

# Global Limits of Economic Growth

*Lomonosov Moscow State University,  
Inter-Departmental Course, 2024-2025, Spring Fall*

*Course Reader:*

**Evgeniya Anatolyevna Shvets, PhD.**

[e.shvec@edu.mgubs.ru](mailto:e.shvec@edu.mgubs.ru)

# Requirements to Pass the Course

- 1) No less than 50% of sessions are attended (6 out of 12)
- 2) There are no less than 60% of points for **the final course test**
  - **May, 7<sup>th</sup> (Wednesday)**
  - **Online in Moodle**
  - **You'll find your login\password information at your personal accounts in advance**
- 3) Individual Project is done properly and delivered in time, i.e. before May, 7<sup>th</sup>
- 4) The alternative for the Individual Project: participation in **the international climate seminar (based on En-ROADS simulation) on May, 30<sup>th</sup> at 13:00-14:30.**

14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	1	2	3	4
5	6	7	8	9	10	11

# General Scheme for Resource Limitations Analysis



## Scheme for the Individual Project

Resources	Steps of Analysis					
	Step 1	Step 2			Step 3	Step 4
	Role/ Importance	Limitations produced for			Ways used to overcome existing limitations	Suggestions how to improve these ways of coping with limitations
		World economy	National economy	Industries/ Business		
<b>Unique Resource or Problem</b> <i>selected by you</i> <b>Scale: world or a country or an industry</b>	...	...	...	...	...	...

# Write the Topic of your individual project in a file

- [https://disk.yandex.ru/i/0L\\_3ptbx-s2yBw](https://disk.yandex.ru/i/0L_3ptbx-s2yBw)



## Topics for individual projects

Course «Global Limits of Economic Growth», spring 2025

+					
Nº	<u>Student's Name &amp; Surname</u>	<u>MSU department</u>	<u>E-mail</u>	<u>Topic selected</u>	<u>Comments of the course teacher</u>
	<u>Example:</u> <u>Aurora Dias</u>	<u>Geografical Department</u>	<u>...@geo.msu.ru</u>	<u>Water &amp; electricity as limiting factors for the development of mining industries</u>	<u>Accepted</u>
	<u>Example:</u> <u>Li Yuzhany</u>	<u>Economic Department</u>	<u>...</u>	<u>I will participate in the <b>Climate Simulation Seminar based on the model En-ROADS</b> (the seminar will take place on one of these dates 30/04 or 14/05 at 13:00-14:30 at MSU BS: the final date will be selected by April, 15)</u>	<u>Accepted</u>
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

## Приглашаем студентов

### на Международный климатический семинар-игру с университетом Турции!

Уважаемые студенты!

Хотите получить уникальный опыт международного сотрудничества и применить свои аналитические навыки для решения глобальной задачи?

Присоединяйтесь к нашему **интерактивному очному семинару**, посвященному изменению климата, с использованием симулятора **En-ROADS**. Мероприятие пройдет совместно со студентами одного из ведущих университетов Турции!

**О симуляторе:** En-ROADS – это мощная научно-обоснованная модель, позволяющая исследовать различные сценарии климатической политики и их последствия в динамике.

#### Формат мероприятия:

- Интерактивная командная игра (3-4 человека в команде) на **английском языке**.
- Продолжительность: 1,5 часа (13:00 - 14:30).
- Задача: Команды от МГУ и турецкого университета будут поэтапно принимать стратегические решения для предотвращения глобального потепления, координируя свои действия.

#### Что вы получите от участия?

- Опыт работы в международной команде.
- Развитие навыков коммуникации на английском языке.
- Практику принятия стратегических решений на основе данных.
- Знакомство с современным инструментом моделирования – En-ROADS.
- Официальный сертификат участника международного семинара.
- Информацию об образовательных программах ВШБ МГУ.

#### Как принять участие?

1. Заполните регистрационную форму **до 14 апреля** (включительно): [ССЫЛКА НА ФОРМУ РЕГИСТРАЦИИ](#)
2. В форме укажите, какая из дат вам наиболее удобна: **30 апреля (среда)** или **14 мая (среда)**. Окончательная дата будет определена на основе большинства голосов.

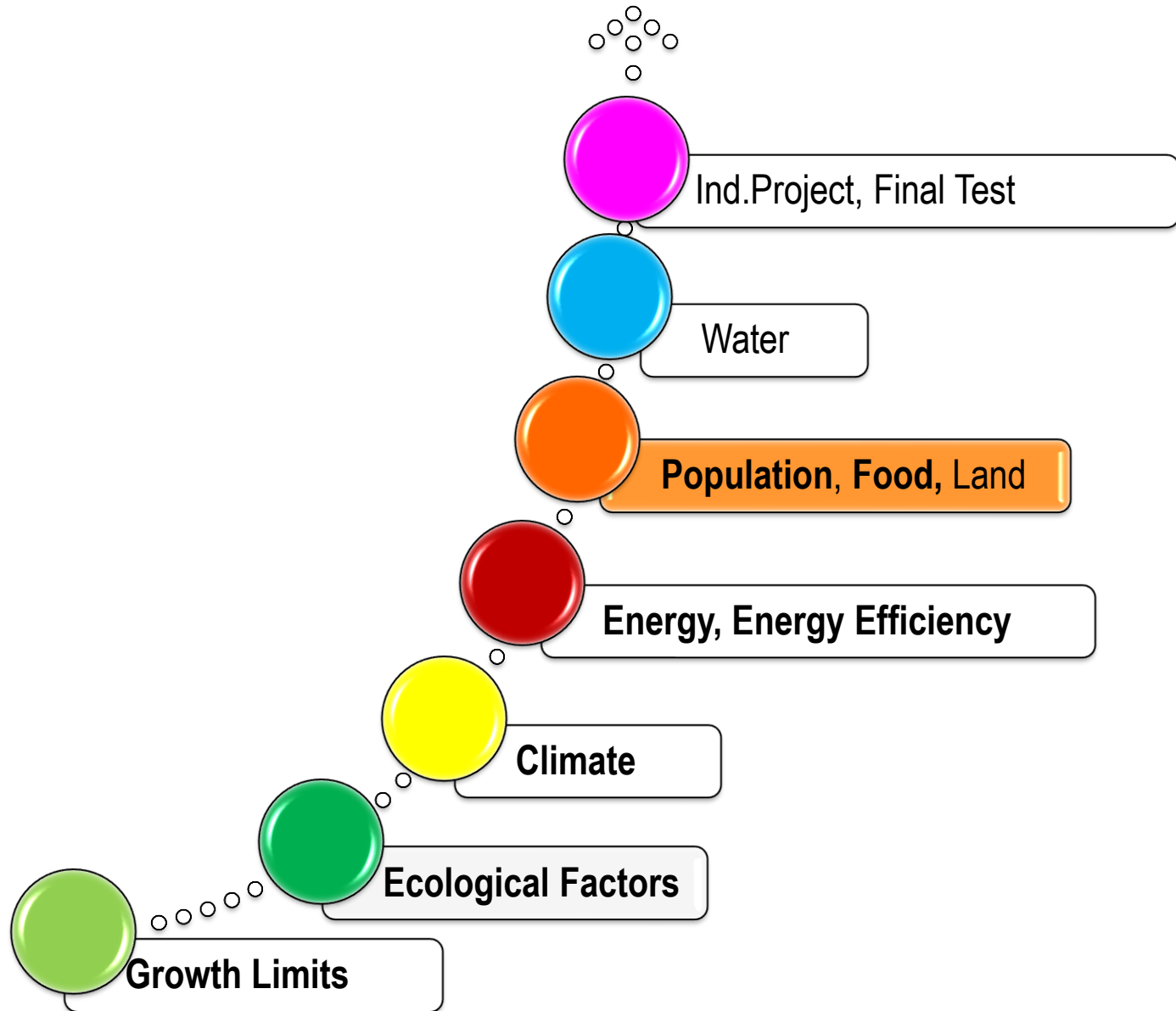
Для зарегистрированных команд будет организована предварительная подготовка к работе с симулятором.

