

Enterprise Essentials

Class # 1: Setting the scene - The economy and the firm as an economic agent

EPITA | Fall 2021

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Kick-Off



- Brief introductions
- Course outline
- Overall course schedule
- Organization, Admin

Course Outline

- The business organization, i.e. the enterprise, is the main player of any economic system.
- While its reason of being, form, size and structure may vary greatly from country to country and from industry to industry, there are several essential features that are common to all companies and distinguishes them from other types of organizations.
- In the context of the entrepreneurial surge driven by digital technologies and of the accelerated transformation of our modern societies and economic systems, this course aims at providing an introduction to the enterprise, its environment, its essential operating and organizational structures, and its core functions.
- Special attention will be paid to the concepts that are relevant in today's digitalized, globalized and highly interconnected economy and to the challenges and opportunities encountered by business organizations in the 21st century's rapidly changing business environment.

Course Breakdown

EPITA | Fall 2021

Class	Date & Time Topics
Class 1	Setting the scene: The economy and the firm as an economic agent
Class 2	The Business Environment: Industries and Markets
Class 3	Enterprise Models
Class 4	Managing a business organization
Class 5	Final Presentations Course Wrap-Up

Today's Reading:

Peter F. Drucker. *The Theory of the Business*. Harvard Business Review. September–October 1994 Issue



Before we get started Organization

- Logistics:
 - ❑ WIFI
 - ❑ Video-projector
 - ❑ White board, paper board, pens, Post-It notes
- We will have several group work sessions during the various lectures, please organize yourselves in work groups
- Individual participation is expected and largely encouraged. Please try to participate not only to all team works but also throughout the sessions.



Organization: Remote Learning | COVID19

- Teams
 - Environment
 - Communications
- Create sub-teams
 - Class assignments
 - Student interaction
 - Quiz – Tool: MS Forms
- Course materials upload
- Breaks

Learning environment

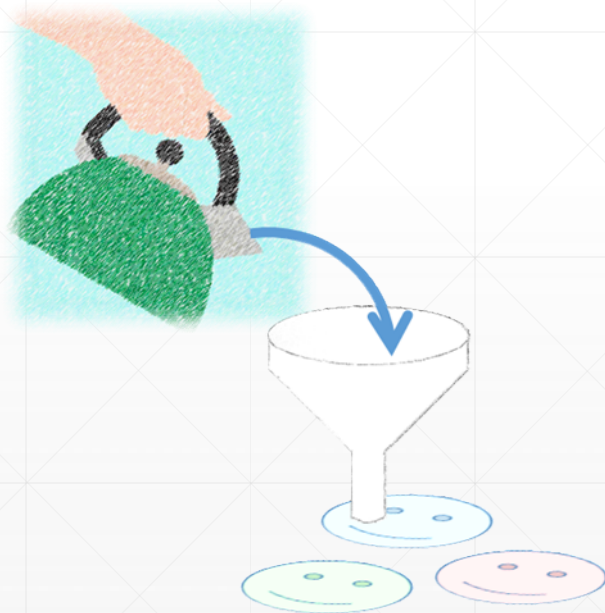


Image source: <http://clipart-library.com/clipart/1308819.htm>

Organization

Articulation between the 2 courses

ENTERPRISE ESSENTIALS

- The Economy, Industries, Markets, Firms
- Global, macro-economic trends
- Firm structure & behavior
- Business and Enterprise Models

WHO? WHAT?

DIGITAL TRANSFORMATION

- Adoption of technologies by organizations and individuals
- Major technology trends – Big Data & AI, IoT
- Digital Platforms
- Digital Transformation of organizations

HOW? WHY?

WHERE?
WHEN?

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Final Grade

Final Composition	Grade	Class attendance and participation throughout the course	Course quiz (MCQ)	Final presentation (group and individual)
Weight		30%	20%	50%

Presence
Questions asked, "hands raised"
Participation to class assignments and group discussions

A project (essay), in the form of a question to which students will answer through a carefully drafted presentation (.ppt presentation)

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Final Presentation | Ideas for subjects

1. Elaborate on your own, present or future, entrepreneurial project: personal motivation, reason of being of business, structure (organization) of business, value proposition for your customers, business model.
2. Discuss, for an industry or company of your choice, the various growth stages the industry or the company has went through and how those crises have been overcome. Please draw the appropriate conclusions for future growth stages.
3. In an economic setting of your choice, present and elaborate on the comparative advantages of a new entrant (start-up) versus existing, established, businesses. Do existing businesses have any advantages on new entrants?
4. Imagine the corporation of the future and elaborate on: business model, work relationships, organization, clients, etc. Underpin your presentation with examples from existing situations that, you believe, should either change, or be maintained, in the future.
5. Elaborate on at least 2 different business models that you see co-existing in an industry of your own choice. Discuss differences, impact on firm organization and performance and consequences at the level of the industry.

Final presentation

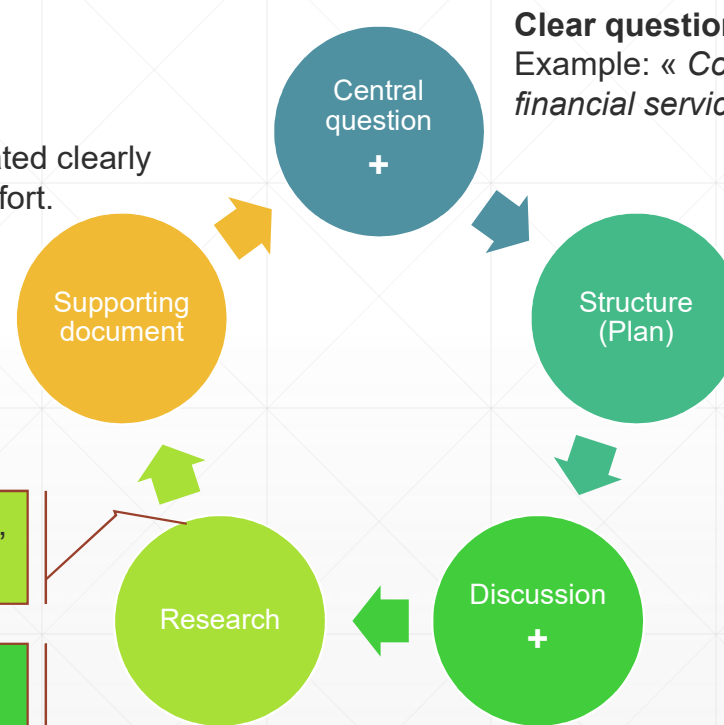
Structure and expectations

In a **group presentation**, it should be stated clearly (in writing) 'who did what' in the overall effort.

