



Ankara University
SCHOOL OF MEDICINE

The First Medical School In The Republic of Turkey (1945)

Economic Appraisal in Public Health

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Main Public Health Activities

- Prevention, promotion and protection
 - Communicable disease control
 - Selected health promotion
 - Organized immunization
 - Environmental health
 - Food standards and food safety
 - Screening programs
 - Health economy
 - Manpower improvements and supervision
 - Research

The *quality-adjusted life year* or quality-adjusted life-year (**QALY**) is a generic measure of **disease burden**, including both the quality and the quantity of life lived. It is used in *economic evaluation* to assess the value for money of medical interventions. *One QALY equates to one year in perfect health.*

Economic appraisal in public healthcare: *Assessing efficiency and equity-3*

- ❖ There are several approaches that can be used to measure **benefits** depending on the type of economic appraisal being used.
- ❖ A measure of special interest is quality-adjusted life years (**QALYs**).
- ❖ Modelling is often used in economic appraisal to combine data on the **costs and benefits of an intervention**.

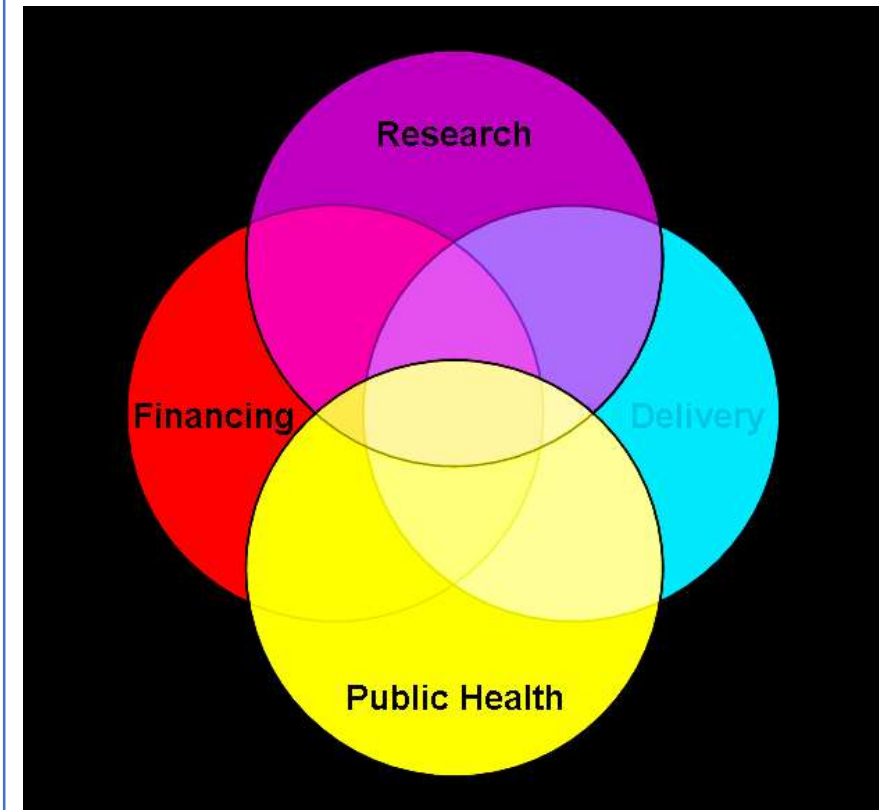
<http://oxfordmedicine.com/view/10.1093/med/9780199661756.001.001/med-9780199661756-chapter-129> 19.2.2019



Economic appraisal in public healthcare: *Assessing efficiency and equity-4*

- ❖ Given the inherent uncertainties involved in **economic appraisal** it is good practice to undertake **sensitivity analyses** that investigate the impact of uncertainty.
- ❖ **Methodological challenges** in undertaking economic appraisals of public health interventions include the importance of **equity and inequality** considerations, establishing robust evidence of the effect of **public health programmes**, the relevance of **QALYs**, and accounting for multi-sectoral costs and benefits.

<http://oxfordmedicine.com/view/10.1093/med/9780199661756.001.0001/med-9780199661756-chapter-129> 19.2.2019



Disability-Adjusted Life Year (DALY)

- Quantifying the Burden of Disease from mortality and morbidity
- Definition
- One **DALY** can be thought of as one lost year of "healthy" life. The sum of these **DALYs** across the population, or the burden of disease, can be thought of as a measurement of the gap between current health status and an ideal health situation where the entire population lives to an advanced age, free of disease and disability.

www.who.int/healthinfo/global_burden_disease/metrics_daly/en/index.html, 02.06.2012)

DALY

Disability Adjusted Life Year is a measure of overall disease burden, expressed as the cumulative number of years lost due to ill-health, disability or early death

$$= \text{YLD} + \text{YLL}$$

Years Lived with Disability + Years of Life Lost



28.02.2019

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46

Healthy life expectancy (HALE) at birth

- **Healthy life expectancy (HALE)** is a form of health expectancy that applies disability weights to health states to compute the equivalent number of years of life expected to be lived in full health.

