



ESCWA
UNITED NATIONS ECONOMIC & SOCIAL
COMMISSION FOR WESTERN ASIA

Financing Energy Productivity

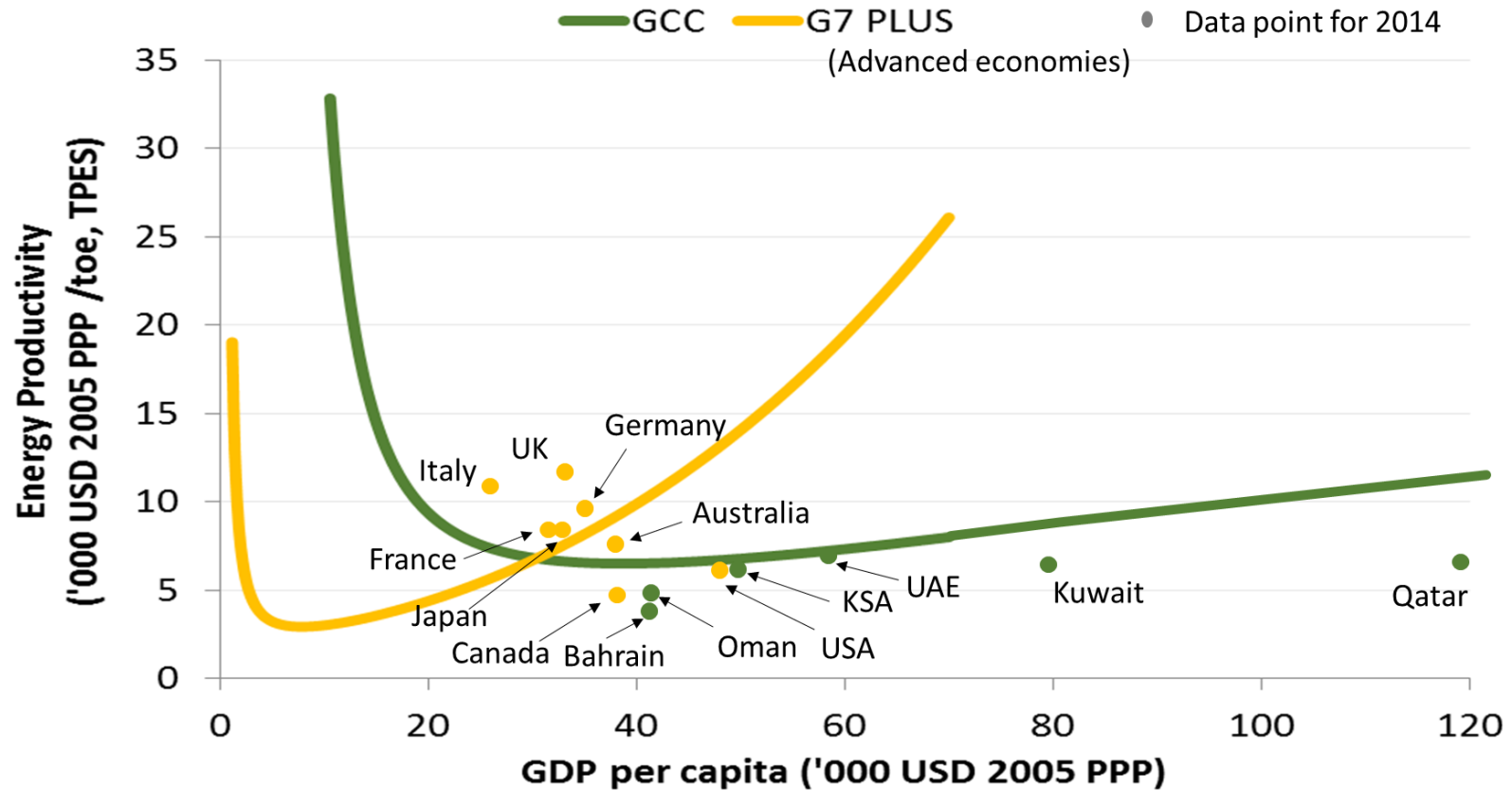
Steven Fawkes

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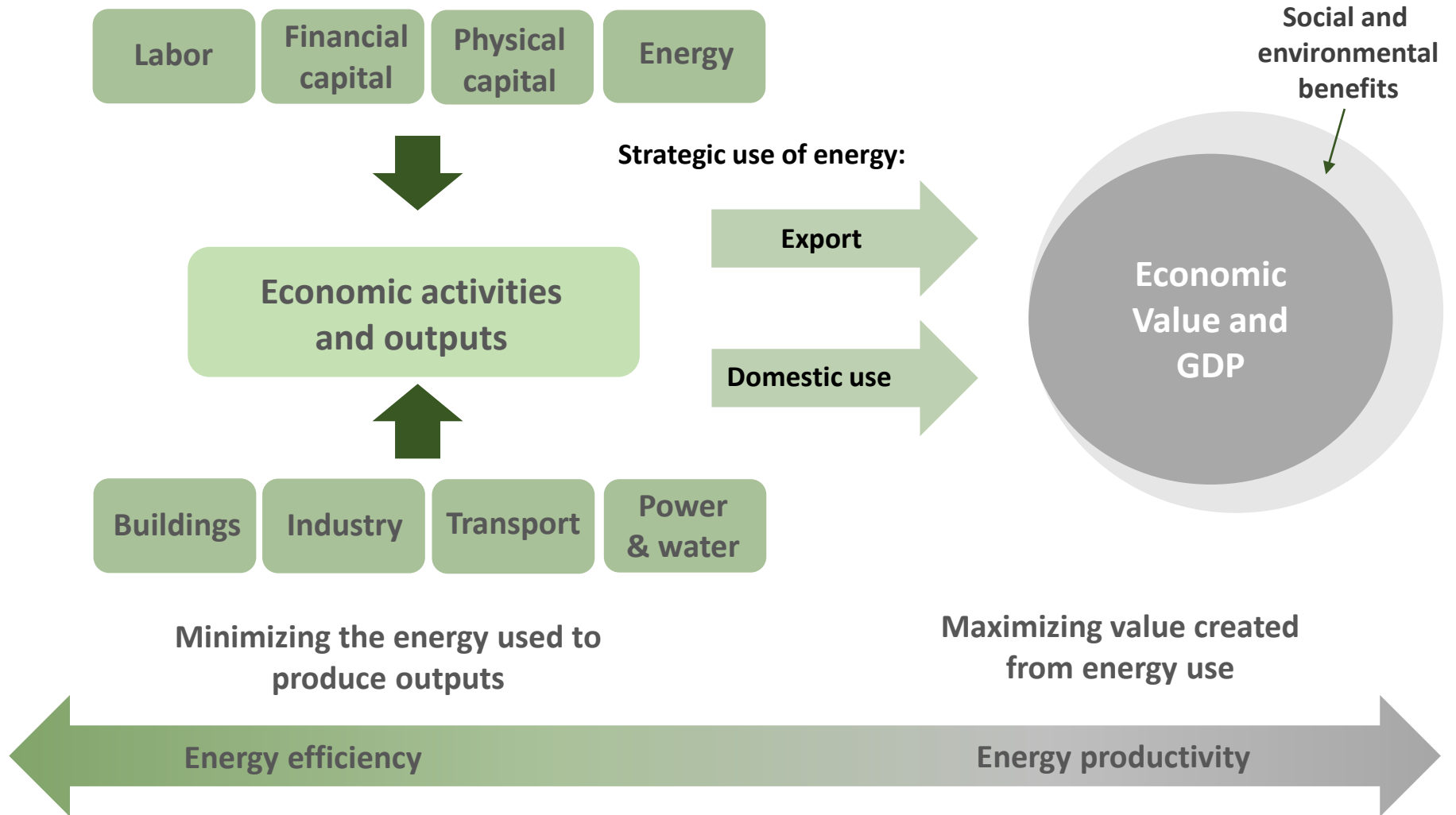
Energy consumption and GDP growth are still closely linked in the GCC

Significant capital investments to support energy efficiency and diversification efforts will be required to transition to higher energy productivity growth

Energy productivity Kuznets Curves for GCC and Selected Advanced Countries



Energy productivity is about how energy resources can best be used to maximize economic value and welfare for society...



