

# The Relationship between Agility Drivers, Agility Capabilities and Organizational Sustainability

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**Abstract Purpose:** This paper seeks to investigate the relationship between Agility Drivers, Agile Capabilities and Organizational Sustainability in Real Estate firms, illustrating how organizations can utilize their capabilities to foster the adoption of sustainability and maintain their competitiveness in an ever changing turbulent and ambiguous business environment. “Agility drivers” are defined as the external challenges (Opportunities or Threats) that might impact an organization. While “Agile capabilities” are the internal attributes or capabilities that an organization possess to deal with such challenges [1]. Additionally, “Organizational sustainability” can be identified as the processes or structures that an organization uses to meet its sustainability goals and objectives while transforming inputs into a products or services [2]. As such an empirical study was conducted to test our hypothesis. **Aim and Objective** The importance of this research is driven from the increasing influence of sustainability and how it will shape tomorrow’s world, by being an objective for a Global wholesome development. This research aims to explore the importance of adapting sustainability and how it impacts competitiveness, development, and the ability of an organization to sustain in a rapidly changing world. **Hypotheses:** This study has managed to examine the impact of Agility Drivers on Agile Capabilities and Organizational Sustainability in Real Estate Firms. Where Agile capabilities were found to be a mediator in the relationship while Agility Drives (Independent Variable) represented by dimensions such as Change in Market, Customer Preference, Competition, Technological shifts in addition to Changes in the Social and Legal aspects are regarded as drivers of Agility & Organizational sustainability accordingly the conceptual model and the Hypothesis were developed to test the questioned relations. **Design/methodology/approach:** The paper provides a research model based on extensive research and a detailed literature evaluation that simulates the paper variables and their interactions. Based on this model, research hypotheses will be developed that will be tested further via a survey incorporating primary data and analysis. Our target respondents were Egyptian Real Estate firms’ practitioners. The sample size was determined by 384 This means 384 or more measurements/surveys are needed to have a confidence level of 95% that the real value is within  $\pm 5\%$  margin of error from the measured/surveyed value. **Main result:** According to the results obtained from analyzing the data, it was found that all the direct relation were significant, Agility Drivers impacts Agile Capabilities and Organizational Sustainability moreover, Agile Capabilities significantly impacts Organizational Sustainability. Thus, the direct effects were proven, and were highly significant Finally the Indirect relationships were investigated in the analysis and the results revealed proving that Agile Capabilities (Mediator) is a partial mediator with a significant impact.

**Keywords:** *agility drivers, agility capabilities, organizational sustainability, real estate in Egypt*

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## 1. Introduction

### 1.1. Agility Drivers, Agile Capabilities and Organizational Sustainability

Agility and sustainability are two approaches that enable firms to obtain competitive advantage. Agility is the ability to understand changing market needs and

respond quickly to them, while sustainability is meeting the needs of the present without compromising the ability of future generations to meet their own needs. In other words, it’s a business approach that creates and sustains the long-term value of a company by embracing opportunities and managing risks from three dimensions: the economic, environmental, and social perspectives. [3]

Over the last few decades, the rise of sustainability had become a major concern providing a unique laboratory for organizations to examine how they would utilize the agile

capabilities in response responding to such significant shifts in the competitive landscape. This lens provides an interesting insight into how can applying agility help to improve performance. [4]. To emphasize it can be said that the environment in which organizations exist has changed. Trends such as climate change, globalization, demographic change, and social inequality have created a significant challenge to the traditional business model with its focus on shareholder value. The “credit crunch” and corporate scandals have led to a loss of trust in business, and companies are facing pressures from governments, consumers, employees, and investors to demonstrate that they are adopting ethical and sustainable business practices. [5]

Thus, it can be said that Sustainability is the goal for all organizations while Agility is the means to achieve this goal. Taking into consideration that Sustainability had been announced as a Global goal by the United Nations since 2015 [6]. Where Egypt is currently considering the social and environmental impacts for all industries, where COP27 would act a necessary platform and leverage on how increased consideration for environmental and social returns will affect the entire business [7]. In this regard, the real estate development sector is facing an increasing number of challenges due to the continuous change in the external business environment, it has been argued that the real estate is inextricably linked to the sustainability debate. [8]

This study tries to identify those challenges and explain how organizations can utilize their capabilities to foster the implementation of sustainability to maintain their competitiveness. Agility is a capability that drives competitiveness. While Sustainability represents performance in a broader perspective by extending traditional economic-based performance to incorporate environmental and social aspects.

## 1.2. Research Significance / Importance

The importance of this research is driven from the increasing influence of sustainability and how it will shape tomorrow's world, by being an objective for a Global wholesome development. This research aims to explore the importance of adapting sustainability and how it impacts competitiveness, development, and the ability of an organization to sustain in a rapidly changing world.

It has been identified that organizations would adapt sustainability for two reasons; One is the compliance to external drivers such as change in regulations and other pressures from the stakeholders. [9,10] Secondly is the organizational motivation to implement the sustainability agenda to enhance its competitiveness. [5,11,12].

To fulfill such a quest of adapting sustainability organizations should detect and anticipate any changes that might occur in their landscapes “*Agility Drivers*”, then they must have the capacities to maneuver and reconfigure themselves to face those challenges “*Agile Capabilities*” Accordingly, we argue that agility would pave the road for adapting “*Organizational Sustainability*” by Designing, Analyzing, and Implementing our conceptual model.

The real estate development has become the main force driving for the Egyptian economy contributing to the

National GDP by almost 11.5 %, of which the private sector dominates the biggest share of the real estate industry by almost 70%. [13]

The real estate market is massively expanding, and the current wave of real estate development is backed by the construction of a new railways and roads networks, increase of the power production capacity and the population growth. Moreover, the Real estate is regarded as a haven for investment specially after the economic reforms. Those factors together are pushing the development in Egypt's real estate market for the forthcoming years in terms of investments, expansions, as well as in the diversity and increase in real estate products. [14].

Egypt's population has exceeded the 100 million marks with an annual growth rate of 2% out of this population 65% fall between the ages of 15 and 35 years old. [15]. The bottom-heavy population pyramid Egypt is that drives a massive demand for all the real estate sectors, it has been estimated that in the following 30 years the residential sector alone will require around 30 million new units with an average of a million unit per year, this growth in the residential sector is extended to all other real estate's sectors. The growth rate of in the retail sector is expected to be 2% year over year. Similarly, the demand of office space, hospitality and leisure industries is expected to witness an inclining rate of demand due the increase of the tourism in addition to the forecasted growth rates that the Egyptian economy should achieve in the coming years. [16].

