

## THE ROLE OF GREEN INDUSTRIAL POLICY IN PROMOTING GREEN CONSUMPTION

**Sherali Mukimov**

Associate Professor of the International Finance Department,  
Tashkent State University of Economics, Uzbekistan

**ABSTRACT:** This article examines the mechanisms of industrial policy aimed at developing green consumption within the framework of transitioning to a green economy. The author theoretically analyzes the influence of environmental literacy and culture on the demand for environmentally friendly goods and services. Key instruments of industrial policy affecting green consumption are reviewed, including eco-labeling, the development of green public procurement, tax incentives, and subsidies. Regulatory measures aimed at greening production processes and increasing public awareness of environmental issues are analyzed. Special attention is paid to the experience of Uzbekistan, with examples such as solar energy subsidy programs and the introduction of environmental standards. The author highlights the importance of environmental education and awareness in shaping a sustainable consumption culture. The article presents a conceptual model illustrating the relationship between green industrial policy and sustainable consumption.

**KEYWORDS:** green economy, environmental securitization, industrial policy, green consumption, environmental literacy, environmental culture, consumption subject and object, conceptual model

### INTRODUCTION

In the modern era, the transition to a green economy has become one of the most constant and fundamental issues on the global agenda, setting before the states the task of minimizing the negative environmental impact of industrial production and consumption. Industrial enterprises play a significant role in global warming and in the pollution of land, water, and air. Consequently, countries prioritize greening industry in their transition to a green economy. As a result, green industrial policy has emerged and is now being pursued in various forms across all countries. However, focusing solely on the production process in such a policy is unlikely to yield the expected results.

From a theoretical perspective, if we apply Say's Law ("supply creates its own demand") [1], goods and services produced by environmentally friendly industries should generate market demand and create a new equilibrium, enabling complete greening. However, the Keynesian and neoclassical economic schools' view that "demand drives supply" must also be considered: if consumers themselves demand environmentally friendly goods and services, the supply side will be forced to adapt. This means that the policy of transitioning to a green economy must include greening not only production but also consumption.

Currently, industrial policy worldwide is mainly pursued in vertical form (targeted at specific industries) and horizontal form (applied across all industrial enterprises). Measures are typically directed entirely at industry itself, leaving out the main factor determining market equilibrium consumption. As a result, serious problems arise in the full achievement of the green agenda, including the Sustainable Development Goals (SDGs). According to UN data, the

implementation of the SDGs remains unsatisfactory for more than 50% of the goals, while for 30% of the goals the situation has not improved or has worsened. Therefore, the scientific community faces the urgent task of revisiting current approaches to sustainable development and improving their effectiveness. The purpose of this article is to develop a conceptual model of industrial policy that encompasses both production and consumption.

## RESEARCH METHODOLOGY

To determine which instruments of industrial policy can be used to promote green consumption and the algorithm for doing so, the study employed systems analysis, semantic analysis of literature, and conceptual modeling. First, the main factors influencing green consumption were identified based on empirical research conducted in various countries. Then, to explore the integration of green consumption into industrial policy, the general systems theory (L. Bertalanffy) was applied. Additionally, the securitization concept (B. Buzan) was employed, modified from the perspective of the environmental agenda.

## ANALYSIS AND RESULTS

### *Green Consumption and Its Influencing Factors*

Green consumption generally refers to environmentally friendly behavior, meaning the purchase of green alternatives instead of traditional products [2]. Environmentally friendly behavior (hereafter referred to as “culture”) can be understood as consuming organic products, using clean and renewable energy, and prioritizing products from companies that cause no or minimal environmental harm [3]. Put simply, green consumption is the practical expression of an individual’s personal responsibility in jointly addressing environmental challenges.

Green consumption is related to individual behavior, and shaping it requires long-term systemic measures. This in turn leads to a green (sustainable) consumption and production policy, or simply, green industrial policy. Any policy should be built on fundamental drivers within its domain. Therefore, consumption greening policy should be constructed around the main factors influencing consumer culture.

Environmental literacy plays a primary role in the formation of green consumption culture. As environmental literacy grows, the intention to protect the environment forms within society, later manifesting in actions and reaching the level of culture [4]. At the micro level, two main factors influence green consumption culture: the subject and the object of consumption. The subject of consumption i.e., consumers’ decision to “go green” is shaped by their environmental attitudes [5], perception of socio-political processes [6], and willingness and ability to pay for green products [7]. The object of consumption includes eco-labeling [8], the quality [9] and availability [10] of green products.

### *Measures Targeted at the Subject of Consumption*

A number of scholars have concluded that the higher the level of economic development, the stronger people’s propensity toward green consumption [4]. This can be linked to the fact that as the economy develops, environmental problems also become more severe, and society becomes more aware of them. Most of the factors mentioned above also depend on the country’s level of

economic and technological development. Therefore, as A. Henry notes [11], environmental literacy can be defined as individuals' understanding of environmental problems and related government policies.