A carefully drafted presentation (.ppt presentation), produced either individually or as a group effort

Original research (articles, figures, charts, ...) should be properly quoted

Utilization of the course's ideas and concepts in order to sustain the analysis



Clear question in close relationship with the course's topics
Example: « *Could several business models coexist in the financial services industry (FSI) ?* »

Outline of presentation

Example:

- FSI – an overview
- Existing Business models
 - Traditional Banks
 - Independent services providers
 - Neo-banks
 - ...
- Coexistence of business models:
 - A 5-F comparison between BM 1 and 2
- Conclusion:
 - Ex: “Traditional banks are challenged by new entrants but they’re fighting back”

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Final Presentation | Timeline

1. (Class 1): Expectations
 - Note: You may develop your final presentation either as an individual project or a group endeavor
2. (Class 3-4): Subjects are chosen, precise formulation is communicated to professor
3. Class (4): Final tweaking and additional guidelines for final presentations
4. Class (5): Final presentations



Setting the scene: The economy and the firm as an economic agent

A Few Fundamental Concepts,
Economic theories of the firm, 21st
century challenges, Ownership,
Liability, Management, Forms of
business

Economy and Economics

ECONOMY

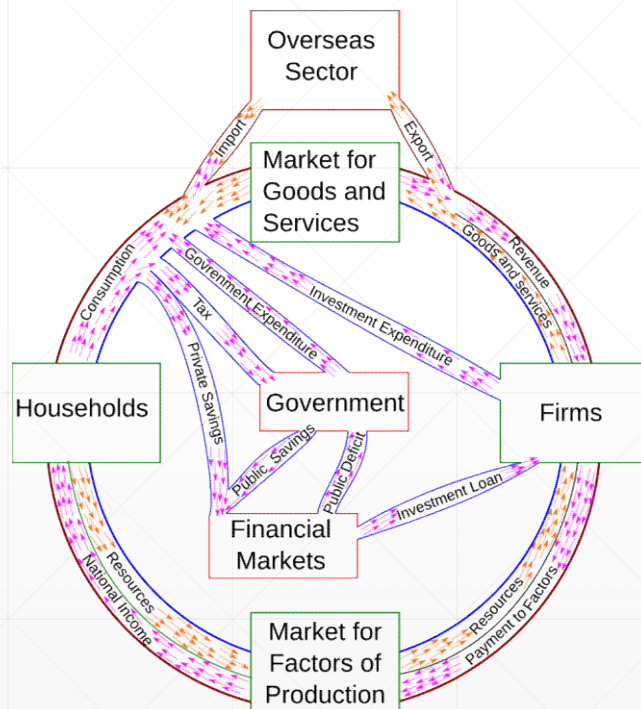
- “The state of a country or region in terms of the production and consumption of goods and services and the supply of money.” (Oxford English Dictionary)
- “The system of trade and industry by which the wealth of a country is made and used.” (Cambridge Dictionary)

ECONOMICS

- “The branch of knowledge concerned with the production, consumption, and transfer of wealth.” (Oxford English Dictionary)
- “The way in which trade, industry, or money is organized, or the study of this.” (Cambridge Dictionary)

The Economy

Circular Flow of Income



https://en.wikipedia.org/wiki/Circular_flow_of_income

The **circular flow of income** or **circular flow** is a model of the economy in which the major exchanges are represented as flows of money, goods and services, etc. between economic agents.

The flows of money and goods exchanged in a closed circuit correspond in value, but run in the opposite direction.

The Economy

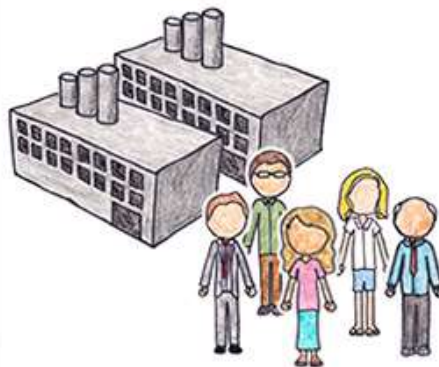
Important Distinctions

- Factor Markets – they include all factors of production, **including labor, and capital**
- Product Markets
 - Between Firms – B2B
 - Between Firms and Consumers – B2C
- Role of Banks
 - Trusted third-party
- Role of Governments
 - Income redistribution (through tax system)
 - Regulation

MACRO



MICRO



<http://courses.wallstreetsurvivor.com/is/17-understanding-the-economy/economics-101/the-basics/#/>

Macro and Micro Economics

Generally speaking, Macro and Micro Economics are the two main branches of this discipline. The former deals with global (aggregated) trends, i.e. at a society, or a nation's level; while the latter studies individual choices.

Note: There are many other sub-classifications in Economics, however, for the purposes of this course we've chosen to illustrate this particular one.

Macro and Micro Economics

Macroeconomics

- Players:
 - Countries, regions, continents, the world
- Indicators (example):
 - GDP – Gross Domestic Product
 - CPI, IPC - Consumer Price Index
- Institutions (example):
 - Central Banks
 - World Trade Organization
 - International Monetary Fund
 - World Bank

Microeconomics

- Players:
 - Consumers, companies (firms)
- Indicators (example):
 - Consumer demand curves
 - Market concentration
- Institutions (example):
 - National Competition Authorities (ex: DGCCRF in France)
 - Industry Regulatory Bodies (ex: ARCEP, CSA in France)

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A business cycles perspective