Four types of investment that improve energy productivity

“Energy Efficiency investments”

Retrofits to buildings, industry, transport or energy facilities with **sole purpose of improving energy efficiency**

e.g. converting lighting to LEDs, adding Variable Speed Drives, insulating a building, retrofitting a power plant to improve efficiency.



“Normal investments”

Investments in new buildings, industry, transport or energy facilities **within the existing structure of the economy** that have higher than average energy productivity in their sector

e.g. a new office building, a new petrochemical plant, a new power station using existing technologies - within sectors already present in the economy. NB new is generally better but may not be.



Refurbishments to buildings, industry, transport or energy facilities with **non-energy purpose** but which include an element of energy efficiency improvement

e.g. refurbishing a building as part of normal life cycle to increase rental income, improving a production line to increase production or improve quality or reliability of an industrial facility, transport system or power station.



Investments that **change the structure of the economy** towards less energy intensive industries

e.g. investing in a new industry such as automobile assembly, rapid transit systems, switch to high density urban housing from low density suburban housing, new power generation technologies using new technologies such as renewables or nuclear.

Types of investment that improve energy productivity

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To accelerate investment into energy efficiency

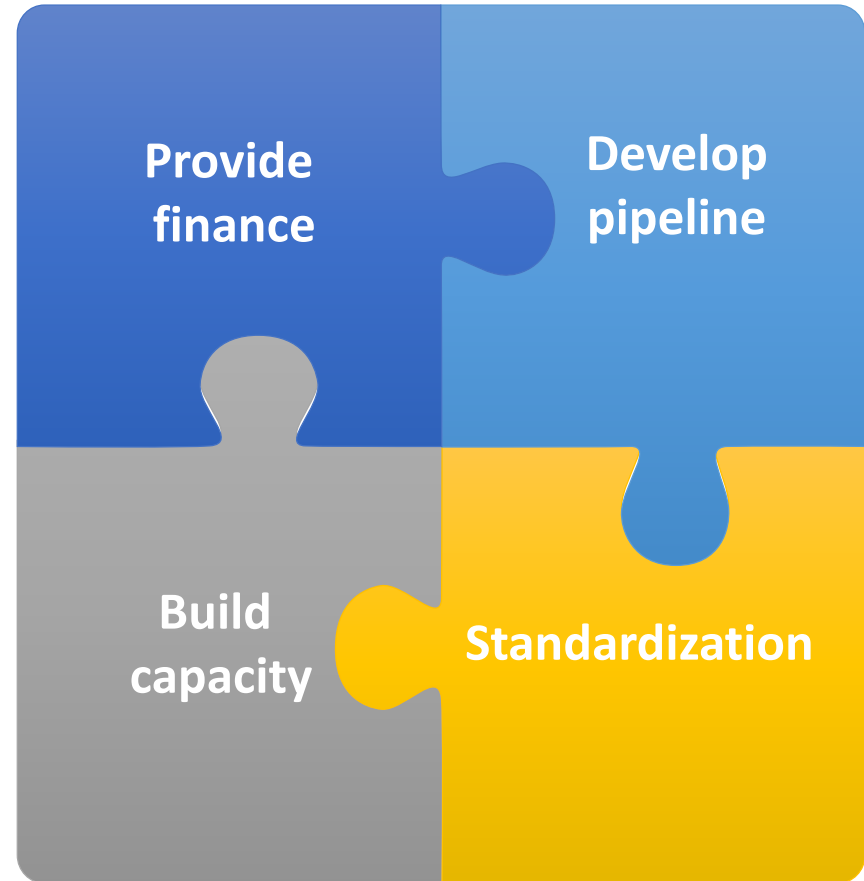
- Providing finance is not enough
- For success you need:

Finance – both project finance and project development finance

Development of a robust & committed project pipeline

Capacity building within end-users, the energy efficiency industry and the financial sector

Standardization of the development process, documentation, contracts and measurement of results



The jigsaw of energy efficiency financing

Sources of investment

- **Public – traditional approach**

- Efficiency regarded as something that has to be public expenditure
- Efficiency regarded as something different to energy supply
- Direct government expenditure or through utility mandates:
 - Tax breaks or subsidies of some form
 - Low interest loans
 - Creation of public funds to invest in efficiency projects
 - Mandate on utilities to invest into energy efficiency