<i>Good health years</i>	<i>poor health years</i>
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- Overall, **global HALE** at birth in 2013 for males and females combined was 62 years, 7 years lower than total life expectancy at birth. In other words, *poor health* resulted in a loss of nearly 7 years of healthy life, on average globally. **Global HALE** at birth for females was only 4 years greater than that for males. In comparison, female life expectancy at birth was almost 5 years higher than that for males.

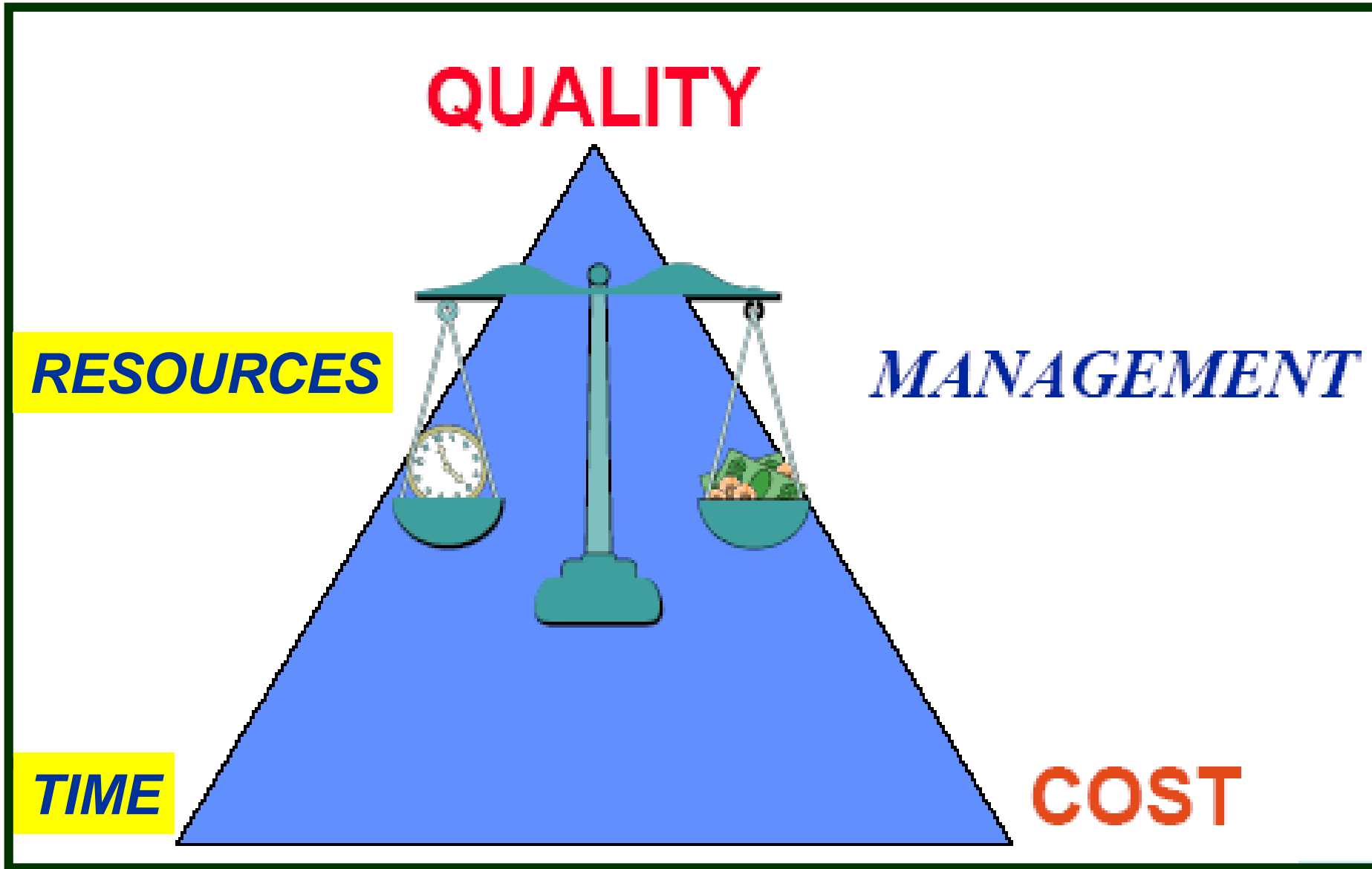
http://www.who.int/gho/mortality_burden_disease/life_tables/hale_text/en/ 23.12.15

