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Engage, influence or innovate –the incumbents' dilemma facing energy transition*

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Energy transition is a strategic driver that has the potential to reshape business sectors, supply chains and economies. However, how this transformational driver should be dealt with is not made clear in business management literature and practice. This study sheds some light on how companies respond strategically to energy transition challenges. We propose a model that integrates generic strategies to deal with energy transition using strategic mechanisms for proactive and reactive responses. This model incorporates three generic strategies: (i) the adoption of sustainable strategies, (ii) influence mechanisms to shape the context and (iii) innovation to change the competitive dynamic. Posterior empirical testing of this model is a key step to reinforce how companies will succeed in generating value on this context.

Keywords: Incumbent Firms; Innovation; Non-market strategies; Climate change, Energy Transition.

Engajar, influenciar ou inovar – o dilema dos incumbentes frente à transição energética

A transição energética é um driver estratégico que tem potencial para remodelar setores de negócios, cadeias de suprimentos e economias. No entanto, a forma de lidar com este driver transformacional não está clara na literatura e na prática de gestão de negócios. Este estudo esclarece como as empresas respondem estrategicamente aos desafios da transição energética. Propomos um modelo que integra estratégias genéricas para enfrentar a transição energética com mecanismos estratégicos de respostas proativas e reativas. Este modelo incorpora três estratégias genéricas: (i) a adoção de estratégias sustentáveis, (ii) os mecanismos de influência para moldar o contexto e (iii) a inovação para mudar a dinâmica competitiva. Testes empíricos posteriores desse modelo são um passo fundamental para consolidar como as empresas prosperarão para gerar valor nesse contexto.

Palavras-chave: Incumbentes; Inovação; Estratégias de não-mercado; Mudança Climática, Transição energética.

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1. Introduction

Climate change is widely recognized as a societal grand challenge, given its global impact and broad implications. Management research can play an important role in tackling this sort of global challenge (GEORGE et al., 2016). The energy sector accounts for more than two-thirds of all greenhouse gas emissions (HARTMANN; INKPEN; RAMASWAMY, 2020). Almost every sector can be affected by changes in energy structure, since all companies, households and countries are energy dependent.

For the purpose of this study we have adopted Grubler, Wilson, & Nemet's (2016) definition for energy transition as a structural change in the energy system that affects multiple energy resources, carriers, sectors, and end-use applications. Despite the urgent need for energy change, Demaria & Rigot (2020) stresses that there are two main risks involved in this process, namely the physical risks and the transition risks. The first of these is related to the expected consequences of weather-triggered events, while the second is related to the consequences of mishaps on the energy transition route. Apart from energy transition, the energy sector is undergoing two other structural changes: namely market liberalization, and digitization (LEISEN; STEFFEN; WEBER, 2019).

As a global challenge, energy transition is a very tricky puzzle to solve because it is deeply embedded, both physically as well as economically, in businesses, countries, and global dynamics. Tackling this sort of problem requires more radical structural changes within and between organizations (ROTMANS, 2005). Hojckova, Ahlborg, Morrison, & Sandén (2020) argue that such radical structural changes impose great difficulties on incumbent firms. Rugman and Verbeke (1998) point out that some companies seem to be reluctant to embrace sustainable strategies in order to deal with energy transition. This fear is based on doubts in relation to the irreversibility of investments. On the other hand, other firms are trying to capture strategic opportunities in the energy transition context. But how to strategically navigate this energy transition context remains a challenge (SAETHER; EIDE; BJØRGUM, 2021).

In terms of business challenges, according to Bergman, Hajikhani, & Blomqvist (2019) there is great interest among strategic management researchers regarding the topic of environmental transitions. Loorbach, Bakel, Whiteman, & Rotmans (2010) previously argued that a number of studies on energy transition focused on networks or systems approaches, bearing in mind that firms will not be able to solve this puzzle by themselves.