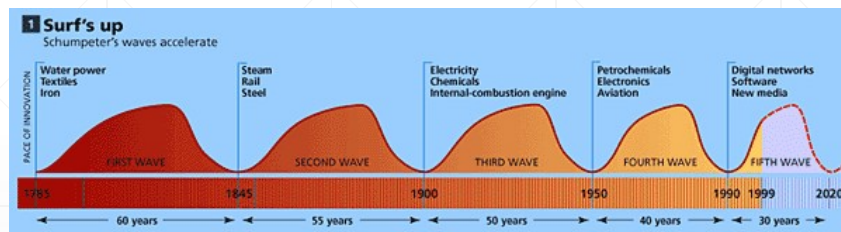
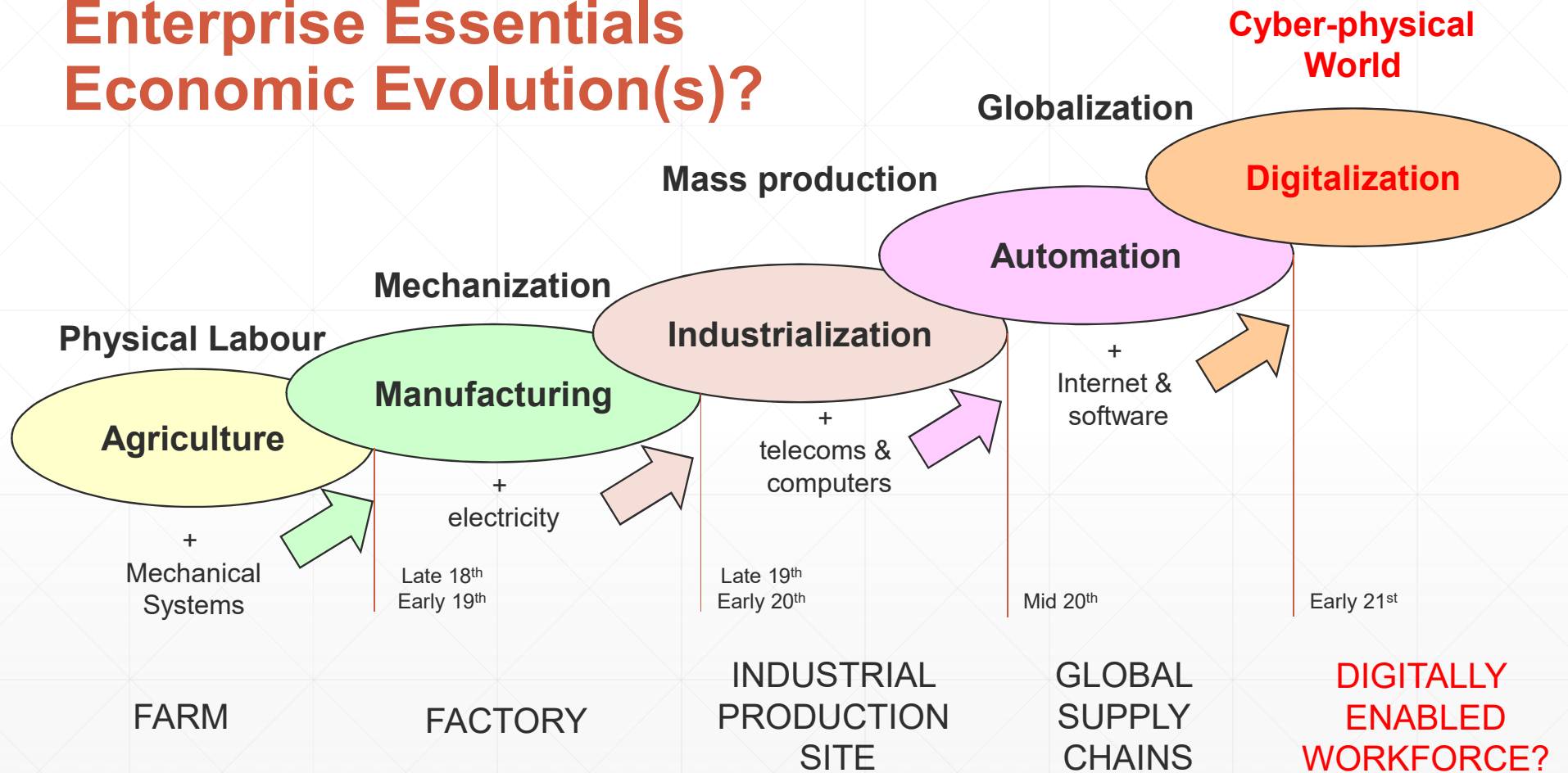


Illustration: *Catch the wave*, published by The Economist, 1999. <http://www.economist.com/node/186628>

- Each new innovation cycle is driven by innovation, coming from different industry clusters and affecting different needs
- Austrian economist Joseph A. Schumpeter has brought to fore the idea that the economy is permanently disrupted by technological innovation (*i.e. creative destruction*)
- According to Schumpeter, innovation and the entrepreneur are at the heart of the economy

Enterprise Essentials Economic Evolution(s)?



If we were having this course...

Class discussion



30 years ago...

1990s

- End of a bipolar world, fall of the communist regimes in Eastern Europe
 - Triumph of market (v. centralized) economic systems
 - Globalization – early innings
 - Technology as a factor of production

10 years ago...

2010s

- Globalized society, realizing that reciprocal relationships are increasingly interconnected and interdependent
 - Internet as main place of exchange
 - The rise of the truly global corporation
 - Technology as a strategic asset

The Economy and the Firm as an Economic Agent

Class Discussion



Consider a traditional farming business

- Their roots go back to the origins of humanity
- Over the centuries, farms have become:
 - More productive, with mechanization and chemicals
 - More capital-intensive (as opposed to labor-intensive), ...
- Today's farms operate an even more challenging transition, towards ecological responsibility, environment-friendliness, and sustainable development

Consider a large manufacturing company, in any country

- They came into existence with the first industrial revolution
- Their production was local, initially
- Little by little, manufacturing became industrial production (mass production)
- Today's traditional industry businesses are multi-national companies, competing in a globalized economy

Consider a large communications company, in any country

- These companies were established - as national monopolies - at the beginning of the 20th century in order to provide Post, Telegraph and Telephony services, nationwide
- Little by little, their economic reason of being has evolved, due to regulation (from monopolies to competitors in a market)
- Today, these companies operate in a highly competitive business, are challenged by companies from other industries, and are under regulatory pressure

The Economy and the Firm as an Economic Agent

Class Discussion



Consider the early Internet pioneer companies (Yahoo!, AOL, ...)

Their “glory days” lasted for less than 20 years

- Their initial success is intimately related to the emergence of Internet and the www
- As Internet grew and changed rapidly, many of the pioneers had difficulties reinventing their businesses
- Today, after being successively transformed and acquired, most of them struggle to stay alive

Consider a famous rock band, active since the 1960s...

