

The Cost of Net Zero: Insights from Green Premium

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As a Cost, or As a Signal?

Embarking on the journey towards net-zero emissions and green transformation comes with associated costs, which Bill Gates refers to as the green premium. In comparison to the costs of transitioning to net-zero, the green premium resembles more of a price signal—a mechanism capable of guiding the reconfiguration of resources.

The Market Penetration of New Technologies

As a price signal, the green premium reflects the performance of corporate green transformations and the commercialization progress of green technologies. When new low-carbon technologies emerge, and both businesses and consumers recognize their future green potential, the green premium serves as an incentive for enterprises to invest in research and adopt these technologies, accelerating their entry into the market. As the market penetration of new technologies increases, the green premium gradually decreases with technological advancements. Policymakers should focus on creating an environment that recognizes, certifies, and mitigates the premium and cost gap for new technologies, adjusting subsidy strategies as the green premium changes.

Green Bond Market

With the growing demand for carbon emission disclosure, the green bond market is rapidly expanding. Research indicates that third-party audited and certified green bonds carry a green premium. Due to third-party verification and scrutiny, these green bonds provide a more intuitive and trustworthy signal to the market compared to social bonds. Additionally, non-Euro-denominated investment projects require higher green premiums. Investor preferences for the environment significantly impact the bond market, necessitating a further consideration of non-economic motivations in bond pricing.

Consumer Willingness to Pay for Green Products

Many consumers are willing to pay a premium for green products, known as the green willingness-to-pay price. This willingness is based on consumers' perceptions and preferences for the environmental characteristics of green products. It determines the level of the green premium and is not solely determined by the costs of green technology. The heterogeneity of the green willingness-to-pay price across different consumers, regions, and products complicates public resource allocation. Policymakers need to address uncertainties in specific sectors' green premiums. If policy support cannot bridge the premium and cost gap, shortages may lead to delayed transitions or unnecessary costs for public budgets.

Concerning the purchasing behavior of green buildings, Mamun et al. (2023) indicates that environmental literacy and environmental beliefs contribute to enhancing consumer awareness of consequences, thereby increasing their willingness to make purchases. Incentive measures support green behavior, and responsibility attribution aids in elevating the willingness to pay a premium for green products. Therefore, governments can utilize various communication channels to discuss different environmental issues, aiming to enhance consumer environmental literacy. By encouraging and incentivizing stakeholders to participate in green advocacy and facilitating adjustments in green policies to promote the development of eco-friendly housing, governments can influence individuals' or consumers' willingness to pay a premium for green products and the associated green premiums.

Conclusion

The green premium not only represents additional costs associated with new technologies but also highlights consumer recognition of the characteristics and environmental improvement offered by green products. As consumers become more accepting and even prefer environmentally friendly products with a green premium, substantial benefits for overall greenhouse gas reduction can be achieved, further motivating and driving decarbonization actions along the product supply chain.

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