- **Private – emerging approach**

- Investment requirement is larger than available public funding in many countries
- Institutional investors looking for yield and environmental investments
- Nascent market everywhere but growing interest and activity
 - Creation of specialized energy efficiency funds
 - Commercial banks making allocations to efficiency
 - Moves towards standardization

Transitioning towards private sector investment – public sector as catalyst

In GCC low energy prices means high % of benefit flows to government therefore public funds appropriate – still opportunities for private funds/PPPs

Maximizing energy efficiency investment

- Specialized funds – need more than finance:
 - Provide finance
 - Build pipelines of projects
 - Build capacity in end-users, energy efficiency industry and finance industry
 - Standardize development process, documentation, contracts and measurement
- Encourage growth of ESCO-EPC market through:
 - ESCO-EPC facilitation
 - Super-ESCO (e.g. Etihad)
- Build market infrastructure:
 - Standardization of process (e.g. Investor Confidence Project)
 - Standardization of contracts (e.g. standard EPCs)
 - Standardization of Measurement & Verification
 - Build evidence bases of project performance
 - Build capacity within financial sector

Plus continue to build demand through strong Minimum Energy Performance Standards and building capacity in energy management through standards e.g. ISO 50001

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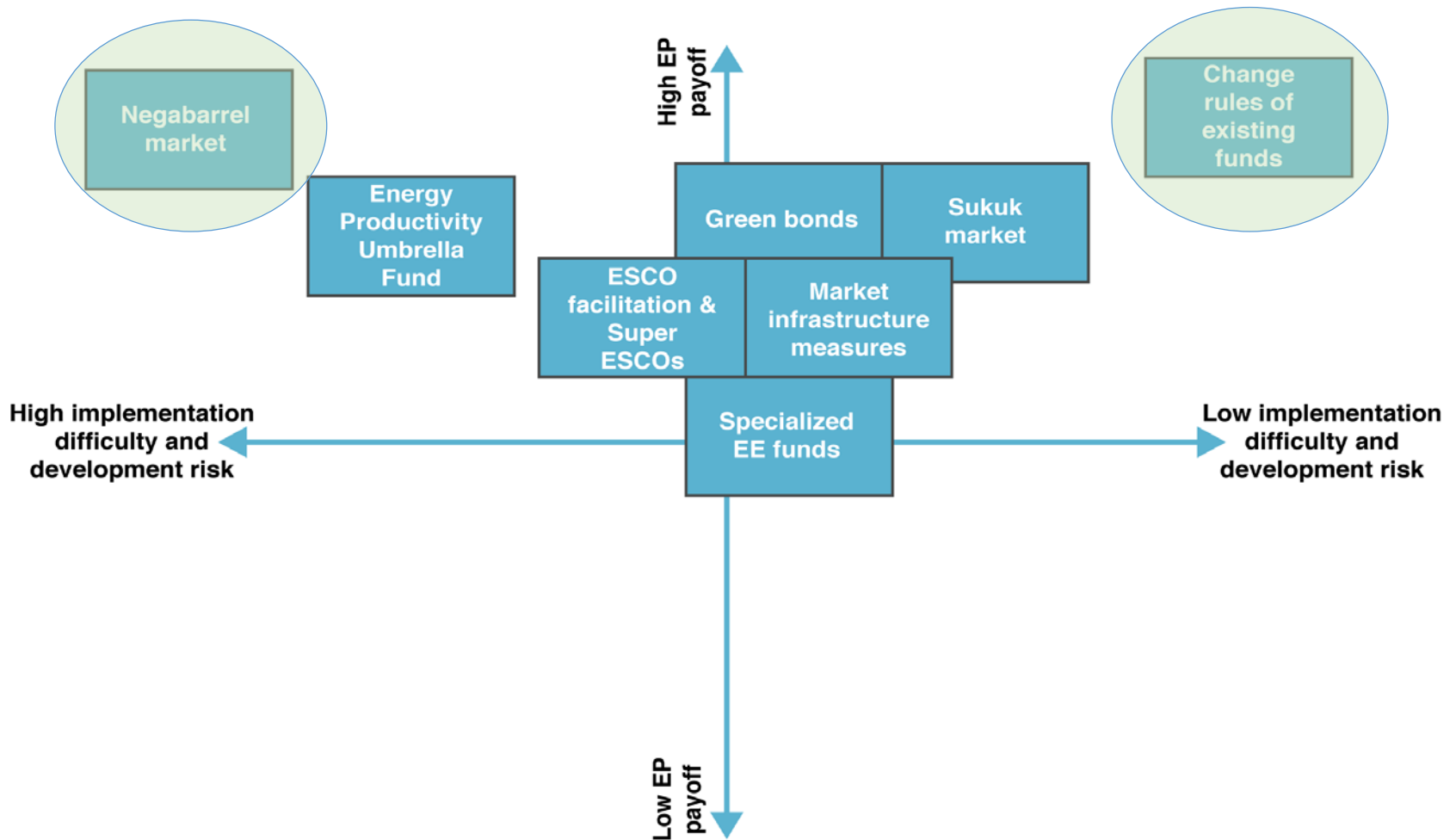
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Maximizing energy productivity investment

