

# Is there a path to inclusive and low carbon growth?

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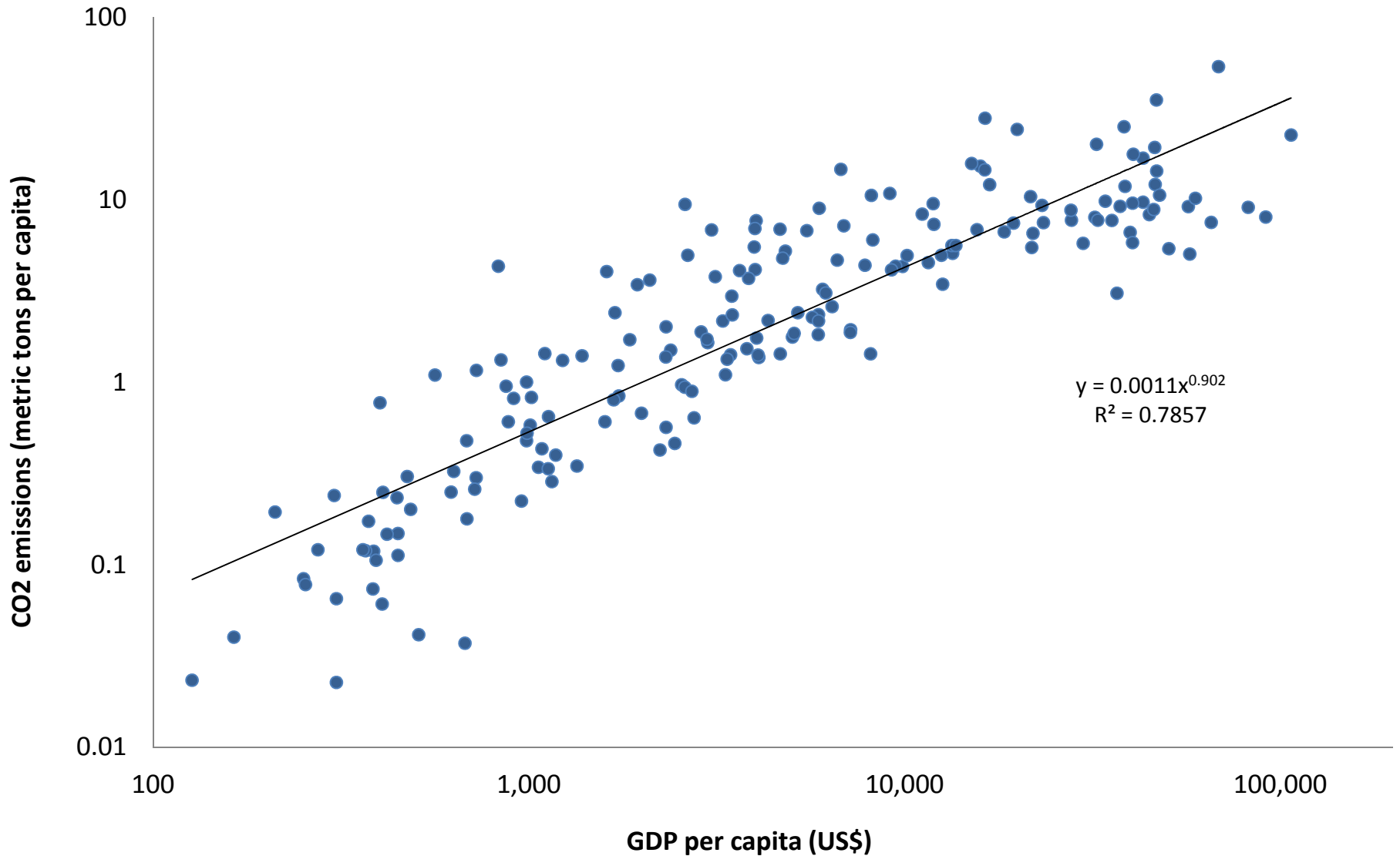
MPDD

UNESCAP

# The challenges to achieve *The future we want*

- "**Poverty eradication** is the greatest global challenge facing the world today and an indispensable requirement for sustainable development. In this regard, we are committed to freeing humanity from poverty and hunger as a matter of urgency."
- "We reaffirm that **climate change** is one of the greatest challenges of our time, and we express profound alarm that emissions of greenhouse gases continue to rise globally." (General Assembly resolution 66/288 The future we want, 11 September 2012)

