




# Human Capital: Education and Health

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# Why is human capital important?

- Human capital is an important factor production
- Improved human capital increases productivity
- Increased productivity  increased output
- Two important factors that improve human capital and productivity are education and health

# Education and health linkages

- Health and education are basic objectives of development; both are fundamental to the expanding human capabilities and human capital
- Health = prerequisite for increases in productivity
- Better health capital improves returns to investment in education and lowers the rate of depreciation of educational capital



# Education and health linkages

- Greater education capital improves returns to investment in health
- Education is essential for a satisfying and rewarding life
- Plays a key role in the ability to absorb technology and develop capacity for sustainable development



# Indicators show improving worldwide trend

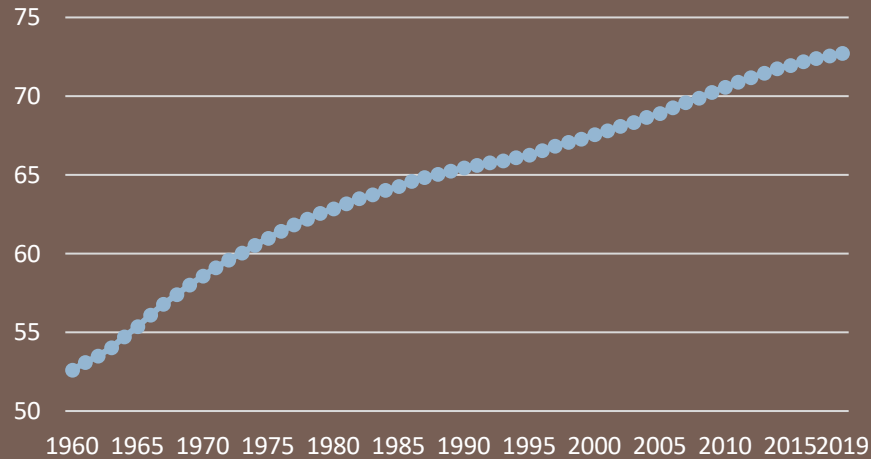
## Education indicators

- Increasing school enrolment
- Greater educational attainment
- Increasing literacy rate