HEALTH ECONOMICS



MS. ANCY CHACKO
SECOND YEAR M.Sc NURSING
GOVT. COLLEGE OF NURSING
ALAPPUZHA



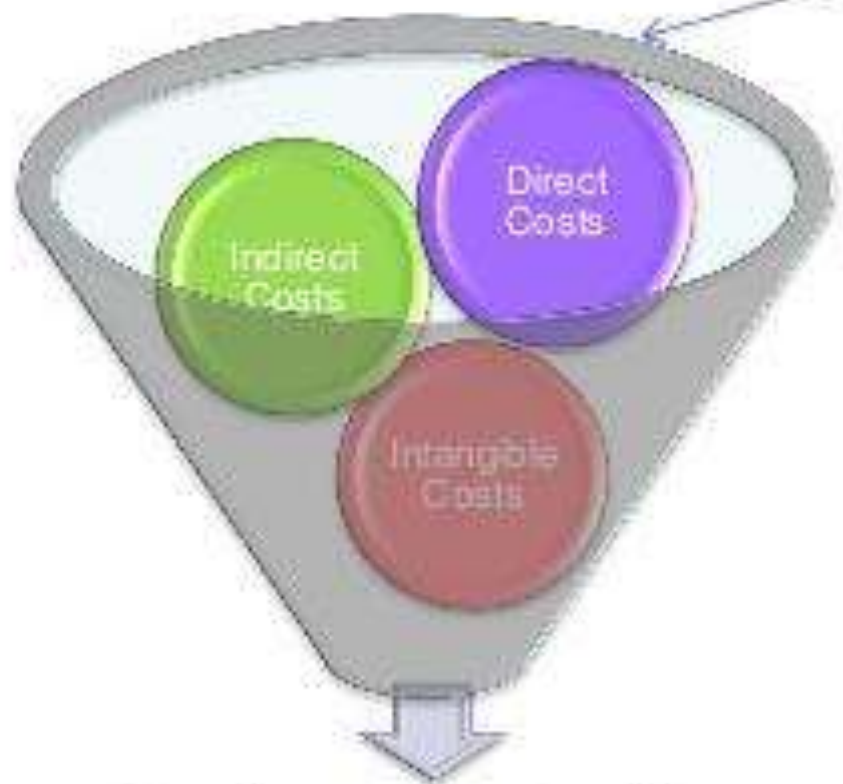


We also need a balance among these 5 issues..

What is economic evaluation?

Full economic evaluation consists of finding both the *costs* and the *benefits* of comparable public health services.

This may be more familiar to Local Authorities as a “Value for Money” assessment.



Total costs valued in monetary terms (£)

• Natural units, e.g. deaths, numbers of accidents, numbers of people quitting smoking, etc.

→ Cost-effective analysis

• Utility values, e.g. Quality Adjusted Life Years - QALYs

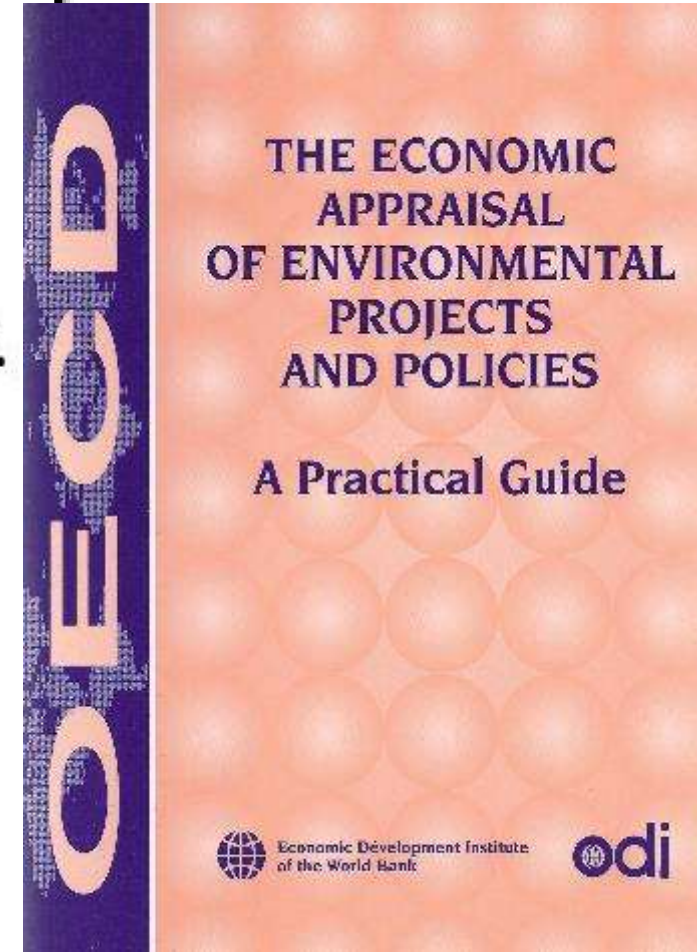
→ Cost-utility analysis

• Monetary value (£)

→ Cost-benefit analysis

Economic Appraisal

- Economic appraisal examines the project's contribution to economy of the region or country.
- It assesses whether the project increases the net wealth of a region or country as a whole or not.
- A purely financial analysis normally does not provide an adequate basis for judging a project's value to the economy, since the financial analysis looks at the project only from a limited viewpoint of revenues entering the project's own account.



