



Course 1.2

Creative Destruction, Disruption and Role of Change

UN-Wide Capacity Building Workshop on Technology for Development:
Innovation Policies for SDGS in the Arab Region

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Creative Destruction, Disruption and the Role of Change

- 1. Creative destruction**
- 2. Disruptive innovation**
- 3. Change and innovation**

1. Creative Destruction

- **Schumpeter (1943)** chapter VII in *Capitalism, Socialism and Democracy*
- Capitalism: evolutionary process, never stationary
- Growth = new products and technologies destroy old
- Creative destruction is the essence of capitalism
- Assumption: Imperfect competition
- Monopolies, large firms, are better innovators, contribute more to growth
... capacity to face uncertainty, and finance and produce innovation

1. Creative Destruction (... continued)

- Policymakers need to have a dynamic perspective
- Creative destruction renders traditional understandings of competition unworkable
... competition is appearance of new product, technology or organization
- Competition that matters – game changer
- Creative destruction is not a neutral concept: it creates clear winners and losers
- Post-millennium international economy is more dynamic and volatile than in Schumpeter's day

2. Disruptive innovation

- **Christensen (1997)** disruptive innovation creates a new market and value, unexpected by incumbents
- Disruptive technology term used interchangeably
... true only when imbedded in a business or innovation
- Profound effect on economy, community, individual
- Dominant firms are poor disruptive innovators
- Start-ups & SMEs have competitive advantage
... redefining the use value of a product or a service and aiming at simplicity, convenience and cost
- Disrupters eventually become new incumbents

2. Disruptive innovation

- Firm-level concept, ... macro effects are long-term
- Example disruption becoming incumbent: Japanese engineering and technology companies
... '60s-'70s disruptive forces (e.g. Sony, Nippon Steel, Toyota...) switch to incremental innovation in the '90s, in '00s themselves disrupted
- Policy: fund innovators-entrepreneurs that disrupt!
- Three criteria that policy support needs to consider:
 1. Demand not met by current too expensive product
 2. Technology and business model can make a profit
 3. Innovation disrupts all firms (not just a few)
- ***Not all innovation is destructive or disruptive:
Policy can support incremental innovation too***

3. Change and innovation

Q: when does innovation occur?

- Not because of increased spending on R&D
- Innovation: entrepreneurial activity
- Social, economic (environmental?) **change** ...
... incentive for firms to respond
- Some examples?
... demographics, markets, new technology, new knowledge, threats (manmade, natural), regulations (standards, int'l harmonization), contradictions... creative destruction or disruptive innovation...
- Response?

3. Change and innovation: Response?

- Targeted, but also often accidental
 - ... innovation is largely an empirically endeavour, trial and error
- Improving absorptive capacities: internalizing tacit and experiential knowledge
- Failure is good
 - Valuable feedback, experience
 - Alternative solutions
 - Do not fall back on *linear innovation thinking* to try managing uncertainty and risk of innovation
- Startups and SMES vs. Large firms, Monopolies

3. Change and innovation: Policy response?

- Focus dilemma:
 - Major national or regional firms, banks ... or
 - Startups, SMEs, incubators, VCs
- Innovation system requires both
- Change, in policy environment
 - ... clear and unambiguous communication, setting correct expectations
- New knowledge, tech in a development context?
 - ... lead times in years, decades, need for policy bias towards identification, adaptation, commercialization