- Over the years, the « initial idea » has developed in a very profitable business, including, but not limited to:
 - Touring (concerts)
 - Recording
 - Publishing
 - Sponsorship, ...
- Further Reading:
<https://www.google.fr/amp/s/amp.theguardian.com/music/musicblog/2014/may/22/how-the-rolling-stones-became-musics-biggest-business>

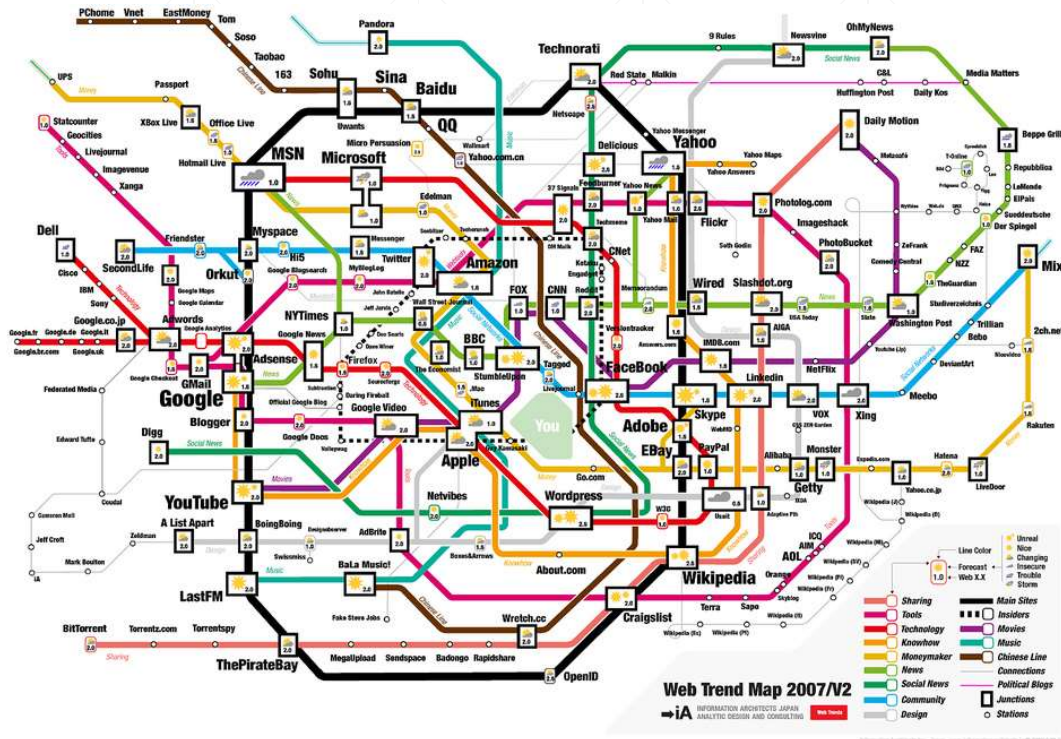
Consider yourself, a student in a Computer Science and Engineering School

Would you, at some point in time, set-up you own company, like Bill Gates, Steve Jobs, Mark Zuckerberg, Larry Page, Sergey Brin, Elon Musk, and many others, did before you?

If you do, chances are that you will find that all 5 examples have things in common

Today's Digital Economy ...

WE
ARE
HERE



[https://en.wikiquote.org/wiki/Information_age#/media/File:WebTrends_2007_otro_mapa_de_web_2.0_\(1149873101\).jpg](https://en.wikiquote.org/wiki/Information_age#/media/File:WebTrends_2007_otro_mapa_de_web_2.0_(1149873101).jpg)

- Highly interconnected
- Changing rapidly
- High pace of technology innovation
- Highly interdependent => Fragile ?
- Entrepreneurship wave driven by digital technologies

Today's Economy 21st Century Challenges



Choice of topics for our course:

Climate Change

Globalized
Economy

Entrepreneurial
wave

Labor Evolution(s)

Rising Services
Economy

Emerging
Economic Models

The Information
Society

Digital Economy



The Firm as an Economic Agent

Discussion 1

- An entrepreneur is, first, an individual existing in a wider social context ... :
 - He/She needs to understand his/her society's overall environment
 - He/She needs to understand who are the clients and what are their needs
 - He/She needs to understand in which market and industry his/her own company will perform and how the company positions itself in this environment
- This understanding of the firm's social role is critical as it defines **“what an organization is paid for”** (Peter Drucker).

21st century challenges

Climate change

- Human activity IS the main factor contributing to the global climate changes through the generation of greenhouse gases (GG) of a different nature than those naturally present in the atmosphere
- The economic activities with the highest emissions of GG are (source: COP21):
 1. Energy production (34%)
 2. Industrial production (18%)
 3. Transport (14%)
 4. Agriculture (14%)
- The challenge is to keep global warming below 2° C



Conférence des Nations unies
sur les changements climatiques

COP21/CMP11

<http://www.cop21.gouv.fr/en/>

Cop 21 summary to be found at:

<http://www.bbc.com/news/science-environment-35073297>

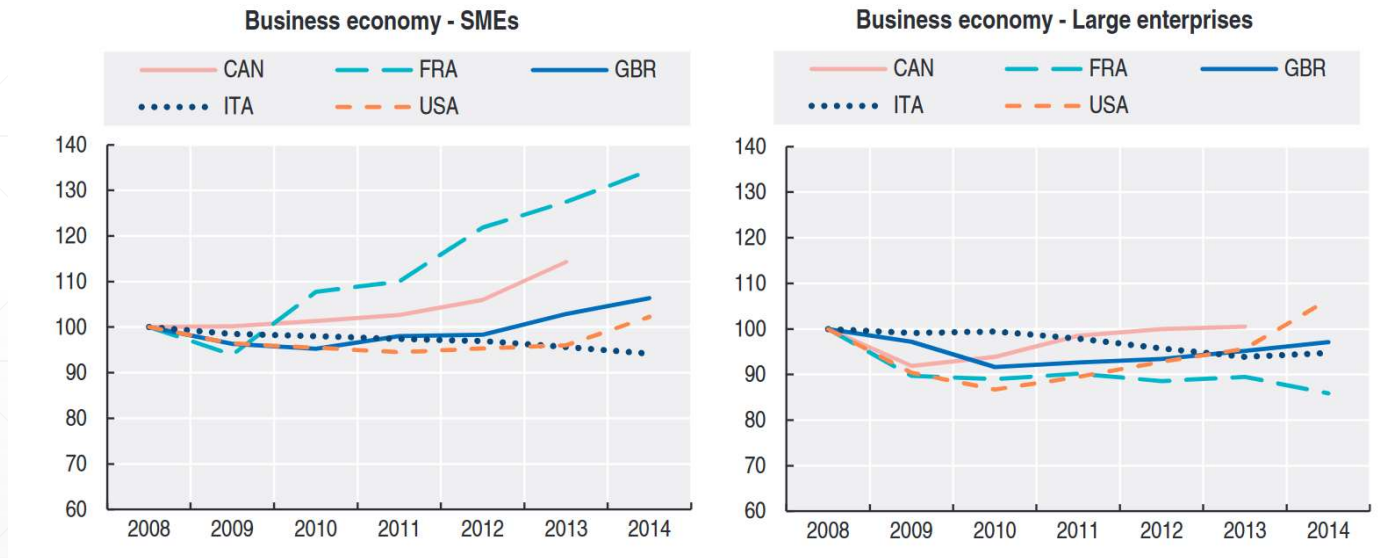
- The deal unites all the world's nations in a single agreement on tackling climate change for the first time in history.
- Coming to a consensus among nearly 200 countries on the need to cut greenhouse gas emissions is regarded by many observers as an achievement in itself and is being hailed as "historic".
- However, scientists point out that the Paris accord must be stepped up if it is to have any chance of curbing dangerous climate change.
- Pledges thus far could see global temperatures rise by as much as 2.7C, but the agreement lays out a roadmap for speeding up progress.

