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National research university “Higher School of Economics”

HOW CAN EDUCATION CONTRIBUTE TO SOCIOECONOMIC DEVELOPMENT? RETHINKING HUMAN CAPITAL FOR THE LABOUR MARKET OF THE FUTURE

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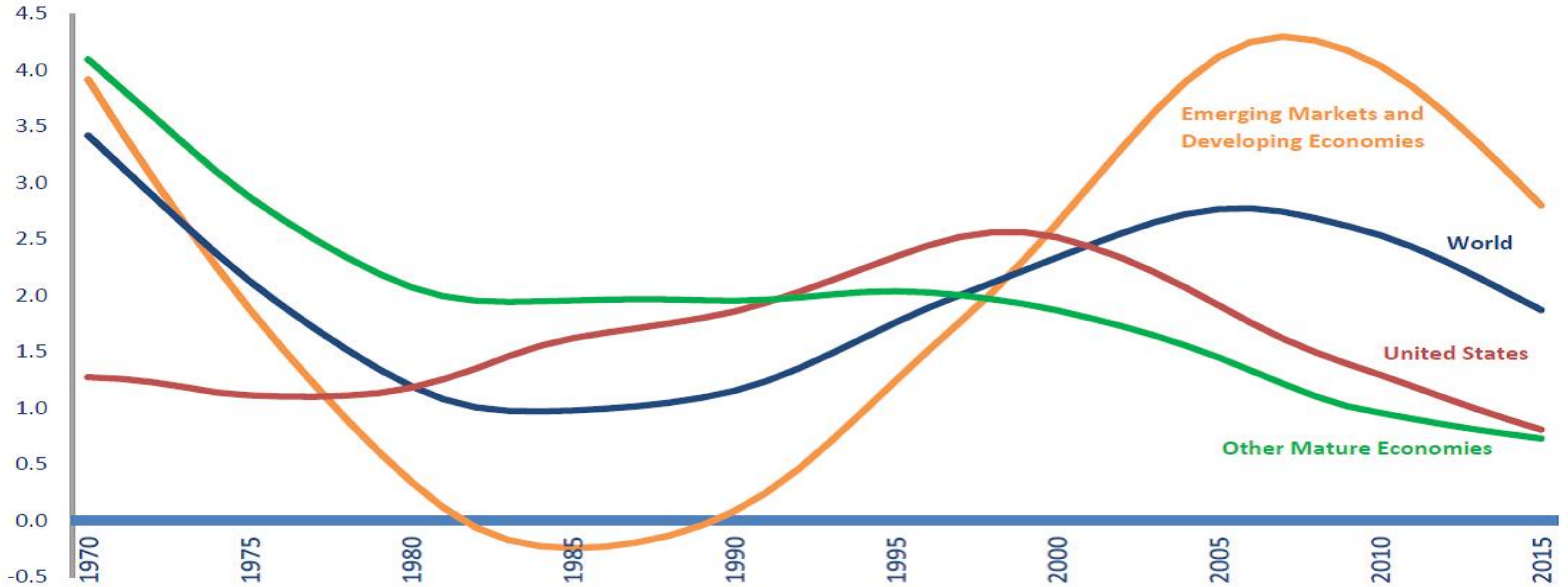
Head of the Institute of Education

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Session 5 “Careers and Skills for the Labour Market of the Future”**

GLOBAL ECONOMIC GROWTH: PROBLEM



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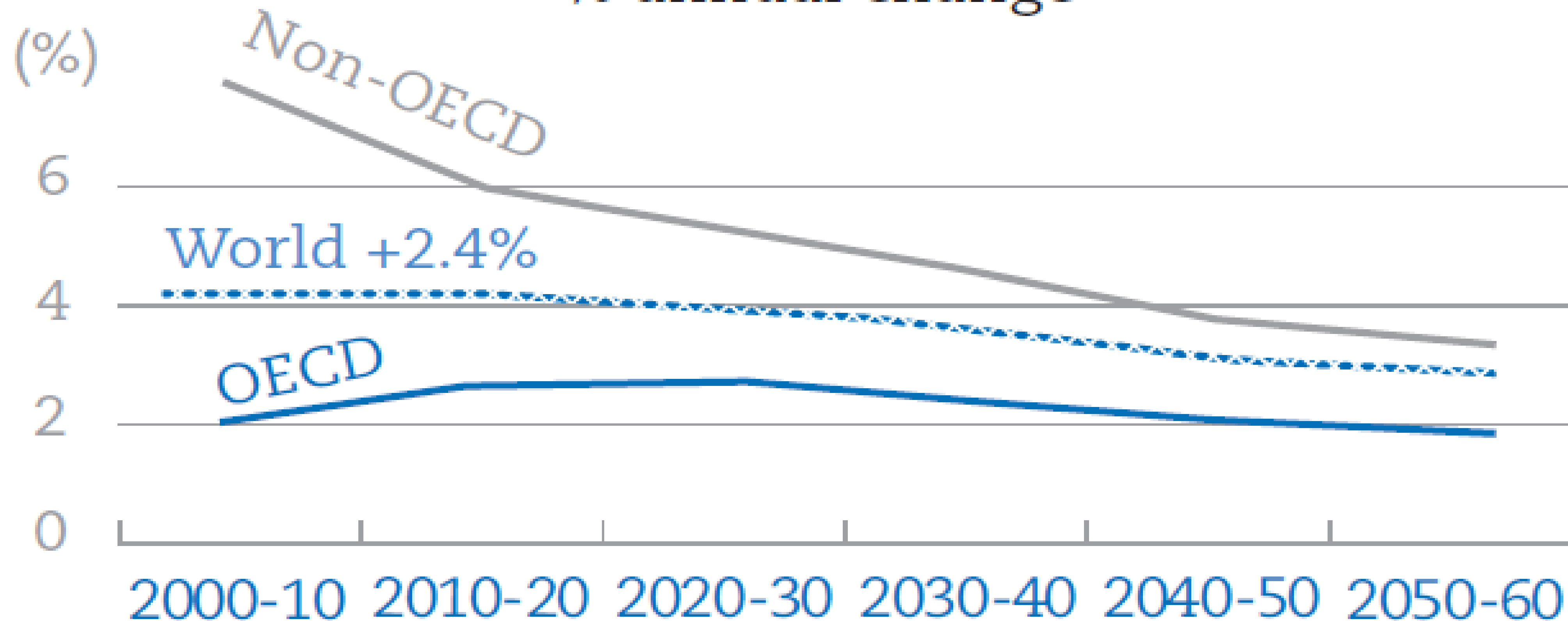
Source: The Conference Board Total Economy Database™ (Adjusted version), November 2016.