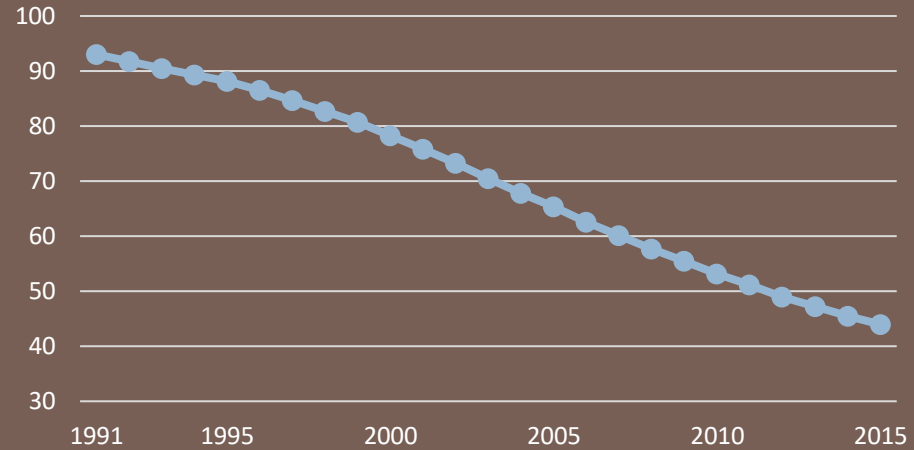
## Health indicators

- Lower under-5 mortality rate
- Higher Life expectancy
- Lower morbidity

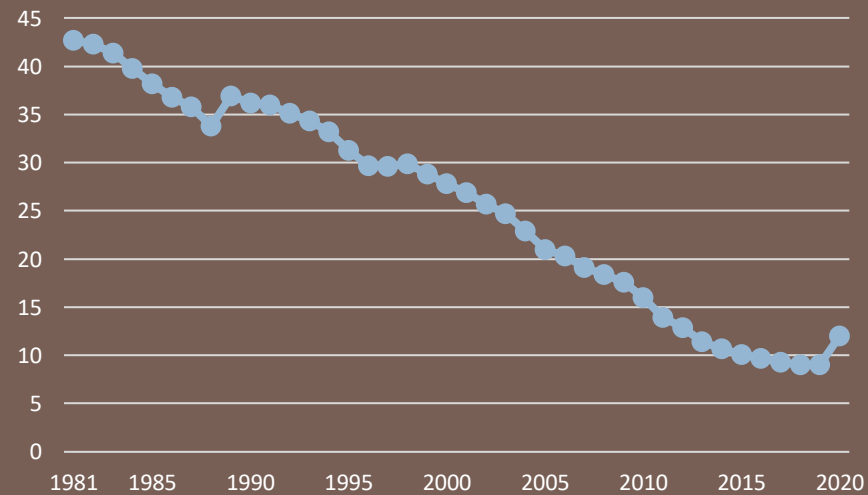
# Improvements in health and education



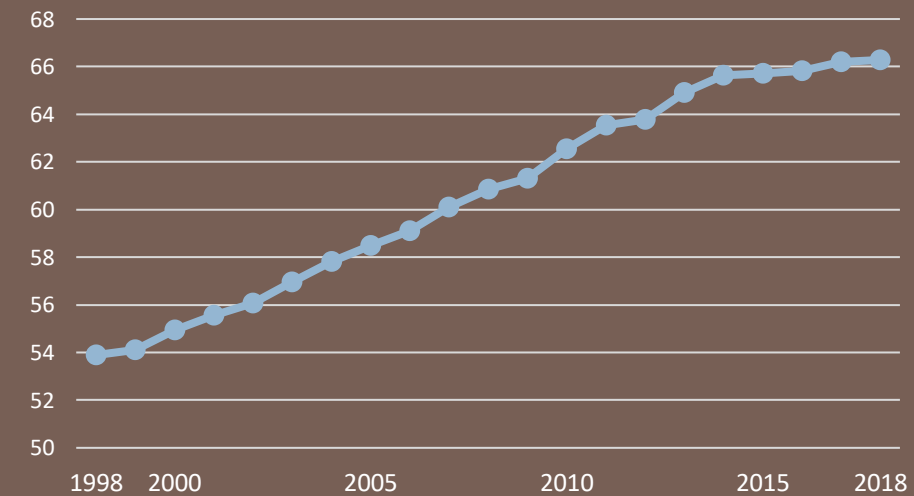
