Industrial Policy for SMEs (IPS)
Introduction
(Class 1)

Sandrine Labory

Industrial Policy and sustainability

Industrial policy = policies aimed at promoting structural changes in industries

Structural changes?

- New products
- New markets (extent of the market)
- New processes (production process)

Generally important when new technologies appear

Industrial economics versus management course

- Both disciplines are interested in the firm, its strategies, organisation and performance
- The point of view of industrial economics is the firm relative to its competitors, hence the unit of analysis is the industry, the market where competition takes place
- Management courses focus on the single firm, not the set of firms competing on a market

DEVELOPMENT OF THE DISCIPLINE OF INDUSTRIAL ECONOMICS

- 1950s and 1960s: SCP paradigm, with stress on empirical studies
- 1970s onward:

  Big theoretical developments with the use of GAME THEORY and ECONOMICS OF INFORMATION

$\Leftrightarrow$ The so-called “new” industrial economics

INDUSTRIAL ECONOMICS

3 MAIN FIELDS OF ENQUIRY:

- Concentration and dimension: issue of the optimal dimension of firms and of the ‘right’ degree of market concentration (in the sense of maximising social welfare)
- Innovation and technical progress: important developments with the ‘heterodox’ approaches
- Industrial policies

INDUSTRIAL ECONOMICS

Focus on **large firms** up to the 1980s (main theoretical models based on oligopolies)

Why? Heyday of the mass production system

Important sectors of the time are all characterised by high economies of scale (steel, automobile, …) so that idea of many governments is that having large firms is a priority for a country's wealth

SMEs are in the 'fringe' (market periphery), occupying niches

INDUSTRIAL ECONOMICS

Main theoretical model used is oligopoly

Strong focus on issues of concentration / collusion / strategies to raise entry barriers

Structural barriers: economies of scale, product differentiation, absolute cost advantage

Strategic barriers: entry deterrence by excess capacity, limit pricing

Also strategies to induce exit of rivals such as predatory pricing

INDUSTRIAL ECONOMICS

1980s: ‘discovery’ of SMEs and of the strength they can have in some cases:

➔ LITERATURE ON INDUSTRIAL DISTRICTS (BRUSCO, BECATTINI) AND CLUSTERS (PORTER)

INDUSTRIAL ECONOMICS

IN THE 1980s, districts or clusters turn out to be very competitive thanks to their "**flexible specialisation**" (Piore and Sabel, 1984)

i.e. capacity to produce variety at low cost

In context of crisis of the mass production model and need to increase product variety, this is an advantage

1970s: crisis of the mass production system.
WHY?

- Markets become mature: people have basic products (e.g. a car) and start asking for more variety
- Workers in factories ask for less alienating jobs: strikes in 1968

- New players appear in markets, offering variety at low cost: e.g. Japanese producers in the car industry

1980s: diffusion of the flexible production system

Large firms: Toyota / lean production system

Increase in economies of scope (differentiation) while maintaining economies of scale (volume)

Small firms: SME systems turn out to be extremely competitive

(hence new focus of industrial policy on SMEs)

1980s: increased competition with arrival of new players (Japanese) + competitiveness gap Europe / USA

➔Innovation performance higher in the USA and in Japan

➔ ‘discovery’ of the important contribution of SMEs to innovation, either single or in clusters (Microsoft, Apple, Silicon Valley)

IMPORTANCE OF INDUSTRIAL POLICY

We will see that governments have implemented industrial policies since the first industrial revolutions:

- support to the adoption of the new technologies
- provision of infrastructure (transport, communication, etc.)
- education and training so that the labour force has appropriate skills
- Regulation of the financial system so that it can support industries' investment
- and so on...

21ST CENTURY: RETURN OF INDUSTRIAL POLICY

Liberal years 1980s and 1990s: industrial policy is useless

Turn of the century: heads of state, industry and policy-makers call for industrial policy

WHY?