Notes: Trend growth rates are obtained using HP filter, assuming a $\lambda=100$.

GLOBAL ECONOMIC GROWTH: PROBLEM SEEMS TO REMAIN



Global economic growth will slow % annual change³

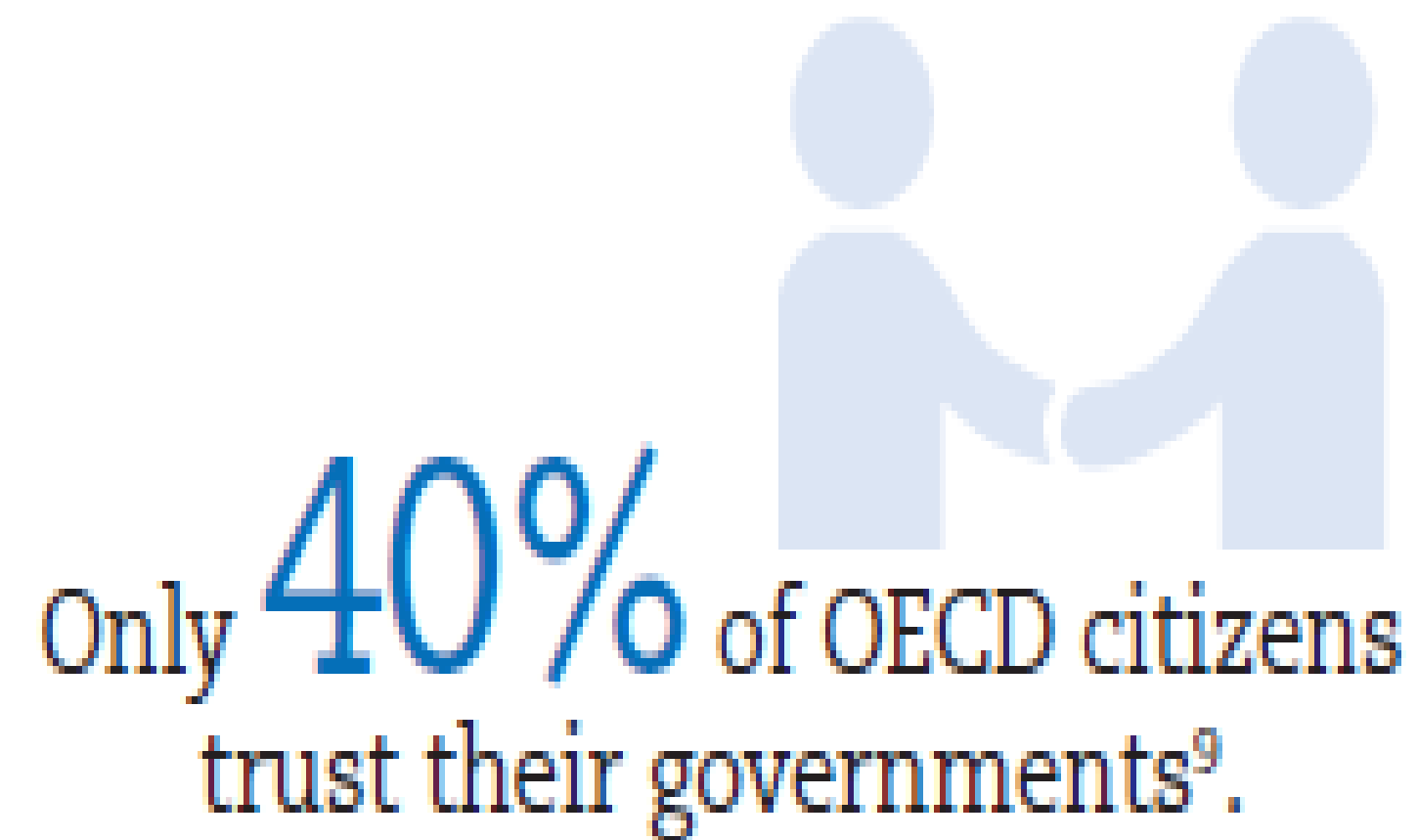


OECD
Science,
technology
and
innovation
outlook 2016

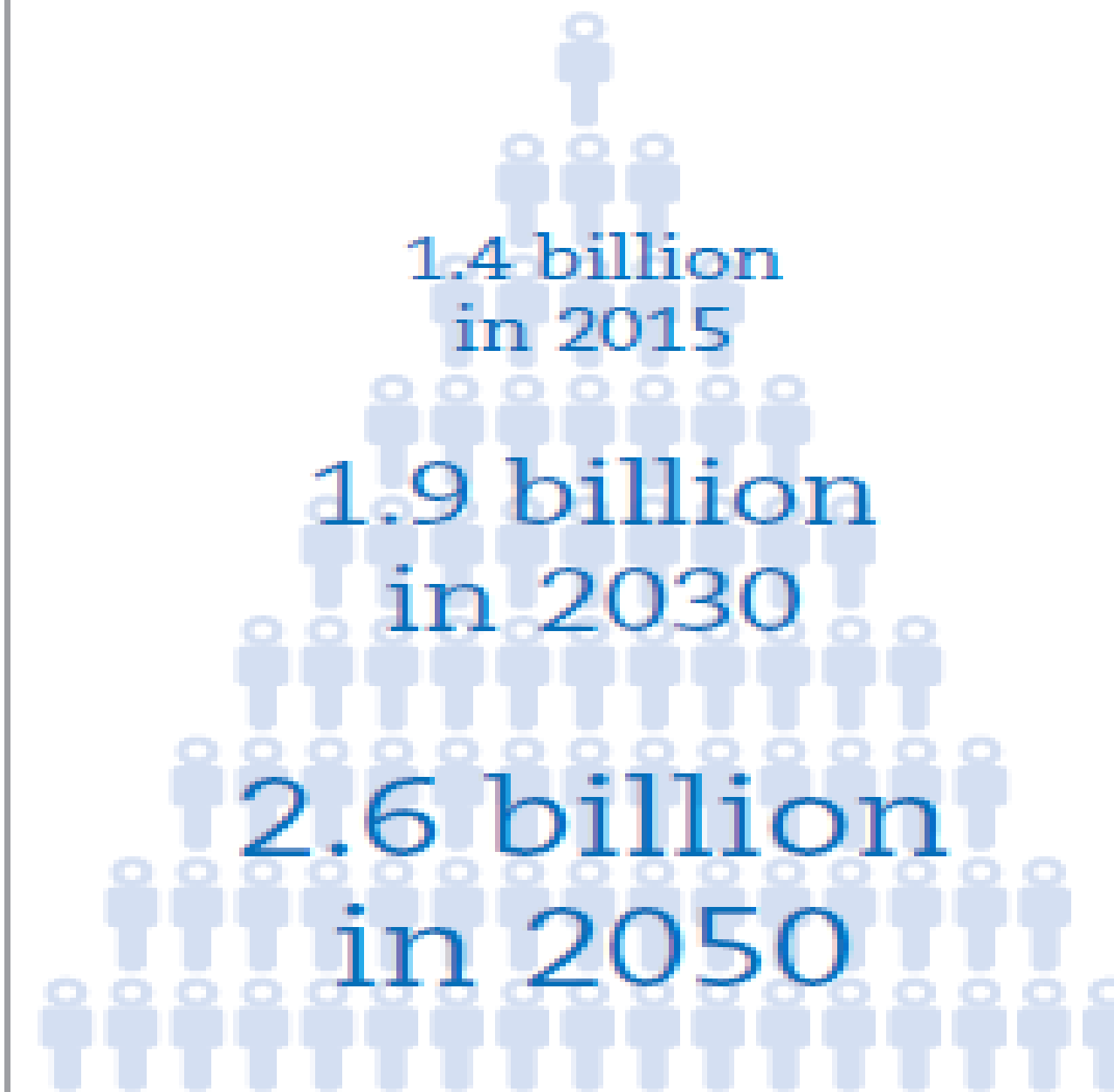
SOCIAL COHESION: PROBLEM THAT ALSO SEEMS TO REMAIN



Political institutions under pressure

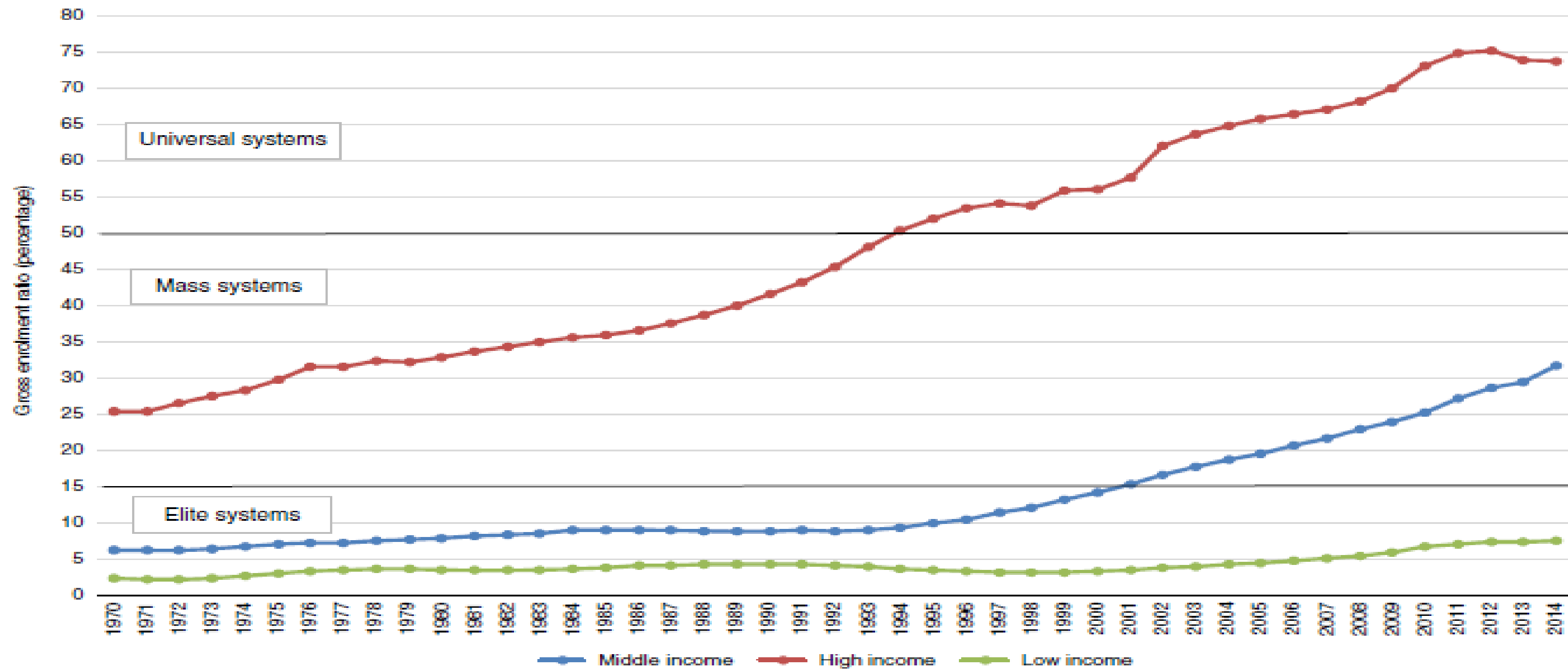


More people will live in fragile states¹¹



OECD
Science,
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INCREASING EXPANSION OF HIGHER EDUCATION



Note: Based on Trow’s (1973) typology of “elite systems” (enrolments of up to 15 per cent), “mass systems” (enrolments of 15 per cent to 50 per cent), and “universal systems” (enrolment of over 50 per cent)

Source: World Bank, Databank (2016)

NOTE: HE SYSTEMS WITH HIGHEST COVERAGE – CONTINUE TO EXPAND (MEYER JW, 2019)

Wright, E., & Horta, H. (2018). Higher education participation in “high-income” universal higher education systems: “Survivalism” in the risk society. *Asian Education and Development Studies*, 7(2), 184-204.