Bergman et al. (2019) argue that energy transition is a subject that needs to be approached from a more holistic perspective. However, Chen, Xiong, Li, Sun, & Yang (2019) demonstrate that most studies have focused on one specific issue of this complex issue, and have failed to gain an overall perspective of this important phenomena. Loorbach et al. (2010) add that there is a need for more research examining business strategy on structural change context. Therefore, this paper presents a review and typology of energy transition in order to answer the following question: What strategies do incumbent companies adopt in order to deal with energy transition?

The objective of the article is to identify typical strategies that incumbent companies adopt in order to deal with the energy transition dilemma. We address this objective by means

of a systematic review of the literature regarding energy transition for businesses. This article is organized into five sections. After the introduction, Section 2 presents the methodology used for research and analyzing literature. Section 3 consolidates the results and potential aspects that address our research question. Section 4 discusses these results and proposes a model that aggregates generic strategies for dealing with energy transition and structural features that are critical for success on this journey, while section 5 outlines the conclusion and recommends future aspects for research.

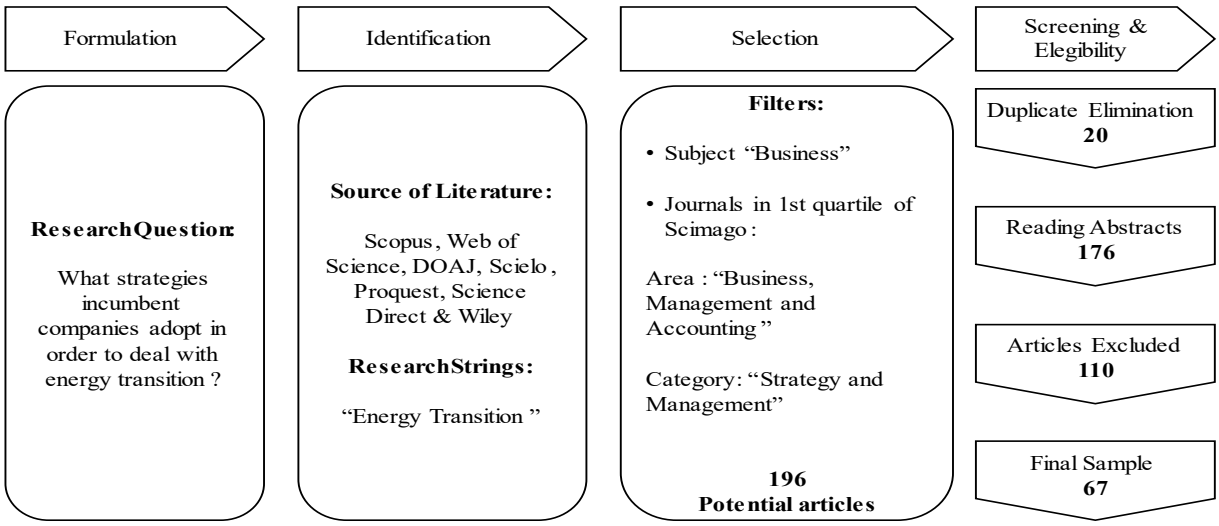
2. Methodology

We used a systematic review of the literature to identify the main challenges faced by incumbent firms in order to cope with energy transition. A systematic review of the literature is a useful tool to come up with a comprehensive overview of the existing knowledge. By using explicit and organized search, assessment, and summarizing procedures, the method provides transparency for the process of finding and analyzing all the relevant literature that relates to a defined focus (TRANFIELD; DENYER; SMART, 2003). We followed the steps suggested by Tranfield et al. (2013) in our systematic review of the literature.

We ensured comprehensive coverage by selecting seven main databases for our review - Scopus, Web of Science, DOAJ, Scielo, Proquest, Science Direct & Wiley - which contain a large number of academic publications. Based on the research question “What strategies do incumbent companies adopt in order to deal with energy transition?” we designed our systematic review of the literature. We used the research stream “energy transition” and limited the sample to business and management journals in order to address firms’ aspects of the energy transition driver. To ensure the relevance of the content reviewed we limited our sample to journals listed in the first quartile of Scimago ranking (Area: “Business, Management and Accounting”; Category: “Strategy and Management”).