In the same context. Egypt is expected to witness an increase of urban area to reach 12%. Compared to current 7%, which will account for 70 % from the total population according to Egypt's Vision 2030 and 2050. The real estate development and urbanization impacts both the Environment and the Society Cities are responsible for 75% of all global CO<sub>2</sub> emissions (United Nations Environment Program, n.d.), Sustainable real estate can serve as a vehicle for social and economic inclusion, as it creates job opportunities in: design, construction, landscaping, materials production, energy efficiency, recycling and waste management, The benefits of sustainable buildings include improving the health and working conditions of occupants, their productivity, and their quality of life. Organizations need and should implement sustainability for the following reasons: Social and environmental improvements are being made mandatory by regulations and compliance, attracting customers who are demanding more environmental and socially responsible products, organizations view sustainability as a vital element to maintain and sustain their competitiveness. Furthermore, from an economic point of view, sustainable constructions generate higher internal profitability coming from the efficient use of buildable land, innovative construction materials, modern technologies, minimizing waste by recycling of demolition materials. [17]

In accordance with the Egypt's 2030 vision the application of sustainability is becoming more and more inevitable. As a response to the growing concern of the impotence of attaining sustainability. On September 25, 2015, the Sustainable Development Agenda of 2030 was agreed and adopted by the United Nations. [6]. In this

regard Egypt has developed its Sustainable Development Strategy: Egypt Vision 2030 representing a fundamental step in Egypt's extensive development Concept as a general framework, meant for the improvement of the quality of life in a way that does not affect the right of following generations for a better life [18,19]. Egypt has also completed the preparation of a national strategy for climate change for 2050 to integrate climate priorities with the state's development aspirations. [18]

In the process of developing the culture of sustainability and implementing practices, firms need to restructure its, approaches, and processes. Thus, sustainability is a capability of reconfiguring therefore its sustainability requires dynamic capabilities. Agility is the ability of an organization to respond successfully to any changes in the business environment thus it could be a solution for organizations that are oriented towards sustainable development to meet these challenges in the context of sustainable business dynamics, organizational agility is regarded as an important business capability, contributing to success in a changing and competitive environment. [20]

The purpose of this research is to study how can organizations that are working in such dynamic and ambiguous environment can adapt and customize themselves to meet such challenges, identify the threats and opportunities and respond to them in the right manner while incorporating the sustainable development policies into their business strategy. This research argues that for companies to succeed they must adapt the SDGs where implementation of Agility could foster the adaptation of sustainability strategies, by developing a research model to clarify the impact of agility on applying sustainability. Sustainability can result in adding competitive advantage, brand value, increase efficiency, meet customer demands and other benefits to the organization, through the following objectives:

1. Identify key elements that drive organizational agility
2. Identify the key capabilities in sustainable organizations that can help organizations to respond to external environmental changes.
3. Identify importance of adapting sustainability.
4. Identify the impact of agile practices on sustainability.
5. Create a framework to adapt sustainability practices in organizations.
6. Employ the framework in a real-world scenario and obtain the feedback.

### 1.3. Research Gap

The proposed study aims to address the knowledge gap found in the literature review related to the relationship between Agility drivers, Agile capabilities and Organizational Sustainability. The relation between those factors were not tackled deeply in literature. Mostly they were addressed separately as most of the literature had either addressed the relationship between Agility drivers and Agile Capabilities [21-27] Or the relation between Agile capabilities and Organizational sustainability [28,29,30,31].

The interaction between those three philosophies was not approached in specific details. Thus, we hereby aim to investigate the relationship between those three elements them by proposing a conceptual model and empirically examining it.

### 1.4. Research Questions

- The main questions that this research aims to answer are.
- i. How does external environmental challenges “Agility Drivers” impact organizations?
  - ii. What is the relationship between the “Agile capabilities” and the Economical Sustainability?
  - iii. What is the relationship between the “Agile capabilities” and the “Social Sustainability”?
  - iv. What is the relationship between the “Agile capabilities” and the “Environmental Sustainability”?

## 2. Literature Review

### 2.1. Agility Drivers

The only constant fundamental in the business environment is change. It is inevitable and can't be avoided, change will occur whether the organization is ready or not, such changes in the external environment are the main driving force behind agility is. changes or pressures in a business environment forces a organizations to search for new ways of running its business in order to persist and sustain in such a turbulent and ambiguous environment. The external environment is of the main sources of uncertainties, such uncertainties could be either an opportunity or a threat, thus scanning the environment is a prerequisite form competitiveness [32]

The change in drivers can be characterized by the following elements: changes in marketplace; changes in customer requirements; changes in competition criteria, changes in technology; as well as changes in social factors [33]. Change is recognized as the major driver of organizational agility it is linked to changes in consumer preferences, emergence of new technology, changes of the business systems of firms, market changes and shifts in social environments. [1]

Darvishmotevali, Altinay, and Köseoglu, [34] Considered agility drivers as the environmental uncertainties, which are the main factor in strategy formulation and implementation process that may shape organizational creativity and organizational agility. Although the drivers of agility concern those forces external to an organization, internal triggers additionally drive the adoption of agility strategies. Internal triggers are thought to be caused by external factors, or those planned internal changes resulting in unexpected consequences [35].

It is becoming more obvious that Firms are faced with radical changes in their landscapes, and they should adopt or “calibrate” [36]. In the same sense Doz and Kosonen, [37] stated that due to an intense global competition and “in the face of discontinuities and interruptions” firms need to adapt and transform in a more radical, rapid and frequent way compared to the past. As the pace of change increases along with the level of ambiguity and uncertainties. Environmental uncertainties stem from a lack of access to sufficient information during the decision-making process and individuals' inability to anticipate the future. High levels of uncertainty arise when the rationales and experiential bases of knowledge are inadequate [38]. The dimensions of Agility Drivers shall be presented as follows.