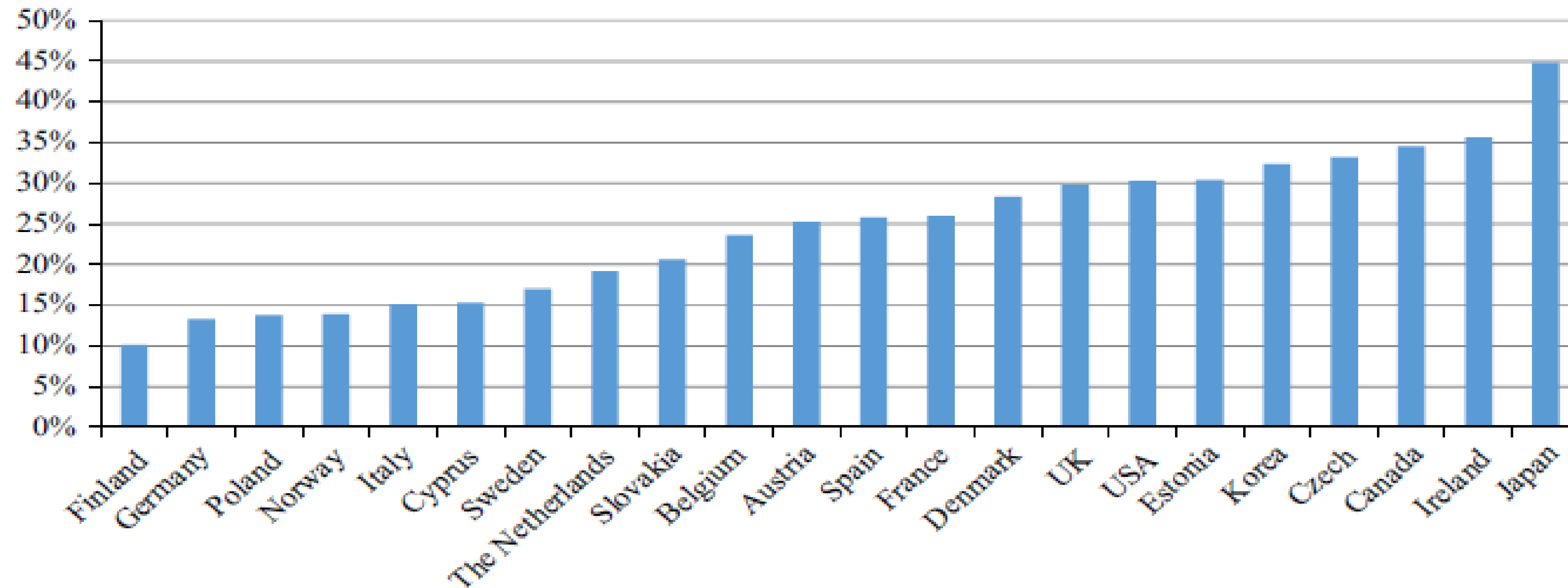
GROWING INVESTMENTS IN EDUCATION AFTER GLOBAL CRISIS 2008



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-
- In 2010-2014 the expanses of OECD countries on primary and secondary education grew by 4%. In the sector of tertiary education the growth was 50% higher.
 - Investment in education is largely due to the efforts of private sector: in 2010-2014 in OECD private expanses on education increased by 8%.
-
- The cost of college in the USA rose more than 170% from 1997 to 2017.
 - No other sector of the country's economy saw such increases in the cost of its products or services.