Не упустите возможность стать частью интересного международного проекта!

Команда **ВШБ МГУ**

An alternative for the individual project

# Course Route



Sessions 9

# Population (continuation)

2025



# The Aims of Session 9 “Population”

- To identify main limitations that can be produced by population for business & national economic growth and to work out ways how to overcome these limitations
- To understand the role of social factor in ESG policy of business (*ESG factors: Environmental – Social – Governance*)

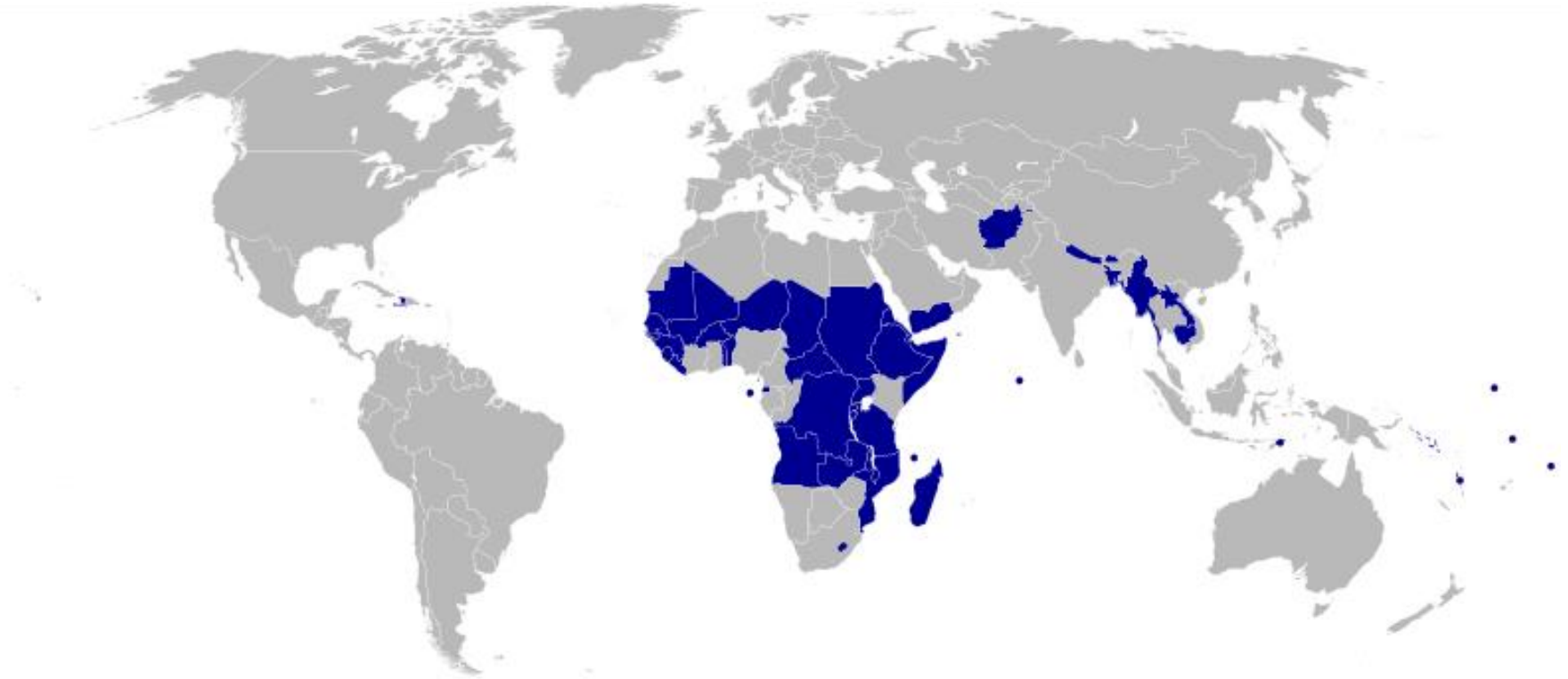


1. Population Trends & Risks
2. Ways to overcome these limitations
3. Social factor in ESG policy

# Population Pauperization Challenge for Business

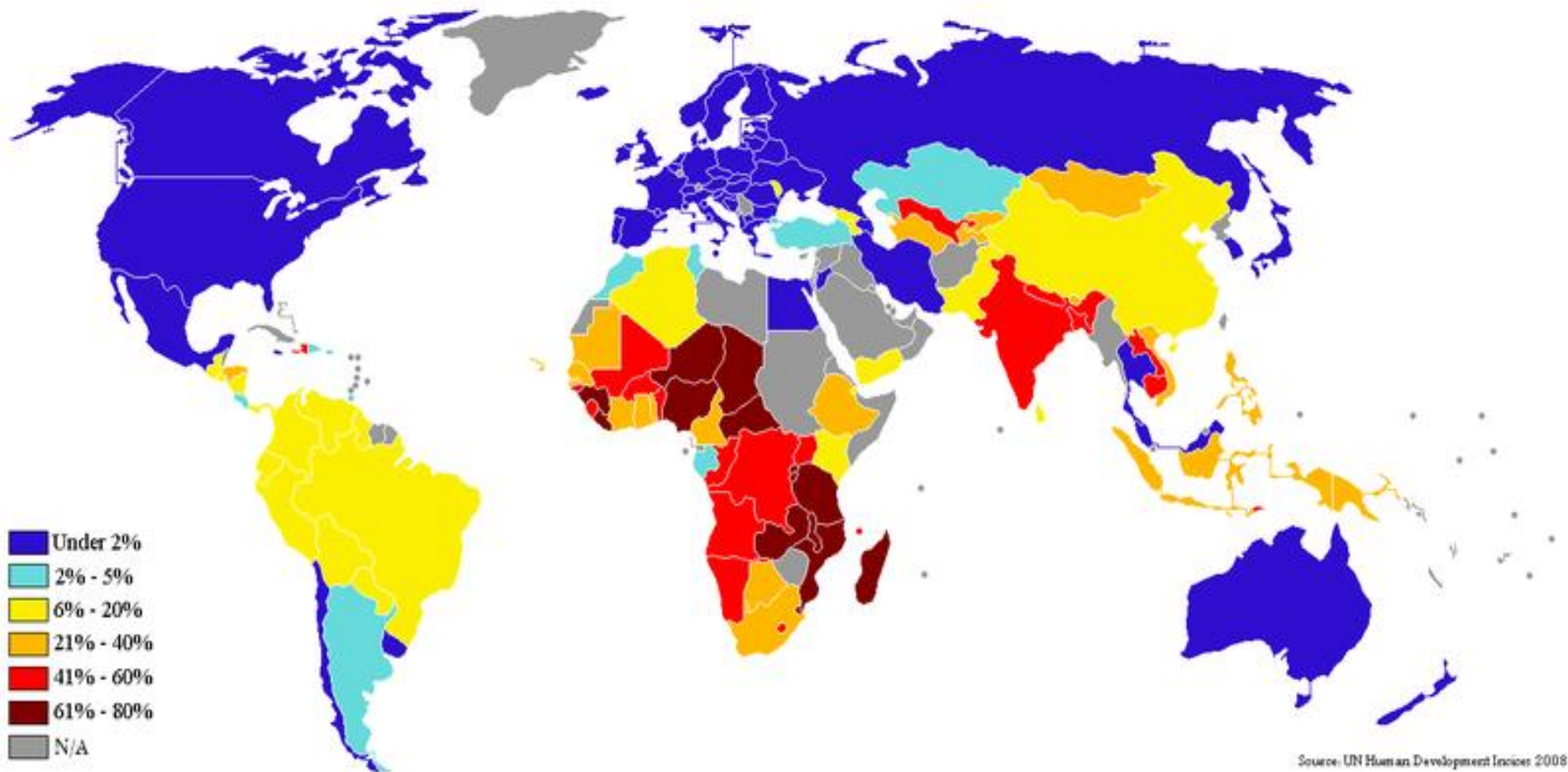
- Pauperization of around 200 mln people is one of the most negative consequences of the world financial crisis (of 2008).
  - The most urgent pauperization is in Sub-Sahara Africa and Asia regions that were shocked by both food price increase and then by financial crisis.
  - The world is 78% poor, **11% middle income**, and **11% rich**
- How business should react to pauperization problems in countries where it is located (if at all)?