### 2.1.1. Change in Market

It arises from Structural market change which can be defined as a shift or change in the way in which a market functions or operates. such Change might be triggered by shifts in the factors of production, technological evolution, economic development, the discovery or depletion of natural resources, or changes in the political environment. Structural changes can therefore cause permanent to economies. Market uncertainty is associated with the unknowns correlated with solving problems, such as hidden customer attitudes, tastes, and preferences, change in demand, needs desire and fashion. Demand fluctuation over time and changes in customer needs, preferences, and interests that organizations face can contribute to market uncertainty Wang et. al, [39] stated that Market turbulence increases the ambiguity and risk in the firm's business processes and the causal link between strategy and firm performance, and therefore is a critical factor in external collaborations. As a result, firms are highly motivated to innovate to cope with uncertainties. These changes can be continuously dynamic and pose a challenging threat to the competitive state of the organization. With unpredictable market changes.

Additionally, Santos-Vijandea and Alvarez-Gonzalez, [40] stated that market turbulence does not only comprise market dynamism (changes in clients and competitors) but also market uncertainty (difficulties in predicting future environmental developments. Finally, it was found that innovative firms perform better in situations with high levels of market turbulence. [41]

### 2.1.2. Competition

Is referred to as the change in the competition environment, the responsiveness of the competitors and the as well as the change in the substitutes. Competitive turbulence is associated with the unpredictability of the competitors' nature, plans, strategies, and response to environmental changes. Competitive uncertainty may be also described as the inability to respond to intense competition in the future. Tense or heavy competition alter the behavior of firms, as their activities become less deterministic and more heavily influenced by the movements of their competitors [42]. Firms should be always watching their competitors at the same time they should have the capabilities of understanding and reacting to information from competitors. To rapidly react to any opportunities or threats that might appear [43].

It can be concluded that competitiveness drives firms to innovate and explore new methods, markets, and clients in order to competed and differentiate themselves from competitors.

### 2.1.3. Customer Preference

Are the unpredicted change in customers' desires, needs, requirements and the demand for customized products and services, need for quicker delivery time and time to market, Increasing expectation of quality, Sudden changes in order quantity and specification. Fundamental shifts in customer tastes threatens the entire existence of an organization and the way firms should deal with such challenges is by regarding products and services with the customers' perspective and expectations, or as how dose

my customer perceive them and what added value do, they add to the customers. Thus, organizations should have a full understanding of the customer's needs in a short, medium, and long-term view as well. Moreover, Organizations should understand how customers' use the products more thoroughly than they know themselves to address the customers' real needs. Organizations should be selling solutions and not products. [44]

### 2.1.4. Technology

Is considered as a crucial influence factor from the macro environmental site. It refers to the rate of technological change within a certain industry, which may arise from increased investments in R&D and production capabilities. Technological uncertainties are the organizations' inability to understand or anticipate some aspects of the technological environment. Technological uncertainties arise from the incomprehension of emerging technologies that combined with new ideas or solutions; accordingly, it would be argued that firms that are facing high levels of technological turbulence in their environment are more likely to incorporate strategies that would help them to those external changes. Otherwise, such turbulence would have the potential to weaken an organization's competitive bases. [34]

### 2.1.5. Social Factors

Social factors include cultural norms and expectations, health consciousness, population growth rates, age distribution, career attitudes, health, and safety. These factors are helpful for companies to better plan their marketing analytics and strategy / Legal factors include changes to legislation impacting employment, access to materials, quotas, resources, imports/exports, and taxation. Osterwalder, [45] adduces that shifts in the social or legal environment, such as the introduction of new laws or social values within a society These factors have both external and internal sides. Certain laws have an impact on the business environment in a country. Apart from these laws/rules, companies maintain their own set of rules and regulations by which an employee is expected to abide by. So, the legal analysis takes accounts of both these angles and forms strategies keeping them in mind.

## 2.2. Agile Capabilities

Nijssen and Paauwe, [46] stated that the ever-changing environment forced organizations to focus on organizational capabilities that would lead to competitiveness such capabilities referred to as dynamic capabilities. Elaborating that Organizational agility is considered a necessary dynamic capability for organizations operating in a highly dynamic environment. Dynamic capabilities (DC) originally branched from the Resource Base View perspective (RBV).

Moreover, Assensoh-Kodua, [47] Stated that the resource-based view are organizational competencies and resources that are distinctive or superior relative to those of rivals, may become the basis for competitive advantage if they are matched appropriately to environmental opportunity. Moreover, RBV assists organizations to understand the collective resources needed to compete in



highly competitive markets. RBV assumes that competitiveness can be achieved when an organization possesses resources and capabilities that could not be imitated by its rivals. RBV, identifies the resources that would most likely make firms more competitive in the market, and then employ these resources to exploit their value. [48].

However, the RBV did not seem to be applicable in high-velocity markets (situations of rapid and unpredictable change), for which dynamic capabilities may provide a more suitable theoretical explanation. [49] In other words, despite its explanatory power, the RBV is static in its nature and is inadequate to explain firms' competitiveness in a changing environment. [50] In other words, they enable organizational adaptation to the environment as well as the shaping of that environment. While being important enablers, dynamic capabilities are not themselves a source of sustained competitive advantage Both RBV and DC are two views that allow us to understand how firms can achieve organizational agility using resources and capabilities. However, RBV does not explain the response to market turbulence. [49]

Dynamic capabilities can enable firms to build and reconfigure their resource base; thus, helping them to manage emerging opportunities or impending threats. The dynamic capabilities emphasize how firms can use their internal resources and external capabilities to sustain their agility in a dynamically unpredictable environment. Agile capabilities are identified as the abilities that an organization possess to respond to the external environmental changes, adapt and take advantage of opportunities or avoid threats. It's also crucial for organizations to identify whether they have the necessary agile capabilities and agility providers. [51]

Teece, [52] Defined the dynamic capabilities as the ability of an organization to create, reconfigure and assimilate towards a highly changing business environment. Organizational dynamic capabilities revolve around three main aspects which are sensing to identify opportunities, seizing where redesigning and reconfiguring of business models and related activities occur as it is also linked to strategy in terms of readiness for competition and saving innovative intellectual properties, and lastly transformation where realignment of structure and culture towards existed capabilities. While Sharifi and Zhang [53] identified four agile capabilities: responsiveness, competency, flexibility, and speed. Considering them as essential abilities for organization should they effectively respond to external market changes. Agile capabilities regard four attributes; Product as a solution; change competency; co-operation; and people, knowledge, and creativity. [54]

### 2.2.1. The Sense-Response Framework

Agile capabilities consist of two dimensions "Sensing and responding" both of those dimensions are basically about external and internal organizational learning. The sense dimension represents the ability organizational ability to detect new opportunities and threats from the external environment, then the response dimension is the ability of an organization to create or shape new opportunities. In other words, once an organization realizes that it must change and adapt to the external

environmental changes using the sensing abilities, it should have the abilities that would empower the internal change. Such abilities may vary from one organization to another; yet some commonalities exist. To illustrate more, the Response dimension in a sense-response framework focuses on the internal abilities of the organization to respond to the environmental changes.