➔ there are **big structural changes** occurring

PARTICULAR STRESS OF INDUSTRIAL POLICY IN LAST DECADES:

POLICY FOR SMEs and CLUSTERS

ESPECIALLY AT LOCAL AND REGIONAL LEVELS

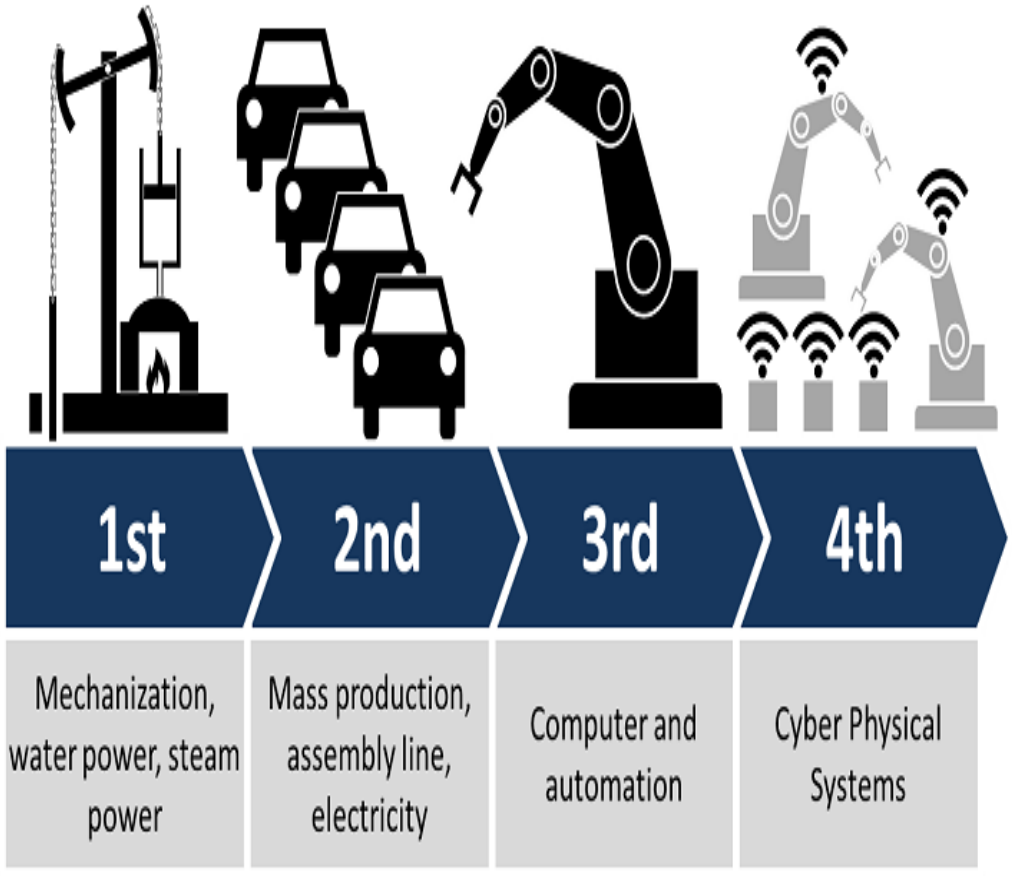
BIG ISSUES TODAY

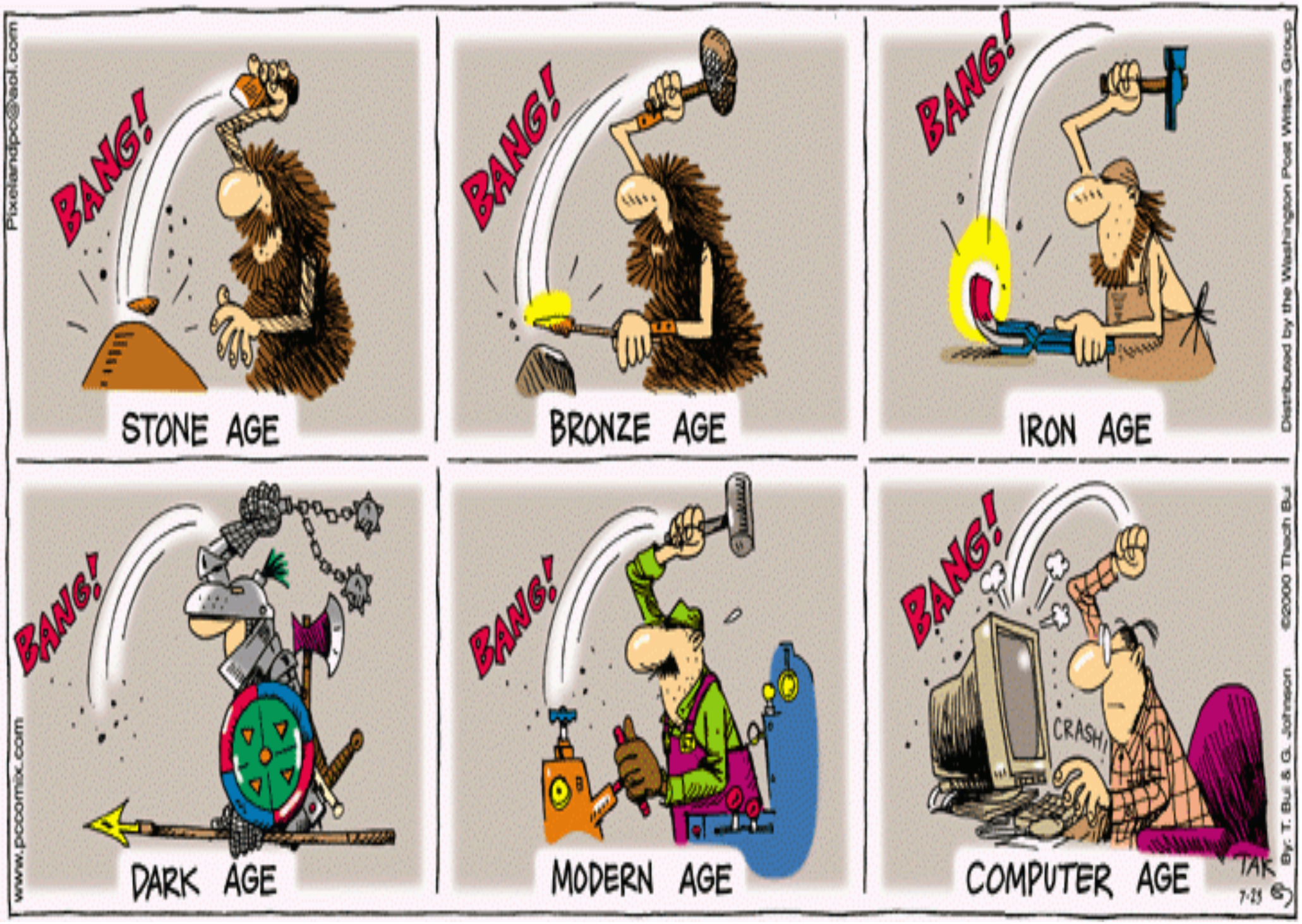
Globalisation, Climate Change, the fourth industrial revolution: what do they mean for industry AND SMEs in particular?

3 main aspects that will be examined in the course:

1. Fourth industrial revolution: importance of innovation and technical progress
2. Globalisation, digital globalisation and new monopolies
3. Sustainability and other societal challenges