# Less Developed Countries



- Less Developed Countries according to the UNO: **less than \$750 per year per person**
- **From 48 countries 33 are in Africa** (14 in Asia and Oceania, 1 in Latin America)
- #1 – Burundi, #2 – Congo, #3 – Liberia

# Percentage population living on less than 1 dollar per day



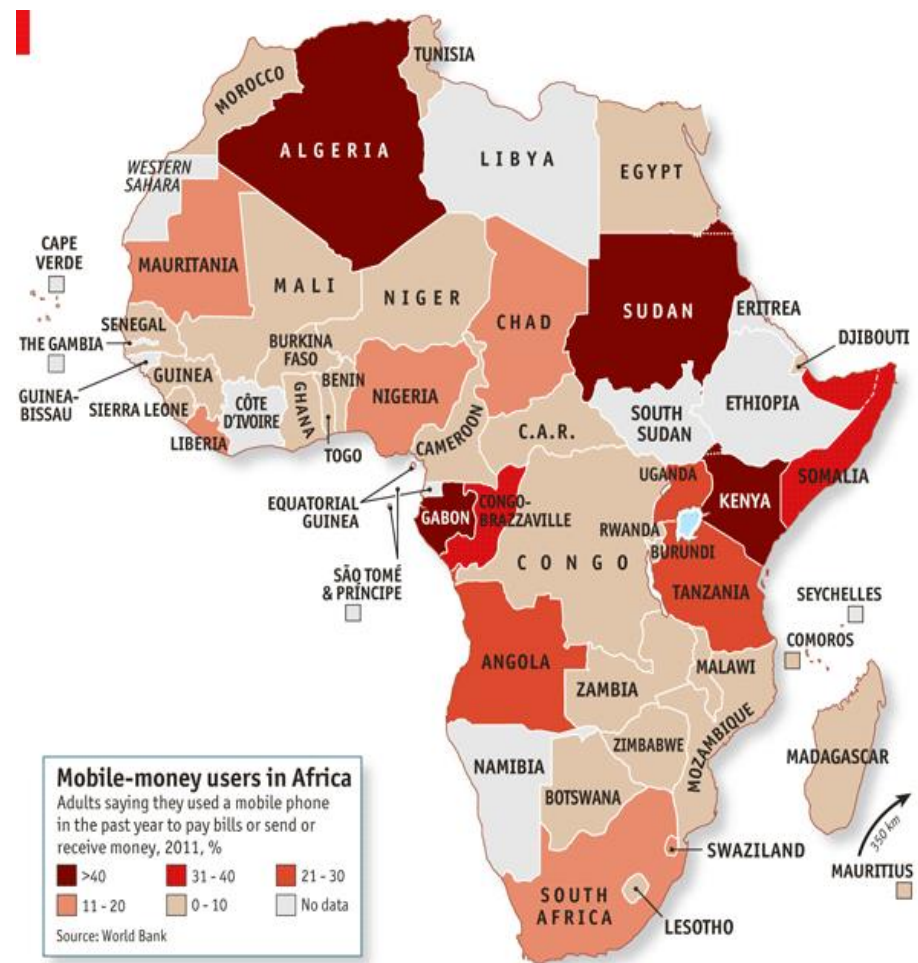
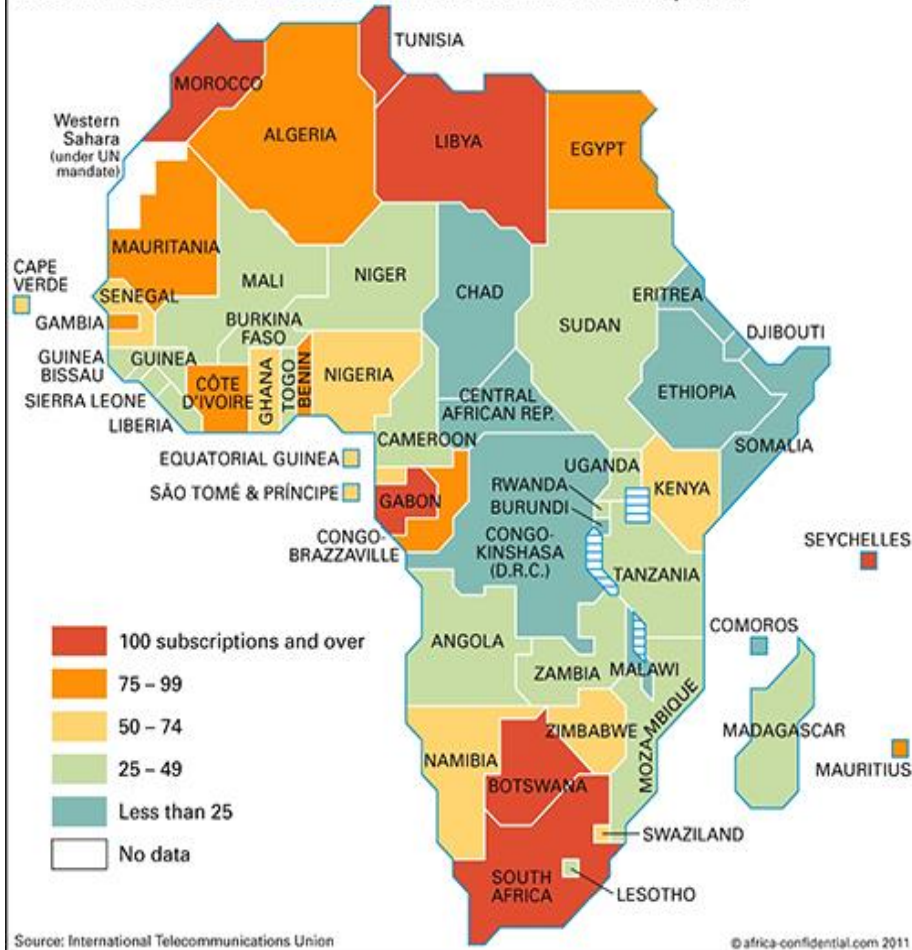
# Population Pauperization Challenge for Business

## Implications for Business

- These people will be involved into the global economy sooner or later
- Potential markets
  - The higher will be their income level the better
- Developing goods and services for these countries drive innovations and business growth
  - Photo-voltaic generators and renewable energy
  - Mobile communications and internet access
  - Water sanitation

