ТЕНДЕНЦІЇ РОЗВИТКУ НАУКОВОЇ ДУМКИ В МЕНЕДЖМЕНТІ, ГАЛУЗЯХ СПОРТУ, ОБСЛУГОВУВАННЯ ТА ОХОРОНИ ЗДОРОВ'Я

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SOCIO-ECONOMIC IMPACTS OF INFORMAL TRANSPORTATION AND ENERGY TRANSITION: COMPLEMENTARY PATHWAYS TO SUSTAINABLE DEVELOPMENT

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Access to efficient and sustainable transportation is crucial for socio-economic development and poverty reduction, particularly in developing regions such as Sub-Saharan Africa. Informal transportation systems, characterized by flexible and low-cost mobility solutions, provide essential services where formal systems are inadequate. Similarly, the transition from fossil fuels to renewable energy plays a key role in addressing climate change while fostering economic growth and human welfare. Both informal transport and energy transitions align with the United Nations Sustainable Development Goals (SDGs), which emphasize equitable access to services and environmental sustainability.

This paper explores the socio-economic impacts of informal transportation and energy transition as discussed in the research by G. T. Tucho [1] and L. Õunmaa [2]. By analyzing the complementarity of informal transport systems and the global shift to renewable energy, this paper aims to provide insights into their roles in addressing socio-economic equity and sustainable development.

The objective of this paper is to:

1. Analyze the socio-economic impacts of informal transportation.

2. Examine the socio-economic benefits of the global energy transition toward renewable energy, with a particular focus on economic growth, job creation, and human welfare.

3. Highlight the policy reforms and institutional changes necessary for integrating informal transportation with formal systems and accelerating the energy transition.

This study employs a realist review approach, combining recent literature on informal transportation and energy transition. The research was based on

systematic reviews, case studies, policy analyses, and grey literature related to the socio-economic impacts of transportation and energy systems. Relevant databases, including Scopus, Web of Science, and Google Scholar, were used to identify studies that address transportation infrastructure, energy transition, and their effects on economic development, equity, and sustainability. The findings are synthesized to present a comprehensive analysis of the socio-economic impacts of these systems.

Informal Transportation and Socio-Economic Impacts. G. T. Tucho (2022) highlights the critical role of informal transportation modes in Sub-Saharan Africa, where formal transportation systems often fail to meet demand. Informal modes, such as mini-buses, rickshaws, and motorbikes, provide flexible, affordable transportation for low-income populations, particularly in urban areas. These modes create employment opportunities, especially for young, unemployed individuals, and facilitate the transportation of both people and goods. However, informal transport faces challenges, including inadequate infrastructure, safety concerns, and a lack of regulation. The integration of informal and formal transportation systems through policy reforms is essential to improving accessibility and equity [1].

Energy Transition and Socio-Economic Benefits. L. Õunmaa (2021) emphasizes that the global energy transition, driven by renewable energy, contributes to economic growth, job creation, and human welfare. The transition promotes global GDP growth through investments in renewable energy technologies, leading to increased demand in sectors such as manufacturing and construction. Furthermore, the transition is expected to reduce air pollution, improve health outcomes, and enhance energy accessibility for populations lacking basic energy services. The decentralization of energy sources, such as solar and wind, presents significant opportunities for regions vulnerable to fossil fuel dependency, including Eastern Europe and Central Asia [2].

The findings from both studies reveal that informal transportation and energy transition share a common goal of fostering sustainable development and

promoting equity. In Sub-Saharan Africa, informal transport systems provide essential mobility services to underserved populations, yet their full potential is limited by infrastructure deficiencies and regulatory gaps. Integrating these informal systems with formal public transportation could alleviate socio-economic disparities by improving access to jobs and services.

In contrast, the global energy transition addresses socio-economic challenges on a larger scale, including long-term economic growth, job creation, and human welfare. The transition to renewable energy has a direct positive impact on global GDP, employment, and environmental quality, offering a solution to the climate crisis while promoting sustainable development. Both studies underscore the need for policy reforms that address socio-economic contexts, historical development, and infrastructure to achieve these goals.

This review highlights the socio-economic importance of both informal transportation systems and the global energy transition. Informal transport in developing regions plays a critical role in providing flexible and affordable mobility for low-income populations, particularly where formal systems fail. However, significant challenges remain in terms of safety, regulation, and infrastructure. Meanwhile, transitioning to renewable energy offers substantial long-term economic and welfare benefits, addressing climate change while creating jobs and improving global GDP. Policy reforms and institutional changes are necessary to ensure the complementarity of informal and formal transport systems and accelerate the global energy transition, thus contributing to the achievement of Sustainable Development Goals.

References:

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