[illegible]

- <http://www.presse.ademe.fr/2011/07/analyses-de-cycles-de-vies-des-technologies-courriers-electroniques-requete-web-cle-usb-quels-impact.html>

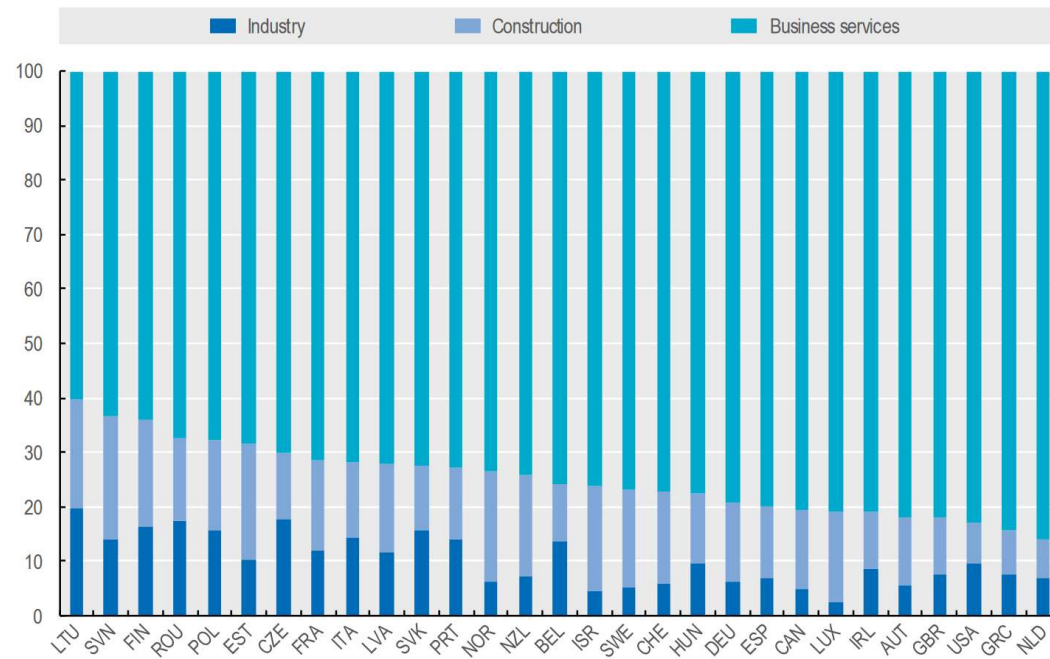
21st century challenges - Entrepreneurial Wave

OECD – SME and Large



Source: OECD (2017), Entrepreneurship at a Glance 2017, OECD Publishing, Paris
http://dx.doi.org/10.1787/entrepreneur_aag-2017-enl

Entrepreneurial Wave OECD – by sector



Source: OECD (2017), Entrepreneurship at a Glance 2017, OECD Publishing, Paris
http://dx.doi.org/10.1787/entrepreneur_aag-2017-enl

Enterprise Definitions

- Oxford English Dictionary –
 - « **Enterprise** /'entəpraɪz/ **noun** – a company or business »
- Wikipedia -
 - “**Business** is the activity of making one's living or making money by producing or buying and selling products (such as goods and services).”
- The Free Dictionary –
 - “**Business** n. any activity or enterprise entered into for profit. It does not mean it is a company, a corporation, partnership, or have any such formal organization, but it can range from a street peddler to General Motors”

Note: « Enterprise », « business », “company” and « firm » shall be used indistinguishably throughout the course.

Enterprise Definitions bis

- Enterprise definition (French) – Wikipedia
 - « Une **entreprise** est une organisation ou une unité institutionnelle, mue par un projet décliné en stratégie, en politiques et en plans d'action, dont le but est de produire et de fournir des biens ou des services à destination d'un ensemble de clients ou d'utilisateurs, en réalisant un équilibre de ses comptes de charges et de produits »
 - (translation in English) : « An **enterprise** is an organization or an industrial unit, driven by a project translated in strategy, in policies and in action plans, and whose purpose is to provide goods and/or services for a group of users or clients, while achieving a balance between expenditure and revenue accounts »

