

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





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