OVEREDUCATION - TIME TO STOP EXPANSION?



Human capital is overqualified. Why do the graduates “extra-skills” not lead to high-productive job-places creation?

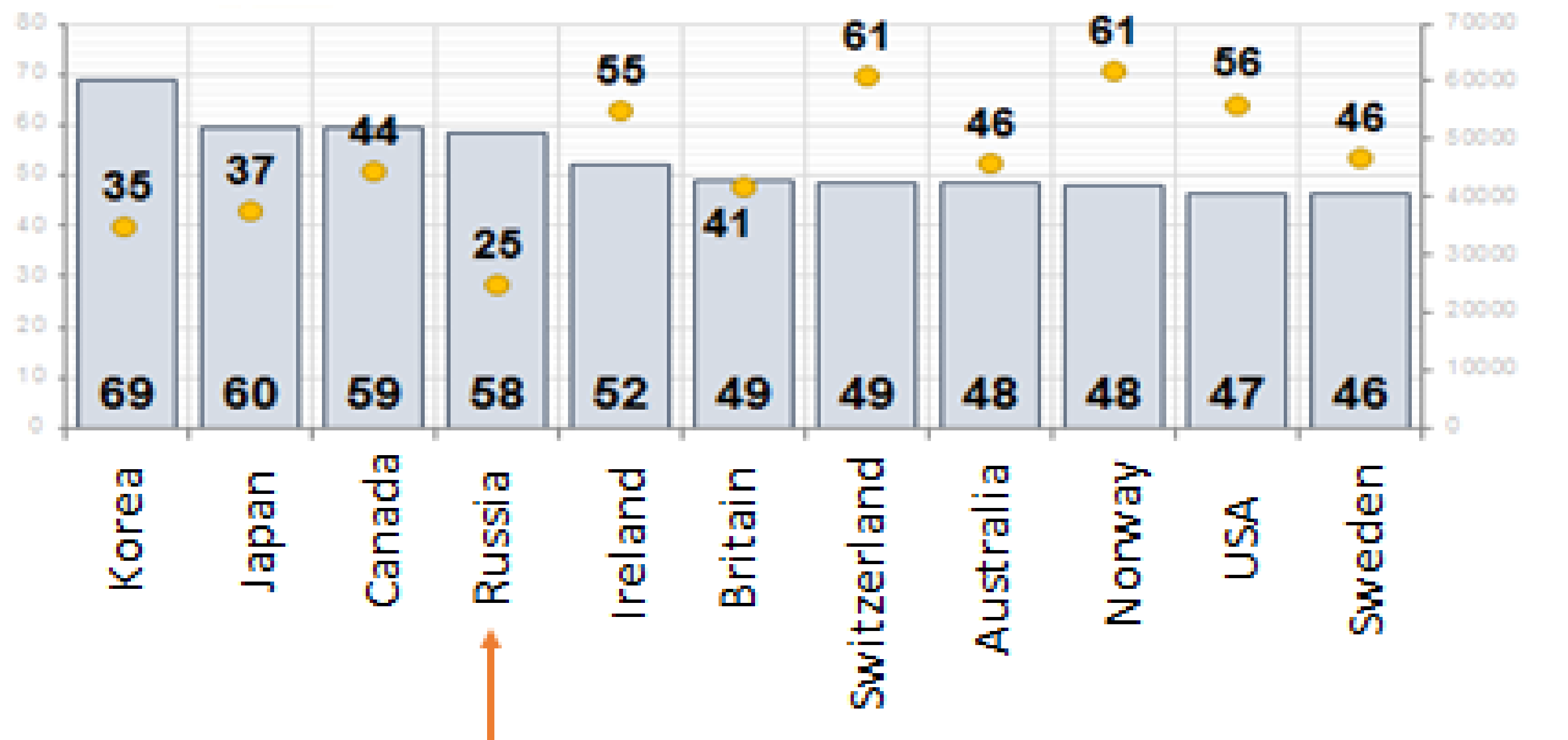
Notes: Graduates are defined as those with educational attainment of International Standard Classification of Education Level 5A; occupations were coded using the International Standard Classifications of Occupations 2008 revision; and under-employment was adjusted for skill levels based on proficiency tests scores in literacy and numeracy as well as measure of “elaborate learning” (i.e. approaches to learning in the workplace)

