

Green Jobs, Energy Efficiency and Sustainable Development: A Theoretical Overview of the Potential for Transformation and Synergistic Effects

Ana Todorova, Irina Kostadinova, Theodora Mihaela Doltu, Tülay Kaya

University of Ruse “Angel Kanchev”, attodorova@uni-ruse.bg

GOAL OF THE STUDY

Green jobs promote sustainability and a low-carbon economy. Energy efficiency optimises energy use and enhances socio-economic benefits (Fig. 1).

The study evaluates how green jobs in energy efficiency contribute to sustainable development through economic, social, and environmental benefits, highlighting their role in a just and sustainable transition.

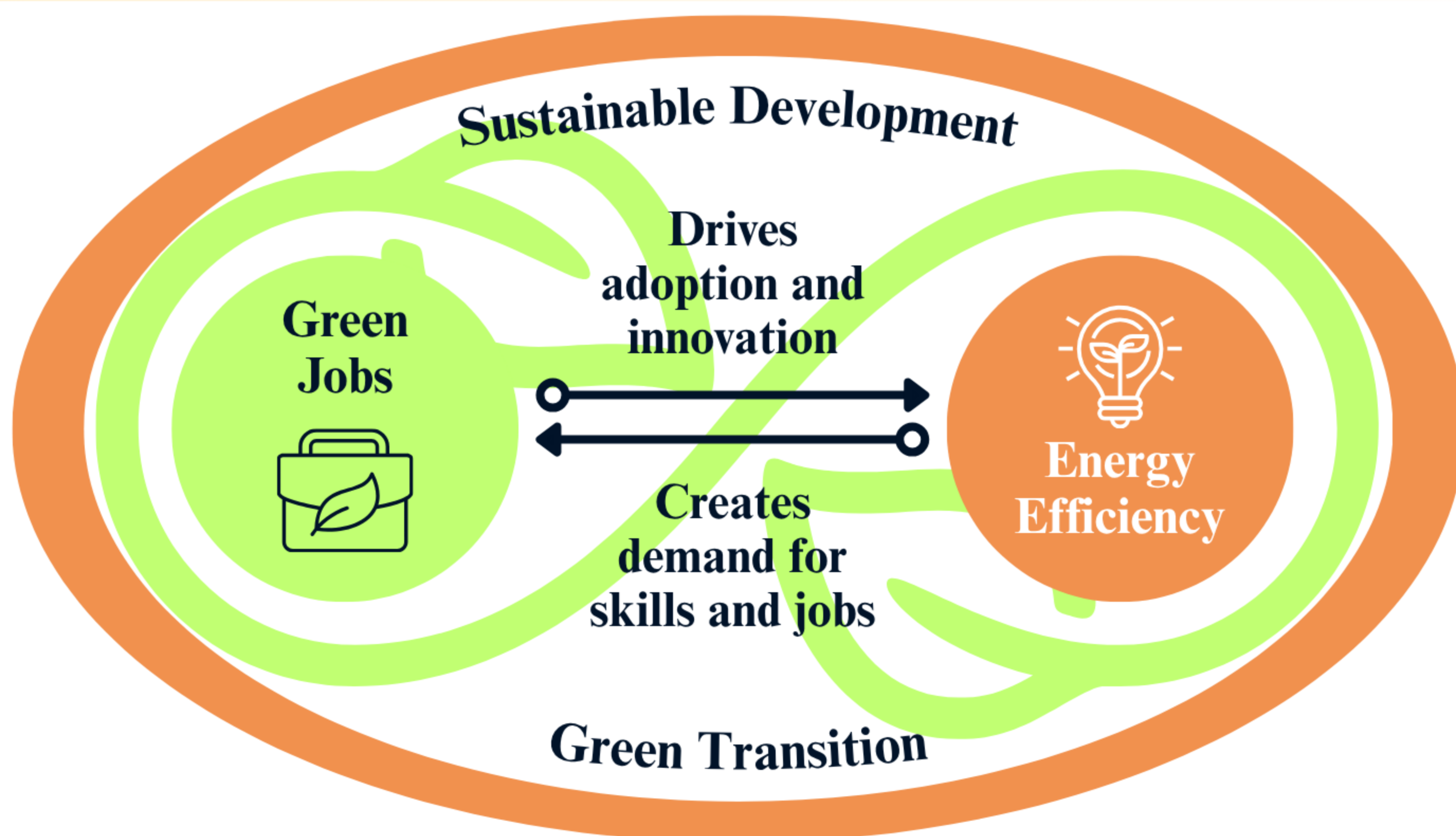


Fig. 1. Relationship between GJ and EE. Source: Own development

METHODOLOGY



The study uses a **systematic literature review** to examine the economic, social, and environmental aspects of green jobs (GJ) in energy efficiency (EE), identifying key interrelations, challenges, and policy mechanisms for sustainable development.