# Example: Mobiles in Africa

MOBILE SUBSCRIPTIONS PER 100 INHABITANTS, 2010



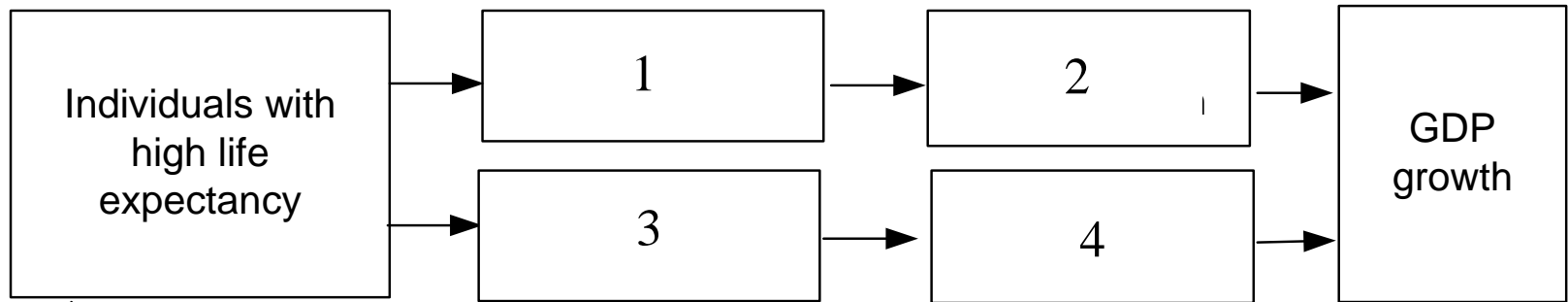


- What is the relationship between the state of health and economic growth of a country?

# Health and economic growth relationship



Improving health is another way to increase country's growth potential.



Source: <http://www.nber.org/papers/w15813>



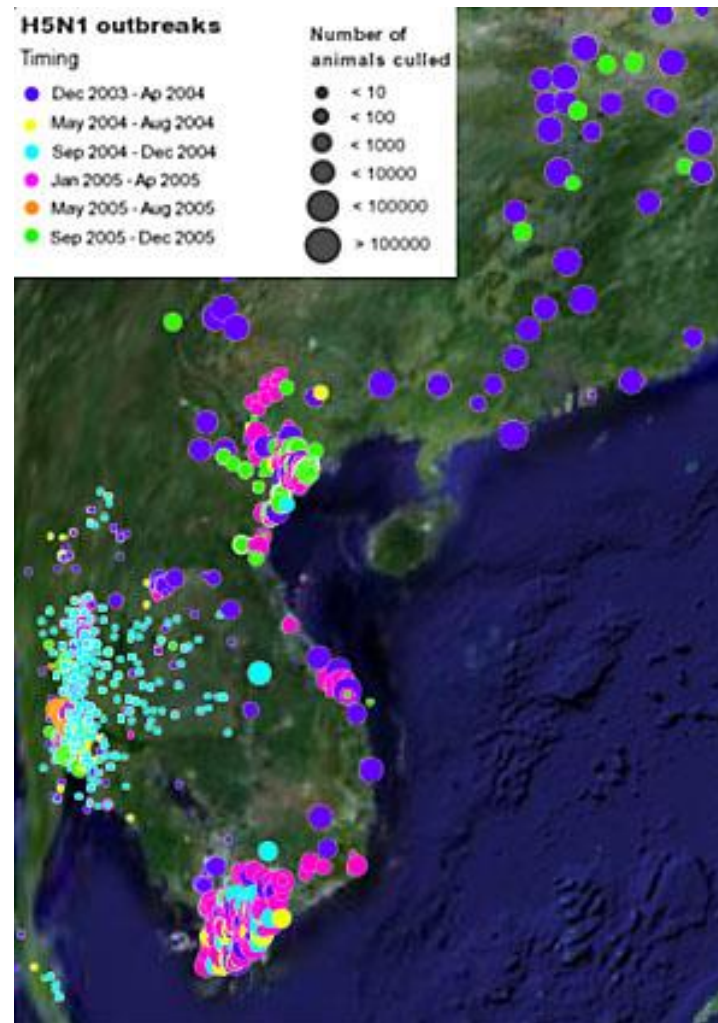


1. The health of employees, customers and stakeholders directly affects productivity (example with HIV/AIDS regions)



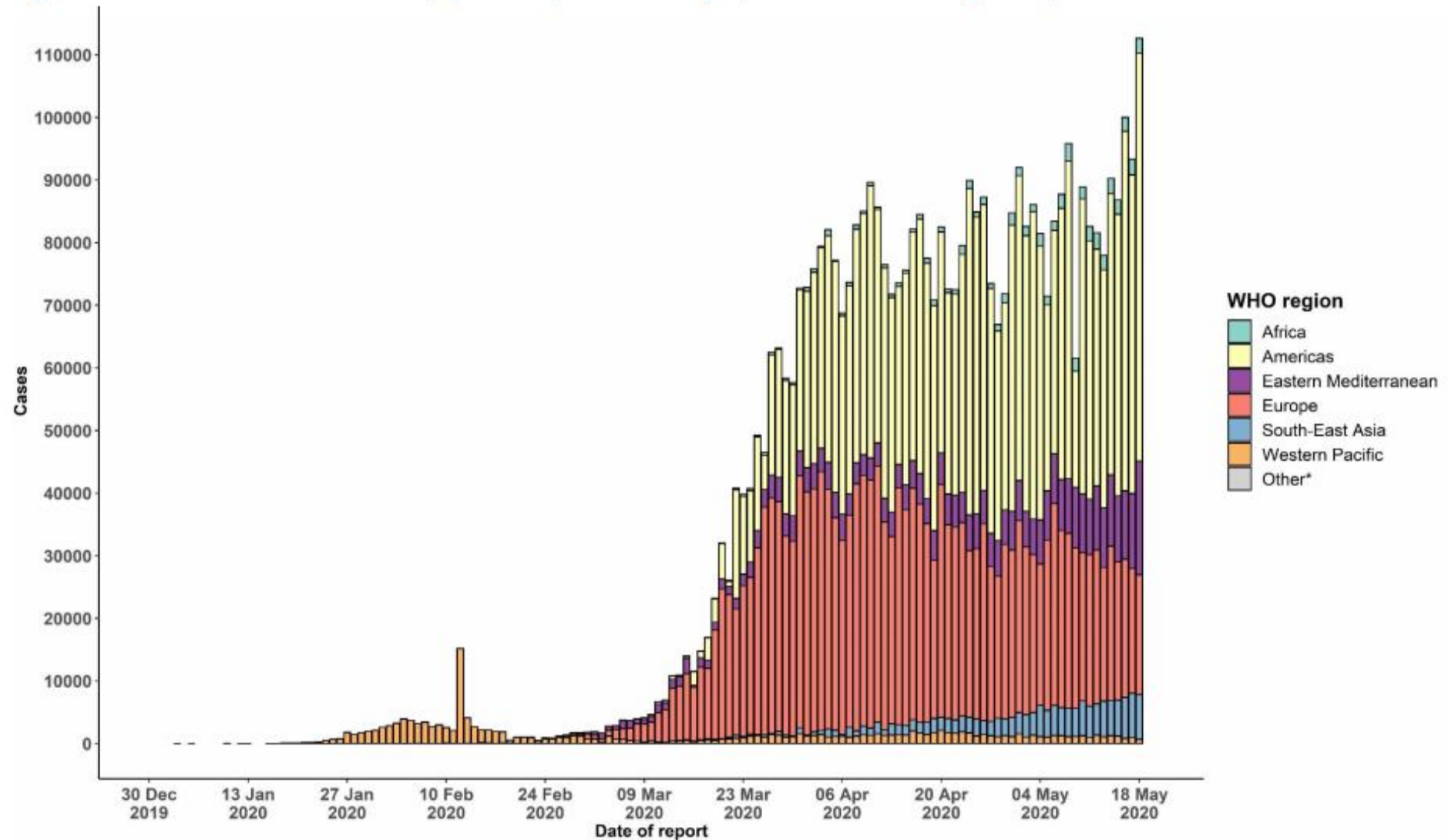


2. Apparently national and regional health crises can be turned into global ones due to the expansion of trade and travel.