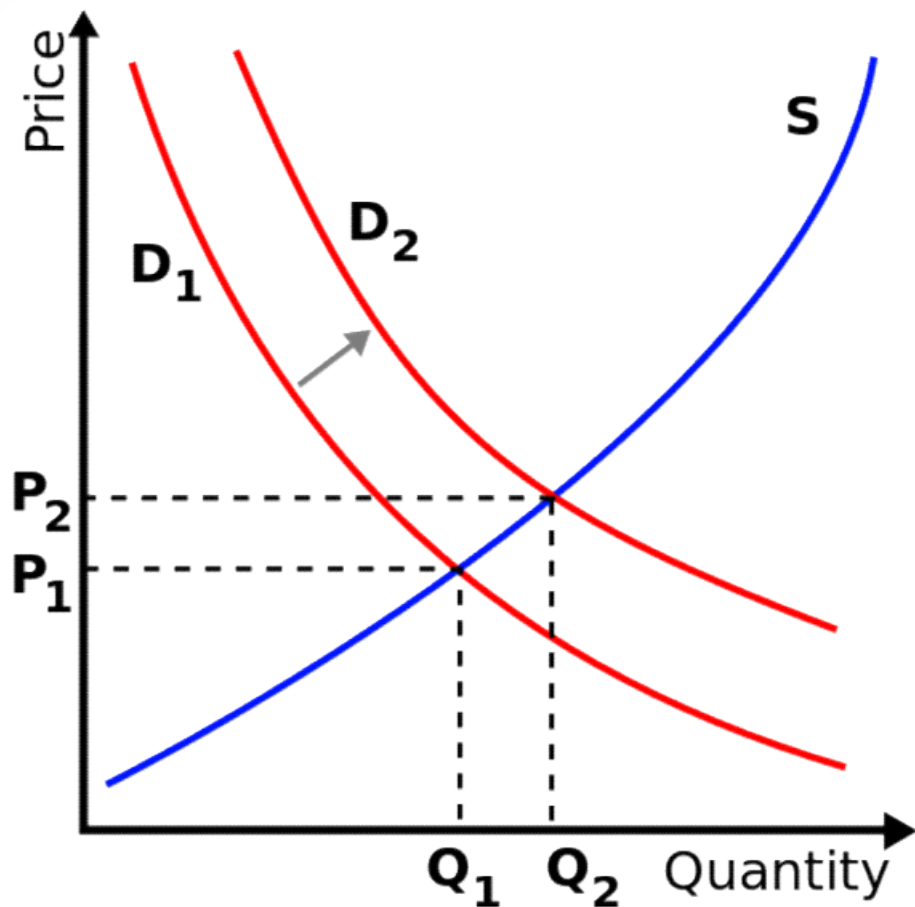
Enterprise Essentials

Market Economy

Wikipedia

- “A **market economy** is an economic system in which the decisions regarding investment, production and distribution are guided by the price signals created by the forces of supply and demand. The major characteristic of a market economy is the existence of factor markets that play a dominant role in the allocation of capital and the factors of production”

Factors + Production = Products (goods and services)



<https://en.wikipedia.org/wiki/Economics>

Supply and Demand

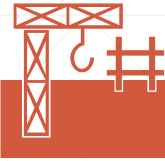
Supply and demand are two economic concepts that, combined, allow to show the forces at work in any economic system. They show, among others, how prices (that are function of the quantity, or output) vary with the production level and how an equilibrium between industrial output and consumer demand may be reached.

The Firm as an Economic Agent

Discussion 2



- Once the entrepreneur has understood the environment, he/she needs to define his/her own mission:
 - How he/she will solve a specific social concern
 - How his/her company will satisfy an existing need
 - How his/her business will be recognized as distinctive player (organization)
- « The assumptions about **mission** define what an organization considers to be meaningful results; in other words, they point to how it envisions itself making a difference in the economy and in the society at large.” (Peter Drucker)



Enterprise Essentials Class 1

Class Assignment

- Drawing on today's class reading, please discuss the social role (environment), mission (reason of being) and core competencies of one (or several) companies of your own choice.
- Please provide, minimally, answers to the following:
 - Which were the initial social role, mission and core competencies?
 - Are they still valid in today's context?
 - If not, what does it imply for the company's survival?

The Rising Services Economy

- Traditionally, **agriculture** was known as the primary sector, **manufacturing** as the secondary sector and **services** as the tertiary sector.
- Is this classification still valid today?

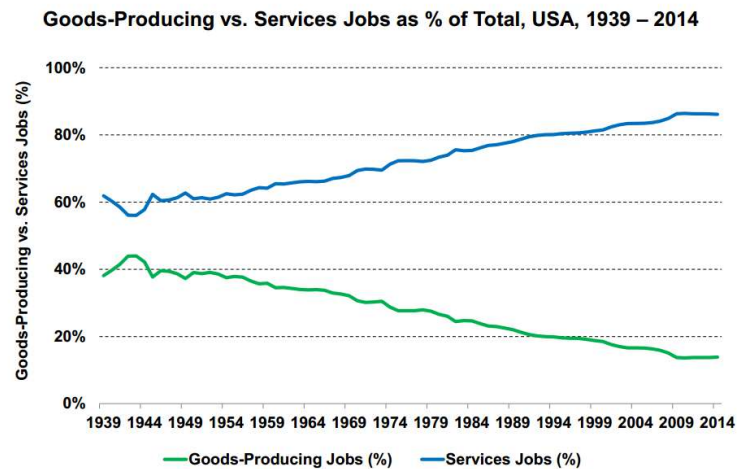
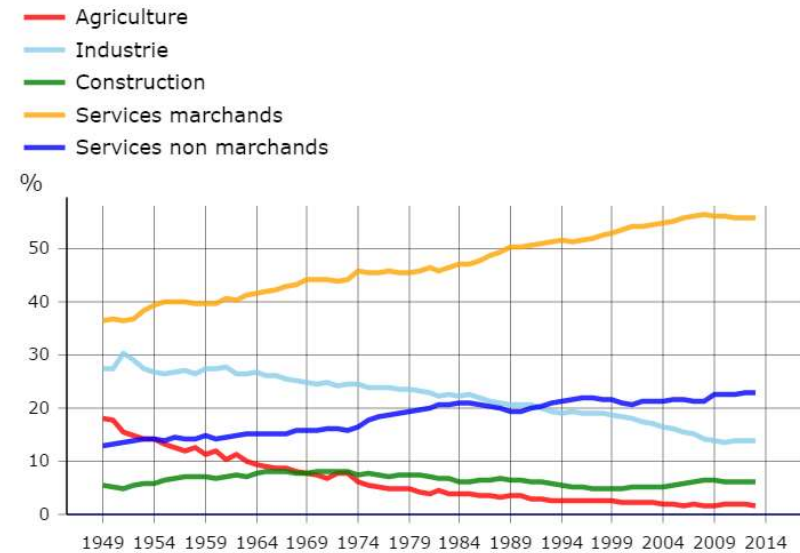


Illustration: KPCB. *Internet Trends Report* by Mary Meeker. May 2015.

