

Entrepreneurship and Innovation Summary Notes

Chapter 3 – Entrepreneurship and Sustainable Development

For centuries, entrepreneurs have been free to exploit the environment without thought of sustainability.

Entrepreneurship during times of economic crisis:

- Innovative ideas emerge during time of crisis
 - Entrepreneurs are the engines of job growth and create more jobs than large established companies
 - Breakthrough inventions are contributed disproportionately by independent inventors and entrepreneurs
- Recessions seem to spur innovation – eg. Microsoft was formed during the Vietnam War
- Economic downturns can have positive effects. They can force companies to increase their efficiency, cut waste and strive to be smarter
- 50% of the fastest-growing companies of today were founded in time of crisis

Stern update: Better Growth, Better Climate (2014)

- There is no need to choose between fighting climate change or growing the world's economy
- Business can create growth and reduce their carbon emissions
- Innovation and investment make it possible to tackle climate change at the same time as improving economic performance (eg. Hydrogen cars, environment-friendly clothing by H&M)

Five basic problems associated with climate change:

- Population
- Energy
- Water
- Food
- Biodiversity

Population problem:

- 78 million people are added to the world's population each year and every day, close to a billion people go hungry
- Density is highly unequal, but half of the world's top 25 most populated countries are in the Asia-Pacific region
- Populous countries have high rates of entrepreneurial activity, although many are 'necessity entrepreneurs'
- Population opportunities for entrepreneurs include:
 - Overpopulation – finding safe drinking water, pollution, disease, unemployment, crime rate, education
 - High youth population – social internet, music, fitness, cheap cars, fashion

- Aging population – age-defying products, dental care, hearing aids, travel, medical provision, labor-saving and food preparation services

Water problem:

- Water is difficult to purify and impossible to substitute. More than two-thirds of our planet is covered in water, and the human body is mainly made of it
- The water crisis is due to poor government (mismanagement of available water) causing issues with availability, quality, capture, transportation and storage
- Business opportunities exist in:
 - Drinking water and sanitation
 - Virtual water trade (water embedded in production) – can entrepreneurs in countries with high amounts of water resources concentrate on the production of water-intensive goods?
 - Collection, storage and transportation
 - Desalination
 - Toilets
 - Conservation
- Avoid bottled water – more expensive than petrol and contributes greatly to greenhouse emissions

Biodiversity problem:

- Biodiversity refers to the variety of life in all its forms, and entrepreneurs contribute to species extinction
- Working ecosystems rely on species biodiversity, which provides essential environmental services such as purification and protection of water/air resources
- The greatest damage to biodiversity results from necessity entrepreneurs in rainforests
- Biodiversity entrepreneurs generate income while protecting or enhancing biodiversity
- Business opportunities exist in:
 - Nature-based tourism
 - Soil improvement for agriculture
 - Aquaculture for food
 - Carbon sequestration in biomass – capturing CO₂ and storing it to defer global warming effects
 - Crop genetic diversity – more variety and breeding for higher yields or ones that can sustain extreme conditions

Food problem:

- The human right to food is in the Universal Declaration of Human Rights, yet hunger and malnutrition are the biggest risks to health worldwide
- Food production is a major cause of climate change, and the affects of climate change are making it worse (less usable land)
- Deforestation practices for farmland

- Food entrepreneurs are a critical link between agriculture, industry and science. They also need to be aware of the most vulnerable locations in terms of risk aversion and opportunity
- According to 2015 research, average Australian household throws out \$1036 worth of groceries a year. YUME link food outlets to connect surplus food, collecting professional leftovers

Energy problem:

- Fossil fuels are largest source of energy, but non-renewable. Energy consumption is growing continuously and reserves are reducing
- There are many entrepreneurial inventions that depend on fossil fuels, such as aeroplanes, cars, power plants, paper, plastic, rockets and electric lights

Climate change economics for entrepreneurs – entrepreneurs need to know basic principles of climate change economics, which refers to how economic activity affects the environment. Climate change economics seeks:

- Economic solutions to minimize harm to the environment
- While allowing maximum economic benefit

Climate change economics incentives:

- Sometimes entrepreneurs are unable to act sustainably
- Why should they take costly sustainable actions when their competitors do not?
- Entrepreneurial sustainability may be punished rather than rewarded

Incentives include:

- Emissions trading scheme are an entrepreneurial way of controlling pollution by providing incentives for achieving reductions
- Peak resource theory applies to any resource that can be harvested faster than it can be replaced