#### 2.2.1.1. The Sensitivity Capabilities

The Sense dimension in the sense-response framework focuses on the abilities to detect the changes on the external environment whether they are opportunities or threats. The sense capabilities are highly dependent on experience and abilities of decision-makers in the organization and their personal abilities. The sensing capabilities can be split into two dimensions the first is awareness while the second one is competence in other words strategic foresight and systemic insight respectively [55]

##### 2.2.1.1.1. Awareness

Awareness refers to organizational capability to understand the environment, by constantly scanning for changes and opportunities by being open to as much possible to information, intelligence, and innovations by developing relationships with a various people and organizations [56]. The practice of constantly scanning the environment for changes opens an organization for new business opportunities. Organization managers should pro-actively search for development and growth opportunities to improve agility level and align whole organization towards this goal. Such scanning for opportunities and threats goes together with practice of analysis and adaptation to internal and external changes. [57]

##### 2.2.1.1.2. Competence

Competence on the other hand is an organizational capability that enables firms to understand the changes in the environment and how they would impact the organization or industry. In other words, it be referred to as the ability of a company to value, integrate, and utilize fresh knowledge for business purposes is known as its competency. Recognizing external influences and comprehending the mechanisms that can help organizations respond to such pressures [58,59]

Competency can be also defined as the ability to put the external information about the upcoming changes and opportunities with the internal capabilities. Where Systemic insight enables organizations to measure the attractiveness and feasibility of the market opportunities through the lens of internal abilities [55]

##### 2.2.1.2. The Responsiveness Capabilities

Alternatively, The Response dimension in a sense-response framework focuses on the internal abilities of the organization to respond to the environmental changes. [29] call it operational adjustment agility as it focuses on an internal maneuvering to provide fast response to changes and is reactive in nature. Dove [60] elaborated by stating that the response dimension has three main enabling attributes; (1) A culture of change proficiency, molded by

language for discussion and debating. (2) A system response architecture structured as reconfigurable systems of reusable modules in a scalable framework. (3) A process for change management, with designated responsibilities for strategic business engineering and tactical change implementation. The Response-abilities involves various dimensions within the organization and with its partners the response capabilities are complex in nature, as they involve various levels and dimensions of an organization. In this context Agile organizations are identified by being flexible, responsiveness, culture of change, speed, integration, low complexity, high quality, customized products, and mobilization of core competencies. [61]

The Responsiveness dimension refers to the ability of an organization to respond quickly. Based on the above we have concluded that responsiveness split into four main groups or dimensions being: (1) Re-configuration, (2) Learning, (3) Coordination, and (4) Cooperation.

#### 2.2.1.2.1. Reconfiguration

Reconfiguration capability, it is the ability on an organization to change the existing structure, processes, and functions to maneuver with its resources to adapt to the new challenges caused by changes in the environment. Reconfiguration is mainly represented by dimensions; (i) Mobilizing rapid response, (ii) Responsiveness, (iii) Flexibility, (iv) Resilience and (v) Adaptation. [53,56,62,63,64,65]

Accordingly, organizational agility is a capability to respond, which is developed within organizations to enable them to respond efficiently in a highly turbulent context where, flexibility and adaptability, should be synthesized into a comprehensive approach to strategically, coin organizational agility. This implies reacting rapidly to sudden changes and, more importantly, anticipating and taking advantage of them through learning and innovation. [66]

#### 2.2.1.2.2. Learning Capabilities

Secondly, The Learning capabilities; The learning capabilities mainly consists of four attributes (i) Organizational learning, (ii) Knowledge-driven enterprise, (iii) Information technology capabilities and (iv) Innovating [56,59,67]. Learning Capabilities allows organizations to learn from internal processes and utilize skills and knowledge of their employees. Saddington [68] Wrote that Learning is critical to the development of change as a habit and should be embedded into organizational and team culture. Learning also supports an iterative approach to working—synthesizing new information, within the context of the work environment, will lead to new connections, ideas, and improvements. Learning agility is a concept introduced by organizations where they link it to the ability of a person's speed and flexibility in learning from experience in organizations, resulting an ability of employees to work across ideas both within and across experiences. As a result, learning agility would allow organizations to tackle the dynamic and complex nature of organizations and their environments [69]. Accordingly, it can be said that Learning is a capability that would allow organizations to increase their agility capabilities.

Organizational learning is the method by which new knowledge is created and insights are gained through experiences of people in a firm. Dyer, and Shafer. [70] Identified the Organizational learning as a process of creation, adaptation, and replication of knowledge to improve organizational performance. emphasizing that it consists of; (1) Adaptive learning which refers to continuous improvements in current operations. (2) And Generative learning, which refers to the challenge and review of employees to all aspects of the business, including general direction, core values, and fundamental operating principles. Such processes would help organizations to become more flexible and adaptive to any challenges that they might encounter.