Life expectancy



Under 5 mortality rate



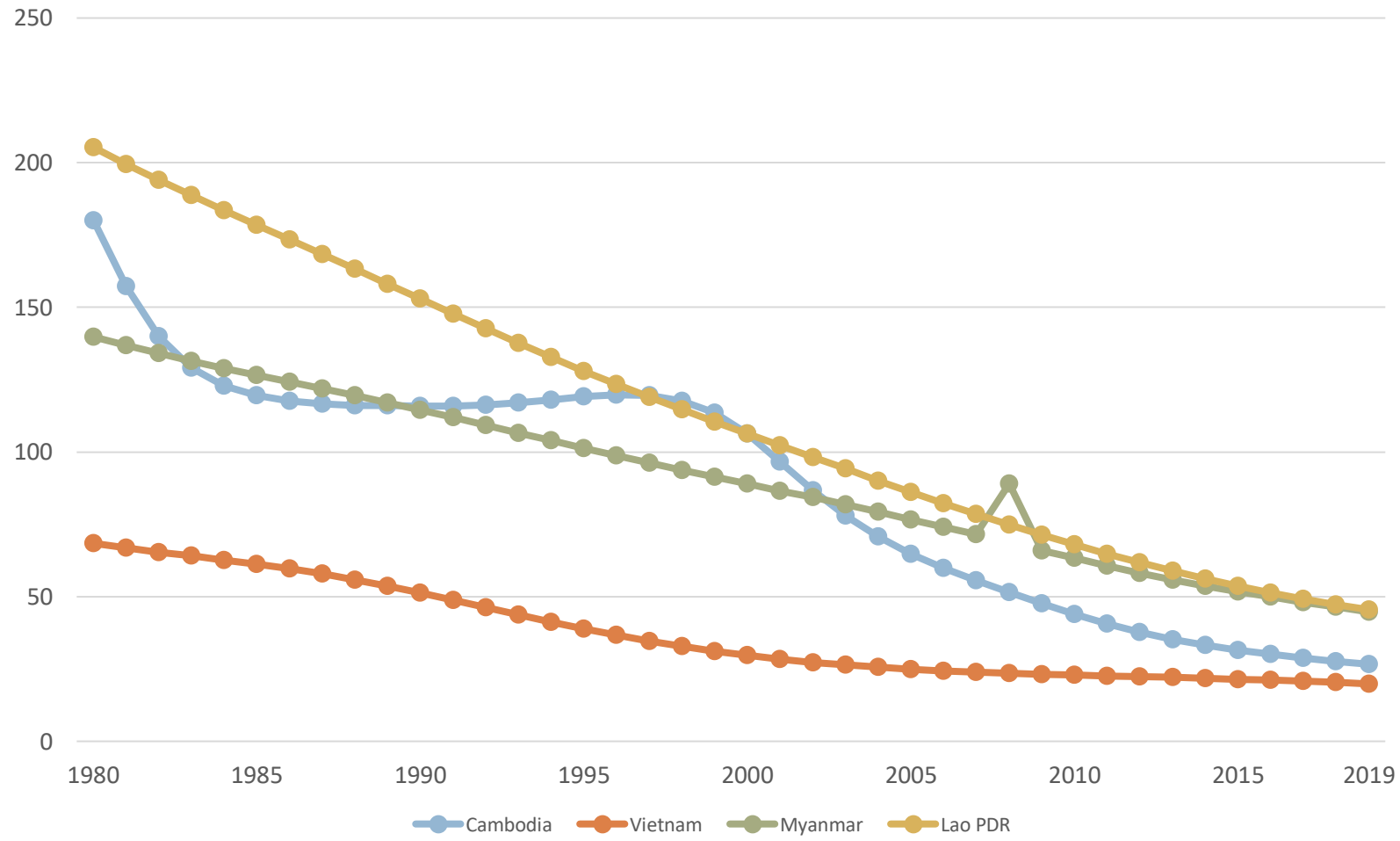
Poverty reduction



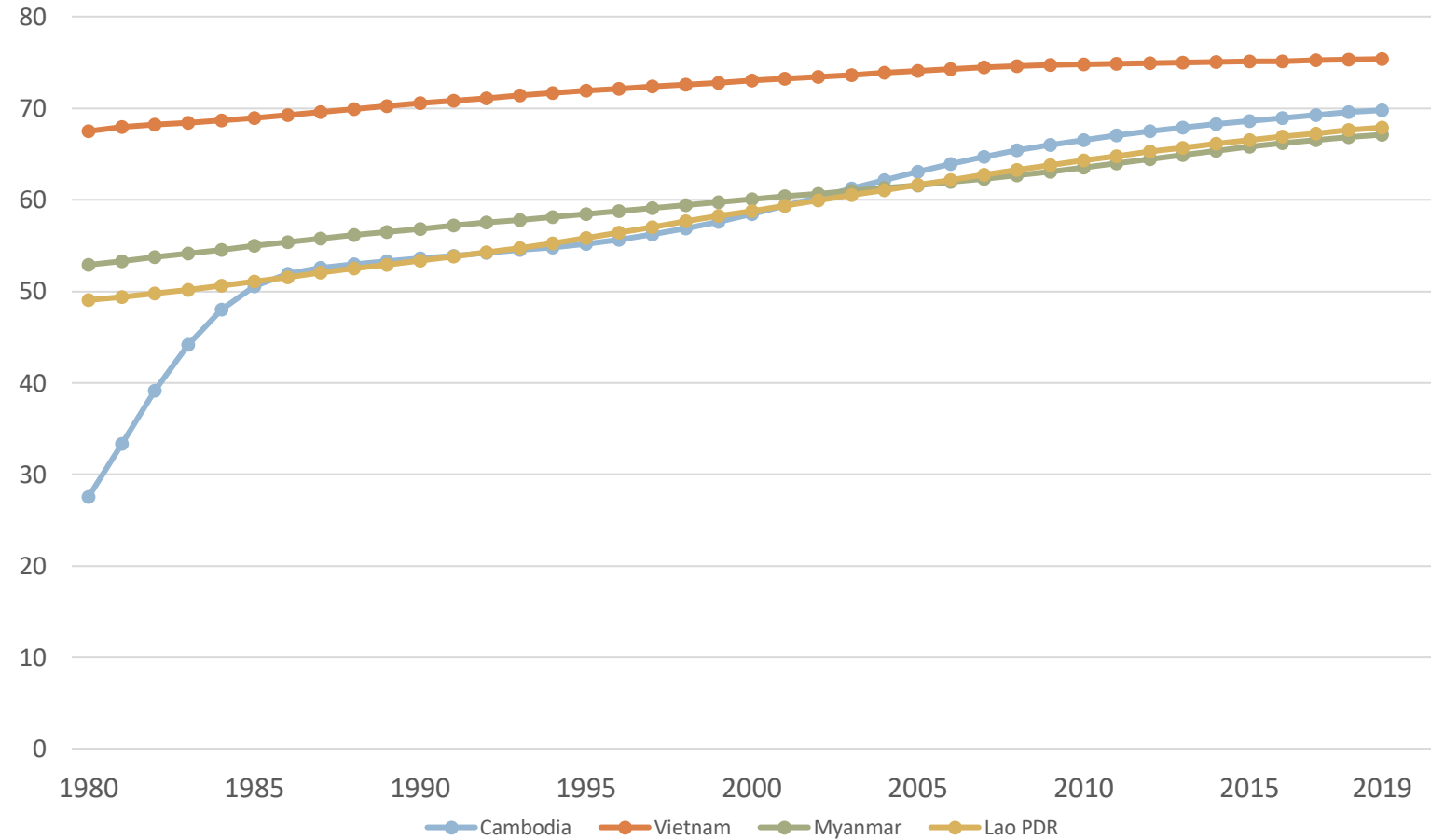
Secondary school enrollment



# Under-5 mortality rate, CLMV 1980-2019



# Life expectancy, CLMV 