The Purpose of An Economic Appraisal

- An economic appraisal is a vein to accomplish a corporate objective.
- In other words, it is commensurate with evaluating the corporate strategies so as to improve stockholders' wealth by implementing a most desirable projects.
- The types of investment projects;
 - i) service (cost) projects: those which are with regard to reducing costs.
(ex. A power plant may need to decide one fuel resource to generate electricity between gas and oil.)
 - ii) revenue projects: those which are concerned with increasing a firm's revenue.(ex. A company may need to decide which one to produce to increase its profit or revenue between a HD and plain tv)
- All projects need cash outflows at the outset and generates cash inflows in the following times.

Economic appraisal in public healthcare: *Assessing efficiency and equity-1*

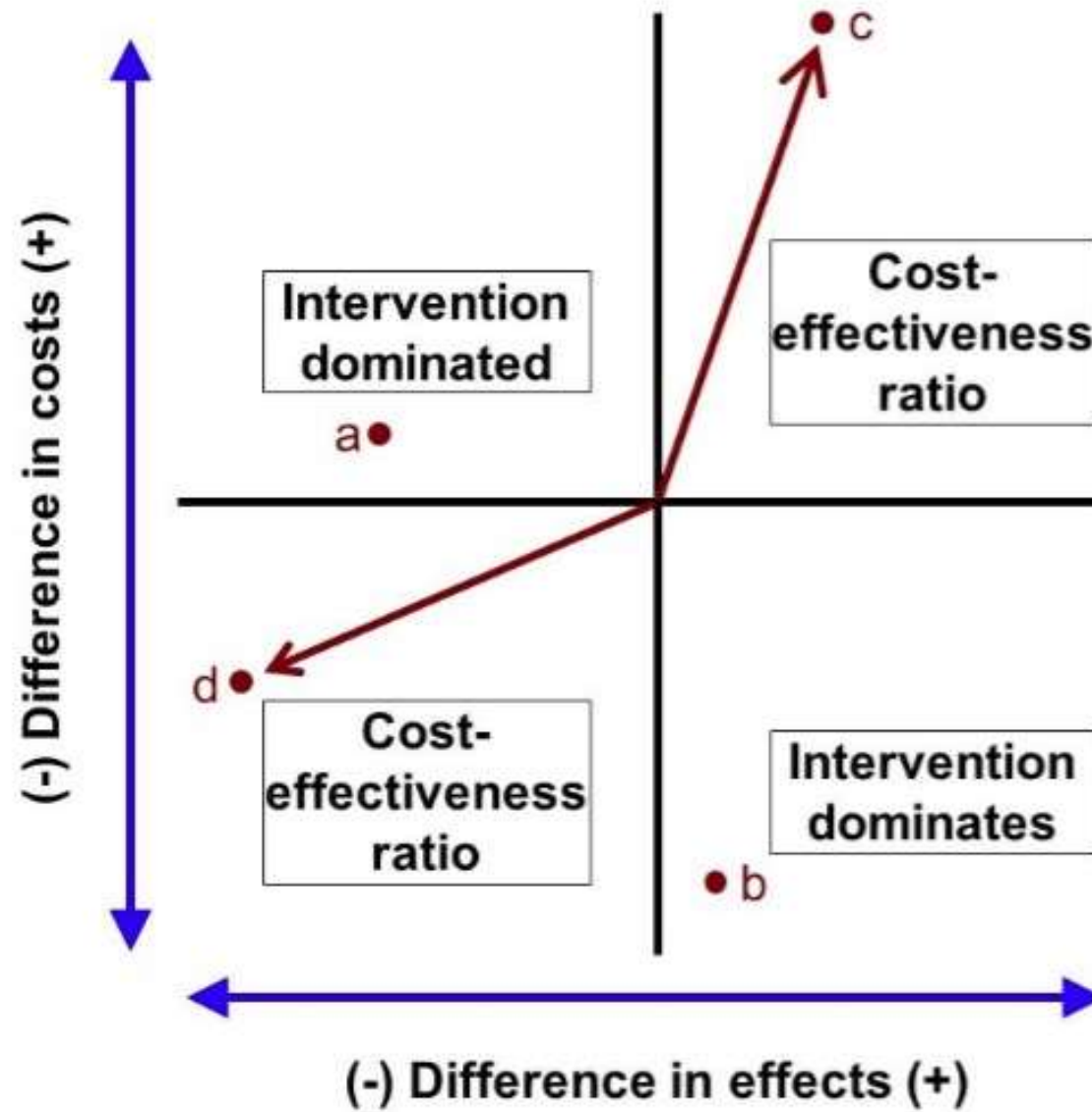
- **Economic appraisal** comprises a set of techniques that weigh up the costs of an action, such as providing a **public health intervention** to an at-risk population group, against the benefits that it provides.
- Important underlying principles are
 - **opportunity cost,**
 - **social versus private costs and benefits,**
 - marginal costs and benefits,
 - **efficiency and equity.**

<http://oxfordmedicine.com/view/10.1093/med/9780199661756.001.0001/med-9780199661756-chapter-129> 19.2.2019

Economic appraisal in public healthcare: *Assessing efficiency and equity-2*

- There are different types of economic appraisal.
- Each of which measures the **costs and benefits** of options being compared.
- Measuring costs involves;
 - identifying and describing resource use changes,
 - quantifying them in physical units and valuing them.
- Issues in **cost measurement** include use of macro or micro costing and dealing with inflation and time preference.