The search was carried out in November 2021 and covered the period between 2000 and 2020. The results are summarized in (Fig. 1). The search process focused on the specific area of business management because our research question is strictly related to the implications of the energy transition process for incumbent firms, and does not cover societal, governmental, technological, engineering or environmental aspects.

Figure 1 – Framework of the review



Source: prepared by the researchers.

The search filters for all the databases were restricted to the main fields (title, abstract and keywords), which resulted in the identification of 196 articles that are featured in scientific publications but excluding conference proceedings and working papers. After eliminating duplicates (20), we identified 176 articles that were carefully examined. After assessing the abstracts, we classified the articles according to seven variables: the focus of the study; the method (editorial, empirical or theoretical); the location (country or region); the business sector; the source of energy (including technology); and the unit of analysis. Based on the research question, we selected papers from two of these categories: the focus and the unit of analysis. The focus selection includes all papers related to the business management aspects, customer issues and innovation. We eliminated those which were related to public polices, specific technologies, emission analysis and sectorial analysis, thereby limiting the sample to articles dealing with business issues, such as the focus denoted in the research question. In terms of the unit of analysis, we focused on those that analyses 'business' and 'organizations'. Using these two criteria, we arrived at a sample of 67 papers. This process ensured that the sample contained studies related to different locations, business segments and energy sources that were conducted using both empirical and theoretical methods.

In the analysis of the selected articles, we attempted to answer the research question and focused on strategic issues or collateral aspects, related to business and incumbent companies. The findings, key references and relevant quotes were listed on a spreadsheet and organized by theme, grouping similar strategies. This procedure resulted in a collection of strategies that incumbent companies can implement when dealing with energy transition challenges. The results are presented in the next section.

3. Results

This chapter describes the results of analysis of the 67 articles selected for full reading. We start off by reporting the descriptive analysis of the sample in terms of method, scope of analysis, and region covered by the studies to date. Then, we assess all sort of strategies and strategic issues described in the sample. The results are distributed in three main types of strategies to deal with energy transition: (i) sustainable strategies, which in fact embrace 'energy transition' and intend to thrive the maximum value in a world where the entire energy matrix is transformed into renewable energy; (ii) influence strategies, which incorporate non-market strategies, the use of relationships and other mechanisms to influence the design of public policies in order to create value for companies, and (iii) innovation strategies, which demonstrate how incumbent firms use innovation as a strategy to deal with energy transition, connecting the relevant number of articles focused on this theme with the research question.

Descriptive Analysis

Due to the fact that energy transition is a polysemic concept that encompasses policymaking, business management, technology evaluation and several other areas of knowledge, it is important to segregate this different focus in order to consolidate the relevant findings resulting from our specific research question. Table 1 shows the distribution of 67 articles across unit of analysis and focus.

Table 1 - Articles per Focus and Unit of Analysis

Unit of Analysis / Focus	Consumers	Energy Organizaition	firms	general	leaders	Regions	Sector	Technology	Total
Costumers issues	12					2	1	2	17
Innovation			3	1		2	2	1	9
Management Aspects		1	22	5	1	2	5	1	37
Others				1					1
Policies	1		2						3
Total	13	1	27	7	1	6	8	4	67

Source: prepared by the researchers.

The variety of focus gives an indication of the complexity of the concept. In this study, we narrow our sample of interest to management aspects, customer issues, and innovation trying to match the sample to our research question that is directly related to firms' strategies.

Table 2 presents the methods applied per unit of analysis. Empirical studies make a marked contribution on this topic, accounting for 80% of the articles. For this review we selected articles that analyze firms, consumers and, leaders, together with other ones that adopt more generic approach, consolidating 67 articles, 53 of which were empirical and 14 theoretical.

Table 1- Method per unit of analysis

Unit of Analysis	Method		Total
	Empirical	Theorical	
Consumers	12	1	13
Energy Organization	1		1
Firms	24	3	27
General		7	7
leaders	1		1
Regions	5	1	6
Sector	7	1	8
Technology	3	1	4
Total	**53**	**14**	**67**

Source: prepared by the researchers.

