BIOECONOMY IN THE HALAL ECOSYSTEM: OPPORTUNITIES & CHALLENGES
Halal Bioeconomy: Sustainability and Self-reliance

August 18, 2015
“When your own life is threatened, your sense of empathy is blunted by a terrible, selfish hunger for survival.”

— Yann Martel, *Life of Pi*
Restrictions:

Methods:

Resources:

Actual economic growth model

Effects

Energy insecurity

Food insecurity

Public health

Climate change

Unsustainable production

Natural resources

Labour resources
Economy: Current Scenario

The present global economic development model is not able to ensure and to promote a sustainable development.

The direct and indirect effects of the classical model of economic growth may have a negative impact on the natural, social and cultural environment.

The actual economic growth model is based on an unsustainable production, which uses extensively the natural and labour resources. This model can be a reason for food and energy insecurity and the climate change across the world which also affects the public health.
The next wave of economy is Bioeconomy, which produces economic growth and wellbeing.
Bioeconomy: Born from necessity of SURVIVAL

50% more food

Due to population growth, by 2030 the world will need:

- 50% more food
- 45% more energy
- 30% more water
- 45% more energy

People are forced to find alternatives to non-renewable raw materials.

- Climate change
- Scarcity of non-renewable raw materials etc...

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The Bioeconomic models are based on the economic paradigm that values are derived from *impacts on human welfare*. The objective function in bioeconomic models is to allocate environmental resources to those uses that yield the highest net benefit to human beings. Assessing the impacts of environmental management changes requires analyses of human welfare effects. To develop a new Bioeconomic model it is necessary that it is for development of human society. It requires a change of old concepts, especially economic ones and their connection to specific environmental management and the current crisis. In this respect, the basic components of the concept of sustainable development are: bioeconomy and environmental protection.
Bioeconomy

• Thus, the bioeconomy should develop mechanisms, criteria, tools, models of social development.
• Finding optimal alternatives between economy and environment depends on the ability of decision makers to choose and use financial and economic instruments to promote environmental protection activities and human welfare.
• Bio-economic modelling allows this assessment by evaluating the costs and benefits associated with environmental resource use.
Bioeconomy

- Bio-economic models offer a useful addition to existing biophysical/ecological models by allowing thorough analyses of socio-economic values, and making testable predictions about environment-human interactions.
- It is now to develop the integrated modelling, and use the bio-economic modelling experiences, as economic costs and benefits.
- Future modelling efforts should aim to include market and nonmarket impacts of environmental changes in their framework.
- Enhanced representation of natural processes and dynamics would improve the ability of bio-economic models.
OECD and Bioeconomy

- OECD recognizes the importance of bioeconomy in the International Futures Programme (IFP)
- The main idea is; “the application of biotechnology to primary production, health and industry could result in an emerging ‘bioeconomy’ where bioeconomy contributes to a significant share of economic output”

Research Analysis: OECD and Bioeconomy

To find the external elements which will drive the bioeconomy to 2030

Analysis divided into two time periods

- 2012-2015
- 2016-2030
The European economy tried to implement this new approach in order to maximize the socio-economic positive effects.

The bioeconomy covers 17% from the EU27’s GDP and 9% from the European total employment.

The largest share of annual turnover of the European bioeconomy is covered by food, followed by agriculture and paper/pulp with new avenues opening.
Bioeconomy represents a way of fighting against the main challenges of the present global economy: ensuring food security, managing natural resources sustainably, reducing dependence on non-renewable resources, mitigating and adapting to climate change, creating jobs and maintaining competitiveness.
Halal: Inroads into Global Economies

- It can be labelled as Islamic Economy which is gaining momentum.
- In Halal Food Brazilian BRF group is investing USD 90 million in a production facility in UAE.
- France invested in new Halal testing technologies.
- Islamic Finance saw arrival of SUKUK in UK, Luxembourg, Hong Kong and South Africa.
- Spain, Japan, Philippines, Russia putting an enhanced focus on attracting Muslim customers.
- Luxury hotel chain Shaza, that is Halal lifestyle focussed plans expansion.
Halal: Inroads into Global Economies, WHY?