#### 2.2.1.2.3. Coordination Capabilities

Thirdly Coordination capabilities: are defined as the abilities to orchestrate and deploy tasks, resources, and activities within the organization, additionally they can be referred to as the management of change within organization, via communication, setting priorities, empowering employees. Coordination capabilities enables organizations to access and allocate resources at lower cost as well as respond to changes with greater flexibility. [71]

Doz and Kosonen [37] identified two agility dimensions that would emphasize the coordination capabilities the first is Leadership unity: Which is the ability of the top team to make bold, fast decisions, without being bogged down in top-level 'win-lose' politics; Secondly Resource fluidity: the internal capability to reconfigure capabilities and redeploy resources rapidly. Coordination capabilities are mainly a result of Operational adjustments, and Speed. [54,59,67,72]

Operational adjustment refers to a firm's ability in its internal business processes to cope and adapt to external changes [60]. On the other hand, Speed is a vital attribute in organizational agility. It is part of the business environment swiftness, where all high dynamic organizational culture tends to have high speed and acceleration in their environments. Organizational speed is defined as the capacity of an organization to quickly identify, assemble, reconfigure, modify, and deploy its organizational processes and activities or as the ability to carry out tasks and operations in the shortest time possible. Speed can be referred to as the "capability to operate quickly in all aspects of product development/manufacturing." Speed as a strategy must be planned and carried out carefully, otherwise it could be fatal. Achieving speed requires, among other things, a broad set of strategies. Firstly, Recognize time as a scarce resource. Therefore, speed should be looked upon as a central objective of the firm. Secondly, management should institute and select faster product development strategies. Finally, those strategies must be implemented on an expeditious basis. Finally, human resources must also be managed for speed. [73,74]

#### 2.2.1.2.4. Cooperation Capabilities

Cooperation capabilities: Are the capabilities that refer to the external partners and business network, and organization's ability to involve this network in its process

of adaptation, so that organizations can adapt and find solutions to mitigate threats and capture opportunities [62]. The Cooperation dimension refers to the ability to deliver the value and solutions as fast and as efficient as possible. Organizations that collaborate through network ties can achieve common interests through agility, cooperation, and knowledge sharing, which is a must, considering today's uncertain environment. Organizations can overcome their weakness and fill the gaps by benefiting from strengths of their partners to respond to efficiently to environmental challenges [75]. It has been argued that organizations should promote agility in their external network, and efficiently adapt to highly dynamic and unpredictable changes in the environment, highly populated and competitive markets with scarce resources. By establishing relationships and cooperation between firms and their suppliers, clients, distributors, competitors and customers. [76].

Cooperation positively impacts the performance of organizations mainly in the following aspects; First they grant organizations access to resources they don't have thought their external associates, Secondly, cooperation distributes the risks of the development of new products among partners by sharing the cost and reducing the time span and decrease environmental uncertainty, finally corporation can lead to the knowledge sharing, and transmission of internal information and experience, stimulating the generation of new ideas and contributing to interactive learning. [77].

## 2.3. Sustainability

### 2.3.1. The Economic Dimension of Sustainability. (Profit)

The economic dimension of sustainability; is the ability to generate enough capital flow to ensure liquidity and produce a persistent return for the long-term [78]. The economic dimension of sustainability promotes a reasonable quality of life through the productive capacity of organizations and individuals in society [79]. In other words, economic sustainability can be referred to as the activities that seek both environmental and social sustainability are profitable [80] Economic prosperity is tied intrinsically to the principles of social equity and environmental integrity. Thus, economic development will not be sustainable unless the other dimensions are attained simultaneously. [81]

The Economic dimension will help to increase the standard of living around the world. Open, competitive, international markets that encourage innovation, efficiency, and wealth creation are fundamental aspects of sustainable development [82]. Sheth et al [83] identified two different aspects of the economic dimension. The conventional financial performance such as Profit and cost reductions. The second refers to the economic interests of stakeholders such as the improvement of the economic well-being and standard of living. Bearing in mind that a society that does not create economic prosperity will ultimately compromise its own health and well-being [82]. Economic sustainability -Profit – focuses on the value created by the organization and goes beyond its financial performance and financial concepts as sales growth,

cash-flow, shareholder value, etc. to include the economic and operational business impact on the society [84]. Organization's success is mainly determined by its financial performance, or the "Profit" it generates for shareholders. In can be also regarded as the impact of organization's operation application on economic system [85]

Strategic planning initiatives and key business decisions are generally carefully designed to maximize profits while reducing costs and mitigating risk. Profit is focused on economic value and associate's growth of the enterprise with the growth of its economy [87]. Further, it focuses on the organization's performance through the efficient management of its strategic capabilities such as core competencies shareholder value creation and marketing orientation [87]

### 2.3.2. The Social Dimension of Sustainability (People)

The social dimension of sustainability. The social dimension describes the consideration of societal issues like tolerance toward others or equal rights and is concerned with the well-being of people and communities as a non-economic form of wealth. Social sustainability ensures that members of society have equal access to resources and opportunities. Sustainable development is the recognition that 'needs,' present and future, must be met [88]. Human needs exceed the basic needs such as food, clothing, and shelter, but also includes other aspects like health care, education... The Social sustainability is obtained when the organization actively supports the preservation and creation of skills as well as the capabilities of current and future generations, promotes health and supports equal and democratic treatments within and outside its borders [89]

The social dimension also referred in the TBL as – People – it is the organizations' focusses on people's welfare, including employees and community, and addressing issues like education assistance, community interaction, charitable causes, and fair fare practices [90]. Firms and society are encouraging the implementation of sustainability, as it is becoming a moral as well as a legal responsibility. Thus, organizational strategies and policies should be formulated and applied around sustainability. Companies commits to optimizing and harmonizing their goals about multiple stakeholders [91]. Accordingly, it can be said that building strong stakeholder relationships will positively impact the organizations sustainability and performance through transparency and attaining stakeholder interests. On the country the consideration of various social issues. Practices that may uphold social causes such as child labor, producing undesirable social products and engaging with unethical partners. Might be inconsistent with the views of some stakeholders [92]

### 2.3.3. The Environmental dimension of sustainability (Planet)

The Environmental dimension of sustainability refers to the maintenance of natural capital. As such, the environmental aspect ensures that human activities don't erode the Earth's resources. Since ecosystems have limited regenerating capabilities and carrying capacities.