Poids des principales branches dans la valeur ajoutée totale



<http://www.insee.fr/fr/themes/series-longues.asp?indicateur=poids-branches-va>

Good (economics)

From Wikipedia, the free encyclopedia

In **economics**, a **good** is a material that satisfies human **wants**^[1] and provides **utility**, for example, to a **consumer** making a purchase. A common distinction is made between 'goods' that are **tangible property** (also called **goods**) and **services**, which are non-physical.^[2] **Commodities** may be used as a **synonym** for economic goods but often refer to marketable **raw materials** and **primary products**.^[3]

Although in economic theory all goods are considered **tangible**, in reality certain classes of goods, such as **information**, only take **intangible** forms. For example, among other goods an **apple** is a tangible object, while **news** belongs to an intangible class of goods and can be perceived only by means of an instrument such as **print**, **broadcast** or **computer**.

Main article: *Rivalry (economics)*

	Excludable	Non-excludable
Rivalrous	Private goods food, clothing, cars, parking spaces	Common goods (Common-pool resources) fish stocks, timber, coal
Non-rivalrous	Club goods cinemas, private parks, satellite television	Public goods free-to-air television, air, national defense

[https://en.wikipedia.org/wiki/Good_\(economics\)](https://en.wikipedia.org/wiki/Good_(economics))

Goods

“Goods” is a central economic concept which describes the items that are produced, sold, bought or consumed within an economic system. In general, “goods” are tangible items. Further classifications may include: public and private goods, rival and non-rival goods.

Information goods are typically non-rival goods.



[https://fr.wikipedia.org/wiki/Service_\(%C3%A9conomie\)](https://fr.wikipedia.org/wiki/Service_(%C3%A9conomie))

Services

A “service” is often described in economic terms by opposition to a “good” in that it’s intangible.

The Rising Services Economy

A question

- Are we heading towards the emergence of a 4th « sector », i.e. « the quaternary sector »?
- While there are still many debates around this concept, there are several commonalities that emerge:
 - It produces a combination of secondary sector elements (products) and tertiary sector elements (services)
 - It is a “knowledge-intensive” sector
 - It tends to be highly intangible (dematerialized), as it relies heavily on the digital infrastructure, i.e. the Internet

Labor Evolution(s)

The evolutions so far have led to the emergence of the
« knowledge worker »



https://en.wikipedia.org/wiki/Manual_labour

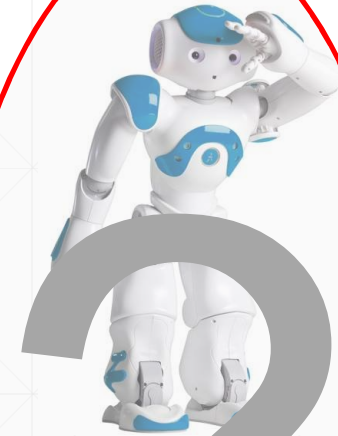


<http://www.arte.tv/sites/fr/olivierpere/2013/12/29/les-temps-modernes-de-charles-chaplin/>

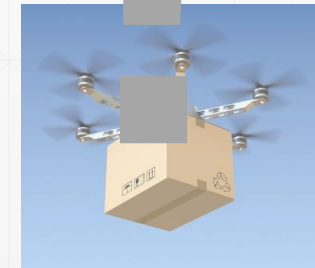


<http://imasters.expert/15-facts-programming-probably-know/>

What does the future hold?

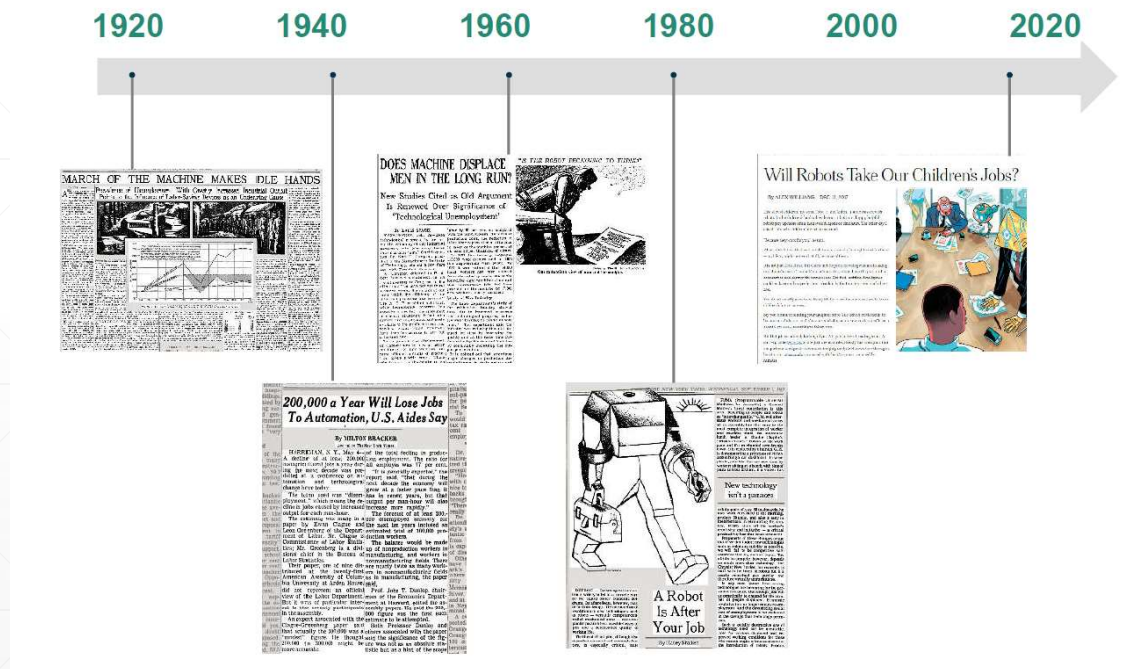


<http://www.capital.fr/enquetes/documents/nao-le-robot-made-in-france-942559>



<http://www.objetconnecte.net/quand-les-drones-sont-au-service->

Labor Evolution is NOT a modern concern



Kleiner Perkins. *Internet Trends Report* by Mary Meeker. 2018

Workforce evolution

Beyond drones and robots...

- Civilian applications of drones
 - Farming
 - Delivery of goods,...
- Robotic applications in medicine:
 - Prosthetics, exoskeletons
- Artificial Intelligence in the workplace:
 - Translators, Artificial Assistants
- Driverless cars
- ...