1980-2019



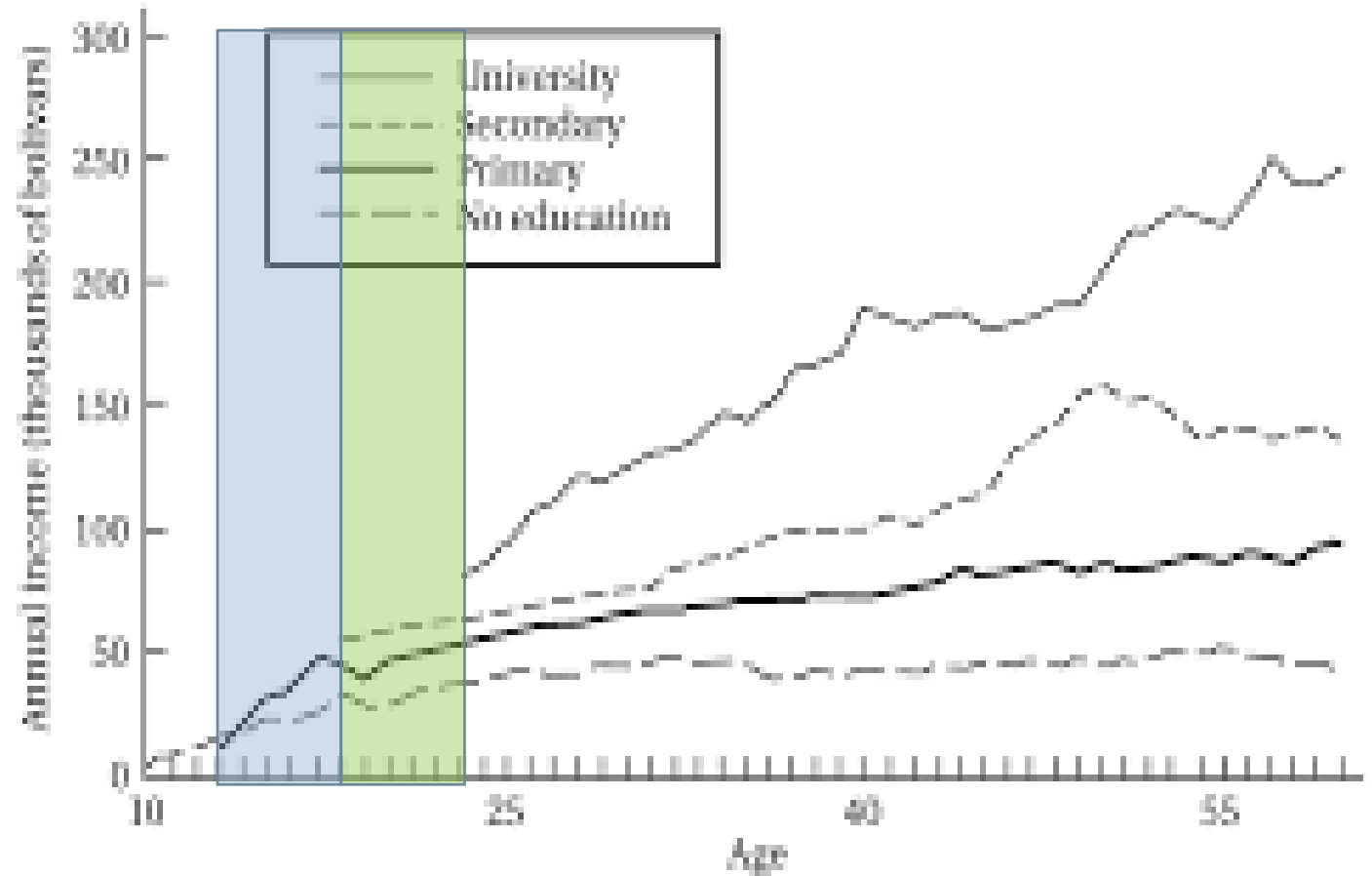


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# Issues in Education

# Returns from education

- People with higher levels of education tend to earn more at the same age level
- But how much more?