Sustainable strategies

Strategy plays a significant role in incumbent firms' playbook for dealing with major challenges, such as energy transition. Despite incumbent firms' strategic focus, the energy transition driver has the potential to affect every type of business, on different levels. Wilder et al. (2020) postulated that strategy is the missing engine for firms to achieve sustainable innovation. Aslam & Ntim (2020) sum up firms' motives for engaging in sustainable strategies, attributing them to two objectives: (i) to gain competitive advantages, including getting access to crucial resources and (ii) to legitimize their operations by obtaining the approval of the wider community.

Apart from the strategic objective, there are five critical success factors for incumbent firms, in the context of energy transition (VERBEKE, 2021):

- Assessing the vulnerability of assets to climate change
- Leadership involving on decarbonizing decisions
- Establishing climate targets
- Embedding climate intelligence in capital expenditures' decision-making
- Engaging proactive climate-change risk disclosures

Different business activities have different exposures to the energy transition driver. Pinkse & Kolk (2010) throw light upon industry- and firm-specific aspects that shape companies' strategies for dealing with energy transition such as – technological dynamism, complementarity between new technologies and existing assets, and ownership of specialized assets for commercialization.

For some incumbent companies, energy transition is perceived as a threat (this is the case with the fossil fuel and transportation sectors), for which they must develop alternative and reliable business models as a strategic hedge. Hansen, Wicki, & Schaltegger (2018) propose ambidextrous strategies to create a secure environment for alternative business development, to overcome the exploration-exploitation paradox. Having an ambidextrous

approach is commonly mentioned as one of the key ways for incumbent firms to gain resilience in the energy transition context. Loorbach, Bakel, Whiteman, & Rotmans (2010) found that an ambidextrous management approach is an important tool that firms can use to develop alternative strategies for dealing with persistent sustainability problems in energy and mobility systems.

Loorbach et al. (2010) also point out that the deployment of this sort of strategy demands organizational capacity to have concurrent flexibility and stability. Another challenge that has to be overcome in applying ambidextrous strategies is the integration of exploration and exploitation activities, ideally promoting cross-fertilization without cross-contamination. Hansen et al. (2018) organize this challenge on a trade-off framework. The six trade-offs listed are:

- 'Exploratory-complementary linking' vs. 'contamination';
- 'Seeking legitimacy early on' vs. 'frustration at discontinuation of innovation';
- 'Boundary spanning through job rotation' vs. 'carrying over of old culture';
- 'Early transfer' vs. 'premature transfer';
- 'Reorganization' vs. 'capability mutation' and
- 'Improved access to core business resources' vs. 'resource starvation'

Scarpellini, Valero-gil, & Andreaus (2020) confirm that firms' existing resources and capabilities are required in order to embrace organizational changes and adapt to major challenges, such as energy transition. Bass & Grøgaard (2021) report that both incumbents and new entrants can carry on the development of firm-level capabilities to support energy transition. Hojckova, Ahlborg, Morrison, & Sandén (2020) emphasize the importance of cooperation among incumbents and new entrants. For new entrants, this cooperation is an opportunity to nurture their immature technologies and access organizational capabilities, while from the incumbents' side it is a short cut to construct an ambidextrous strategy.

In fact, cooperation seems to be a key element of incumbent firms' strategies for dealing with energy transition. Loorbach et al. (2010) highlight that, in order to take part successfully in sustainable strategies, firms need to consider themselves as coevolving actors within a wider societal system. However, the overall climate change policy influences this sort of decision. Pinkse & Kolk (2010) stress that, in the face of high uncertainty regarding climate change policy, firms are more likely to embrace competition and refrain from cooperation.