- 2013: Muslim Market size: USD 2 Trillion
- 2019: Potential Muslim Market: USD 3.7 Trillion
Global Islamic Economy Indicator Methodology

• A barometer of the state of the Islamic economic sectors across their fundamentals

• Aims to introduce a new way of measuring development by combining data from the various key elements of the sectors into a singular composite indicator

• The Global Islamic Economy Indicator is a composite weighted index that measures the overall development of the Global Islamic economy sectors by assessing the performance of its parts in line with its broader social obligations. It is a global level composite indicator with selected national and industry component level indicators
Global Islamic Economy
Indicator: Leading sectors

• Islamic Finance
• Halal food
• Travel
• Pharma & cosmetics
• Media and Recreation
• Fashion
Global Islamic Economy Indicator: Leading Countries

- Malaysia
- UAE
- Bahrain
- Oman
- Saudi Arabia
- Qatar
- Kuwait
The Economic Islamicity Index (EI²)
Rehman and Askari

- EI²: A measure of the Islamicity of countries.
- Islamic countries: *How Islamic are they in practice?*
- A list of proxies developed to compare some key dimensions of economies such as:
  - Economic Opportunity and freedom
  - Justice
  - Access to Employment
  - Equity and Social welfare
  - Education
  - Financial systems
Constructing the Index: EI²

Islam has laid down clear injunctions in the Quran for the following:

- **Equal economic opportunities** for all members of society & economic freedom
- Economic equity
- **Personal property rights** and sanctity of contracts
- **Job creation** for all that can and want to work & **equal availability of employment**
- **Equal availability of education**
- **Poverty prevention and reduction;** basic need fulfillment of food, shelter, clothing and rest; and alms giving to charity
- **Taxation** to meet the unfulfilled needs of society & to address social issues generally
- Appropriate management of **natural and depletable resources** to benefit all members of current and future generations,
- **Abolition of corrupt practices**
- Establishment of a supportive **financial system**
- Good governance, respect for human rights, freedom of choice
<table>
<thead>
<tr>
<th>Islamic Principles</th>
<th>OECD Principles</th>
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</thead>
<tbody>
<tr>
<td>Promote transparency, consistency and equality of law</td>
<td>Promote transparent and resourceful market with rule of law and division of responsibilities</td>
</tr>
<tr>
<td>Maintain and strengthen a good relationship with superiors and clients.</td>
<td>Uphold basic shareholder rights and ownership rights</td>
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<tr>
<td>Equitable distribution of wealth among stakeholders.</td>
<td>Focus more on creating wealth and job opportunities and protection of minorities</td>
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<tr>
<td>Accountability is not only to the company board or stake holders, but also to Allah the ultimate authority</td>
<td>Accountability remains confined to company and stakeholders.</td>
</tr>
<tr>
<td>God being the ultimate owner and the society is considered as stakeholders</td>
<td>Free market</td>
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</tbody>
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KEY OPPORTUNITIES

**Halal Food**
- Halal food value chain
- Halal food SMEs seeking Islamic financing
- Building global or regional brand that deliver on halal integrity

**Islamic Finance**
- Convergence of Islamic finance with halal market
- Hajj savings and funds
- Crowd funding and SME financing

**Halal travel**
- Luxury Muslim market services
- Family-friendly and business travel

**Modest Fashion**
- Expansion of online start-up brands with retail outlets
- OIC-based exporters

**Media & Recreation**
- Broadening of genre, gaming
- Marketing partnership with other halal lifestyle sectors

**Pharmaceuticals & Cosmetics**
- Halal Nutraceuticals
- Halal vaccines
- Halal Pharmaceuticals
Key Challenges

- Regulations/ Standardization/ Compliance
- Halal-certified raw materials/ supply chain integrity
- Human capital development and training
- Consumer education
- Global positioning (variances in terminology, e.g. Shariah-compliant, Halal, Muslim-friendly, family-friendly)
- SME/ venture financing
- IP protection
- Operational excellence: quality, competitive, innovative, and profitable solutions.
Halal Bioeconomy

For Many-
Islam is “Way of Life”

God Consciousness
Family values
Modesty
Dietary law/healthy
Just and equitable
financing
Education
Spirituality
Social Responsibility

... Touches Many Sectors

Food and food
services
House financing
Recreation
Clothing
Service
Education
Service/Charity
Personal care
Business to business
infrastructure

...Values with Universal
Appeal

Just and equitable
business
Zakat- charity
Family values
Fasting/self-control
Wholesome food
Education
Halal Solution-driven experts

• Through cooperation and combining technologies, we can achieve wellness-promoting and sustainable products and services complying with Islamic Injunctions.
• Technologies, procedures and expertise should be developed within OIC and can be transferred and applied globally.
• Bioeconomy solutions produced in the Muslim world can advance sustainable global welfare and still being Shariah compliant.
• Community based strategies: The basis of Islam