Population growth, associated with excess consumption, threatens the environmental integrity [93]. Environmental damage that is caused by consumption threatens human welfare and health. Other scholars stated that the increasing rate of natural resources consumption affects the environment two ways. Environmental degradation and ecosystem resource constraints. Environmental degradation are losses and harm such as biodiversity loss, deforestation and soil erosion because of climate change and pollution of water systems and land while the Ecosystem constraints suggest that the earth cannot support unlimited growth in consumption [83]

It can be said that sustainability generated profit for firms and at the same time it minimizes environmental damage and at the same time it benefits the society with whom it has contact with. In other words, it balances economic, environmental, and societal interests, giving organizations 'license to operate' in the society. Although sustainability emerged in relation with environmental production, it has evolved to include the economic, and social dimensions in addition to the environmental. Organizations can achieve both environmental performance and financial performance at the same time. Accordingly, firms should consider the environmental dimension while generating profits by being environmentally responsible. [94]

Corporate environmental management is an effort exerted by firms to reduce the ecological impact. Enterprises aim to preserve the environment and protect the natural resources for the next generations which is known as the environmental dimension of the TBL, while the economic and social are viewed as a secondary concern because everything depends on the Earth's resources. Businesses have historically been the greatest contributors to climate change; thus, it can be said that it holds the keys for driving a positive change. [95]

Accordingly, it can be concluded that Sustainable development is an ultimate desired goal for wholesome growth. It may not be so easy to expect sustainable development unless we are able to develop both sensing and responsive dimensions to such rapid, unexpected changes that might occur in the environment in both an effective and efficient manners in other words Agility would be the answer to such challenges. [20]

To Elaborate it can be concluded that, Agile capabilities come as an essential set of attributes the would be the answer to such required organizational need to embed sustainability in their strategies and operations [96]

Additionally, the United Nations Environment Programme, [2] defined sustainability management as processes or structures that an organization uses to meet its sustainability goals and objectives while transforming inputs into a product or service. Moreover, Neubaum and Zahra [97] elaborated that organizational sustainability is the ability of a firm to nurture and support growth over time by effectively meeting the expectations of diverse stakeholders.

### 3. Main Hypothesis Based on the Historical Studies

Enlightened by the literature review, based on the identified variables and research model. The following hypothesis illustrates the relationship between Agility Drivers, Agile Capabilities and Organizational Sustainability in the following hypothesis

*H1: Agility drivers positively impacts Agile Capabilities*

*H2: Agility drivers positively impacts Organizational Sustainability*

*H3: Agile Capabilities positively impacts Organizational Sustainability*

*H4: Agile Capabilities acts as a mediator in the relation between Agility drivers and Organizational Sustainability*

### 4. Proposed Research Model

Based on the literature review the conceptual model was developed [Figure 1](#) illustrates the variables of this paper and the relationships between them. The independent variable Agility Drivers being (Change in market - Competition - Customer Preference - Social Factors) and Mediator variable being (Awareness - Competence - Reconfiguration - Learning - Coordination - Cooperation). finally the dependent variable Organizational Sustainability being (Economic - Environmental - Social).

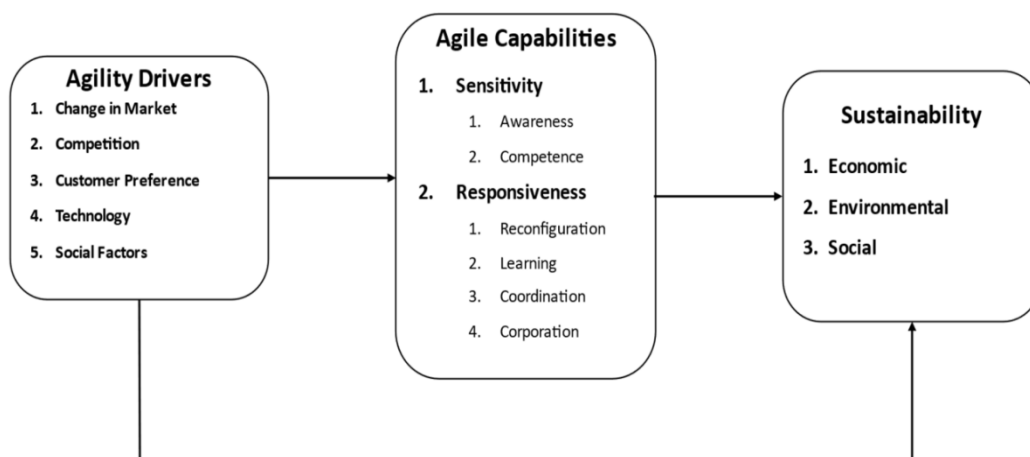


Figure 1. Conceptual framework based on the previous studies: Source Author



## 5. Research Methodology

The target respondents were Real Estate development practitioners aiming for middle and high-level management personnel referred herein as the “respondents”, and patients who have experience with the real estate industry. The research applied a Convenience sampling technique as the convenience sampling would overcome the difficulties that will happen in gathering the surveys in other methods due to the difficulties of accessing the respondents, moreover, it is a the most used sampling technique as it is incredibly prompt, uncomplicated, and economical. A web-based survey was designed and developed for data collections using Google Forms since Google Survey forms will provide us with the advantages of having unlimited surveys, unlimited respondents, Survey answers and data are automatically collected in Google Spreadsheets, and 100% free. [98]

The questionnaire was designed based on the literature review, similarly the model and the hypotheses were developed. The collected data was analyzed using SPSS version (25) and for the path analysis we used AMOS version (25) to obtain the required statistical results and confirm our proposed hypothesis. Accordingly, the sample size was determined by 384 This means 384 or more measurements/surveys are needed to have a confidence level of 95% that the real value is within ±5% margin of error from the measured/surveyed value, while the Population Proportion was set at 50%. The sample size based on the sample required to estimate, was calculated using the following formula:  $n = ((1.96^2) pq) / (d^2)$  [99].

## 6. Statistical Analysis Results (Findings)

### 6.1. Correlations between the Variables

#### i. The correlations between the main variables

The below Table 1 shows the correlation coefficients between the main Variables “Agility Drivers, Agile Capabilities and Organizational Sustainability” with values of .841, .885 and .915, indicating that there is a direct and strong level of correlation between our main constraints at the level of significance (0.01).

Table 1. The correlations between the main variables

	Agility Drivers	Agile Capabilities	Organizational Sustainability
Agility Drivers	1	.841**	.885**
Agile Capabilities	.841**	1	.915**
Organizational Sustainability	.885**	.915**	1

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

#### ii. The correlations between Agility Drivers and Agile Capabilities variables

The below Table 2 shows the correlation coefficients between the “Agility Drivers and Agile Capabilities variable” results indicates that there is a direct and strong level of correlation between Agility Drivers and Agile Capabilities at the level of significance (0.01), where all relations came bigger than 0.7 with a positive direction. Moreover, the table as well identifies the strong relationship between the dimensions of both variables.