Source: Adapted from Green and Henseke (2016b)

Wright, E., & Horta, H. (2018). Higher education participation in “high-income” universal higher education systems: “Survivalism” in the risk society. *Asian Education and Development Studies*, 7(2), 184-204.

HUMAN POTENTIAL IS NOT CAPITALIZED

Tertiary education coverage (age 25-64) in % and GDP per capita (thousand USD)



Russia's place in the world:

4 place
in terms of human potential
(formal coverage)

42 place
in the real use of skills in the
workforce

89 place
according to the indicator
"availability of skilled workers"

According to the report "Global Human Capital-2017"

RUSSIA IS NOT THE ONLY CASE: MICRO-MACRO PARADOX

Even though schooling rates substantially increased in **Mexico, El Salvador, Venezuela Bolivia, Jamaica, Peru, and Jordan** from 1965 to 2000, only a slight improvement or even negative growth took place in the aggregate production levels of these countries (Pritchett, 2009).

China – the same issue (Yao, 2019) – HE expansion leads to 2,5% productivity decline due to allocation effects



CRITISICM OF HIGHER EDUCATION INCREASES:

IN SOME COUNTRIES RECENTLY THERE HAVE BEEN POLICY MOVEMENTS AGAINST HIGHER EDUCATION: TURKEY, HUNGARY (MEYER, 2019)

IN RUSSIA HIGHER EDUCATION ENROLLEMENT DECLINES IN 2019 WHILE LEADING HEAD-HUNTING AGENCY “SUPERJOB” ELIMINATES “EDUCATION” FROM THE NECESSARY ELEMENTS OF VACANCY DESCRIPTION

HOWEVER, THE LEGITIMACY OF HIGHER EDUCATION REMAINS (SO FAR):

- **Sustainable Development Goals (UN) acknowledge crucial role of education (SDG4-Education 2030 Steering Group)**
“Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (SDG-4)
- **Higher education is the key instrument in securing legitimacy of the State (Carnoy, M.) and responding to the demand from the families for social status (Marginson, S.)**

HUMAN CAPITAL THEORY: HOW DOES EDUCATION STIMULATE GROWTH



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- education can increase **the human capital inherent in the labor force, which increases labor productivity** (Mankiw, Romer, and Weil (1992)).
- education can **increase the innovative capacity of the whole economy**: the new knowledge on technologies, products and processes promotes growth (Lucas (1988); Romer (1990); Aghion and Howitt (1998)).

(Hanushek and Wößmann)

HUMAN CAPITAL STRUCTURE IN THE 21ST CENTURY

(I. FROUMIN, P. SOROKIN)

Traditional Specific HC (specific cognitive and professional skills)
(1950-1960 Becker, Schultz)

Traditional General HC (basic cognitive skills)
(1950-1960 Becker, Schultz)

New General HC #1 (non-cognitive skills , personal traits)
(1980-1990, Heckman)

General HC #2 (Universal Competences)
(1980-1990, OECD)

General HC #3 (Allocative Abilities. Entrepreneurial Element)
(1975, Schultz)
Most underdeveloped

TRADITIONAL COGNITIVE SKILLS (GENERAL AND SPECIFIC)

PISA and PIAAC (OECD): General cognitive skills (literacy, numeracy, problem solving) are important for aggregate economic growth

World Bank: higher education (mostly, specific human capital) gives 9% rate of return (Patrinos, 2018)

HOWEVER: THE EXPLANATORY POWER OF PISA TESTS RESULTS FOR GROWTH - DECREASES (FROM OVER 35% TO LESS THAN 20%) (Komatsu and Rappleye 2017)