FOURTH INDUSTRIAL REVOLUTION

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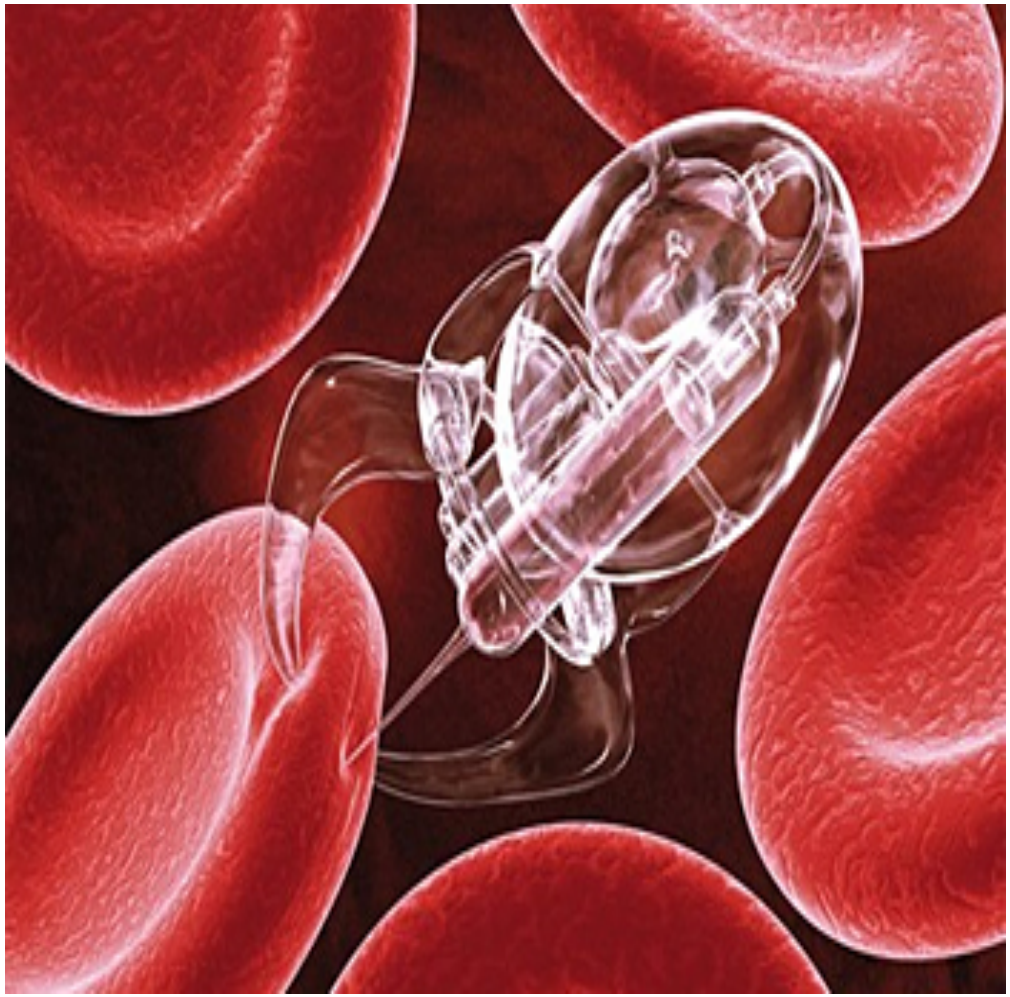
Nanotechnologies

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BIG
DATA
& ANALYTICS


WHAT WE KNOW...
THE REST...
BIG DATA

Very big technological changes are occurring nowadays: artificial intelligence, big data, quantum computing, nanotechnologies, genomics, new energy sources, etc.

The new technologies are converging in a way that enable the development of new products and processes that could help resolve global challenges (world demographics, climate change, urbanisation, epidemic of new diseases as viruses and bacteria becoming medicine-resistant, …),

Since the converging technologies produce new solutions

For instance, nanotechnologies + genomics allow to develop new health treatments that target directly the infected cells, without overwhelming the whole body

Biotechnologies + chemistry + engineering are developing new energy sources, alternative to fossil combustion

Robots + artificial intelligence + IT produce robots able to assist disabled or elderly people in their home

Etc., etc., etc.

$\Rightarrow$ in the last decades the competitive and institutional context in which firms operate has dramatically changed

$\Rightarrow$ in the course we will try to understand these changes, as well as their impact in terms of policy implications and risks / opportunities offered for people and for businesses, focusing on SMEs

COURSE STRUCTURE

PART I. SMEs IN INDUSTRIAL SECTORS: STRATEGIES AND PERFORMANCE

1. Introduction
2. Economics of SMEs: definition, characteristics and influence of the business environment
3. Megatrends in markets : the fourth industrial revolution
4. Platform businesses and SMEs
5. Innovation in SMEs and clusters
6. Globalisation and internationalisation of SMEs ; global value chains
7. Italian industry and SMEs