- Ensure existing development funds assess and target energy productivity gains
 - Make improving energy productivity one of the funds' objectives and part of investment criteria
 - Assess projects for cost-effective efficiency improvements (e.g. EBRD process)
- Create new financing vehicle(s) for energy productivity
 - Utilize growing green bond market
 - Utilize growing sukuk market (including green sukuk)
 - Create sukuk energy productivity fund
- Create a market for negabarrels
 - Reward additional revenue from exports and savings from reduced subsidy
 - Would encourage investment into energy efficiency and energy productivity

Example: Financing the Transition to Energy Productivity

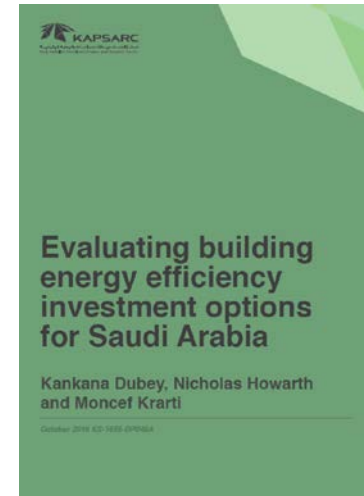
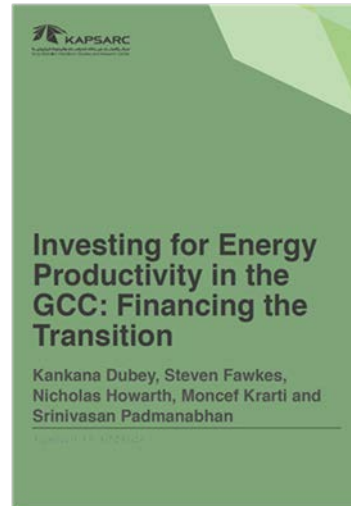
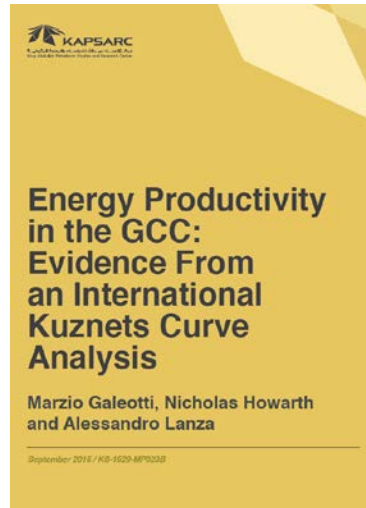
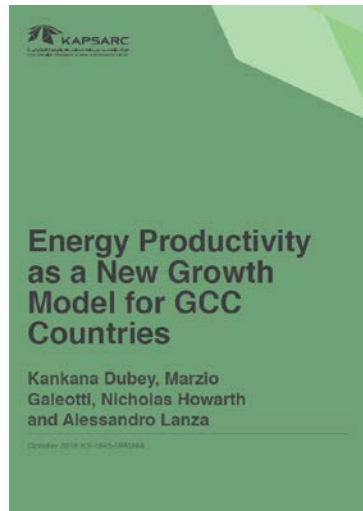
Policy tool to finance energy productivity - Ranking the impact and implementation



Source: KAPSARC

Thank you and further information

Project research publications



Publications available at www.kapsarc.org

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