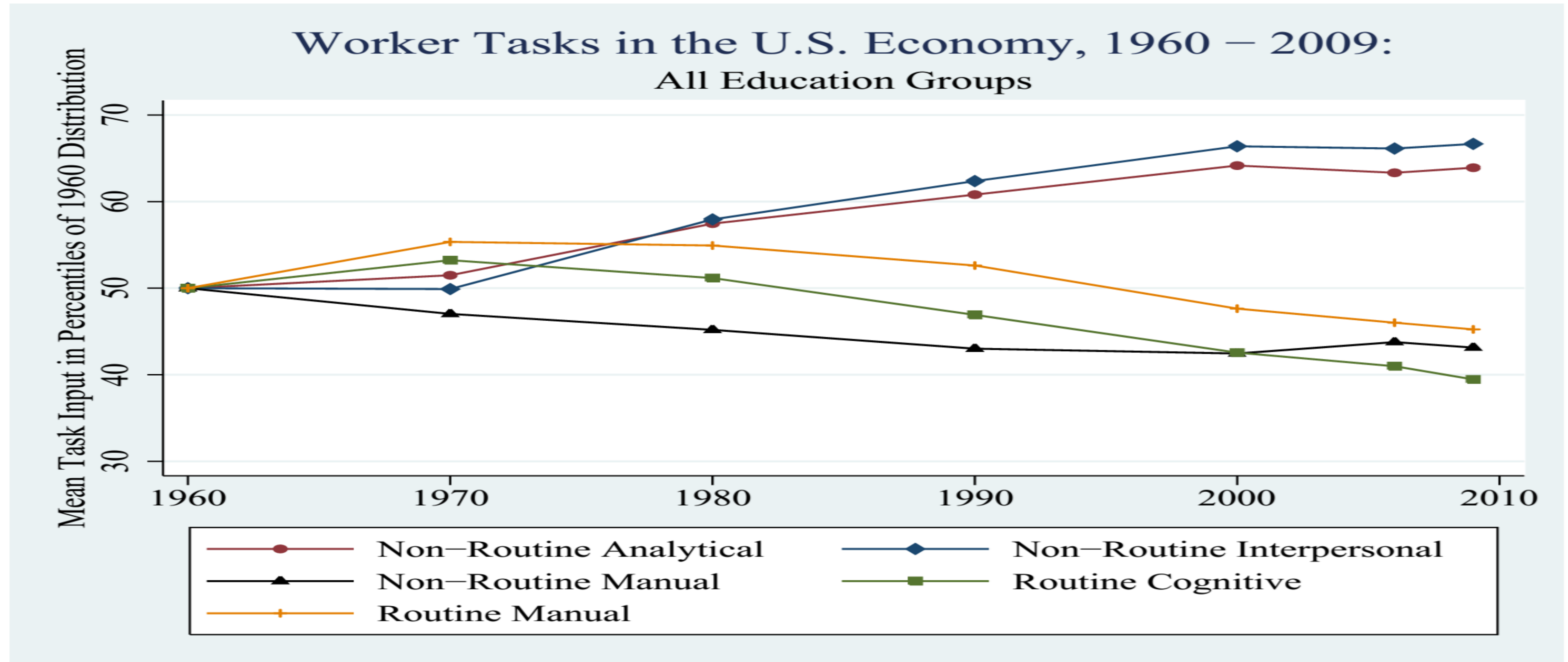
Personal traits (seen as non-cognitive skills because they are trainable) account for working life success.

“Big five” Framework:

- Openness to experience (inventive/curious vs. consistent/cautious)
- Conscientiousness (efficient/organized vs. easy-going/careless)
- Extraversion (outgoing/energetic vs. solitary/reserved)
- Agreeableness (friendly/compassionate vs. challenging/detached)
- Neuroticism (sensitive/nervous vs. secure/confident)

*Kautz T., Heckman J.J., Diris R., Ter Weel B., Borghans, L. (2014)
Fostering and measuring skills: Improving cognitive and non-cognitive skills to promote lifetime success.*

CHANGING DEMANDS OF LABOUR MARKET: GENERAL HUMAN CAPITAL (USA)



Source: Levy F., Murnane R.J. Education and the changing job market // Educational Leadership. 2004. Vol. 62. No. 2. P. 80.

T. Schultz in 1970s put forward an idea of “**entrepreneurial**” element of human capital – “**allocative abilities**”, which he believed to be:

- not equally distributed among the population,
- not similarly and automatically performed (in response to “market stimuli”)
- dependent upon formal education
- crucial for economic growth (aside from other elements of “human capital”).

The concept of “**allocative abilities**” allows to suggest the greater possible contribution of education to institutional change – by empowering human capital to participate in institutional transformations.

Schultz, T. W. (1975). The value of the ability to deal with disequilibria. *Journal of economic literature*, 13(3), 827-846.

TOWARDS NEW MODE OF GLOBAL ECONOMY?