COURSE STRUCTURE

PART II. INDUSTRIAL POLICY

8. Industrial policy: general features and return in the 21st Century

9. Industrial Policy for SMEs: why and how

10. Policy for clusters

11. The European context: multilevel industrial policy in the EU

12. Regional industrial policy: case of the Emilia-Romagna Region

13. Sustainability issues

Didactic Material:

Essential lecture notes (Pwpt on the course site)

+ references indicated in the course programme and lecture notes

Future Markets

INDUSTRIE 4.0

SMART MANUFACTURING FOR THE FUTURE

SMEs: Equipped to Compete

How successful SMEs are reinventing global business

OXFORD ECONOMICS

Il Sole 24 ORE

28 novembre 2015

Viaggio nell'Italia che innova: Emilia-Romagna, cuore dell'innovazione

di Paolo Bricco

EXAM

either

1. Essay and presentation

Or

2. Written exam on the whole programme

Classes

- Thursdays 10.00 – 13.00 (EC1)
-Fridays 13.00 – 16.00 (EC1)

4 hours time-slot have been booked so as to have flexibility

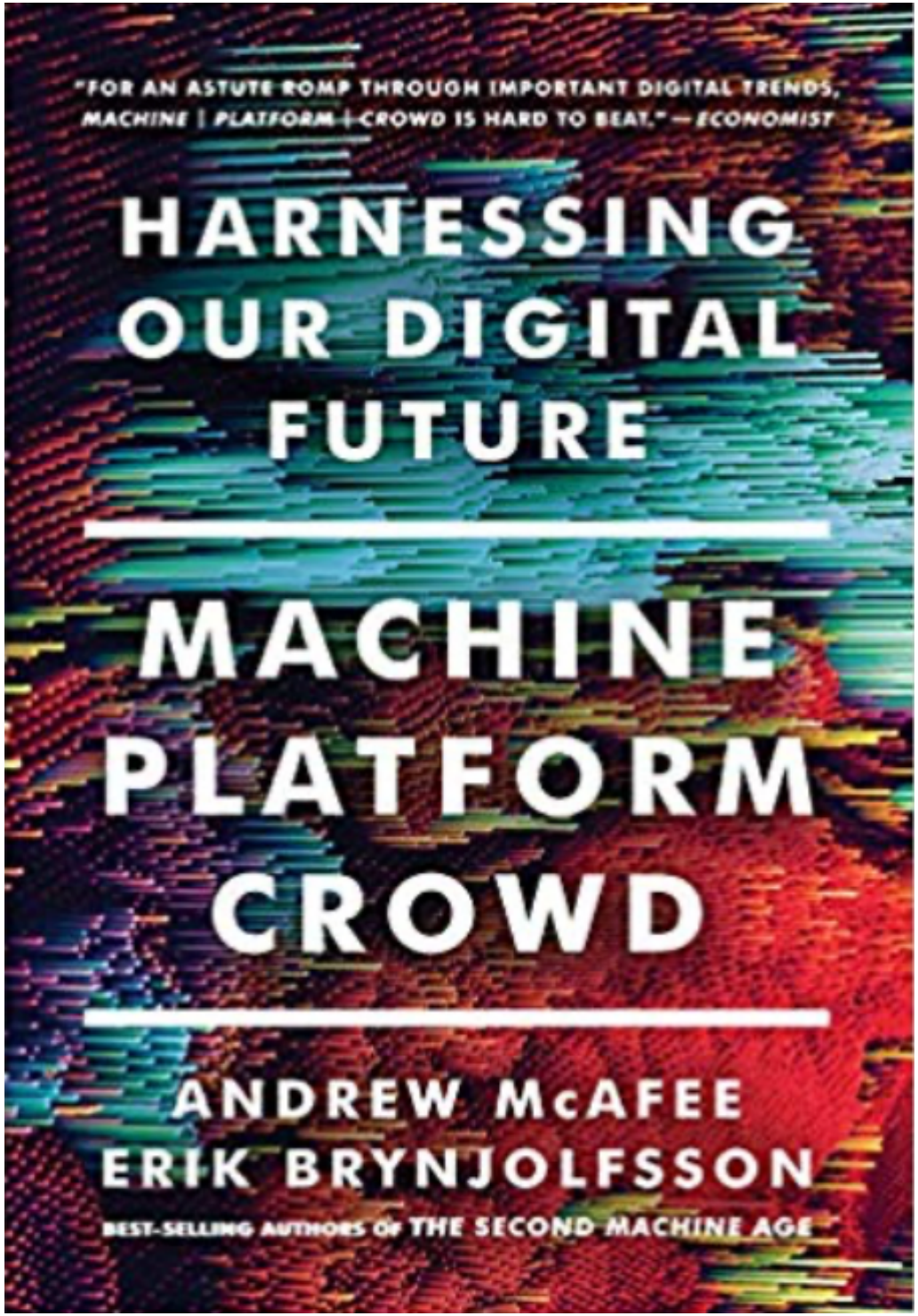
Email list?