# Number of Confirmed COVID-19 cases. 30.12.2019 – 19.05.2020

Figure 2. Number of confirmed COVID-19 cases, by date of report and WHO region, 30 December 2019 through 19 May 2020\*\*



# Health Implications for Business

3. This is a strategic opportunity for the private corporations in sectors such as pharmaceuticals, health services, water infrastructure, and water sanitation.





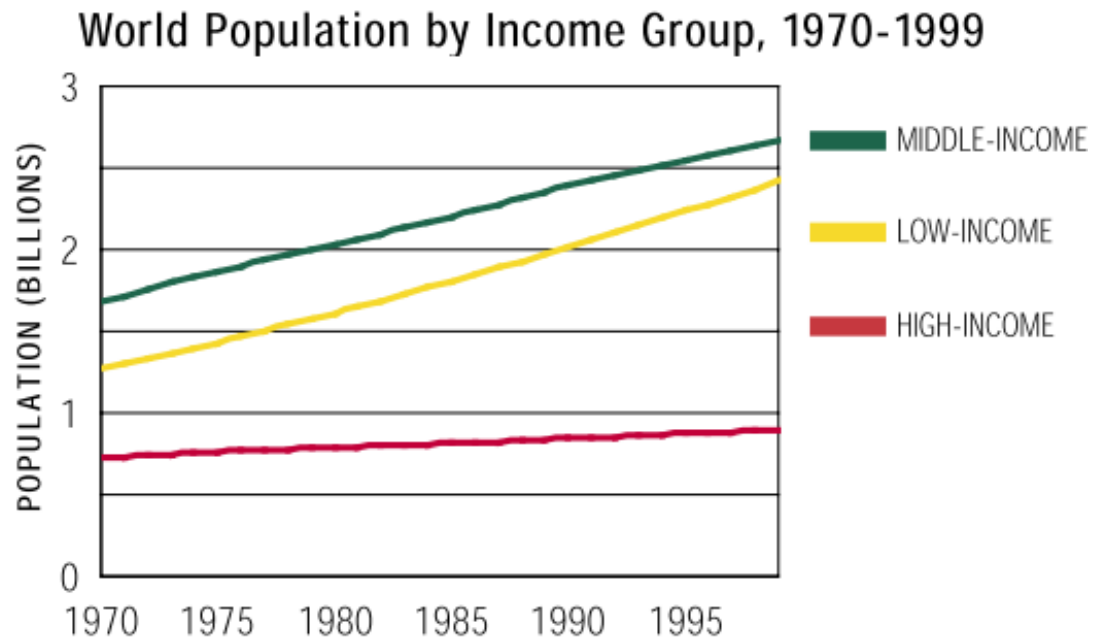
# Population = Consumers + Labor Force

1. Growing income has allowed people **to expand their consumption**
  - The money spent on household consumption worldwide increased 68% between 1980 and 1998
2. **Rising consumption creates** environmental risk and business opportunities for innovation
3. Implications for Business
  - How can a society meet the growing demand?
    - By increasing extraction, increasing efficiency, developing substitutes
    - Now there is a huge opportunity for innovation

# Population Growth Creates New Markets

1. Rapid population expansion in low-income and medium-income countries is contributing large numbers of potential workers and consumers to the world's economy.

2. The steady population growth in high-income countries means that few additional workers and consumers are being added in these countries.



Source: World Bank

# Business/Corporate Social Responsibility



Source: <http://newlearningplaybook.com/blog/2008/07/09/corporate-social-responsibility-and-global-talent-development/>

- Corporate social responsibility (CSR)
  - Corporate social responsibility (CSR) is a self-regulating business model that helps a company be socially accountable—to itself, its stakeholders, and the public.
- **ESG (Environmental, Social, and Corporate Governance)**
  - Three parameters according to which companies ensure the management of sustainable development by solving environmental, social and managerial problems



# ESG Factors



# Case of ESG transformation of CEMROS (ex-Eurocement Group company)

## ESG Transformation



What should be the focus of **social policy** of the company and why?

Consider the location of CEMROS plants and social & economic level of development of these regions

1. Identify stakeholders of the company.
2. Suggest problems or risks the company can have in social sphere
3. Think what actions should be taken by the company.

## Our company



2

industrial groups



22

manufacturing  
enterprises



9000

employees  
of our team



No 1

the leader of cement  
production in Russia



40

million tons  
per year



60

regions of product  
sales

## What is ESG?

ESG principles are already widespread in the corporate sector. It can be about aspects, as well as risks and opportunities that affect the company's ability **to create long-term value**.



The growing interest in ESG is an element of a more general trend in the development of Stakeholder capitalism

### Environmental

Natural resources  
Climate change  
Pollution

### Social

Human capital  
Development of the territories of our operation

### Governance

Corporate structure  
Corporate behaviour

### **Sustainable development is important for EUROCEMENT Group**

The values of sustainable development are an integral part of EUROCEMENT Group's business strategy. We are confident that our commitment to the principles of sustainable development, along with the growth of financial indicators and production capacities, ensures **the qualitative and long-term success of the Company**, creating values for all stakeholders.



## Key factors



## Our goals

- 1 To be a reliable partner and conduct an open dialogue with all stakeholders – customers, employees and local communities
- 2 To create conditions for the development of a team of professionals aimed at achieving high results

## Our approach

Employees are one of the key stakeholders for EUROCEMENT Group.

The company focuses its efforts on the continuous development of the motivation system, improving working conditions and ensuring professional development and career growth.

At the same time, we promote environmental, social and economic progress not only within the framework of our core activities, but also by supporting initiatives aimed at improving the quality of life in the regions of our presence, coordinating our actions with universal values and national development goals.