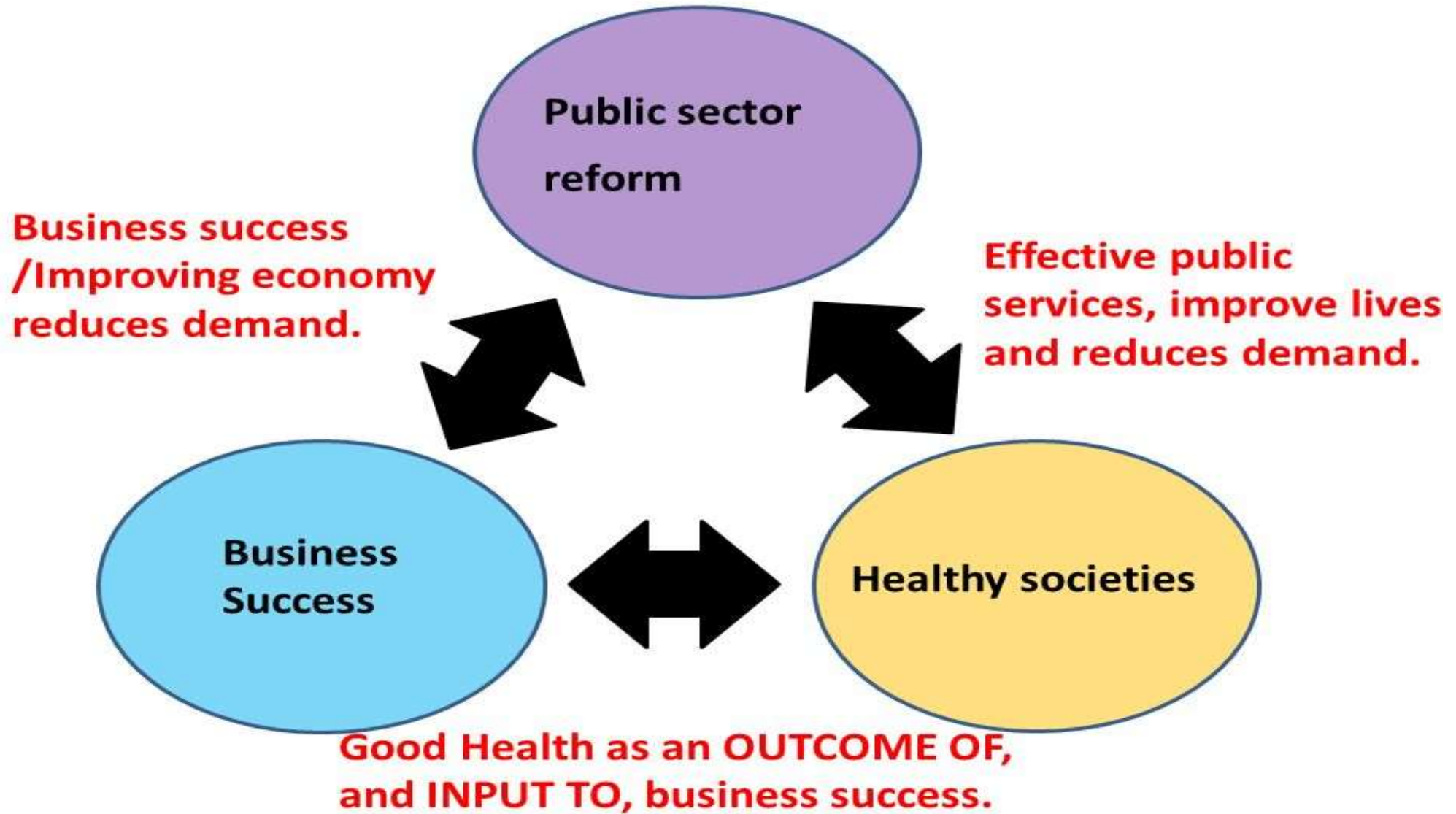
<http://oxfordmedicine.com/view/10.1093/med/9780199661756.001.0001/med-9780199661756-chapter-129> 19.2.2019







Whole system approaches



Investing \$10 per child each year prevents:



