

BIO-ECONOMY COURSE MAY 2017
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Economic regulations in the frame of
Bio-economy

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INTRODUCTION

- The concept of bio-economy has existed since 1925, but emergence in the 70's and real consideration in the 2000's
 - From a theoretical point of view, bio-economy is an economic theory developed by Nicholas Georgescu-Roegen at the beginning of the 1970's.
 - The concept of bio-economy covers the agricultural industry and all manufacturing sectors and their respective service areas, which develop, produce, process, reprocess or use them in any form of biological resources such as plants, animals and microorganisms.
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INTRODUCTION

A real world stake

- The sector of the bio-economy in the EU would already represent a turnover of about 2 000 billion euros and would employ more than 22 million people, that is 9 % of the total working population
- Modification of the sources of energy: perpetual renewal and limit to the global warming
- A fundamental innovation: waste as source of energy
- Synergy of the skills
- Conformity with the expectations of the stakeholders

Opportunities for the firms

- Communications tool of companies
- Creation of new activities and markets
- Essential argument to attract the new talents (For the human resources, it could be tool of motivation and development of worker's loyalty)
- Dominating marketing argument
- Answer to consumer expectations (safe and healthy food, environmental protection, ...)

INTRODUCTION

Concerns

- Higher price for the consumers
- Problem of knowledge of the risks and side effects : does the stakeholder have a fair and transparent information ?
- Many scandals in the industry and finance
- Insufficient policy interaction and stakeholder's engagement
- Mistrust due to "green washing"

Potential threats

- Costs of research and development
- Needs of new technologies
- Invention, but limited innovation (limited industrial application)
- Importance of the ethics and the business ethics of the scientists, in charge of the innovation (example of the apprentice-wizard)
- The outsider model : the dominance of the collection of the profit

PRELIMINARY ASSESSMENT : NEED OF EFFICIENT REGULATION

- Bio-economy is therefore a real way to rethink the economy after the disappearance of the fossil energies, but we have to make the choice between green washing and the future of our planet
 - A number of conditions must be fulfilled in order to provide a real transition, and this is not always the case :
 - - Transparency
 - - Fair information
 - - International coordination
 - - Fair evaluation of new products
 - - Involvement of the stakeholders (emergence of an effective opposition force)
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SPECIFIC ISSUES

- The fear of novelty
- The customers adore the technological innovations in the electronic and the communications domains, but are very hostile to the progress and the innovations in the field of health and of food
- The precautionary approach : for example, GMO's are massively allowed in South America without problems until today for human health, but are forbidden in Europe because of this principle
- However, there is a paradox because, on the one hand, the notion of bioeconomy is very recent, but certain products stemming from the biotechnology are very old on the other hand
- One example : brewing beer in 6.000 BC (*Pr. Dr. Constantinos E. VORGIAS, "bioeconomy and biosystems", p. 31, Bioeconomy course 2016, <https://bei.jcu.cz/course-presentations-2016/constantinos-e-vorgias-bioeconomy-and-biosystems>*)

SPECIFIC ISSUES

- Situation of asymmetries of information



SPECIFIC ISSUES

- Destructive creation (Schumpeter)
 - It is the process which revolutionizes presently from the inside the economic structure, by destroying constantly its old-looking elements and by creating constantly new elements.
 - Creative destruction in the Old Economy is an important and necessary feature of the technological transition induced by a major new technology.
 - But in the field of bioeconomy, this process can strike a blow at the environment, in particular in the case of the GMO's which can upset the balance of an ecosystem or remove certain animal or vegetable species
 - In such a hypothesis, the effects are irreversible, and the replacement by the innovation does not allow to compensate for such an imbalance, what goes against the underlying principle of sustainable development inherent to the bio-economy
 - Then, it is clearly unlikely that the victims of these processes would believe in the virtues of 'creative destruction'.

HOW TO RAISE THE OBSTACLES ?

- Actually there is a gap regarding the regulatory frame both in terms of processes and in terms of transactions and the EC has prioritized the issue. The examples from previous platforms (cell factories, GMO's, Labeling, Stem Cells etc) were rather disappointing due to the lack of a proactive regulation and they did cost to the European economy a lot (Interview with Dr. George SAKELLARIS, March 13th, 2017)
- The main question is therefore to find the efficient tools to regulate a multidisciplinary sector and which includes numerous businesses and different jobs such as agriculture, forestry, horticulture, fisheries and aquaculture, plant and animal breeding, food and beverage, wood, paper, leather, textile, chemical and pharmaceutical industries up to branches of energy industry.