MATERIAL TO PREPARE FOR EXAM:

- Notes are provided on EACH TOPIC discussed in the classes (all students are expected to study them and think about them)

- Books: for readings specific to each class see the programme (online)

Reading of book by Brynjolfsson and McAfee strongly recommended to everybody


"FOR AN ASTUTE ROMP THROUGH IMPORTANT DIGITAL TRENDS, MACHINE | PLATFORM | CROWD IS HARD TO BEAT." — ECONOMIST
HARNESSING OUR DIGITAL FUTURE
MACHINE PLATFORM CROWD
ANDREW McAFEE
ERIK BRYNJOLFSSON
BEST-SELLING AUTHORS OF THE SECOND MACHINE AGE

AIM OF THE COURSE:

1.ACQUIRE KNOWLEDGE SO AS TO BE ABLE TO ELABORATE ONE'S OWN "VISION OF THE WORLD" = IDEAS AND OPINIONS OF THE GENERAL TRENDS OF BUSINESSES, HENCE THE ECONOMY AND THE SOCIETY

IN ORDER TO

-UNDERSTAND COMPETITIVE DYNAMICS

-UNDERSTAND EMERGING NEEDS

-UNDERSTAND / ELABORATE ON INDUSTRIAL POLICY

-BEING ABLE TO RECOMMEND INDUSTRIAL POLICY

2. OCCASIONS TO:

- RESOLVE PROBLEMS (ESSAY)
- COMMUNICATION (PRESENTATION)
- TEAM WORK (ESSAY)

LEARNING BY DOING AND LEARNING BY USING: DIRECT USE OF THE KNOWLEDGE PROPOSED DURING THE CLASSES IN THE ELABORATION OF ESSAY AND PRESENTATION

WHAT COMPETENCIES ARE REQUIRED BY FIRMS FROM YOUNG GRADUATES?

Importanza delle competenze richieste dalle imprese per le assunzioni programmate nel 2011 per livello di istruzione in provincia di Reggio Emilia

(quote % sul totale)

	Universitario	Secondario e post-secondario	Qualifica regionale di istruz. o formaz.	Scuola dell'obbligo
Assunzioni non stagionali 2011 (v.a.)	860	2.920	750	2.390
Capacità di lavorare in gruppo	74,3	50,9	63,2	48,8
Abilità manuali	8,5	34,8	65,1	68,9
Capacità di lavorare in autonomia	60,0	49,8	43,5	35,3
Capacità di risolvere problemi	56,4	35,0	52,1	21,3
Abilità nel gestire rapporti con clienti	57,9	33,6	38,0	19,8
Capacità comunicativa scritta e orale	63,9	34,2	39,3	14,9
Competenze informatiche	42,2	24,0	9,9	--
Capacità direttive e di coordinamento	38,2	12,2	14,4	8,2
Conoscenza di una o più lingue straniere	41,6	12,2	7,5	--
Abilità creative e d'ideazione	19,1	12,3	19,7	4,6
Conoscenze amministrative e d'ufficio	17,9	14,5	--	--