Age earning profiles by level of education

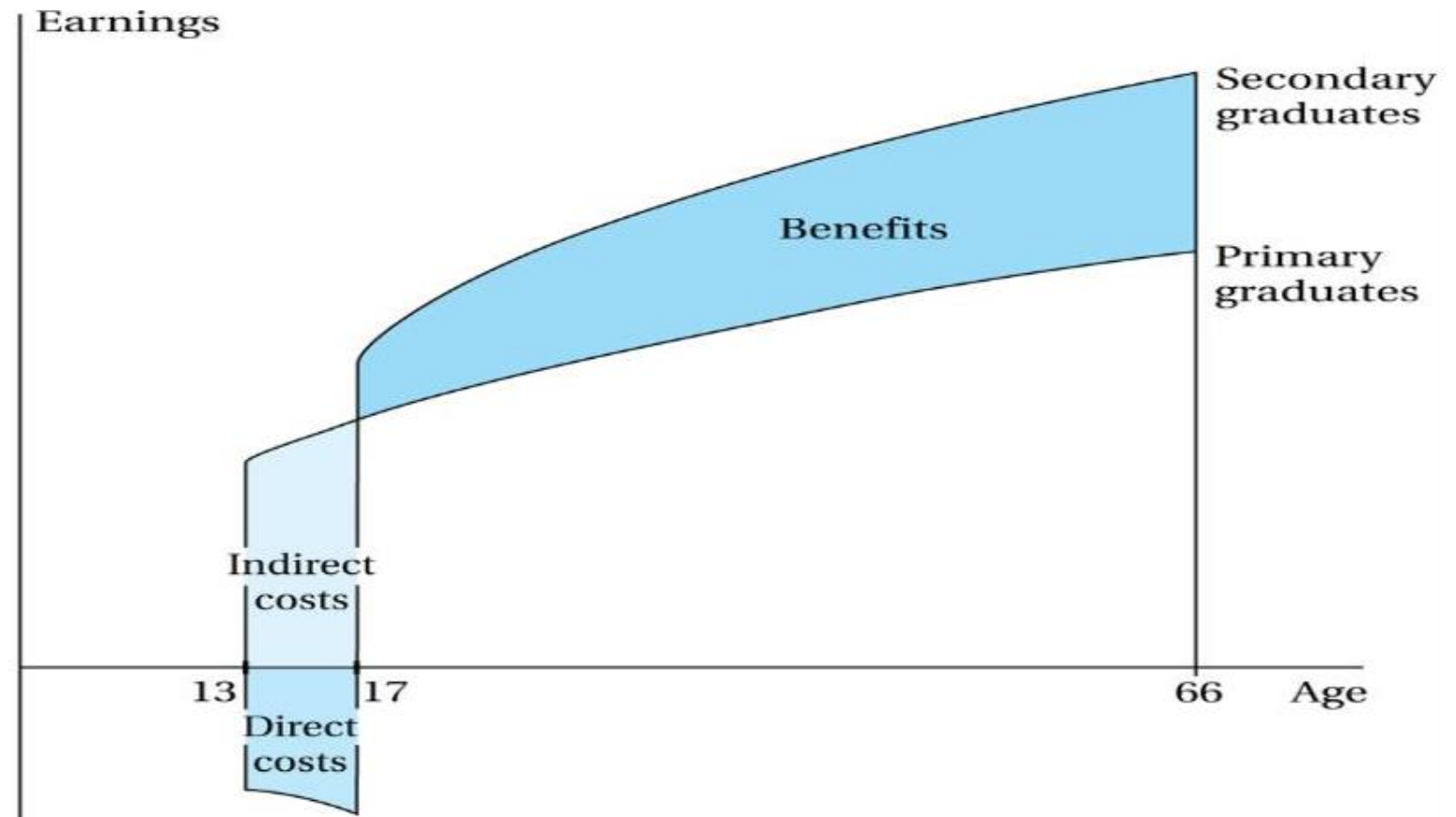
# Costs and benefits of education

- As primary school graduates begin to work, students attending secondary school will incur direct cost (tuition, transport) and indirect costs (foregone earnings)
- These combined costs constitute opportunity cost for attending secondary school
- However upon graduating, the individual receives higher earnings, which yield more benefits



# Financial tradeoffs in deciding to continue schooling

- In deciding whether to pursue secondary education the benefits should exceed costs



# Keeping children in school

Incentives to keep poor children in remote areas in school:

- Introduce complementary activities
- Provide conditional cash transfers as incentives for parents to keep their children in school
- Implement school nutrition programs for school children



# The gender gap in education

- Youth literacy has much improved, however girls education still lag behind boys
- Discrimination against women reinforces social inequality and hinders economic development
- Increasing women's education not only increases their productivity but also increases labor force participation
- Educated women have later marriage, lower fertility and improved child health and nutrition





YOUR LOGO

# Issues in Health

# Health and productivity

- Poor health harms the productivity, e.g., lost person work days because of illness
- Healthier persons get better pay. In India, elimination of deformity from leprosy enabled workers to earn three times their original wages
- In developing countries: increases in height from generation to generation
- In Brazil: taller people earn more income, holding other factors such as education and experience constant



# Public health systems

- Public health systems include: public health departments, hospitals, clinics, doctors and paramedics, and informal network used by poorer citizens, such as traditional healers and midwives



# Indicators to measure performance

- The overall health level of the population
- Health inequalities within the population, health system responsiveness
- Distribution of responsiveness within the population
- Distribution, or fairness, of the health system's financial burden within the population



# Health issues in developing countries

- Absolute poverty: limits access to health and health care facilities
- Malnutrition: retards the immune system and causes stunting in children
- AIDS: leading cause of deaths of working-age adults in developing countries
- Malaria: making a comeback after years under control; 70% fatalities are children