# Higher income is associated with higher CO2 emissions per capita



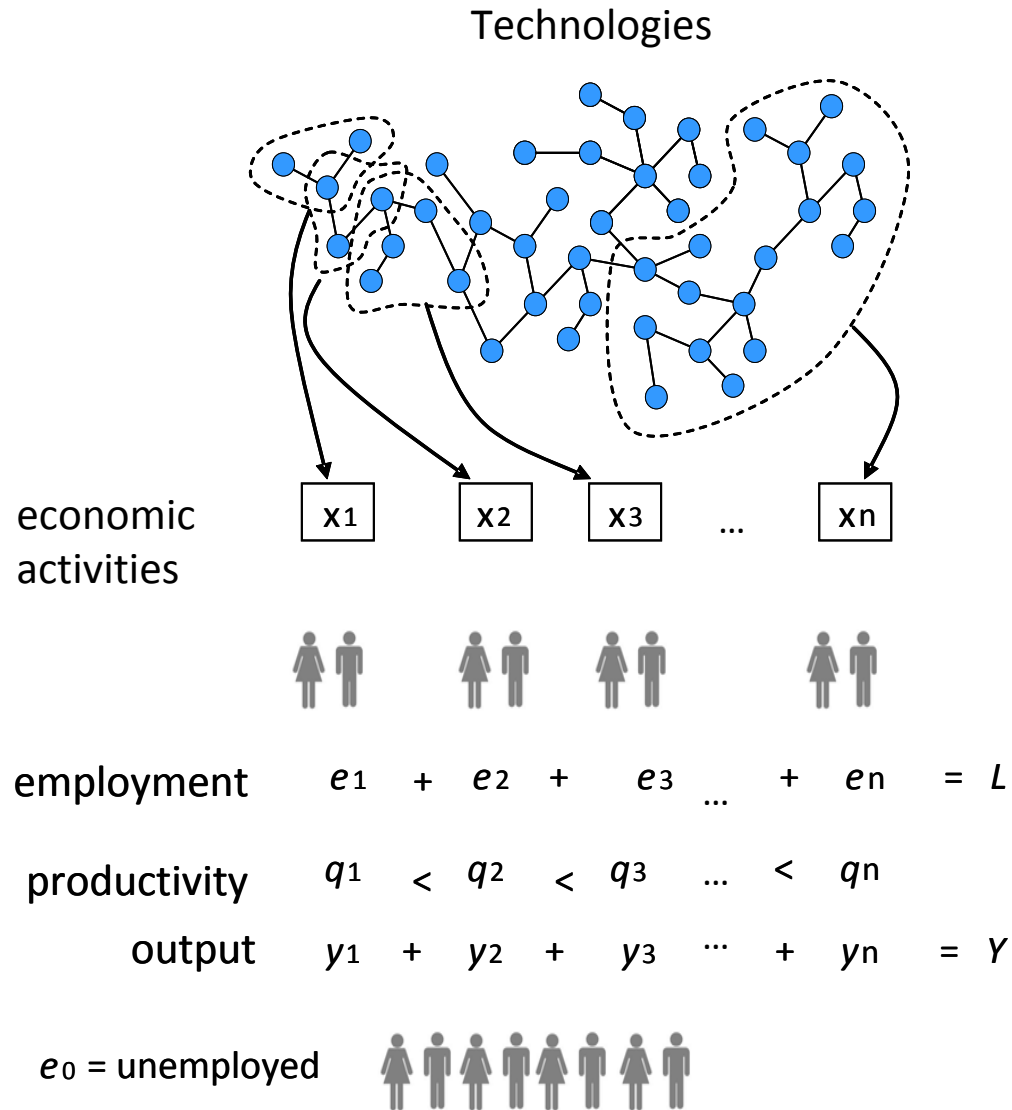
Source: Author based on data from World Bank, 2011b (accessed November 2011).

## Conceptual framework

- Technological and organisational innovations are the engine of economic growth (Schumpeter)
- Rapid catching up associated with radical structural transformation of the economy towards activities with higher productivity and higher levels of technological sophistication (Kuznets, 1979; Amsden, 2001; Rodrik)
- Carbon emissions as a function of the technology used in the production (life cycle analysis)