On the other hand, it is incorrect to claim that a developed economy is a prerequisite for high environmental literacy. Environmental problems do not choose specific states or societies: they are equally relevant to all. Linking environmental literacy solely to economic growth may be explained by the relatively short history of global recognition of environmental issues. Indeed, environmental literacy is a relatively new field in science [12]. Therefore, raising environmental literacy in society should not be tied exclusively to economic growth.

The advantage of developing measures to improve environmental literacy is that there is a single clear direction: the lack of literacy can only be addressed by providing knowledge. In other words, any measures in this area involve didactic activities such as teaching, explaining, promoting, and demonstrating.

### ***Environmental Securitization***

When teaching society to adopt green consumption, the state itself (as the educator) must first have a coherent system of views on environmental protection [4]. The state must have a clear understanding of what environmental threats exist for its people, what measures can be taken to prevent or adapt to them, and what the consequences will be if no action is taken, and it must convey this understanding to society. Through this, the state securitizes environmental problems and gains the ability to take more decisive measures in the future. For example, under securitization, increases in taxes on fossil fuels, criticism of hedonism and overconsumption, the application of administrative or financial measures against it, and making wasteful lifestyles more expensive will be accepted by society.

Once an ideological foundation is established, the second stage is the development and implementation of relevant state policies. The examples above represent individual elements of such policy. In general terms, at this stage the state develops measures targeting both the subject and the object of consumption. Systemic measures aimed at the subject include providing environmental education through schools and the media, explaining the state's environmental policies, promoting green consumption, and shaping public intolerance toward excessive consumption.

### ***Measures Targeted at the Object of Consumption***

Measures targeting the object of consumption can be implemented within the framework of industrial policy. The primary focus here is on producing green goods and services and informing consumers about them. Global practice shows that environmental literacy and eco-labeling are among the most important factors encouraging the purchase of green products [13]. Since 2019, Uzbekistan has operated a voluntary eco-labeling system ("green label"). Under this system, without undergoing the eco-labeling procedure, it is prohibited to use any sign of environmental safety in the product description, name, or advertising, to indicate any environmentally safe properties of the product, or to use terms such as "environmentally friendly," "environmentally safe," or "eco-friendly" [14]. However, introducing such a system will not produce the expected results unless environmental culture is developed. In fact, according to a survey of about 7,000 respondents in Uzbekistan, the lack of environmental culture was identified as the most significant environmental problem by 70% of respondents [15].

Another important measure that can be taken within industrial policy to green consumption is green public procurement. Companies participating in green public procurement are usually required to comply with environmental standards. For this, they must meet the requirements of eco-labeling, certification, or environmental standards such as the ISO-14000 group. As a result, a continuous flow of green goods and services enters the market [16]. Under competitive conditions, green attributes take precedence in product packaging and advertising, simultaneously contributing to promotion and stimulating green consumption.

In OECD countries, public procurement accounts for about one-fifth of GDP; therefore, applying “green” criteria in procurement is a highly effective tool for stimulating the production of green products [17]. In Uzbekistan, from 2024, the green procurement principle has also been applied in public procurement [18]. Chapter 2 of the 2025-2027 Public Procurement Development Strategy [19] notes the significantly low share of green procurement and identifies the increase in this share, along with measures to protect the environment and prevent ecological damage during procurement processes, as one of the main directions of development. The content of the strategy indicates that full implementation of green public procurement will begin in 2026.

Tax incentives for green consumption are among the oldest instruments of industrial policy. They are usually part of the group of green taxes. Some studies note that green tax reforms focused on consumption are the most effective way to ensure environmental security [20]. Currently, green energy is emerging as the main target of environmental taxes aimed at consumption. Environmental taxes effectively penalize the production and consumption of “bad” goods, while creating additional income for “good” goods. The higher the cost of non-green energy, waste, and environmental harm, the greater the incentives for consumers and producers to minimize or eliminate this environmental “penalty” [21]. Experience in the G7 [22] and OECD [23] countries, as well as in China [24], confirms that taxes on traditional energy result in increased green energy consumption.

At present, Uzbekistan does not have tax instruments directly targeting green consumption. Differentiated energy tariffs encourage energy savings but do not create sufficient incentives to increase green energy consumption. However, there are clear examples showing the effectiveness of benefits for green products in the country. For example, reforms to support electric vehicle purchases began in 2020: import duties, excise tax, and vehicle and disposal fees were abolished. As a result, while only 39 electric vehicles were imported into Uzbekistan in 2019, this figure exceeded 23,000 in 2024.

Increasing the volume of green consumption can also be supported by industrial policy tools such as subsidizing consumption and production (R&D) and introducing regulatory requirements in production. Subsidy policy can be conditionally divided into two categories: subsidies for firms and subsidies for consumers. Research shows that subsidies to firms are significantly more effective than subsidies to consumers [25], which can be explained by firms’ continuous work on greening production processes and placing greater emphasis on green attributes in product promotion. For this reason, many studies refer to subsidies to firms as “green innovation subsidies” [26].

