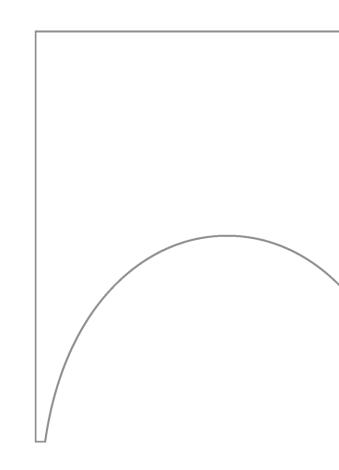


Automation

Ethical Aspects

Prof. Michael Zichy





Ethical Assessment

- Very generic: no specific scenario, action or policy, no detailed data
- No judgement, but a first appraisal



- Three fundamental moral values
 - freedom/autonomy
 - wellbeing/quality of life
 - justice/equality
- Who is affected?
 - > companies
 - > skilled workers
 - > unskilled workers
 - developed countries
 - developing countries



Three Analytical Questions

- What are the positive and what are the negative effects on a stakeholders freedom/autonomy?
- What are the positive and what are the negative effects on a stakeholders wellbeing/quality of life?
- What are the positive and what are the negative effects on a stakeholders equal opportunities?



Ethical Matrix

	6

Ethical values	Freedom/Autonomy	Wellbeing/Quality of Life	Justice/Equality
			7

Ethical values Affected groups	Freedom/Autonomy	Wellbeing/Quality of Life	Justice/Equality
Companies			
Skilled workers			
Unskilled workers			
Society - developed countries			
Society - developing countries			8

Ethical values Affected groups	Freedom/Autonomy	Wellbeing/Quality of Life	Justice/Equality
Companies	 greater choice of work forms (humans or machines) 	reduced labor costshigher productivity	 concentration of capital competitive disadvantages for SME/those who cannot employ/afford automation
Skilled workers			
Unskilled workers			
Society - developed countries			
Society - developing countries			9

Ethical values Affected groups	Freedom/Autonomy	Wellbeing/Quality of Life	Justice/Equality
Companies	 greater choice of work forms (humans or machines) 	reduced labor costshigher productivity	 concentration of capital competitive disadvantages for SME/those who cannot employ/afford automation
	 New jobs (and choices) will possibly emerge 	new job opportunities might emergemore leisure time (?)	
Skilled workers	 less jobs for choice 	 will lose (fulfilling) jobs wages will go down (at least short term) some will remain without jobs 	 higher competition on the job market (at least short term)
Unskilled workers			
Society - developed countries			
Society - developing countries			10

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Unskilled workers	•	less jobs for choice	 less dangerous and dull jobs some will upgrade (education, training) will lose jobs (very likely permanently) wages will go down 	 higher competition on the job market deteriorating situation for already underprivileged group
Society - developed countries				
Society - developing countries				11

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Society - developed countries			 cheaper products/services higher productivity automation might replace missing human workforce (demographics) technological innovation and new jobs more leisure time (?) higher public spending higher taxes (?) 	 concentration of capital (knowledge, technology and wealth)
			 social and political tensions (due to high unemployment) 	
Society - developing countries				
				12

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Society - developing countries			 some might adopt new technologies and take advantage of them severe job losses social and political unrest cheap imported products/services might harm local markets 	 withdrawal of production/deindustrialization of developing countries/ reindustrialization of developed countries will find it hard/impossible to compete

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Conclusion

- At the moment, the harms of automation seem to outweigh its benefits
- The issue of inequality both within and across countries – is the most pressing issue.
- Automaton cannot be stopped
- Governments must react



Recommendations

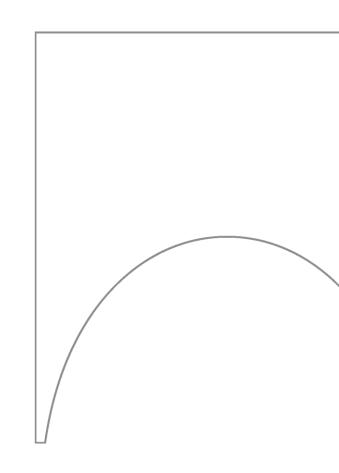
- support/protect developing countries
- invest in education: technology and creativity (humanities, arts and culture)
- support small and medium enterprises
- adapt taxation systems and redistribute wealth
- develop strategies for (unskilled) left-behinds
 - Provide basic living means (basic income etc.)
 - Provide meaningful activities
 - invest in social volunteering & community building
 - invest in arts & culture
 - invest in basic social education



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Skilled workers	- less jobs for choice	 - will lose (fulfilling) jobs - wages will go down (at least short term) - some will remain without jobs 	 higher competition on the job market (at least short term)
Unskilled	- less jobs for choice	+ less dangerous and dull jobs+ some will upgrade (education, training)	higher competition on the job marketdeteriorating situation for already
workers		- will lose jobs (very likely permanently)- wages will go down	underprivileged group
Society - developed		 + cheaper products/services + higher productivity + automation might replace missing human workforce (demographics) + Technological innovation and new jobs + more leisure time (?) 	 concentration of capital (knowledge, technology and wealth)
countries)		 higher public spending higher taxes (?) social and political tensions (due to high unemployment) 	
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