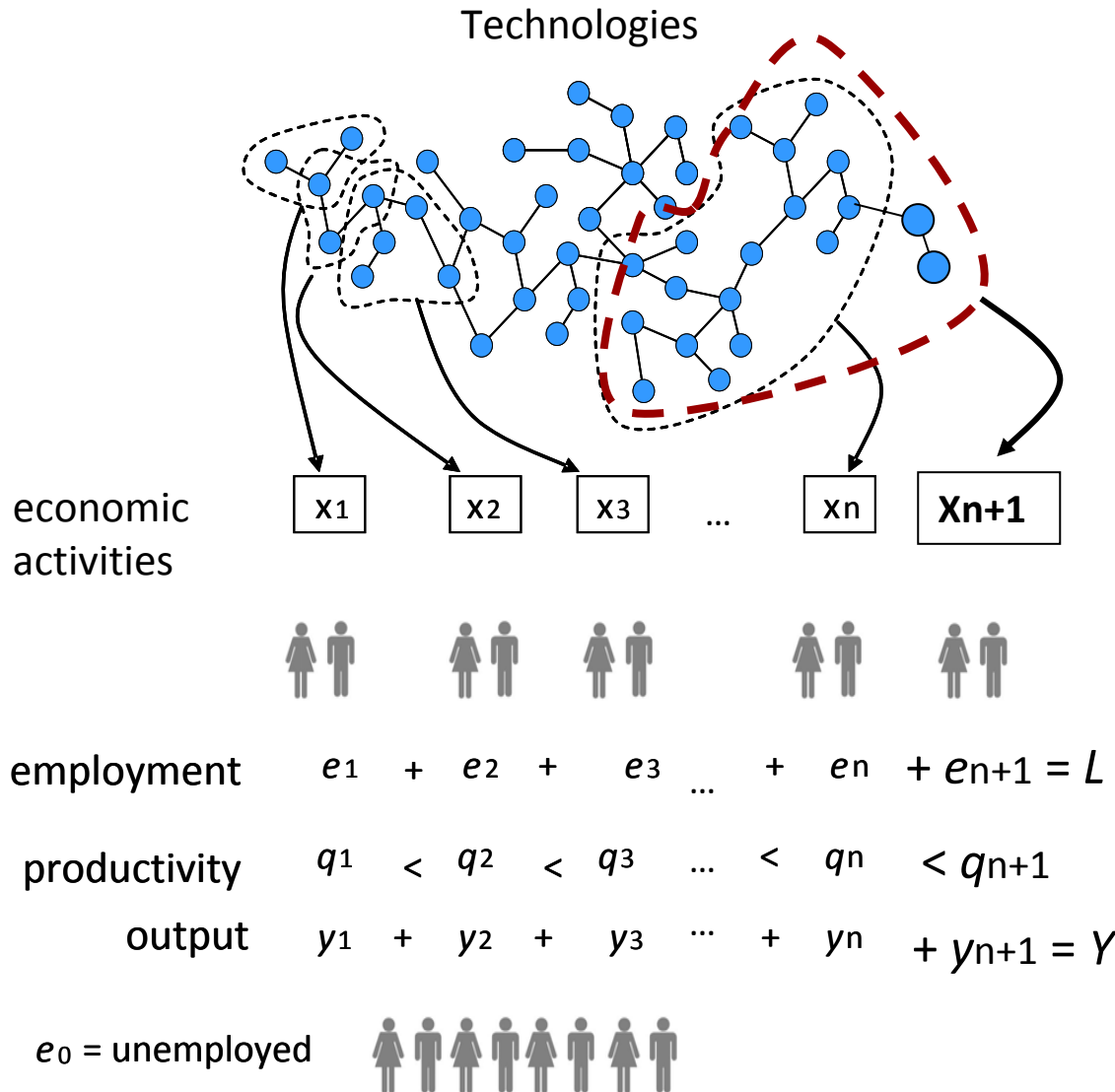
# Conceptual framework

(Based on evolutionary growth models - Pasinetti, 1987, 1993; Silverberg and Verspagen, 2005; Metcalfe et al., 2006)