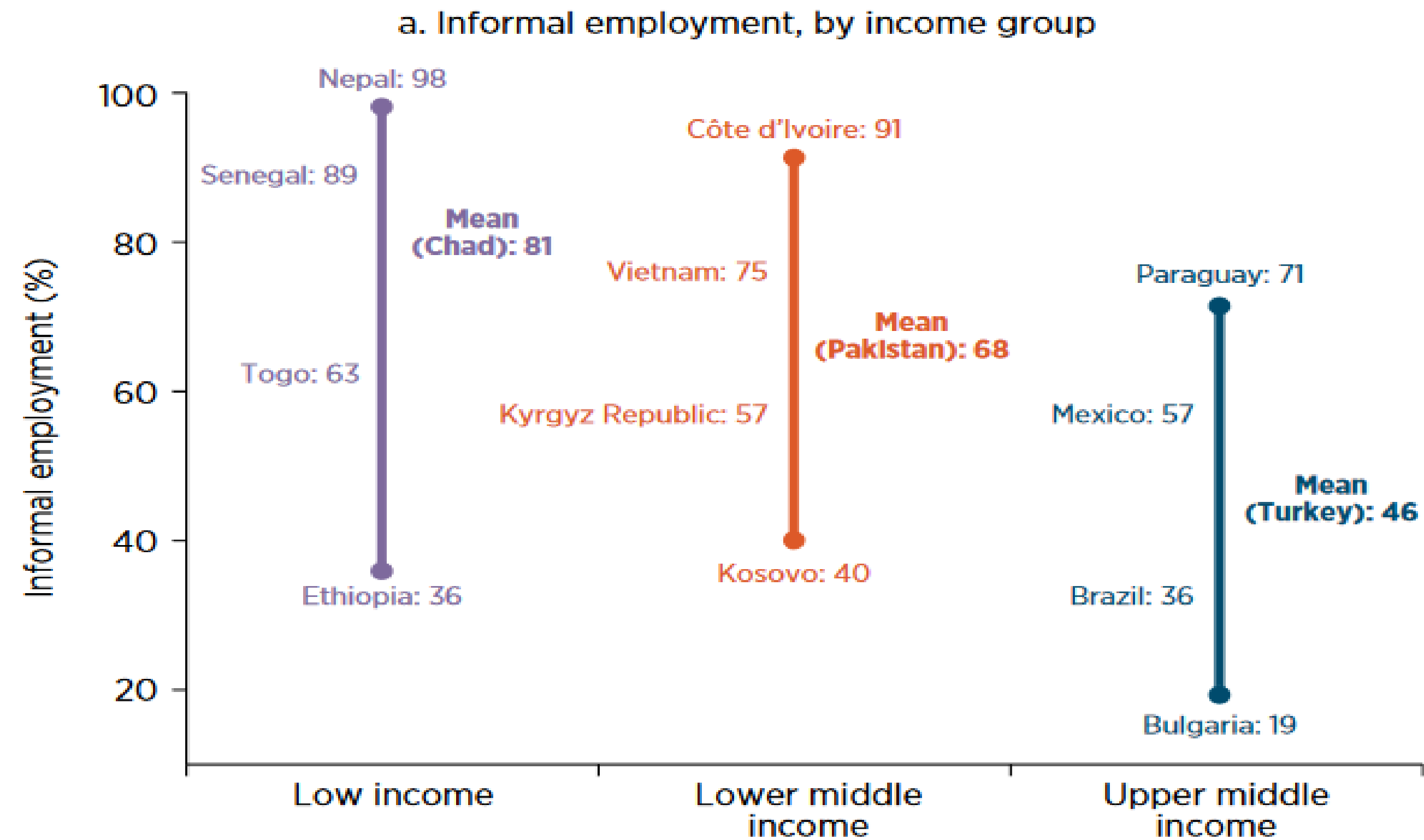


USA labor market dynamics (Source: "Freelancing in America" (2017) (by Freelancers Union and Upwork))

TOWARDS NEW MODE OF GLOBAL ECONOMY?



FIGURE 0.5 Informality persists in most emerging economies despite improvements in the regulatory environment



Source: THE CHANGING NATURE OF WORK (World Bank 2019)

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AGENDA FOR HIGHER EDUCATION SYSTEMS TRANSFORMATION BEYOND 2020



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Integrative approach taking into account all the elements of human capital (as well as interrelations between them):

- 1. Traditional General and Specific cognitive skills** (literacy, numeracy, problem solving and specialized professional skills) – remain important (maybe less than before) **BUT need to be addressed in life-long learning.**
- 2. Non-cognitive skills and personal traits** (“big five”, grit, self-efficacy, etc.) – always relevant, need further research in terms of education practices (solving real life problems)
- 3. Universal skills – require clarification of theoretical framework:** “4k” (communication, cooperation, creativity, critical thinking), “new literacies” (digital, ecological, cultural, financial, etc.) as well as analysis and dissemination of best practices
- 4. Allocative Abilities. Entrepreneurial Element of HC – most underdeveloped, requires investment in research and experiments (entrepreneurial education?)**



THANK YOU

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