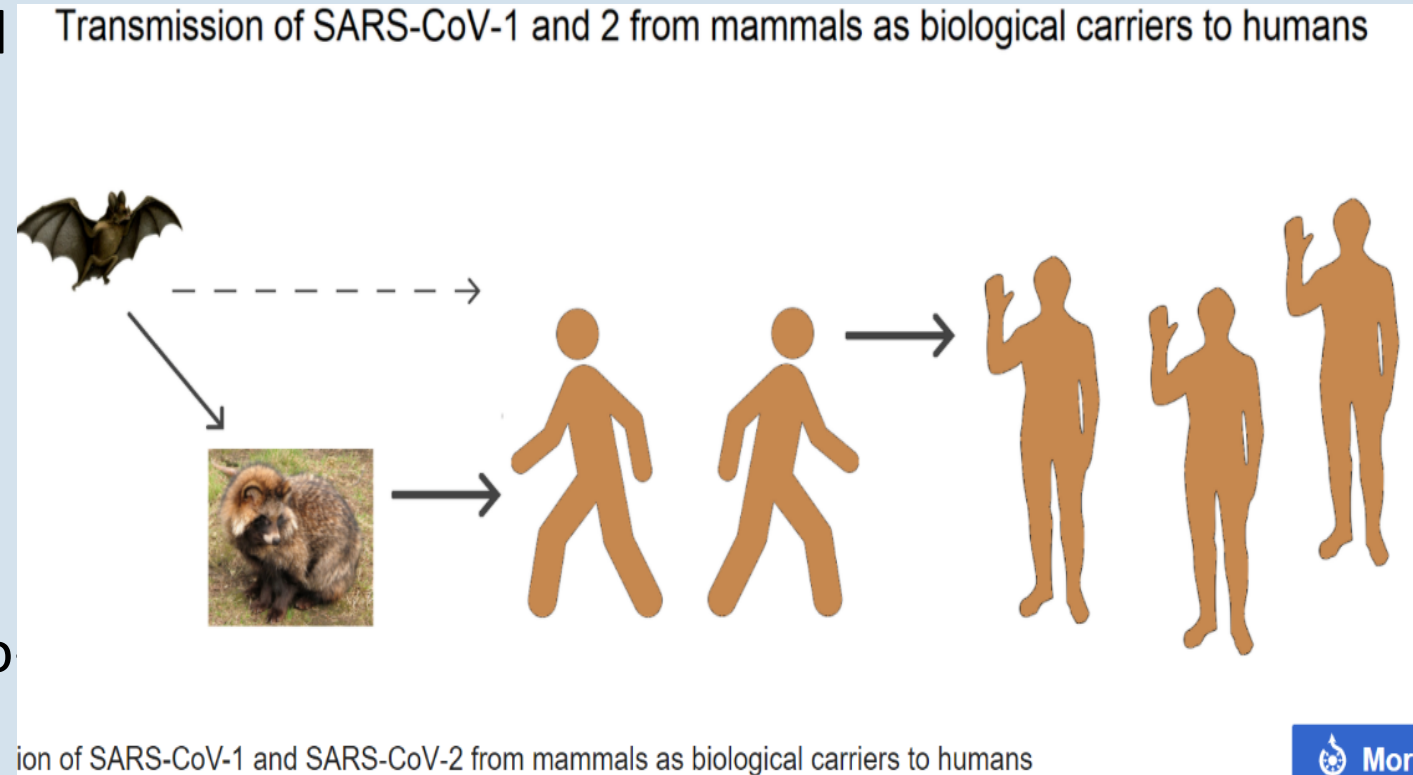
# Health issues in developing countries

- Tuberculosis: claims about 2 million lives a year; 1/3 of world population infected
- Acute lower respiratory infections: pneumonia is cause of 20% child deaths
- Dengue: spreads rapidly with millions of cases reported each year
- Parasitic infections (ascariasis, guinea worm disease, chagas disease, elephantiasis)