Fonte: Unioncamere – Ministero del Lavoro, Sistema informativo Excelsior 2011

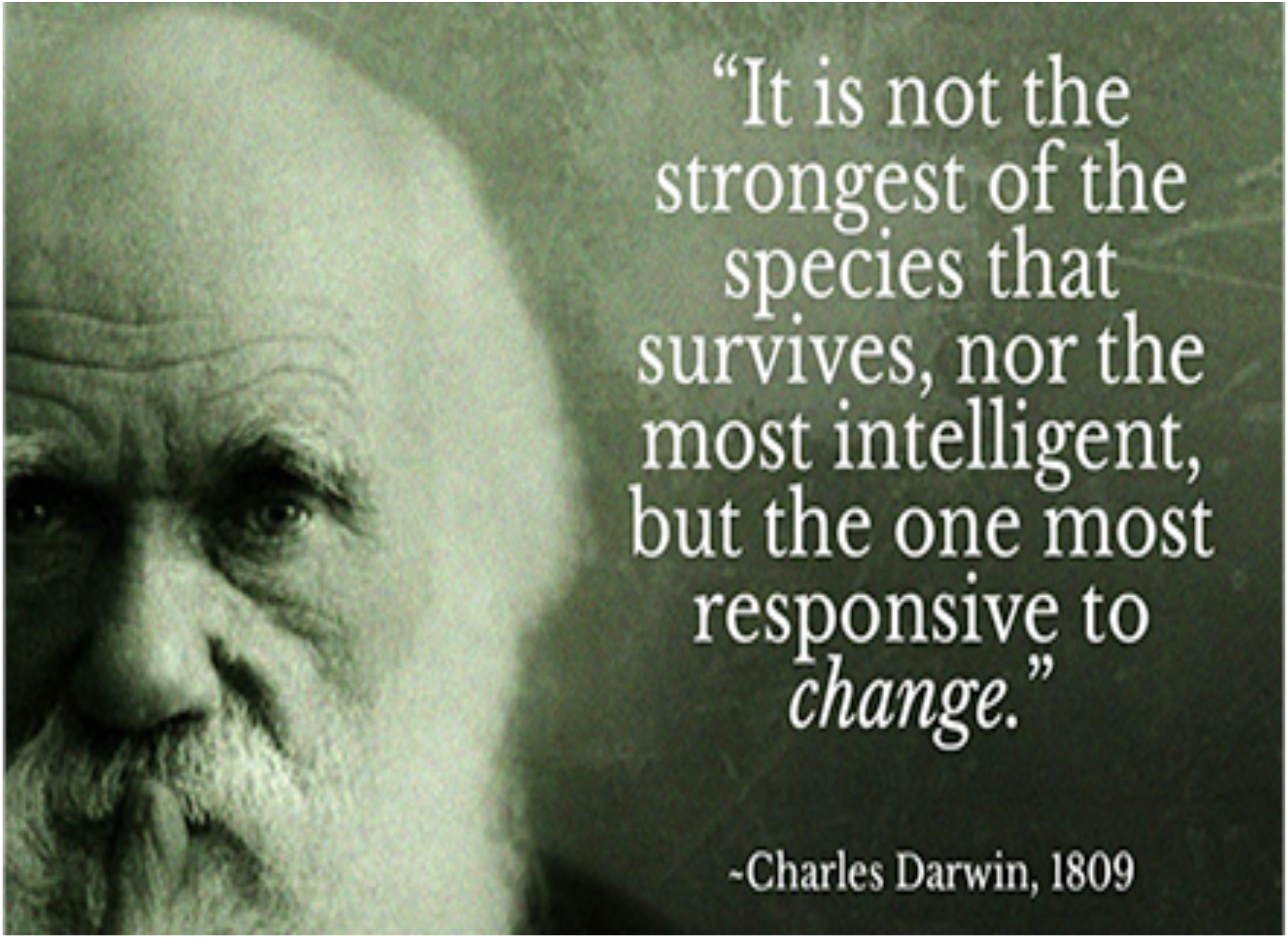
Competencies required to Economics and management graduates (according to managers, accountants, ecc.)

-Knowledge of the fundamental notions of economics and management

-Ability to think, reason and work with others

-Have an own “vision of the world”: what is happening in the economy / society / politics; own informed opinions (a LM student MUST read newspapers every days)

-Capacity to ADAPT TO CHANGES, openess to changes and to risk (e.g. period of studies abroad)


"It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to *change*."
~Charles Darwin, 1809