## Human capital

## WHAT WE DO



WE IMPLEMENT MEASURES AIMED AT ELIMINATING PRE-EMERGENCY, EMERGENCY AND OTHER DANGEROUS SITUATIONS



WE ATTRACT THE BEST SPECIALISTS, IMPROVE THEIR PROFESSIONAL SKILLS AND QUALIFICATIONS



WE HAVE DEVELOPED AND ARE IMPLEMENTING A COMPREHENSIVE MOTIVATION PROGRAM AND AN EMPLOYEE CARE PROGRAM



WE ARE LAUNCHING PARTNER EDUCATIONAL PROGRAMS WITH UNIVERSITIES AND COLLEGES TO TRAIN SPECIALISTS IN THE CEMENT INDUSTRY

## Development of the territories of operation

## WHAT WE DO



WE HAVE DEVELOPED A QUESTIONNAIRE FOR EMPLOYEES AND THEIR FAMILY MEMBERS



WE CONDUCT AN INITIAL ASSESSMENT OF THE STATE OF SOCIAL, ENGINEERING AND TRANSPORT INFRASTRUCTURE IN 10 TERRITORIES OF OUR OPERATION



WE WILL FIND OUT THE OPINION OF EMPLOYEES OF 10 FACTORIES OF THE COMPANY ABOUT SATISFACTION WITH THE QUALITY OF LIFE IN CITIES AND TOWNS OF RESIDENCE



WE ARE DEVELOPING MASTER PLANS FOR THE LONG-TERM SOCIO-ECONOMIC DEVELOPMENT OF THE TERRITORIES OF OUR OPERATION



## Human capital

### External risks

- **Outflow of qualified personnel in the regions of our operation**

### Our tasks

- **Increasing staff involvement in solving operational and production problems**
- **Social guarantees and welfare programs (wellbeing)**
- **Development of youth policy and youth worker**
- **Increase employee motivation**
- **Continuous training and development of people and leaders in production**

### Implemented activities in 2021

- ↑ **IMPROVING POSITIONS IN THE TOP 10 EMPLOYERS IN THE REGIONS OF OUR OPERATION**  
by increasing the level of wages at enterprises  
**to 30%**

-  **TRAINING OF THE PRODUCTION SYSTEM WAS CONDUCTED**

**INTRODUCTORY TRAINING ON THEORY OF INVENTIVE PROBLEM SOLVING (TRIZ) WAS CONDUCTED**

-  **THE PARAMETERS OF PARTNERSHIP WITH A REFERENCE UNIVERSITY WITH EXISTING DEPARTMENTS FOR TRAINING SPECIALISTS IN THE CEMENT INDUSTRY HAVE BEEN DETERMINED**







## Welfare program

### 1.0 Focus on health

- Traditional wellness models – from financial incentives for health screening and smoking cessation programs to providing employees with wearable gadgets for tracking physical activity and providing sports programs.

### 2.0 Focus on financial well-being

- Employers focus on the financial well-being of employees through the introduction of educational programs that help employees understand how to manage finances, make the right financial decisions and teach savings. As well as the opportunity to use corporate offers on financial products and simplified procedures for obtaining them.

### 3.0 Focus on an individual value proposition

- A holistic approach, the transition from one-time programs to full-fledged programs of well-being and concentration on each employee as a versatile person with different needs.
- This approach includes taking care of health, finances, social connections and emotions.

- Health Programs, VMI
- Telemedicine Online
- Employee recreation program
- Vaccination
- Smoking cessation program



Health  
Management



Physical  
activity

- Sports grounds (football, volleyball, hockey)
- Preferential programs of fitness clubs and swimming pools
- Sports competitions

- Preferential lending programs
- Financial products from a corporate bank
- Corporate offers of insurance products
- Co-financing programs
- Lectures on pension reform
- Corporate non-state pension fund



Financial  
well-being

Emotional  
comfort

- Team building
- Corporate events, holidays
- Support of employees in difficult situations
- VMI-programs for relatives
- Vouchers to the children's camp
- Electronic Library





## Development of the territories of our operation

### CONCEPT OF DEVELOPMENT OF THE TERRITORIES OF OUR OPERATION

---



Urban  
environment



Transport  
infrastructure



Sport



Culture  
Leisure



Educational  
environment



Career guidance



## Development of the territories of our operation

### What is the goal?

#### 1. ENSURING A SOCIAL STANDARD OF LIVING

##### 2. SOLVING NEXT PROBLEMS:

- Poor quality of the urban environment
- Lack of socially significant infrastructure
- Lack of opportunities for self-realization and talent development
- Weak involvement of residents in the processes of positive change

### Concept

#### 1. VALUES

Initiatives

Progress

Innovativeness

Engagement

Active urban communities

#### 2. PHYSICAL EMBODIMENT

Educational  
environment

Sports  
environment

Cultural and leisure  
environment

Healthcare  
facilities

Modern habitation

Well developed  
infrastructure

Comfortable urban environment



## Development of the territories of our operation

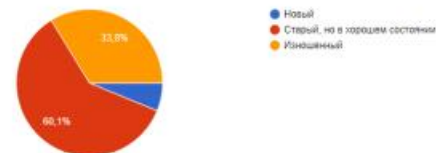
### What we do

1. WE INVOLVE EMPLOYEES OF ENTERPRISES
2. WE INVOLVE COMMUNITIES (LEADERS, ACTIVISTS, YOUTH)
3. WE INTERACT WITH MUNICIPAL AND REGIONAL AUTHORITIES
4. WE COLLECT A COMMON VISION OF DEVELOPMENT, TURN IT INTO A SET OF PROJECTS, LAUNCH THEM AND ACCOMPANY THEM



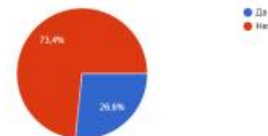
Какое состояние парка общественного транспорта

4 421 ответ



Есть ли в школе, в которой обучается Ваш ребенок (Ваша дети) углубленно изучение предметов?

1 434 ответа



Сквер Защитников Отечества



Пешеходно-прогулочная зона по ул. Дачная к пруду на реке «Полов ручей»



Парк «Юность»



# Labour Mobility

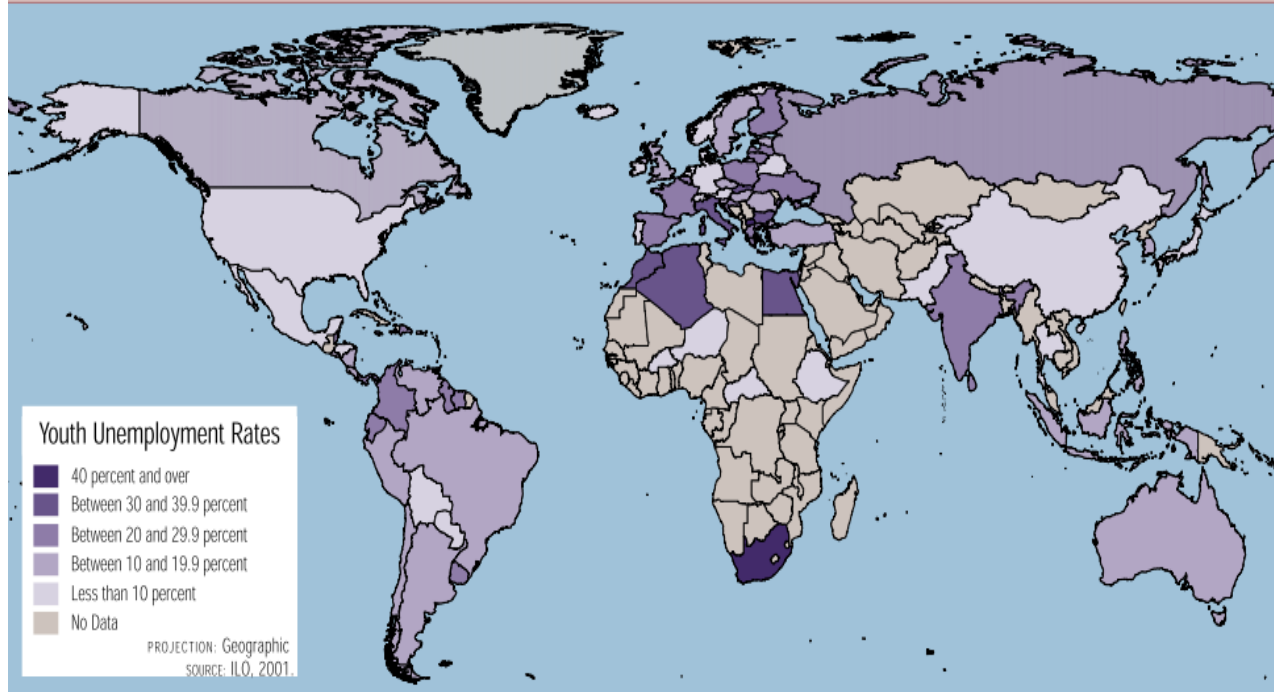
- Labour mobility consists of changes in the location of workers both across physical space (geographic mobility) and across a set of jobs (occupational mobility).
- Humans labour mobility is growing
- It creates a large demand for energy and infrastructure
  - Access to less polluting and more efficient mobility is both a challenge and an opportunity for business
  - Transport of people and goods is responsible for about 1/5 of worldwide energy consumption
- Between 1990-1995, 40% of population growth in high-income countries was due to migration, while in low-income countries, migration reduced population growth by about 3%. (WB)
- Big cities population would be reduced in 2 times after 2 generations changes of there is no migration flow into it.



