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
  o Valuable feedback, experience
  o Alternative solutions
  o 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:
  o Major national or regional firms, banks ... or
  o 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