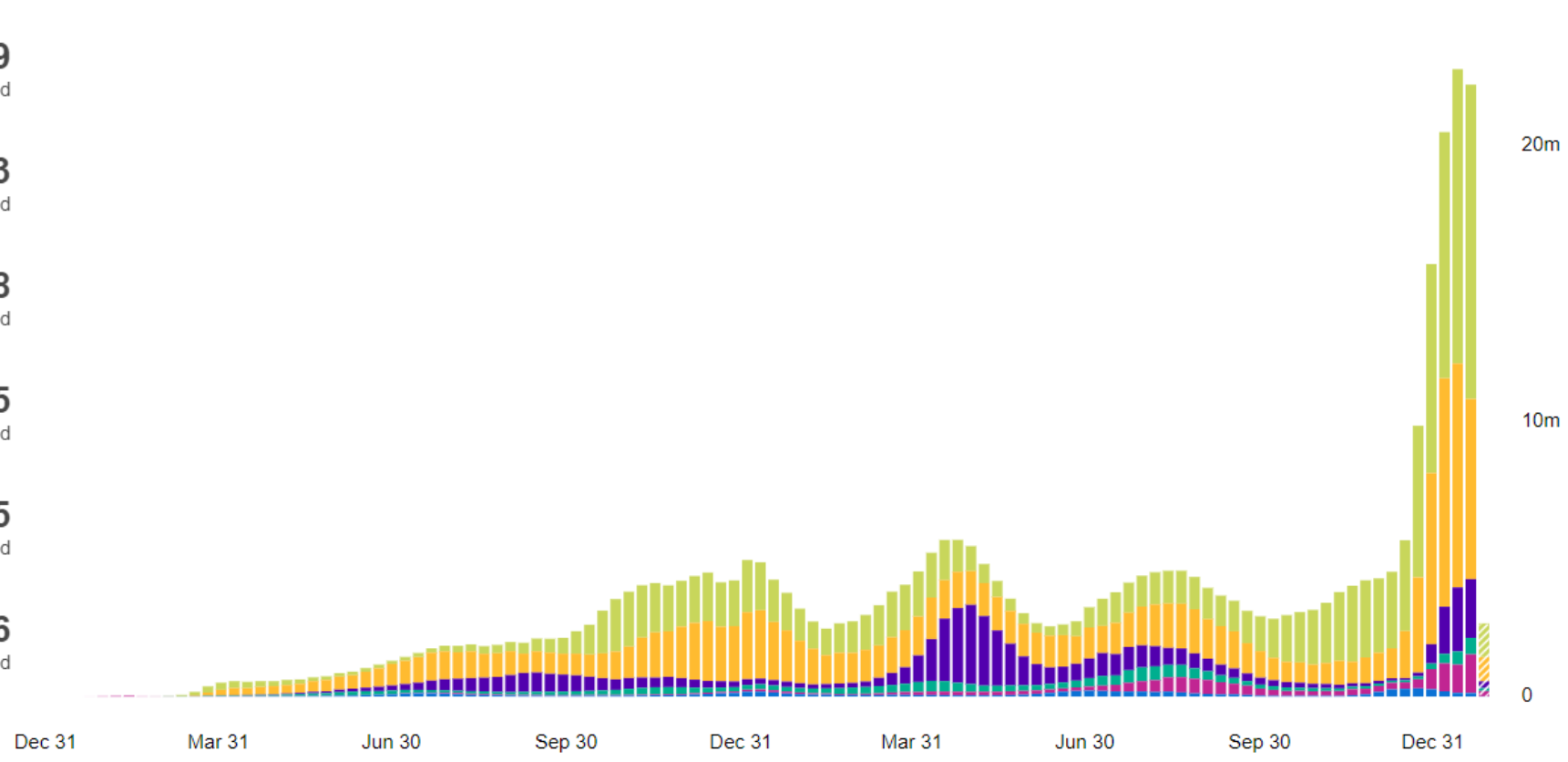
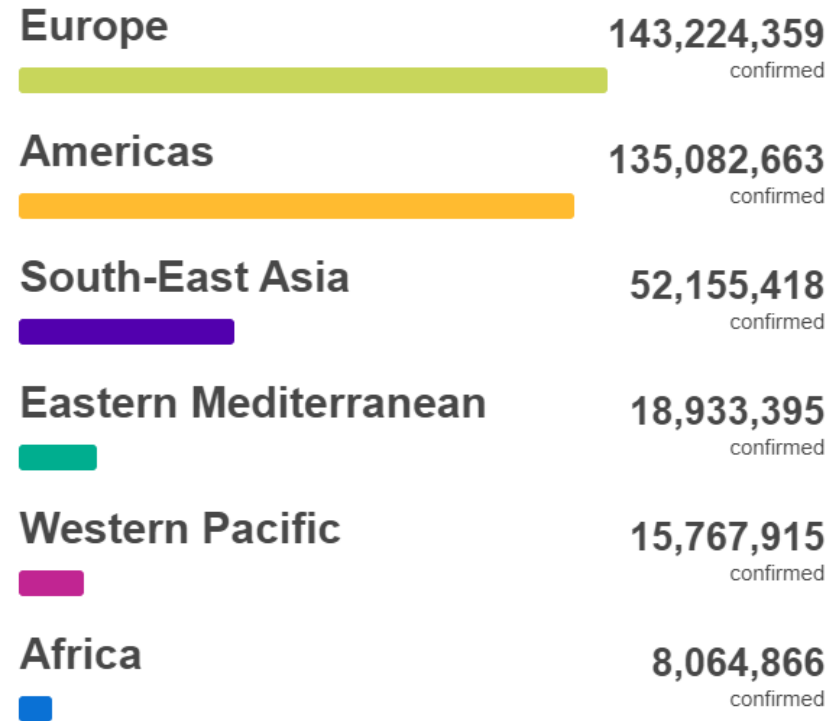


# Pandemics: Covid 19

- SARS-CoV-2: cases of unexplained pneumonia noted in Wuhan, China, end of 2019
- Key feature: human-to-human transmission
- Virus demonstrates great infectivity, particularly to those with respiratory symptoms and comorbid; affects the immune system
- 374 million people worldwide affected, 5.7 million deaths