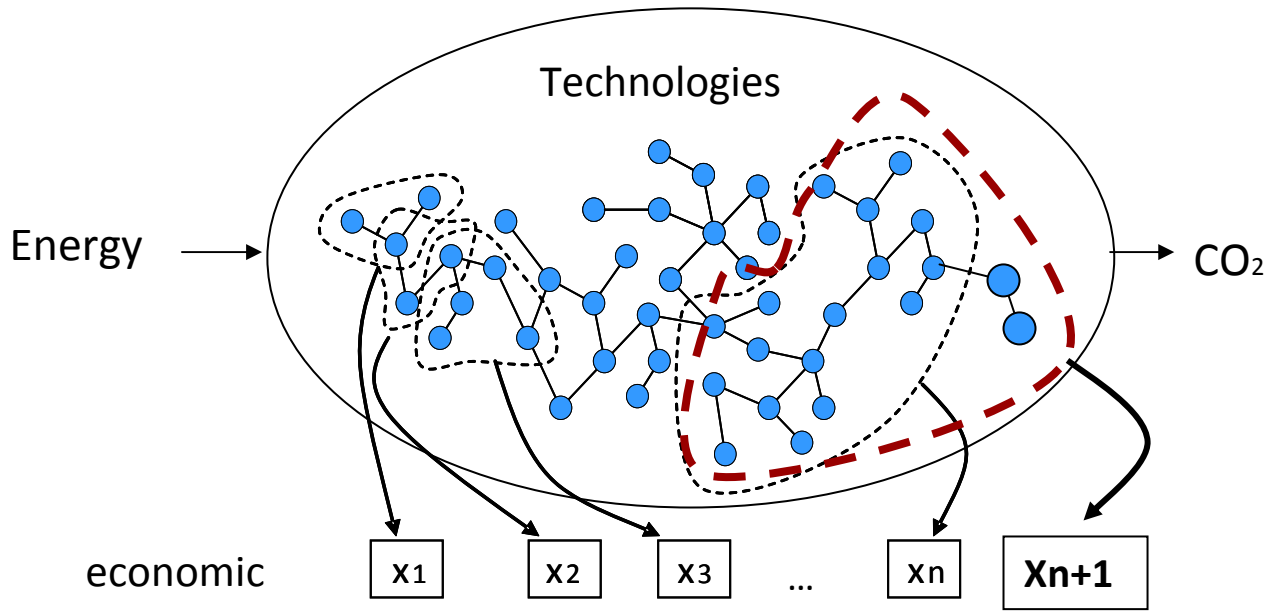


# Inclusive growth

Economic growth with shift share of employment from low to more productive economic activities (productive employment)



(Diversification)  
**Creation of new and more productive economic activities**, which would increase the opportunity for more productive jobs



CO<sub>2</sub> emissions  
as a function  
of the  
structure of  
the network of  
technologies  
and the  
sources of  
energy

economic  
activities



employment

$$e_1 + e_2 + e_3 \dots + e_n + e_{n+1} = L$$

productivity

$$q_1 < q_2 < q_3 \dots < q_n < q_{n+1}$$

output

$$y_1 + y_2 + y_3 \dots + y_n + y_{n+1} = Y$$

Carbon footprint

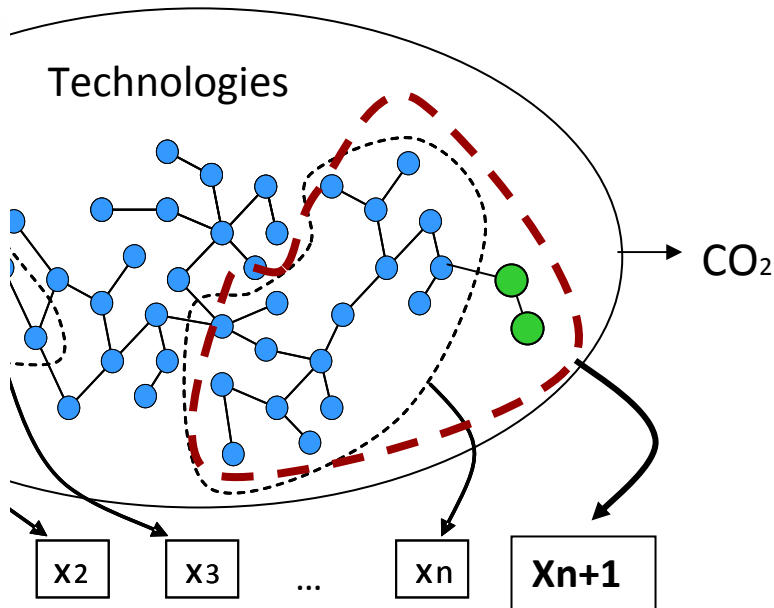
$$c_1 + c_2 + c_3 \dots + c_n + c_{n+1} = C$$

Carbon footprint  
 $c_j = (CO_{2j} / e_j)$

$e_0 =$  unemployed



预览已结束，完整报告链接和二维码如下：



$$e_2 + e_3 \dots + e_n + e_{n+1} = L$$

$$q_2 < q_3 \dots < q_n < q_{n+1}$$

$$y_2 + y_3 \dots + y_n + y_{n+1} = Y$$

$$c_2 + c_3 \dots + c_n + c_{n+1} = C$$



Two ways that an economy can evolve through a greener path

1. Foster new economic activities that, in addition of being more productive, emit less carbon
2. Increase share of renewable energy sources, which require new technologies and therefore new products