TRADITIONAL REGULATORY POLICY INSTRUMENTS

- The law

- The law can define itself as the way for a state to regulate relationships between the individuals and the community on a determined territory
- From the point of view of the trade, the law specifies simply what can be sold and on which conditions
- The limits are then obvious: the law does not guarantee the quality of products and limits itself to the territory of a state. So, certain harmful products are freely sold, such as the tobacco, or in certain countries, it is possible to have a gun on the street.
- Thus there are no common rules at the international level, if it is in very precise domains which do not run the sectors of the bio-economy

TRADITIONAL REGULATORY POLICY INSTRUMENTS

- Conduct of professionals
- The business ethics send back in a set of rules with which is equipped a profession through a professional organization which becomes the authority of elaboration, implementation, surveillance and application of these rules (Isaac, 1998, p.981)
- But the bio-economy recovers numerous sectors and different jobs, so that it seems impossible to establish a coherent transverse business ethics for the set of the concerned domains

TRADITIONAL REGULATORY POLICY INSTRUMENTS

- The morality
- The morality can define itself as all the ways implemented to act in a human way and consists in a set of concrete prescriptions adopted by individual and collective economic agents.
- From a more universal point of view, the morality bases itself on the discrimination between the good and evil.
- For some, to speak about morality in the field of the management is a nonsense, because the business world obeys firstly to the law of the profit.
- And how to define what is good or evil ? Selling weapons which kill people seems to be amoral, but thanks to this industry, firms are creating a lot of jobs and it allows a state to defend its territory and its citizens
- Finally, a quality product for a company is a product which is sold

TRADITIONAL REGULATORY POLICY INSTRUMENTS

- Ethics

- It is a science of the behavior of the customs. It is so about a theoretical study of the principles governing the practical choices
 - These rules are based on the distinction between the right and the bad
 - With regard to the morality, the ethics has to allow the individual to assert its word and its own interests
 - The current paradox is that they are often not ethical considerations, as for example are risks bound to the degradation of the image and the reputation, the threat of trial, which are on the base of the efforts realized by companies to adopt and respect an ethical policy
 - It is thus a question more than a constraint than a real will
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FIRST CONCLUSION

- No traditional way of regulation allows to bring a satisfactory regulation of the bio-economy
 - It is essential to have an international and multidisciplinary authority, capable of substituting itself for states and for existing international organizations
 - It is just not a question of regulation, but especially to bring to the stakeholders a clear and transparent information about all the aspects of the bio-economy and the products stemming from this sector
 - It is also necessary to incite and to include the stakeholders, and members of the civil society, so that the stakes in the bio-economy are shared by all and become a common concern
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THE B.B.E.E BOARD FOR BIO-ECONOMY EVALUATION

- **A lesson to be learned :The failure of rating agencies**
- As “gate keepers” of the fixed income markets, rating agencies had a key role to play in reducing the asymmetric information between the issuer of a security and investors. Yet three characteristics of rating agencies are troublesome. First, since the beginning of the 1970s, rating agencies have been paid by the issuers. In an investigation by the Securities and Exchange Commission in 2008, it was found that senior analytical managers and supervisors participated in fee discussions with issuers and that the analytical staff also discussed ratings decisions and methodology in the context of fees and market share. At the same time, rating agencies provided related consulting services to issuers. Second, rating agencies are not liable for the quality of their ratings as their responsibility in information provision to the public has been found in courts to be closer to that of a journalist than to that of an auditor. Finally, the possibility for issuers to approach several rating agencies and “shop” for the best possible rating implies that the market only sees the most optimistic ratings that have been purchased by the issuer.
- (*“The credit rating industry: Incentives, shopping and regulation”, Xavier Freixas, Joel Shapiro 18 March 2009*)

THE B.B.E.E.

MAJOR FUNDAMENTAL PRINCIPLES

- 1. It is totally forbidden for the Board to maintain business relationships with the companies products of which are estimated.
- 2. It is totally forbidden for the Board to supply advice or recommendations of whatever nature to companies
- 3. When the Board is consulted to express an opinion on a product, no cost or financial contribution must be paid by the company which requests the evaluation (The financing of the Board can result from public or private money, but through annual subsidies via a foundation for example)
- 4. Priority objectives: independence, transparency, fair information, no lobbying
 - **Mission of the B.B.E.E.**
- *The mission of this board is not to determine which product is dangerous or marketable, but to supply a clear and transparent evaluation on the risks and the effects of new products on the human health and the environment*

THE B.B.E.E. COMPOSITION

- Independent experts
(stakeholders)

- 7 persons
- No link with firms
- Different specialities (chemistry, economy, marketing, agriculture, fisheries, etc ...)
- Selected or elected for 4 years, renewable once

