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Development policy to increase the competitiveness of renewable energy-sector companies in a territory like Corsica (France)

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ABSTRACT

The past decade has seen the renewable energy sector really take off, driven by now well-structured industries starting to mobilize now-mature technologies. This developmental shift towards renewable energy has been framed by different policy measures that nevertheless share the same core rationale – climate change. Among the pro-renewables policies adopted by France, the deployment of competitive clusters has proved an effective tool for leveraging the growth of renewables.

Business clusters are geographically-concentrated economic structures assuring the often tenuous link between efficient national industrial policy efforts and regional planning and branding issues. From this perspective, the logic of synergy by connecting global to local issues remains to be created around a new paradigm: regional attractiveness/place branding. In today's fast-globalizing world, the much-hyped concept of place branding has become critical for regions in fierce global competition to capture and secure geographically-mobile investment. In this context, promoting and attracting inward investment is a multidimensional challenge where business clusters have a pivotal role to play. Corsica, a small island economy, represents a case-in-point target of analysis through its long-standing PADDUC project (French decentralization policy on Corsica under the law dated 22 January 2002) and the CAPENERGIES business cluster – a key link in the technological research strand, entrusted with the overriding role of leading the island's transition toward decentralized energy independency. After highlighting the innovative technological approach of promoting socio-economic fabric as one of the key foundations to structured economic development and regional branding, this paper goes on to outline the joint-effect impacts of development of the CAPENERGIES competitive cluster in tandem with the process to find technology-centred solutions to drive development of the "renewable energy" industry in an island economy like Corsica.

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1. Introduction

The aim of this research is to bring further insights into potential synergies between knowledge management, innovation, technological research, applied vocational training and human capital development strategy and the barriers and constraints involved.

Based on its relevancy for energy and economic development policy, the business cluster case is presented as a model of this type of development in geographic island territory.

Chapter 17 of Agenda 21 (1992 Earth Summit in Rio de Janeiro) clearly states that islands are special configurations – both in terms of environment and development perspectives – with specific issues, making them particularly fragile, vulnerable micro-economies. Within the framework of sustainable development policy, energy is the cornerstone of island-scale planning strategy. The traditional energy retail barriers – distance to grid networks, small-scale deployment, distribution challenges and the absence of traditional heavy-user markets – are more than comfortably offset by the extreme abundance of RE sources and the outstanding ability of RE technologies to adapt and integrate. These factors are in stark contrast to the infrastructural inefficiency and high costs of conventional energy systems in island-based regions. Ultimately, islands need to develop into research platforms for test-trialling sustainable energy futures.

The authors of this review emphasize the importance of promoting effective coordination between research, training and enterprise, well conscious of the potential global impact in areas as critical as renewable energy (RE) development in island-territory planning.

Business clusters are geographically-concentrated economic structures assuring the often tenuous link between efficient national industrial policy efforts and regional planning and branding issues. In today's fast-globalizing world, business clusters also represent the French response to inherent constraints in order to increase competitiveness in the global marketplace, consistent with the desire of European authorities to construct a knowledge-based economy.[1] Entry into the global economy does not preclude the issue of strictly-local development concerns. This apparent ambivalence, rooted in the concept of globalization [1], is fully integrated into the progress of business clusters, whose ambition in a given geographic area is to interconnect businesses, research labs, training centres, government and local authorities, all of which synergistically partner up on innovative shared-focus projects [2].

Invariably, the very principle of a business cluster helps forge regional branding policy – the new paradigm ushered in through globalization. Corsica, a small island economy, represents a case-in-point target of analysis through its long-standing PADDUC project (French decentralization policy on Corsica under the law dated 22 January 2002) and the CAPENERGIES business cluster – a key link in the technological research strand, entrusted with the overriding role of leading the island's transition toward decentralized energy independency. After first highlighting the characteristics of the Corsican island territory, this paper sets out to identify the specificities of a territorial governance policy built around the CAPENERGIES cluster from the perspective of the construction of a sustainable island branding plan, which is currently in search of foundations.

2. Methodology and literature review

The aim of this study is to compile arguments, experiences and policies from countries around the world designed to promote RE. The literature review is important to gain a clear picture of existing tools to promote RE. Various authors have used a literature review approach to examine the impacts of the effectiveness of RE policy and development legislation, including Mitchell and Connor [3] for the UK between 1990 and 2003, Cherni and Kentish [4] for China, Lewis and Wier [5] for the international development of wind turbines, Al-Amir and Abu-Hijleh for the United Arab Emirates [6], Hashim and Shin Ho for Malaysia (Tenth RE Plan 2011–2015) [7], Mondola and Koumpetsos for Greece and the Greek islands [8], Arnette and Zobel for RE development in the greater southern Appalachian mountains [9], Valle Costa, Rovere and Assmann for Brazil through the Program to Encourage Alternative Energy Sources (PROINFA) based on EU experience in promoting RES-E and policy instruments adopted by the United Kingdom, the Netherlands and Germany [10]. Byrnes et al. reported on Australian RE policy, presenting the key policy frameworks, incentives and regulatory landscape encompassing the RE sector and giving a critical analysis of the barriers faced by the industry [11]. Kobos, Erickson and Drennen show that institutional policy instruments play an important role in enabling emerging RE technologies to cut costs and gain further market adoption.

Here, it is based on this literature review that we will set a course for our study. Different tools and mechanisms have been used in different countries to promote and encourage RE adoption. An EU directive sets a common pan-European framework on the use of renewable-resource energy in order to curb greenhouse gas emissions and promote cleaner, greener transport. The EU Member States are to establish national action plans which set the share of energy from renewable sources consumed in transport, as well as in the production of electricity and heating, for 2020. These action plans must take into account the effects of other energy efficiency measures on final gross energy consumption (the higher the reduction in energy consumption, the less energy from renewable sources will be required to meet the target). These plans will also establish procedures for reforming net metering, pricing schemes and grid access to promote energy from renewable sources.

In general terms, looking at the worldwide picture, some countries have used subsidies whereas others have used feed-in tariff (FIT) schemes, some have let the free market do the work whereas some have forced their national utilities to purchase a specific percentage of RE [12].

Given the obvious inescapable issues tied to fossil fuels, including the availability of fossil fuels in years to come, RE could well be the key to the energy future.

However, consumption patterns are also changing, and demand for the new product hinges on added value in terms of comfort, economics, social–environmental benefits. New products need to be technologically and economically viable to be successful. Furthermore, the product also needs a support package, i.e. information, awareness, maintenance, quality standards, R&D-driven improvement [13]. The introduction of new technologies thus hinges on three factors [14]:

- The policy framework needs to consider future developments.
- The new technology needs to be budgeted for.
- There has to be a supportive environment, such as capacities for information and awareness.

These criteria to maximize the promotion of new technologies and thus promote RE energy are integrated into the mission duties of French business clusters like CAPENERGIES.

3. Corsican as an exemplary case

Corsica is an island economy marked by the complete absence of any of the big holdings and multinationals that fuel and forge the worldwide economy. Equally rare are any of the kind of

[1] As Patrick DAMBRON states, "*the birth of business clusters in France results from a joint effort by the European Union and the French State. Their definition is connected with the European framework. Their functional principles and their missions are, in fact, dictated by the objectives of the Lisbon Strategy, even if they are adapted to national context, as with the DATAR-DIACT in France.*" (Dambron, 2009, p.149).