Beyond the incumbents' strategic choice of investment in energy transition, there are also a number of barriers to the adoption of sustainable strategies. Several authors mentioned these barriers which are listed below:

- Lack of Human Resources – According to García-quevedo & Martínez-ros (2020), the lack of human resources is perceived by firms as a key obstacle to taking part in sustainable initiatives as one key obstacle by firms engaged in sustainable initiatives;
- Lack of Expertise - García-quevedo & Martínez-ros (2020) also identify that the lack of expertise deters companies from engaging in sustainable strategies. Patala, Juntunen, Lundan, & Ritvala (2021) stress that, specifically for

incumbent companies in the fossil fuel sector, the lack of international experience can be a greater barrier;

- Organizational inertia - Hoppmann, Sakhel, & Richert (2018) indicate that organizations may experience path dependencies, focusing on business as usual strategies, moving away from sustainable strategies;
- Lack of resources - García-quevedo & Martínez-ros (2020) conclude that availability of resources makes it easier to adopt sustainable strategies;
- Lack of long term orientation - Saether, Eide, & Bjørgum (2021) find that long-term orientation is directly related to sustainable strategies.

In order to overcome these barriers, Paetzold, Sydow, Tuschke, Wu, & Zobel (2016) suggest that boards of directors constantly engage in self-evaluation and self-reconfiguration, avoiding to incur in path dependencies that will probably move incumbent companies away from sustainable strategies. Hoppmann et al. (2018) show the importance that external change agents play in overcoming organizational inertia, significantly increasing investments in sustainable strategies. These two pathways are specially relevant because, usually, firms are more likely to select their investments with profit-oriented targets rather than sustainability-oriented ones (ZHANG et al., 2020).

Influence strategies

Aslam & Ntim (2020) show how complex drivers such as energy transition enhance the challenge of gaining and retaining competitive advantages and according to them, increasing the importance of fulfilling environmental legitimacy in order to shield positive competitive conditions. They suggest that addressing stakeholders' concerns, particularly those related to environmental challenges, is a constructive way of gaining legitimacy and sustaining competitive advantages.

Böttcher & Müller (2015) expand this concept, demonstrating that low carbon operations are mostly driven by stakeholder pressure and to some extent by competitiveness expectations. Hoppmann et al. (2018) summarize earlier studies by suggesting that firms' decision making to embrace sustainability is based both on firms' issues as well as external factors, such as institutional or stakeholders' pressures.

One key point to consider is the local environment and the variety of stakeholders, regulations, and policies in place across different countries or regions. Crescenzo, Baratta, & Simeoni (2020) and Vainio, Pulkka, Paloniemi, Varho, & Tapio (2019) investigate customers engaging in sustainable crowdfunding and highlight that even in decentralized initiatives stakeholders' management play an important role. Combining Ruppert-winkel's (2018) finding that local players perform important roles in the energy transition context, with Georgallis' (2020) conclusion that firms are attracted by industry-support policies, shows the importance of tailor-made influence strategies for each company to apply in each country or region.

From the government perspective, with sustainability in mind, it makes sense to attract investments by multinational enterprises, since Nippa & Patnaik (2021) find that multinational enterprises, by comparison with purely domestic firms, maintain consistent carbon reductions and a superior overall carbon performance. But the result of this process is heavily dependent upon whether the government intends to encourage energy transition, with positive externality, or has other political aims with unknown consequences (GEORGALLIS, 2020).

Smink, Hekkert, & Negro (2013) clarify the dynamics of non-market strategies that are designed to influence political decision-making and society's overall perception. Incumbent firms tend to tailor their arguments to general social or policy goals: they express their interests in terms of socially legitimate goals. Disqualifying competitors or possible new technologies or policies, in order to preserve competitive advantage through environmental legitimacy.

Innovation strategies

Energy transition may be approached from a constructive perspective, and in order to do this companies need to add and build new and unrelated capabilities and technologies (Pinkse & Kolk, 2010). Smink et al. (2013) point out that both incumbents as well as new entrants may play relevant roles using innovation strategies to deal with energy transition. They both face the challenge, but play different roles to do so; for the most part new entrants implement innovations that deviate from existing practices, while incumbents, with strong path dependence, in general tend to stay attached to incremental innovations (SMINK; HEKKERT; NEGRO, 2013).

