

– **Nome e estatuto de ligação ao CEG-IST**

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– **Título da apresentação**

***The Role of Natural Capital in Business Ecosystem Resilience***

– **Resumo**

The Natural Capital is a key concept both in ecology and economy. How to relate Natural Capital with business performance? And will ignoring volatility and extreme events arising from Natural Capital degradation, scarcity or depletion increases business fragility by affecting its resilience? Also, how can the systemic integration of Natural Capital into the business strategy transform 'fragility' into 'resilience'... and towards 'antifragility'?

– **Conteúdo**

The concept of Natural Capital can be shortly summarized as the finite stock of natural assets - biodiversity, air, water and land - from which goods and services flow to benefit society and the economy. This is a key concept both in ecology and economy and was developed in the 1980s by 'hybrid thinkers' like Daly and Costanza *inter alia*, strongly influenced by acclaimed scientific minds from Edward Wilson and Schummacher to Marx and Ostrom. Also, by 'Natural Capital' it is considered the various ways that the environment powers production and supports critical aspects of human development. It provides an extended concept of 'land' and includes largely other aspects not directly convertible in human, labor, technological or economic capital like ecological services provided by the Earth systems. The role of natural capital in the definitions of limits to growth has been determinant and this concept has helped in bringing environmental issues into business strategic thinking and decision-making.

So, what could be the expected relevance of Natural Capital for business strategy, and how to relate Natural Capital with business performance? Some authors focus on the concept of 'Business Ecosystem' as a dynamic structure which consists of an interconnected population of organizations, which includes small firms, large corporations, universities, research centers, public sector organizations, and other parties which influence the system. Thus considered, a business ecosystem would develop through self-organization, emergence and co-evolution, acquiring adaptability through trial-and-error and resilience.

Following this trail of thought, the concept of 'resilience', generally accepted as the capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure, can be considered as a bridging concept that will help to disclosure the type of relation existing between business strategy and Natural Capital. Thus considering the latter hypothesis, the following assumptions must be put into perspective:

- a) Resilience is a key factor for the development and growth of business ecosystems, and
- b) Ignoring volatility and extreme events arising from Natural Capital degradation, scarcity or depletion increases business fragility by affecting its resilience.

This leads us to another key element of the main research question - how to relate Natural Capital with business performance? - which is 'fragility'. 'Fragility' can be defined as an accelerating sensitivity to a harmful stressor. 'Antifragility' is the opposite, and is defined as a positive response to a stressor or source of harm (for some range of variation), leading to a positive sensitivity to increase in volatility or variability, stress, dispersion of outcomes, or uncertainty to some point.

Considering the above on the construction of the research hypothesis, the objective of the current research is to analyze to which extent Natural Capital has a central role in business resilience. Also, how can the systemic integration of Natural Capital into the business strategy transform 'fragility' into 'resilience'... and towards 'antifragility'?

– **CV**

Biologist, specialized in conservation & applied ecology (FCUL). Worked for the private sector and NGO's as consultant in sustainable business and ecological management. Researcher in Business Strategy and Natural Capital. Post-graduated in Geography and Environment (FCSH-UNL)