3.7 MILLION
CHILD DEATHS

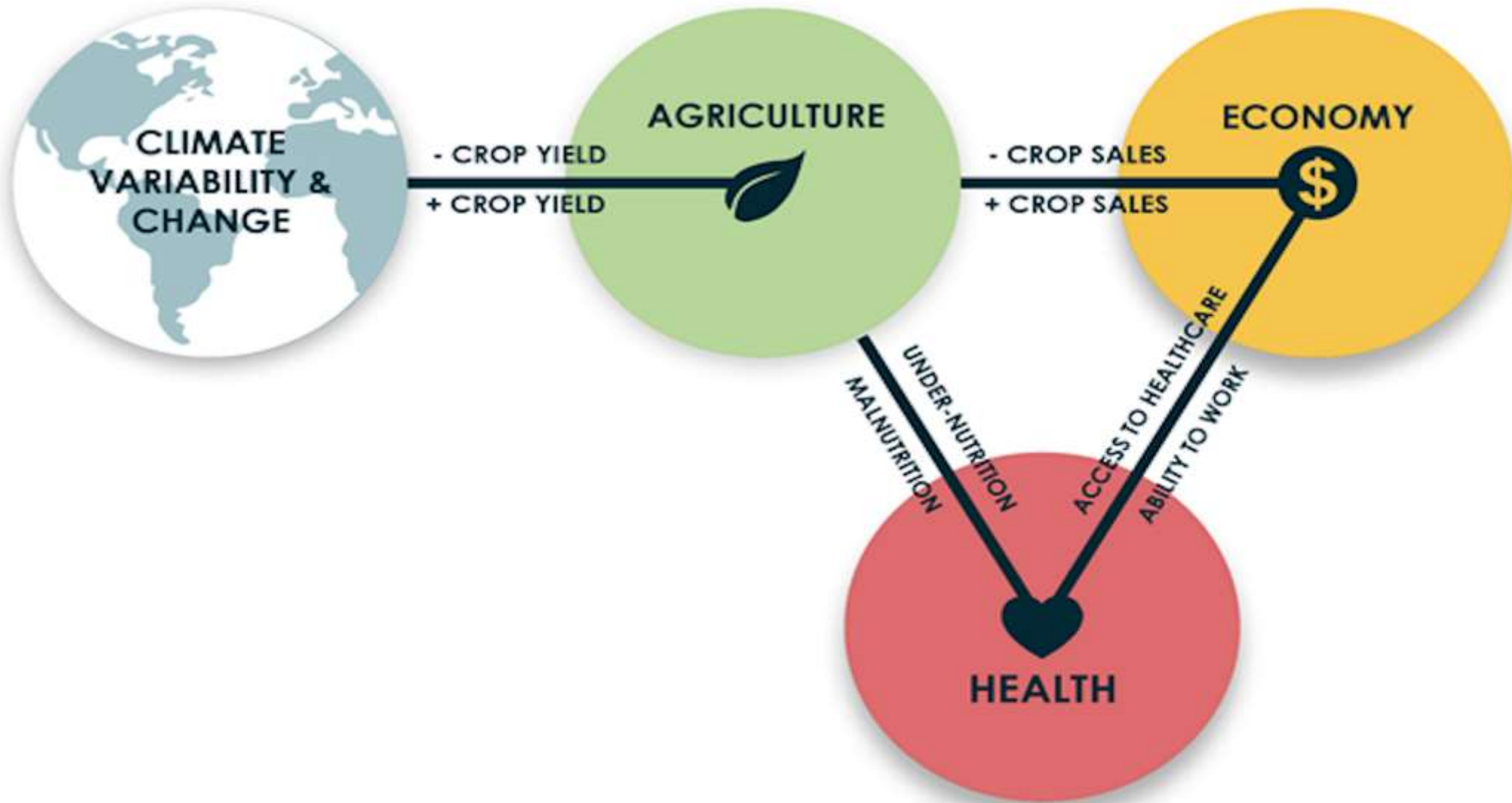


STUNTING IN
65 MILLION
CHILDREN



ANEMIA IN
265 MILLION
WOMEN

Source: An investment framework for nutrition, 2017



TURKEY

An Economic Appraisal

BY