Contributing to this discussion, Pinkse & Kolk (2010) demonstrate three important trade-offs in energy transition innovation:

- 'Technology Development or Technology Deployment'
- 'Niche Market or Mainstream Market'
- 'Cooperation or Competition'

The first trade-off is due to the fact that technological innovation is sustained by long-term research and development investments. Compared to technology deployment, technology development is risky, with a high level of uncertainty regarding the results. It requires companies to increase the amount of time and effort spent on the development phase in order to control the risks and improve the chances of success.

The second trade-off is given by the notion that sustainable technologies will be considered successful if the developer aggregates capabilities and conditions to introduce this technology in global mainstream markets, particularly in the energy transition context. This corroborates Araújo & Jean's (2019) findings that focusing on niche market that does not lead to synergy-scope and gains of scale over time.

The third trade-off refers to the issue of capabilities' availability. Cooperation will be useful in the innovation process due to the complementarity of possible partners' capabilities. Firms tend to cooperate in order to obtain access, by means of innovation partnerships, to new and compatible resources, competences or technologies.

Innovation also plays a key role in the transition process because of its impact on sustainability performance. Zhang et al. (2020) find that innovation efficiency has a positive effect on sustainability performance.

4. DISCUSSION

Loorbach et al. (2010) describe three paths that companies take to deal with energy transition: (i) strategic envisioning to direct change, (ii) coalitions developing alternative pathways and (iii) dealing with resistance to change and practical experiments to learn about (im)possibilities of innovations. These three paths are mixed and represented in the other three topics contained in this review: (i) the adoption of sustainable strategies, (ii) exercise the influence mechanisms to shape the context and (iii) innovation to modify the competitive dynamics.

Energy transition is a complex concept, and the analysis of recent studies identifies several aspects that operate as points of intersection or bridges between these three typical strategies.

Innovation expectations - Kriechbaum, Posch, & Hauswiesner (2021) show how social expectations shape technological trajectories. Social expectations are one of the links between innovation and stakeholders' management. On the one hand companies use influence strategies to shape social expectations, and on the other hand expectations influence the results of innovation. These expectations act as crucial reference points not only for companies, but also for policy makers and the general public. Hyysalo, Juntunen, & Martiskainen (2018) and Liang, He, & Lucy (2021) reinforce this conclusion with a customer's view.

Policies promoting or discouraging innovation - Verbeke & Hutzschenreuter (2021) point out that innovation is an intrinsic process that occurs inside organizations without clarity for external players. But Georgallis (2020) argues that, if public policies aimed at sustainable innovation and improvement are established, firms' investments and innovation will respond to these demands. Looking from the new entrants' side, Hojckova et al (2020) put forward the idea that , in order for radical innovation to succeed, will require agency efforts from the new entrants who will be exposed to the risk of incumbents trying to or create a barrier to their expansion.

Stakeholders lighting sustainability up - Aslam & Ntim (2020) point out that incumbent firms may engage in sustainable strategies in an attempt to obtain legitimization, in response to pressure from stakeholders, despite competitive advantages. Tarim, Finke, & Liu (2020) also emphasize that stakeholders' pressure, in the energy transition context, plays as important a role as regulatory issues. Therefore, stakeholders' influence of stakeholders on firms' adoption of sustainable strategies is very significant.

External conditions shaping where be more sustainable - Countries have heterogeneous sustainability policies for different types of sectors. On the other hand, companies also have heterogeneous performance in terms of sustainability among different locations (NIPPA; PATNAIK, 2021) and (PATALA et al., 2021). Ragosa & Warren (2019) present evidence that policies affect multinational firms' decisions as to where to implement sustainable strategies and where not to. This is especially important when policies for energy transition are not exclusively based on good will for a more positive sustainable performance. Several studies highlight how energy policies, and their results, have their roots in specific social and economic conditions (for example: Swain & Mishra (2019),Liao, Chen, Tang, & Wu (2019),

Fleiß, Hatzl, Seebauer, & Posch (2016), Zhao, Cheng, Zhao, Jiang, & Xue (2019) and Mezger, Cabanelas, Cabiddu, & Rüdiger (2020)).