RESULTS

GJ, especially in EE, drive economic growth and the green transition, creating strong incentives and broad environmental benefits (Fig. 2). They promote environmental protection, address global challenges, and contribute to sustainable development. Beyond these gains, green jobs foster social justice and help reduce poverty and exclusion in times of uncertainty.

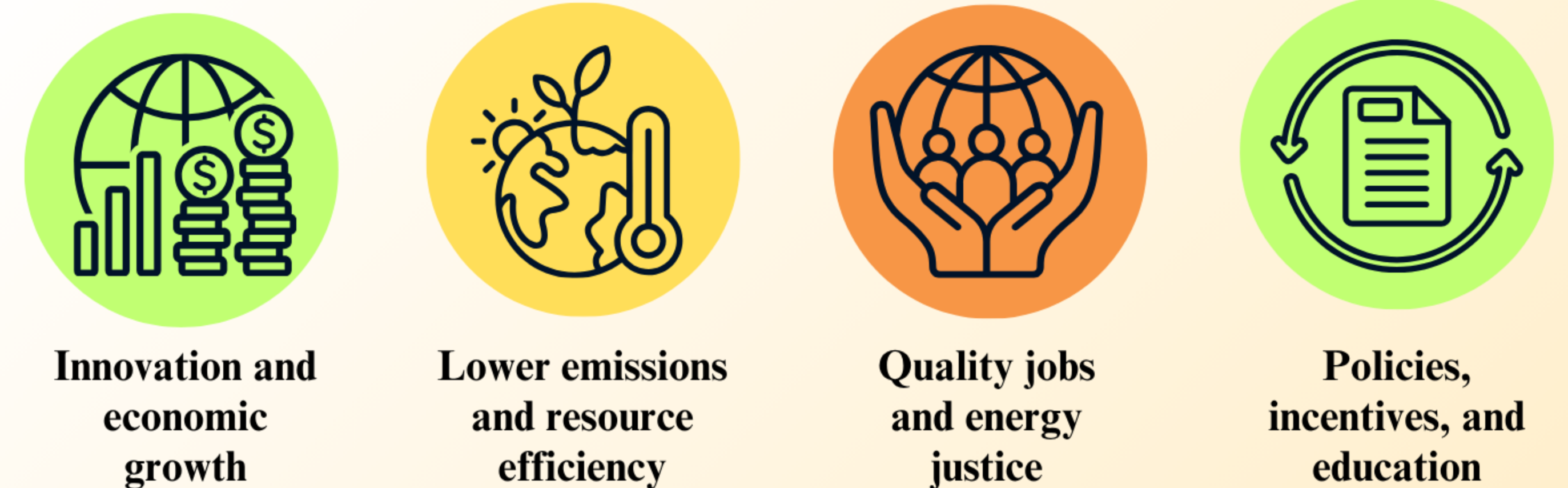


Fig. 2. Summary of the *Economic, Environmental, Social and Policy Dimensions* of GJ in the Context of EE.
Source: Own development

The green transition offers growth and inclusion but also poses major challenges. Overcoming them requires a **comprehensive approach**:

- 🌀 **Social inclusion:** Policies that ensure fairness and equal opportunities, preventing the marginalisation of certain groups of workers;
- 🌀 **Transition planning:** Active measures to manage changes in the labour market, including support for reskilling and redeployment of workers;
- 🌀 **Cross-sectoral cooperation:** Close cooperation between government, business, academia and civil society to develop and implement integrated strategies;
- 🌀 **Building an evidence base:** Continuing research better to understand the dynamics of GJ and their impacts in order to inform effective policies;

By implementing this integrated approach, it is possible to **ensure a smoother, fairer and more effective transition to a sustainable economy that maximises both the environmental and socio-economic benefits of EE and GJ.**

CONCLUSIONS

- ✓ **GJ in EE are a driver of sustainable development**, combining economic growth, social inclusion and environmental protection.
- ✓ Achieving their full potential requires **integrated strategies that combine energy efficiency goals with employment, education and investment policies.**
- ✓ A just transition depends on **educational reforms and social inclusion** that ensure **equal access to green skills and opportunities for all groups in society.**

ACKNOWLEDGMENT

This research was supported by the European Union's Horizon Europe research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 101179323.

This paper is funded by the European Union-NextGenerationEU, through the National Recovery and Resilience Plan of the Republic of Bulgaria, project No BG-RRP-2.013-0001.