Thus, it can be concluded that Agile Capabilities is a mediator between Agility Drivers and Organizational Sustainability. Consequently, the mediation is present.

#### iii. The correlations between Agility Drivers and Organizational Sustainability variables

The below Table 3 shows the correlation coefficients between the “Agility Drivers and Organizational Sustainability” results indicates that there is a direct and strong level of correlation between Agility Drivers and Organizational Sustainability at the level of significance (0.01), where all relations came bigger than 0.7 with a positive direction. Moreover, the table as well identifies the strong relationship between the dimensions of both variables.

#### iv. The correlations between Agile Capabilities and Organizational Sustainability

The below Table 4 shows the correlation coefficients between the “Agility Drivers and Organizational Sustainability” results indicates that there is a direct and strong level of correlation between Agility Drivers and Organizational Sustainability at the level of significance (0.01), where all relations came bigger than 0.7 with a positive direction. Moreover, the table as well identifies the strong relationship between the dimensions of both variables.

Table 2. The correlations between Agility Drivers and Agile Capabilities variables

	Awareness	Competence	Reconfiguration	Learning	Coordination	Cooperation	Agile Capabilities
Change in Market	.744**	.840**	.798**	.723**	.755**	.739**	.752**
Competition	.895**	.722**	.711**	.889**	.761**	.726**	.717**
Customer preference	.709**	.804**	.872**	.776**	.767**	.757**	.726**
Technology	.980**	.947**	.789**	.782**	.711**	.832**	.920**
Social factors	.791**	.810**	.762**	.766**	.772**	.748**	.718**
Agility Drivers	.817**	.886**	.745**	.777**	.741**	.836**	.841**

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

Table 3. The correlations between the Agility Drivers and Organizational Sustainability variables

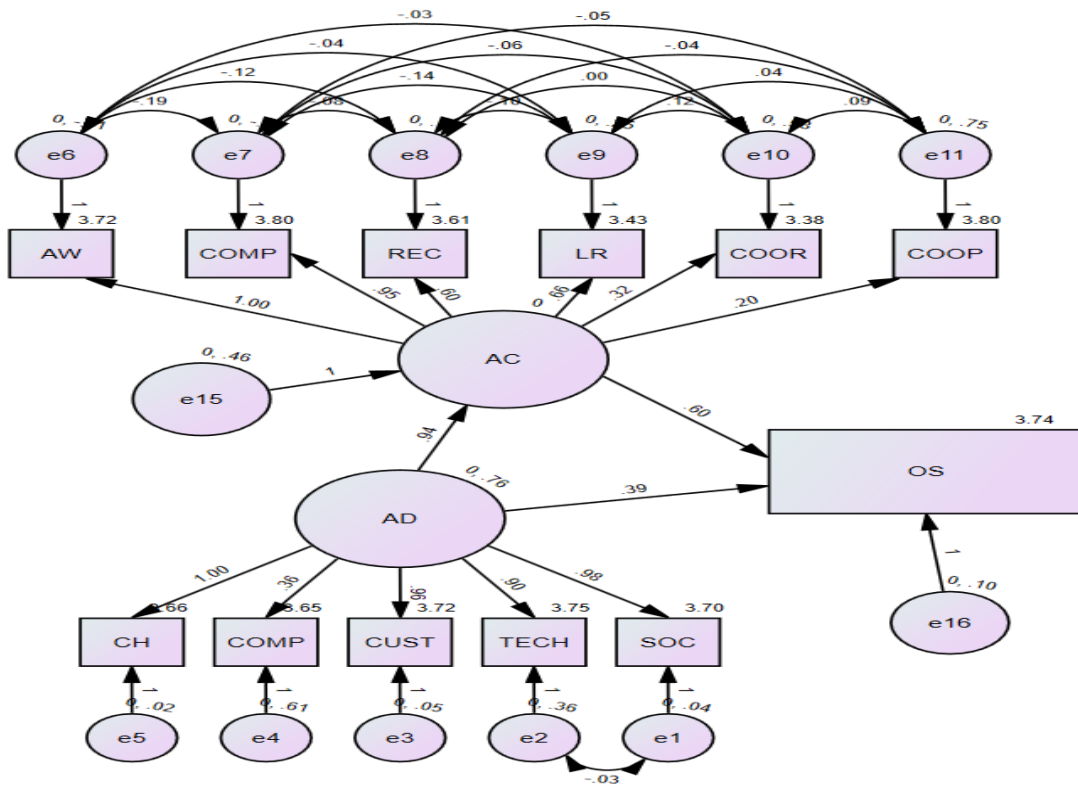
	Economic Performance	Environmental Performance	Social Performance	Organizational Sustainability
Change in Market	.721**	.832**	.725**	.832**
Competition	.719**	.723**	.964**	.723**
Customer preference	.739**	.798**	.717**	.798**
Technology	.773**	.970**	.714**	.970**
Social factors	.742**	.793**	.702**	.793**
Agility Drivers	.792**	.885**	.715**	.885**

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

**Table 4. The correlations between the Agile Capabilities variables and Organizational Sustainability Variables**

	Economic Performance	Environmental Performance	Social Performance	Organizational Sustainability
Awareness	.746**	.969**	.715**	.969**
Competence	.771**	.987**	.715**	.987**
Reconfiguration	.771**	.821**	.730**	.821**
Learning	.714**	.750**	.725**	.750**
Coordination	.865**	.781**	.785**	.781**
Cooperation	.811**	.814**	.788**	.814**
Agile Capabilities	.759**	.915**	.750**	.915**

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



**Figure 2.** Path analysis Diagram created from AMOS

**6.2. Path Analysis Model**

Path analysis is a statistical method used for establishing a causal relationship between variables. It is used when there are multiple variables in a study. It is an important Structural Equation Modeling (SEM) analysis type used commonly by researchers for testing the hypothesis. Figure 2 illustrates the path analysis model.

The Study assessed the relationship between Agility Drives, Agile Capabilities & Organizational Sustainability the below tables demonstrate the results. Table 5 summarizes the results and illustrates the researcher’s comments on the results. While Table 6 shows the full results obtained from AMOS. Both Table 5 & Table 6

show that all of the direct effects have been supported by the analysis.