# Job Crisis



Employing Young People Promotes Long-Term Growth And Stability



What a job crisis is?

Unemployment is **only one** dimension of the jobs crisis: workers that are at risk of losing jobs should also be included.

- Youth unemployment in most countries is about twice that of adult's and usually is higher for women than men.

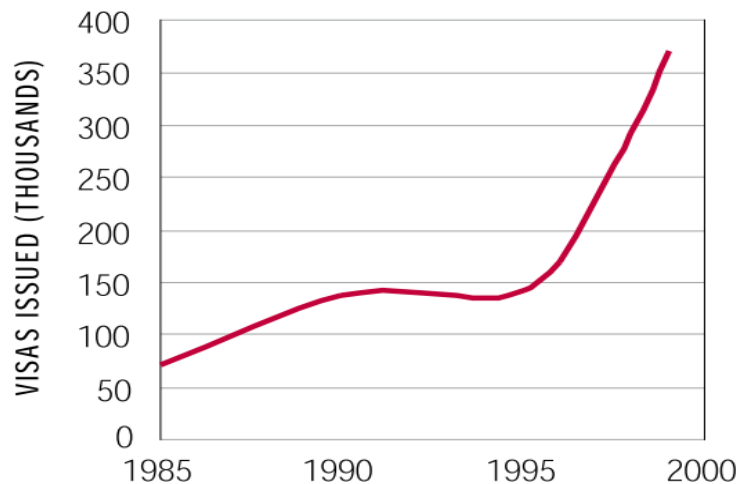
## Ways to resolve

- Stimulus packages, subsidies
  - Encourage employers to hire, and train, people who have been out of work for more than 6 months (UK)
  - Stimulate unemployed people to look for a new job (RF)
- Unemployment insurance
  - USA practice
- Part-time work (public works)
  - temporary and part-time workers in agriculture in Japan
- Professional Retraining
- “Green projects”
  - How many jobs can be created in GREEN PROJECTS in the short and medium term? Money invested in clean energy is estimated to create **twice as many jobs per dollar** invested compared with traditional fossil fuel-based energy.



# Shortage of Qualified Workers

Non-Resident U.S. Visas Granted to Specialty Workers, 1985-1999



SOURCE: US Department of Justice, 1998; OECD, 2001.

- Demand for skilled labour is increasing.
- Especially in the high growth areas of business that are technology intensive.
- Most countries have adapted policies to allow immigration of skilled foreign workers (special quotas).
  - USA
  - Australia

## Implications for business:

- Labor capacity = traditional education + adult education + worker training → career-long learning
- It increases productivity, boosts the living standard and creates a consumer base



# Illegal Immigration

- Role of illegal immigrants in the economy of countries recipients and countries of their origin
- Challenges, difficulties, obstacles
- How the problem can be addressed?
  - What factors are contributing to the problem? (*pauperization, unemployment, wars, hunger, ...*)
  - Any Implications for Business?



## Illegal Immigrants

**15  
Million  
2008**

**83  
Million\*?  
2030**

\* Based on the current estimated rate of growth in illegal immigration to the U.S.

Source: Congressional Research Services (R33674)

# Ways to overcome Population Limitations

## CHALLENGES

- Business Social Responsibility
- Population as a Determinant of Consumption Factor & Labor Force for Companies
- Population Labor Mobility
- Shortage of Qualified Workers
- Ageing Population
- ....



## WAYS TO OVERCOME

- Creating green jobs
- Improving health-care and pension system...
- ...
- ...

# Session 9

# Food & Food Supply

2025



# The Aims of Session 9 “Food”

1. To know main limitations that can be produced by food production as for business and national economic growth
2. To work out ways how to overcome these limitations

# Session Plan

## Food Supply

1. Food Security VS Food Self-Sufficiency
2. Public Policy on Food Security
  - Discussion “pro” & ”con”, [basing on FAO article](#)
3. Genetically Modified Food
4. Key Challenges for Food Production Companies

- **Food security** exists when all people, at all times, have **physical, social and economic access** to **sufficient safe and nutritious food** that meets their dietary needs and food preferences for an active and healthy life.
  - It is estimated that more than 1 billion people may be suffering from under-nourishment.
  - The Committee for World Food Security (UN CFS) was established *as a result of the food crisis of the 1970s*, upon recommendation from the 1974 World Food Conference.

# Food Security VS Food Self-Sufficiency

## Food Security

- WHO defines 3 aspects of food security:
  - **Food availability** is having available sufficient quantities of food on a consistent basis.
  - **Food access** is having sufficient resources, both economic and physical, to obtain appropriate foods for a nutritious diet.
  - **Food use** is the appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation.
- FAO adds a fourth aspect:

**The stability of the first three dimensions of food security over time.**

## Food Self-Sufficiency

- It is the state of not requiring any aid, support, or interaction in food supplies, for survival; it is a type of **food autonomy** or even autarky on a national scale.



# Food Security

- How it can be measured?
  - General understanding:
    - The ratio of national products in total products consumption should be about 70-75%
  - Russian Food Security Doctrine:
    - Approx. 85% of consumed products was produced inside the country (2020)
    - Now: cereals - 100% (+/-), meat – 78%, milk – 81%.
    - Food import in Russia (2016) is about 28-30%
    - In February 2010 the obligatory certification system for all food products was abolished. *What are consequences of this step?*



# Food Security Dynamics in Russia by Main Product Types (%)

Год	Cereals (>95%)	Potatoes (>95%)	Milk and milk products (>90%)	Meat and meat products (>85%)
1990	89,9	105,4	88,2	88,2
1995	99,8	104,0	86,8	73,4
2000	95,9	101,2	88,6	69,1
2005	117,5	102,0	82,3	62,0
2010	122,4	101,0	80,6	72,4
2012	134,8	103,7	80,2	75,9
2013	123,7	н.д.	80,5	77,5

Источник: Рассчитано по данным Росстата «Балансы продовольственных ресурсов». [http://www.gks.ru/wps/wcm/connect/rosstat\\_main/rosstat/ru/statistics/enterprise/economy/#](http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/enterprise/economy/#)

ПН=(ОП:ОЛ):100, где ОП – объем производства, Минсельхоз: вместо ОП – объем потребления

# Food Insecurity or Food Trade

If a country is dependent on imports  
for a significant share of its food consumption

<b>It is not a problem</b> (Describe possible positive sides of such situation)	<b>It is a problem</b> (Describe possible negative sides of such situation)
1. ...	1. ...
2. ...	2. ...
3. ...	3. ...
4. ...	4. ...
5. ...	5. ...