AND YOU?
WHAT ARE THE CHANCES THAT YOUR JOB GETS AUTOMATED?
TAKE THE TEST

<http://www.bbc.com/news/technology-34066941>

Beyond the contributions of technology to the global workforce, it nonetheless appears that the next decade will face the following HR challenges:

- Shortage in number of workers in most countries
- Mismatch in skillsets
- A changing workplace mix, with:
 - More flexibility (on-demand, contract and freelancing)
 - A shift in the age distribution (with the millennial generation progressively replacing baby-boomers)
 - Corporate training and education will be increasingly important for a diverse and multicultural workforce

Further reading: <http://www.oxfordeconomics.com/workforce2020>, https://www.ted.com/talks/rainer_strack_the_surprising_workforce_crisis_of_2030_and_how_to_start_solving_it_now

The Firm as an Economic Agent

Discussion 3



- Let's now imagine the entrepreneur who understands the environment and has defined his/her mission:
 - He/she needs to hire the right people (talent, skills)
 - He/she needs to organize work across the organization
 - He/she needs to build the work environment supporting the company's mission ...
- “The assumptions about **core competencies** define where an organization must excel in order to maintain leadership” (Peter Drucker)



The Firm as an Economic Agent

Putting it all together

- Once the entrepreneur has understood the environment, defined his/her own mission and its core competencies ...
 - He/she needs to be awarded contracts for work, goods or services,
 - He/she needs to source its basic resources (inputs)
 - He/she may need to source additional labor...
-
- ... there are situations where the costs associated with all these activities (in economic terms, the « transaction costs ») could be lowered when, instead of engaging in bilateral contracts on the markets for labor, goods and services and factors of production, the entrepreneur forms a business entity, i.e. a *firm*. (Ronald Coase. *The nature of the firm*. 1937)

The Firm as an Economic Agent

Liability, Ownership, Management

- **Liability**

- “the state of being legally responsible for something” ()

- **Ownership**

- “own (verb) - to have something that belongs to you, especially because you have bought it”
- “ownership - the fact of owning something” ()

- **Management**

- “the activity of running and controlling a business or similar organization”

All definitions are from the Oxford English Dictionary

The Firm as an Economic Agent

Forms of business - Examples

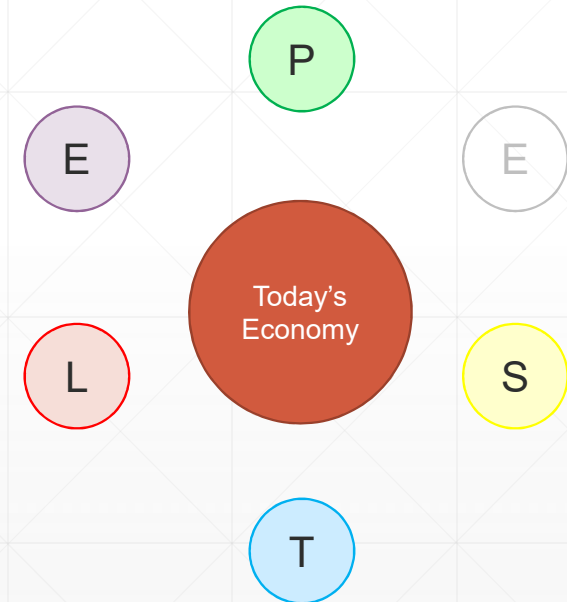
- **Sole proprietorship**
 - Business is not legally separated from its owner
 - Not a legal entity (in some countries)
- **Partnership**
 - Formal arrangement between two or more parties to share ownership and profits of a business
- **Company**
 - Legal identity
 - Limited liability

Important note: Legal forms of business vary greatly from country to country, because of the national differences in commercial, tax systems, etc...



Are we living in a Digital Economy?

- **Politically** speaking:
 - Government and country level policy implications
- **Economically** speaking:
 - Macro and micro implications
- **Socially** speaking:
 - Impacts of economy on social structures
- **Technically** speaking:
 - Ubiquity of technologies in the workplace and at home
- **Legally** speaking
 - Consequences on the legal environment and law-making process
- **Environmentally** speaking
 - Are economic activities adjusting themselves to global climate challenges?



Today's Digital Economy

POLITICAL

1. Threats to democracy (cyber crime)
2. Fragility of the global and highly interdependent supply chains
3. International coordination and solidarity (ex: COVID-19)
4. Global commercial wars
5. Global corporate taxation

ECONOMIC

1. Regulation of large internet players
2. Public debates on leading technologies such as 5G, Artificial Intelligence
3. Entrepreneurial wave driven by digital technologies

Today's Digital Economy

SOCIAL

1. Digitalization of social interactions
2. Emergence of the “gig economy”
3. Polarization of income distribution
4. Universal basic income
5. Work-life balance

TECHNOLOGY

1. Ubiquity of digital technologies in the workplace and at home
2. Fast pace of technology innovation
 - Obsolescence of products and goods
 - Obsolescence of knowledge and skills?
3. Polarization of R&D and investments

Today's Digital Economy

LEGAL

1. Privacy
2. Statute of “platform workers”
3. « The right to disconnect »
4. Intellectual Property rights and patents

ENVIRONMENTAL

1. Digital accounts for 4% of greenhouse gas emissions
2. ... nearly half of which is due to terminal (user) equipment
3. By 2025, its carbon footprint is expected to double

FOR MORE INFORMATION ABOUT THE GLOBAL BUSINESS ENVIRONEMENT:

<https://www.doingbusiness.org/en/rankings>

Enterprise Essentials

Summary Class # 1:



- ☑ Economics is a social science that is studying the way goods and services are produced, allocated, exchanged or consumed, either at an individual (consumer, firm) or at an aggregated (nation, society) level. The 2 main branches of economics are “Macroeconomics” and “Microeconomics”
- ☑ The surge in recent years of enterprise (especially SMEs) creation, a phenomenon called “entrepreneurship”, calls for a good understanding of the role of the **enterprise** in our modern economics systems. As an economic agent, the enterprise has distinct features that sets it apart from other type of organizations
- ☑ The enterprise, or, « business organization » is an economic agent that contributes to the economy by providing efficiently goods and services, either to other companies (B2B) or directly to consumers (B2C)
- ☑ Today’s social and economic challenges (environment, labor evolutions, urban transition, increased digitalization of economic activities, ...) are numerous and businesses have to take them into account.
- ☑ A firm’s reason of being and founding principles are the lifeblood of any enterprise. They include: i) the firm’s understanding of its social role, ii) its mission, and iii) its core competencies.

Class # 1 Wrap-Up

- Q&A
- Reading for next class

Thank You!

Valeriu Petruian, PhD