**6.3. Barron & Kenny (Hierarchical Regression)**

According to Barron & Kenny the independent variable in the presence of mediator is significant when All the P values are significant then it means that it is a **partial mediation**. As illustrated in Table 7.

The mediating variable contributes to the relationship by representing a part of the linkage. Thus, even in the absence of mediating variables, dependent and independent variables could relate.

**Table 5. Estimates summarizes the results**

Hypothesized relationship	Standardized Estimates	P-value	Comments
AC <--- AD	.769	***	There is a significant relationship between Agility drivers & Agile capabilities which confirms our hypothesis
OS <--- AD	.344	***	There is a significant relationship between Agility drivers & Organizational Sustainability which confirms our hypothesis
OS <--- AC	.657	***	There is a significant relationship between Agile capabilities & Organizational Sustainability which confirms our hypothesis

Table 6. Regression Weights: - From Amos

			Estimate	S.E.	C.R.	P
AC	<---	AD	.941	.035	26.818	***
Social factors	<---	AD	.975	.015	65.850	***
Technology	<---	AD	.901	.036	24.784	***
Customer preference	<---	AD	.957	.016	60.729	***
Competition	<---	AD	.356	.046	7.680	***
Change in Market	<---	AD	1.000			
Competence	<---	AC	.948	.019	50.723	***
Reconfiguration	<---	AC	.603	.024	25.130	***
Learning	<---	AC	.657	.026	25.113	***
Coordination	<---	AC	.321	.040	8.065	***
Organizational Sustainability	<---	AC	.604	.090	6.725	***
Organizational Sustainability	<---	AD	.386	.086	4.495	***
Awareness	<---	AC	1.000			
Cooperation	<---	AC	.195	.045	4.353	***

Table 7. Barron &amp; Kenny Hierarchical Regression

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.817	0.094		8.708	0.000
	Agility Drivers	0.757	0.025	<b>0.842</b>	<b>30.459</b>	<b>0.000</b>
a. Dependent Variable: Organizational Sustainability						
2	(Constant)	0.884	0.092		9.593	0.000
	Agility Drivers	0.741	0.024	<b>0.841</b>	<b>30.332</b>	<b>0.000</b>
a. Dependent Variable: Agile Capabilities						
		B	Std. Error	Beta		
3	(Constant)	0.452	0.100		4.536	0.000
	Agile Capabilities	0.874	0.027	<b>0.856</b>	<b>32.313</b>	<b>0.000</b>
a. Dependent Variable: Organizational Sustainability						
4	(Constant)	0.817	0.094		8.708	0.000
	Agility Drivers	0.757	0.025	<b>0.842</b>	<b>30.459</b>	<b>0.000</b>
5	(Constant)	0.361	0.090		4.002	0.000
	Agility Drivers	0.375	0.040	<b>0.417</b>	<b>9.470</b>	<b>0.000</b>
	Agile Capabilities	0.516	0.045	<b>0.505</b>	<b>11.468</b>	<b>0.000</b>
a. Dependent Variable: Organizational Sustainability						

## 6.4. Sobel Test

The result of SOBEL is 22.16 which is larger than 1.96 making it significant reduction and therefore the **mediation effect is statistically significant**. Thus, it can be concluded that Agile Capabilities is a mediator between Agility Drivers and Organizational Sustainability. Consequently, the mediation is present.

## 7. Conclusions, Recommendations & Limitation

### 7.1. Conclusions

The study reached several results that can contribute to answering the study's questions and confirming the hypotheses. The researcher has categorized the results of the study according to the variables set by the study for examining the Relationship between Agility drivers, Agile Capabilities & Organizational Sustainability to facilitate the demonstration the results, as follows:

#### 7.1.1. Direct Effect

All the direct effects have been supported by the analysis, as illustrated in the conducted path analysis

section. Moreover, even in the absence of mediating variables, dependent and independent variables could relate. As presented in the Sobel test and the Barron & Kenny test.

#### 7.1.2. Mediator Effect

The current study concluded that Agile Capabilities (AC) is the mediator (Partial mediator) in the relationship between (AD) and (OS) moreover it was found that it has a positive and significant impact on Organizational thus our hypothesis regarding the impact of (AC) on (OS) was verified.

In this regard, the six dimensions of (AC) were highly correlated with both the (AD) and (OS) also with their sub variables which consolidates our hypothesis.

### 7.2. Recommendations

Based on the objectives achieved in this research as mentioned above, the recommendations were made to identify the role of the Relationship between Agility Drivers, Agile Capabilities and Organizational Sustainability in the Real Estate industry, the recommendations below were drawn and concluded from the findings of the research.

During fast change communication and effective decision making are important for the agility of organization. During periods when an organization is

undergoing internal change, its leaders should be able to communicate, direct and control. Simple organizational structure and decision making helps to do that more efficiently. Organization should strive to flatten its organizational structure to simplify it and improve decision making. To take advantage of opportunities arising from the changes in the market, consumer preference changes, and other factors, the organization needs to be able to identify these opportunities.

Agility and Sustainability are two crucial philosophies that would be vital for the survival and existence of almost any existing organization the importance of those philosophies raises from the ultimate fact that the only constant matter in this world is “**Change**” Change in enviable whether firms are ready for it or not it will happen and will even impact every one of them threatening the performance, competitiveness and even the existence of the organization. Only prepared firms will be able to adapt and maneuver around those challenges. Firms aim to persist and sustain in today’s world and look forward to becoming a sustainable organization as such the Agile Capabilities come as a savior since (AC) possess the required capabilities to deal with challenges / opportunities that may appear in the business environment. By having the required attributes to sense and respond to those changes to maintain their existence.

### 7.3. Limitations

- This study is limited to Real Estate companies in Egypt, the differences among industries can arise from differences factors according to the industry, or even the country where the research was conducted. To test the model applicability in other industries / countries, the researcher needs to conduct a survey in the country under investigation and extend the current study by applying it into other sectors and fields, such as banking, hospitality, and hotels.
- Organization’s abilities and attributes are complex concepts, thus factors driving agility can change, due to changes in the economic and political situation, accordingly, the model for agile capabilities and Organizational sustainability in the dissertation should be periodically reviewed and verified.
- Lack of previous studies of the research area in Egypt.
- Time constraints the research was conducted in the academic year (2022 – 2023)

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