# World Food Market

- **The food market** covers all edible products that are bought and consumed for nutrient-based purposes. The market includes both fresh and processed foods.
- The market is further differentiated into Dairy Products & Eggs, Meat, Fish & Seafood, Fruits & Nuts, Vegetables, Bread & Cereal Products, Oils & Fats, Sauces & Spices, Convenience Food, Spreads & Sweeteners, Confectionery & Snacks, Baby Food and Pet Food.
- Food market is expected to grow at a CAGR of 6% between 2023 and 2028.

# World Food Market

**2011:** 1) China (\$ 963 bln), 2) USA (\$ 907 bln)

**2015:** 1) China, 2) USA, 3) India, 4) **Russia**, 5) Brazil

**2024:** 1) China (\$ 1,630 bln)

**Russia:** 2008-2011 – growth by 2 times (\$ 314 bln in 2011)

**China:** 2006-2015 – growth by 3 times

Growth contributing factors - ?

# World Food Market Trends

- Revenue in the Food market amounts to US\$10.07tn in 2024. The market is expected to grow annually by 6.53% (CAGR 2024-2028).
- The market's largest segment is the segment Confectionery & Snacks with a market volume of US\$1.77tn in 2024.
- In relation to total population figures, per person revenues of US\$1,299.00 are generated in 2024.
- In the Food market, 6.0% of total revenue will be generated through online sales by 2024.
- In the Food market, volume is expected to amount to 3,118.00bn kg by 2028. The Food market is expected to show a volume growth of 3.9% in 2025.
- The average volume per person in the Food market is expected to amount to 352.30kg in 2024.

# Home Reading Review

- Read or listen the story from The Economist (13/02/2025): [Tensions with the West are fuelling China's anxiety about food supplies](#). Be ready for the discussion of food security and food trade of the biggest food producer in the world.
- In the past few years, as the contest with America and other Western countries has intensified, China has become ever more preoccupied with maintaining food security, stressing that it is a vital component of national security.
- Last year the country introduced its first food-security law. All this has expanded the way China views food security. The usual term for it is *liangshi anquan*, which literally means **grain security**. It commonly refers mainly to rice, wheat and maize as well as soyabeans (an oilseed). Now it is promoted with another term: *da shiwu guan*, or the “**big food concept**”, covering all types of commonly eaten foodstuffs.



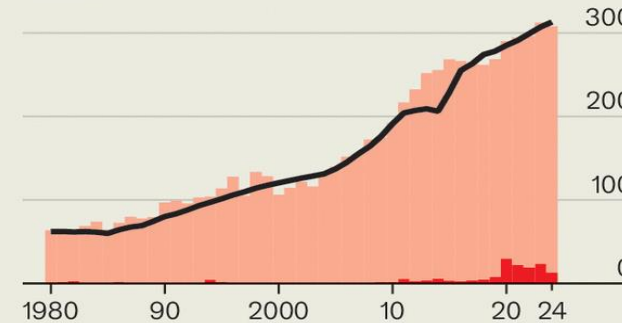
- The country is the world's biggest producer of food. Its grain harvest last year (including soyabeans) hit a record high of more than 706 m tonnes. It is over 95% self-sufficient in the production of main staples for human consumption: rice and wheat. But the country's growing wealth has fuelled demand for a much more varied diet.
  - Since 2004 China has been a net importer of foodstuffs. It is now the world's biggest buyer of them. Imports in 2023 were worth \$140bn. It relies on foreign supplies for 80% of its soyabean needs, 70% of its edible oils, 30% of its milk and nearly 10% of its meat.
- China has 18% of the world's population but just 7% of the world's arable land.

## Grow your own

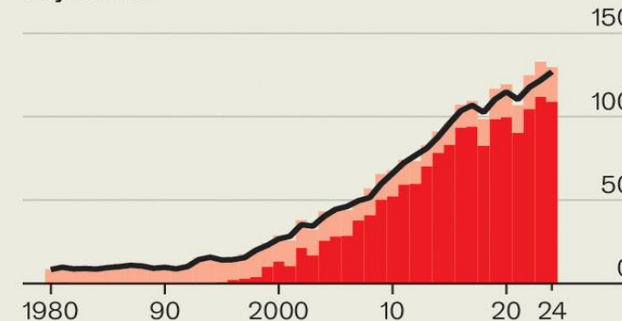
China, commodities, tonnes m

Imports Production Domestic consumption

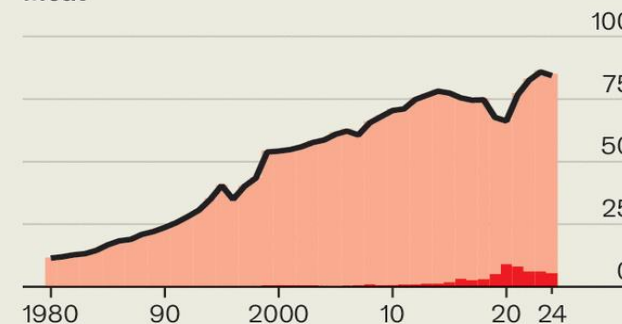
Maize\*



Soyabeans\*



Meat†



\*Years ending August 31st †Beef, chicken and pork

Source: US Department of Agriculture, Foreign Agriculture Service

# Export & Import of Food

TABLE 6: Exports and Imports of food, million US\$ (2012)

	Export value	Import Value
Europe	403	418
Asia	160	264
Americas	266	159
Africa	29	64
Oceania	45	14

CHART 56: Top food importing countries in 2012

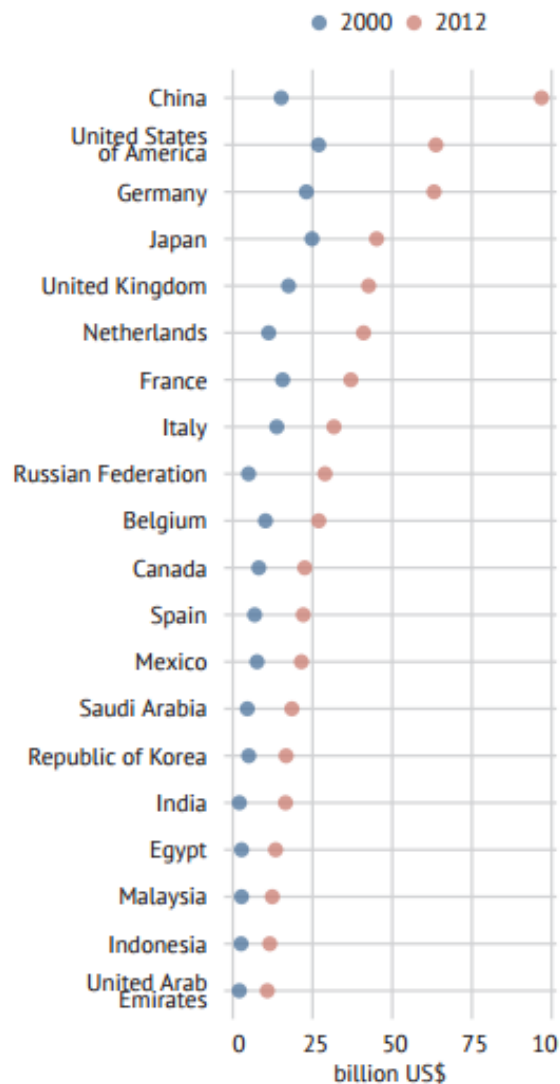


CHART 57: Top food exporting countries in 2012