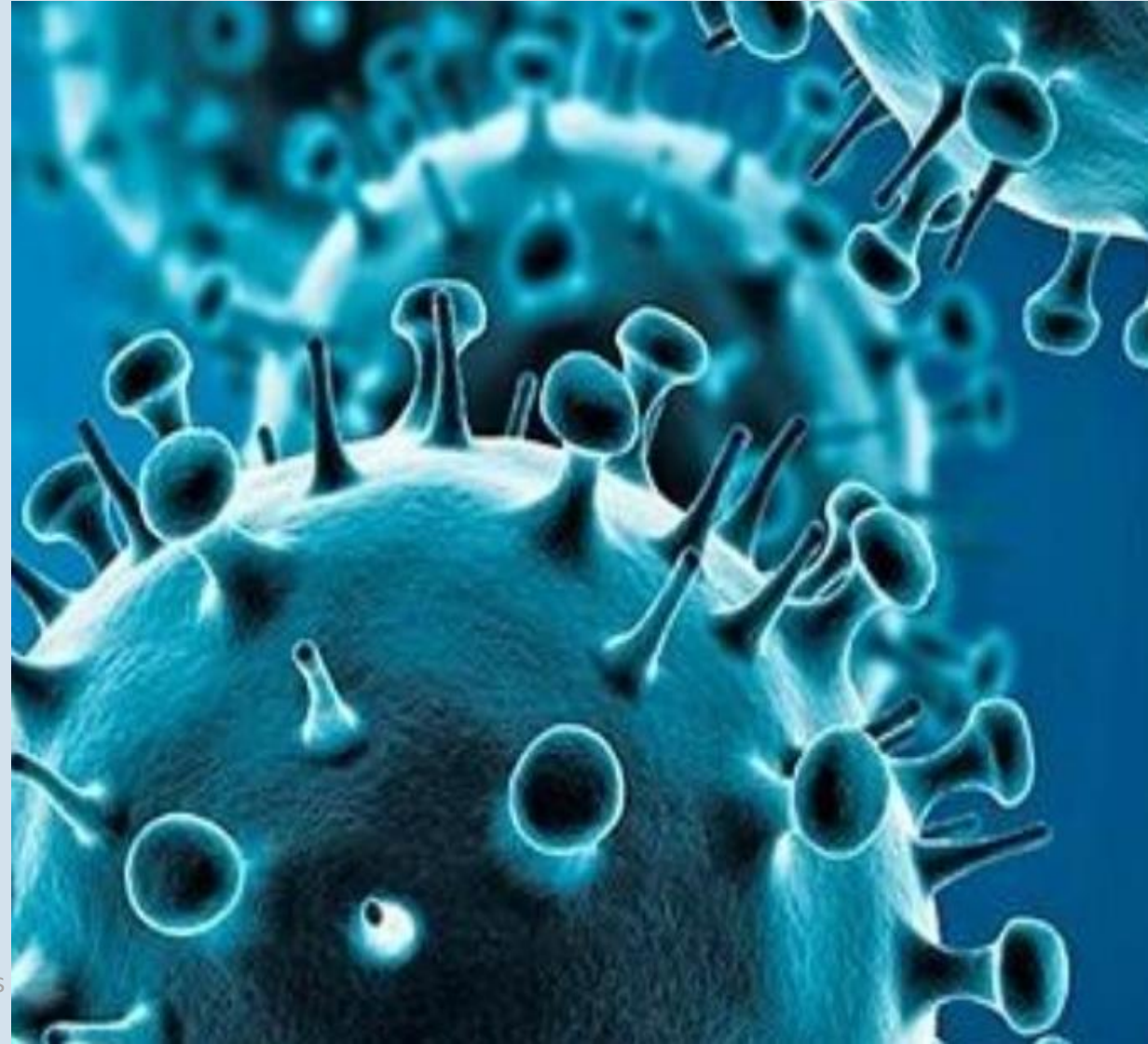
# Pandemics: Covid 19



Source: World Health Organization  
Data may be incomplete for the current day or week.

# Pandemics: Covid 19

- Public health measures: wear masks, regularly wash hands, physical distancing, avoid crowds, reduce mobility
- Interventions: administer vaccines, quarantine-at-entry, lockdown measures
- Impact: economic recession, decline of worldwide GDP to 3.4%, loss of 400 million jobs, income by 10% equivalent to \$3.5 trillion; increased debt burdens, loss in stock value, and decrease in global trade



# Epidemiologic transition

- The dramatic improvement in life expectancy and reduction in infant mortality resulting in demographic and socioeconomic changes
- Lower fertility rates, decline in death rates and slower rates of population growth
- As societies age and health improves the pattern of disease and causes of death shift in a predictable pattern

## Some examples

- Period of pestilence and famine due to wars and conflict: malnutrition and diseases associated with unsanitary and unhygienic conditions
- Period of receding pandemics: famine declines, death rates decline, life expectancy increases; heart disease and cancer become common
- Period of degenerative and man-made diseases with low mortality rates: heart disease, diabetes, hypertension and cancer

# Government role in the health sector

- Ensure good policies for overall health of the population to reduce poverty
- Address externalities in the health sector (e.g., contagion or spread of disease), of which people are unwilling to shoulder the costs
- Invest in health infrastructure and research and development, where private sector is unwilling to invest
- Implement public health programs that have proven successful



# Health and gender

- Girls face discrimination in health; families are more likely to take an ill boy rather than an ill girl to a health center
- Education of girls is one of the cost effective means of improving health standards
- Baby boys are preferred over baby girls; in the future, males will have a more difficult time seeking a partner



# Conclusion

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- Health and education are important elements of social development; both are prerequisites to the improvement of human capital and productivity
- Worldwide, people's education and health have been improving; however there are still many that do not have access to basic health and education



# Conclusion

- Returns to investment from education is an individual decision, weighing costs and benefits; however in the long run, those with higher education are better off and on average have higher incomes
- Improvements in nutrition, food production and technology has improved health conditions worldwide; however health systems need to be more equitable, accessible and responsive



# Conclusion

- Along with improvements in health, types and patterns of diseases also change; this is called the "epidemiological transition"
- Government has an important role in addressing externalities in the health and education sectors through appropriate policies



**T**HANK **Y**OU!