Potential effect on employment in developed and developing countries

By

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Expert Group Meeting on Exponential Technological Change, Automation and Their Policy Implications for Sustainable Development
Historically both regions are closely linked with respect to technological change

- International investment and trade cycle (Vernon)
  - Advanced nations are first movers to development and commercialization of advanced technologies and products
  - Markets in advanced nations become saturated and more competitive driving cost pressures up
  - At this stage, developing nations begin incorporating into the international supply chain
  - Eventually they become both consumers and producers of these technologies and products
Is it plausible that advanced automation technologies break this pattern?

• Two considerations
  ➢ Perhaps with automation technologies there will not be need to offshore processes to developing nations
  ➢ Perhaps the growing S&T capacities of developing nations will lead to capturing more of the automation industry from the start

• Difficult to know
  ➢ Regions with very different endowments
  ➢ Regions going through very different political process
Potential effects of automation technologies on employment

• In advanced nations
  ➢ Large pool of advanced human capital
  ➢ Large pool of financial resources
  ➢ Already existing large base of high quality critical infrastructures

• Possible areas of positive effects of robotics and automation
  ➢ Maintenance
  ➢ API
  ➢ Insurance and procurement

• Not really a problem unemployment

• These opportunities would likely be available to the high-skilled sectors of the population
  ➢ This may or may not contribute to inequality in a significant way
Potential effects of automation technologies on employment

• In emerging nations
  ➢ Limited pool of advanced human capital
  ➢ Limited pool of financial resources
  ➢ Poor base of critical infrastructures

• Possible areas of positive effects of robotics and automation
  ➢ Maintenance
  ➢ API
  ➢ Insurance and procurement

• Not really a problem of unemployment, but perhaps a problem of informality

• These opportunities would likely be available to the high-skilled sectors of the population too
  ➢ As things stand today in developing countries this would certainly lead to higher inequality
Potential effects of automation technologies on wages

• Similar effects across regions materializing at different time windows
  ➢ Low-skilled population -> very likely downward pressures
  ➢ Medium-skilled population -> likely downward pressures
  ➢ High-skilled population -> unknown
Potential effects of automation technologies on structure of labor markets

• Advanced automation technologies likely to change the meaning of “work” and of “having a job”
  ➢ Larger base of small firms
  ➢ More flexible contracts

• Growing tensions between inequality and the pace of technological progress on both regions
Potential effects of automation technologies on structure of labor markets

• Paradoxically advanced automation technologies may help expand the welfare protection net in both regions
  ➢ Low cost healthcare
  ➢ Low cost massive higher education
  ➢ Environmental protection
  ➢ Create new markets for “low-skilled” labor

• Symptoms in developing nations are not promising
  ➢ Uber