Ambidextrous strategies, the soft landing - For incumbents, a less radical shift is to adopt a mixed approach, exploiting current business opportunities (despite energy transition) coupled with exploring new opportunities (centered on energy transition). Hansen et al. (2018) show us that this sort of ambidextrous strategy can help firms extract the maximum value from today´s operations, and at the same time take care of building future operations.

Virtuous cycle of innovating and building capabilities - Firm level capabilities are a pre-requisite for firms to innovate in the energy transition context (García-quevedo & Martínez-ros, 2020). In the face of a lack of capabilities, incumbents tend to cooperate on innovation process either with possible new entrants or collateral partners (Pinkse & Kolk, 2010). This sort of cooperation is a driver for generating value, given that both incumbents and new entrants can develop firm-level capabilities for dealing with energy transition (Bass & Grøgaard, 2021).

The six concepts relate to the three generic strategies as per the model shown below:

Figure 2 - model for generic strategies to deal with energy transition

Source: prepared by the researchers.

Table 3 uses examples of strategic initiatives (actions) to clarify strategies emerging from the combination of the three generic strategies for dealing with energy transition and the six strategic concepts regarding energy transition.

Table 3 – Integration of three generic strategies with six strategic concepts

		Energy Transiton Generic Strategies		
		Sustainable Strategies	Influence Strategies	Innovation Strategies
Energy Transition strategy concepts	Ambidextrous	Balance management of today's business efficiency (more exposed to energy transition) and building new business (more resilient in energy transition context)	-	Apply innovation in order to build new business (more resilient in energy transition context)
	Capabilities Building	Build new capabilities to support more sustainable operations and business	-	Leverage innovation through the combination of traditional and new capabilities
	Stakeholder Management	Adopt sustainable strategies responding to stakeholders pressure	Manage stakeholders in order to reduce pressure for sustainability	-
	Internationalization Decision	Adopt sustainable strategies once finds a proficuous business environment on a specific country or region	Negotiate conditions and regulations related to energy transition in return of a foreign investment decision	-
	Expectations Management	-	Communicate to shape and drive societal expectations about energy transition	New technologies and business models changing the overall expectations about energy transition
	Policy Crafting	-	Directly influencing on energy related policy making in order to gain competitive advantage	New technologies and business models triggering policy making and regulations

Source: prepared by the researchers.

5. CONCLUSION

Climate change is an urgent matter for society and for business strategy. In this context, our literature review sought to identify the strategies adopted by incumbents regarding energy transition challenges. The results, demonstrate the existence of the three main strategies adopted by incumbents: (i) sustainable strategies; (ii) influence strategies, and (iii) innovation strategies. Considering those findings, we drew up a model of integration of three generic strategies with major strategic concepts (Table 3).

There is no longer any room for firms that ignore energy transition issues. Markets, consumers, governments, regulations, supply chains and competitors are constantly adjusting their behavior in order to better navigate in this complex background.

This review offers a summarized compilation of the body of knowledge created up to the present in the business management area that tackles energy transition. This study is intended to be an important step on this initial journey.

This literature review describes the freshness of energy transition drive over business management. The main contribution here is the model for generic strategies for dealing with energy transition that embraces a wide range of strategies and strategic initiatives that firms can use to handle this complex concept. The theoretical model proposed here needs to be

validated and improved by means of empirical studies, to verify it in terms of its applicability, and whether it really represents the set of strategies in place and other possible questions in relation to it.

Finally, strategic mechanisms for dealing with the major challenges faced by society is undoubtedly one of the business management fields with the greatest potential impact on society. Firms that know how to use these mechanisms will achieve sustainable competitive advantages. We have a long journey ahead of us to construct the theoretical framework to support this disruptive social and managerial advance.

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