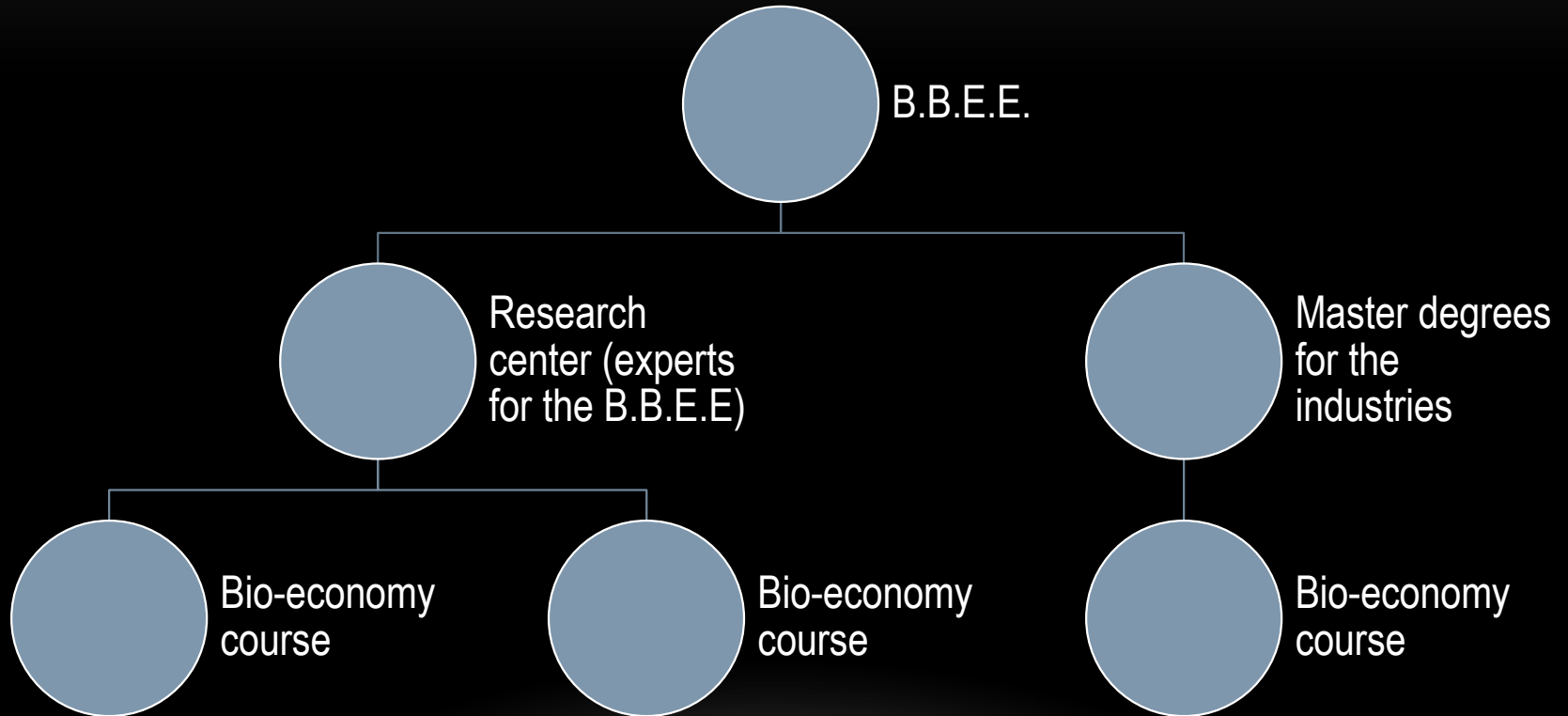
- Business representatives

- 7 persons
- Selected by the firms
- Have to bring sufficient informations about the products
- Scientists or executives

THE B.B.E.E. METHOD OF VALUATION

| Stakeholders | Business representatives | Signification |
|--------------|--------------------------|--|
| A | 1 | Risks and slide effects known and mastered |
| B | 2 | Risks and slide effects known, and mostly mastered |
| C | 3 | Risks and slide effects mostly known |
| D | 4 | Risks and/or slide effects not confirmed |
| E | 5 | Not enough efficient informations to evaluate |
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THE B.B.E.E. A COMPLETE ORGANIZATION



CONCLUSION

- The bio-economy is apparently a major stake for the planet and its conservation, as well as a real opportunity to bring to the foreground a new economy model
 - From this perspective, whether it is for the environmental protection or a creative harmonious economic growth of jobs and wealth, the stakeholders and the industrialists share the same interests
 - The B.B.E.E. could thus be the tool allowing to raise the obstacles and the apprehensions of the various parts and so favor the real development of the economy in all its aspects
- **So, nothing to add if it is not : Let us make the set !**

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- THANK YOU VERY MUCH FOR
YOUR ATTENTION

- ANY QUESTIONS ?