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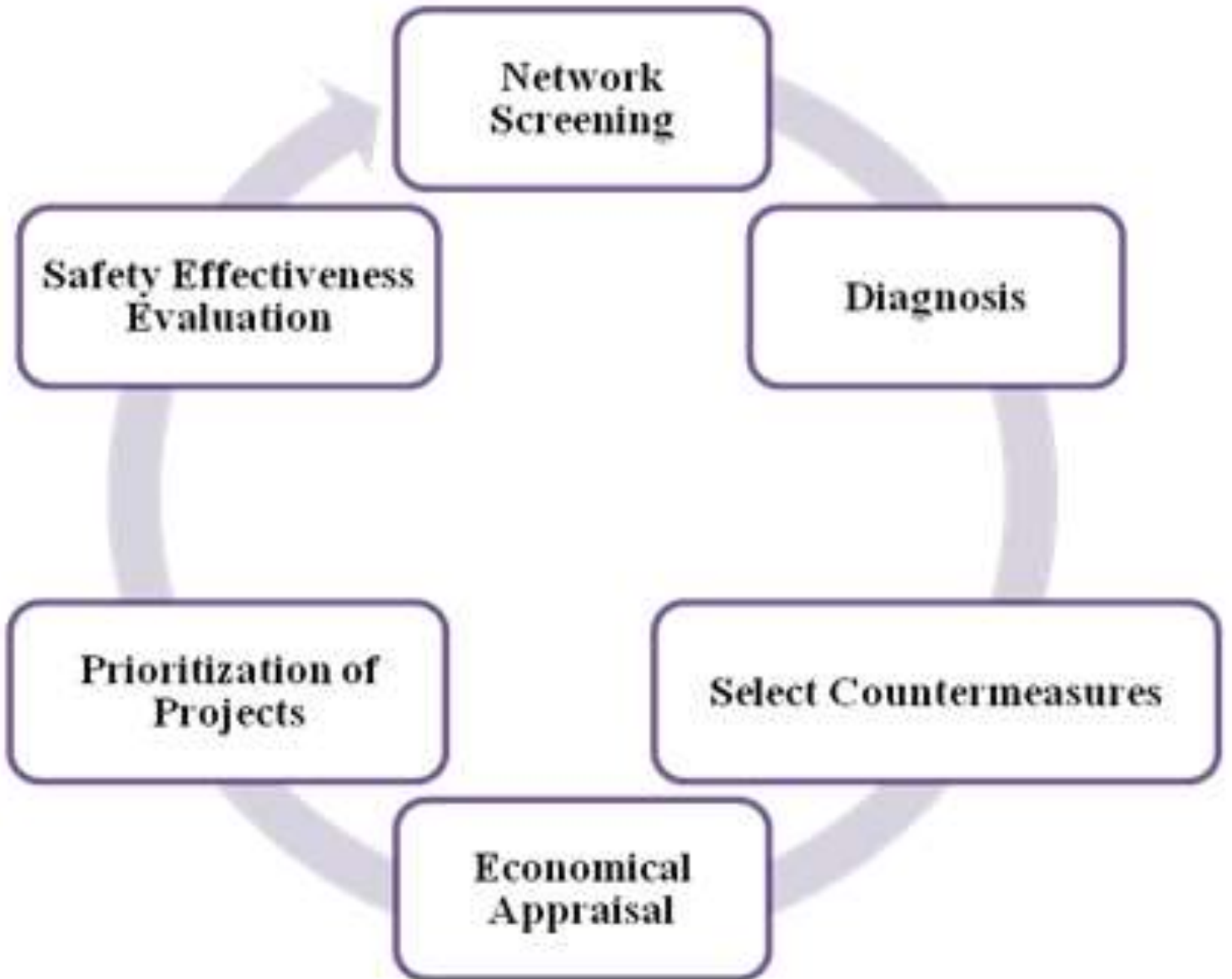


New York

THE TWENTIETH CENTURY FUND

1949

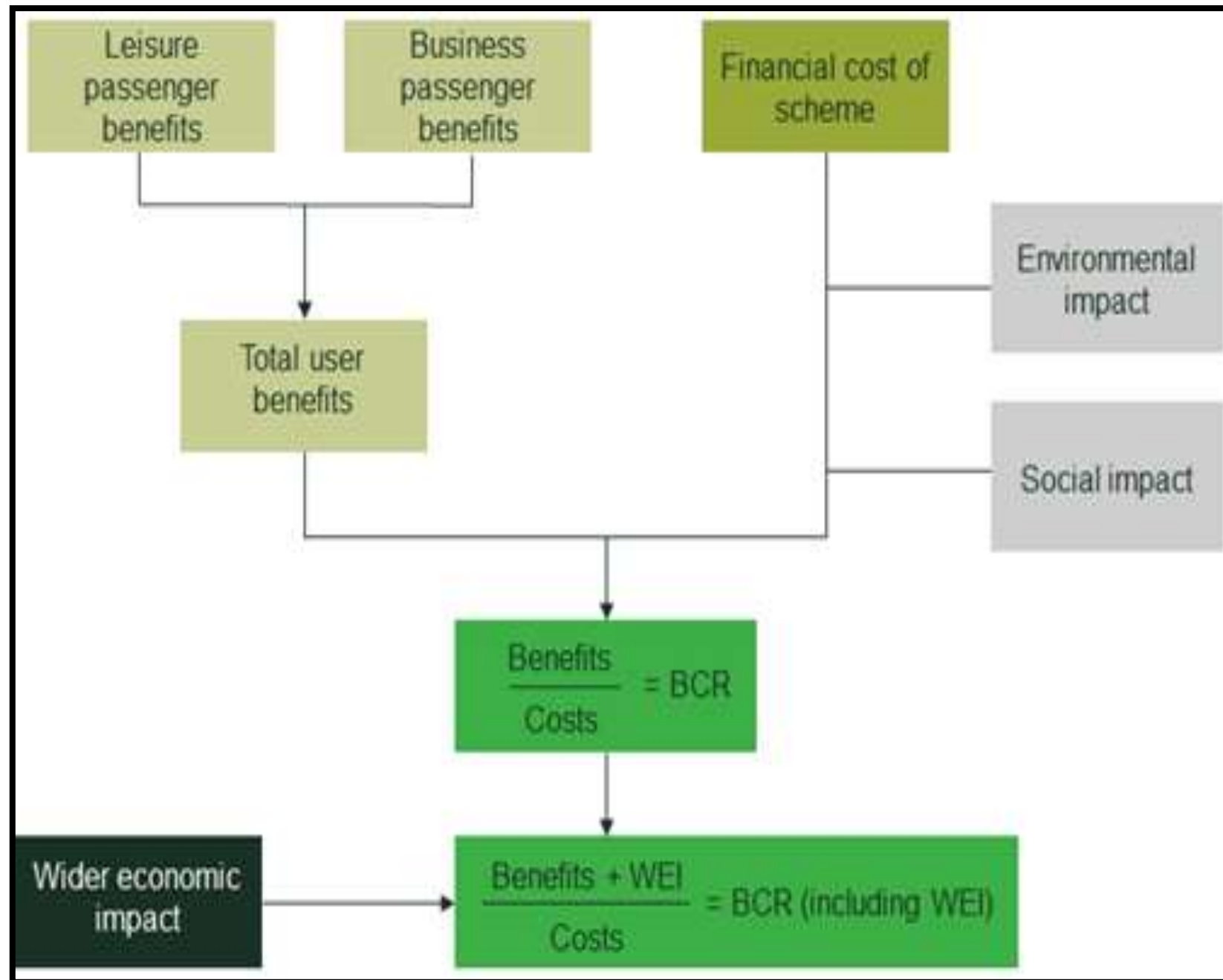
<https://archive.org/details/in.ernet.dli.2015.278424/page/n13>



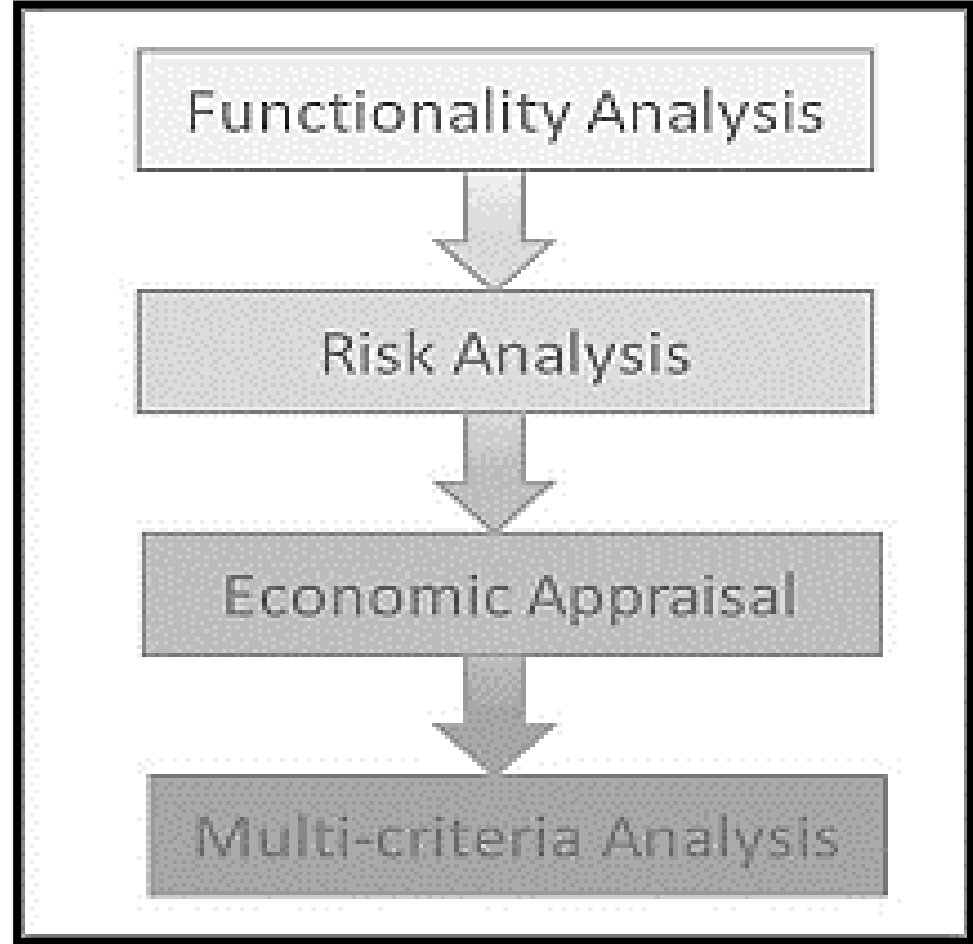
Economic Appraisal of the Health Effects of Air Pollution

Dept. of Health

Note: This is not the actual book cover



Thank you for active participation....



Never forget; HEALTH is a Basic Human RIGHT!