However, excessive subsidies can lead to overproduction and overconsumption, worsening environmental problems through the boomerang effect. This is especially evident in subsidies with a low level of greenness. Therefore, any subsidy program requires strong ideological support, i.e., the development of environmental culture in society [27]. Without a sufficiently developed environmental culture, the effectiveness of subsidies will be questionable.

One of the few green subsidy projects in Uzbekistan is the “Solar Home” program launched in 2023. Under this program, individuals who install solar panels in their homes receive a subsidy

of 1,000 soums (0.08 USD) for each kilowatt-hour of electricity generated and fed into the unified power grid. From January to September 2024, more than 6,000 individuals used this program, receiving a total of 8.9 billion soums (8.9 million kWh) in subsidies from the state budget [28]. Currently, these subsidies serve more as a passive income source for households than as a tool for green consumption: out of over 8 million household subscribers in the country, only about 6,000 (0.07%) participate in the program. Theoretical analysis above suggests that allocating green energy subsidies to technologically capable entities (firms) would yield better results.

### *Regulatory Measures*

Regulatory measures are the most powerful and effective tools at the state's disposal. These measures directly influence the formation of environmental awareness and culture among the population, as well as the environmental safety of production processes. Analysis shows that without regulatory policies, the willingness of the population to shift to green consumption will not be high [29]. On the other hand, at the individual level subsidies may be more effective than state-imposed fines; thus, both incentives (“carrots”) and administrative penalties (“sticks”) are needed to develop a green consumption culture. In fact, studies in China [29] show that coercive state measures have a faster effect on shaping green consumption culture than emotionally oriented measures.

Regulatory norms aimed at greening production differ fundamentally from those targeting consumption and are introduced separately for each sector. They may vary at all stages of the production process. Based on their scope, regulatory norms can be grouped as follows:

- emissions into the environment;
- resource efficiency;
- recycling rate;
- packaging;
- raw material composition;
- energy supply and composition;
- certifications;
- land and biodiversity conservation;
- sustainable jobs, etc.

Many such regulatory norms are also applied in Uzbekistan. For example, since 2024, an indefinite moratorium has been imposed on the extraction of non-metallic materials from the beds of the Chirchik, Sangzor, Zarafshan, Norin, Kashkadarya, and Surkhandarya rivers [30], reducing the environmental damage caused by the production of construction materials (sand, gravel) and increasing the share of green materials used in the construction industry.

Environmental regulations also apply to the cement industry. Due to the high level of air pollution from cement production, enterprises are required to install dust and gas collection equipment [31]. Such regulations have led to the emergence of concepts such as “eco-cement” or “environmentally friendly cement” in Uzbekistan. As environmental culture in society develops, consumption of this type of cement will also increase.

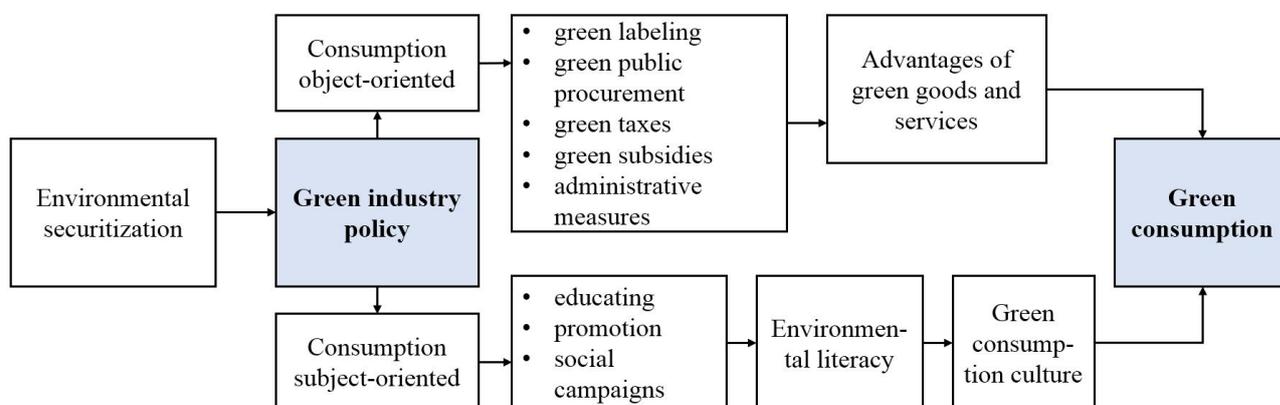
### *Environmental Literacy and Environmental Culture*

It is important to recognize the practical difference between environmental literacy (awareness of environmental problems and feeling of involvement) and environmental culture (engaging in environmentally friendly behavior). This can be illustrated by two hypothetical situations:

1. A person is sufficiently environmentally literate but this is not reflected in their purchases.
2. A person engages in green purchases but does not have high environmental literacy.

Naturally, there is a strong relationship between environmental literacy and environmental culture, as confirmed by numerous studies [32]. The formation of a genuine green consumption culture is determined by environmental literacy and the social environment [33]. Based on this, the most effective tools for turning literacy into culture are environmental promotion and social campaigns [34].

To generalize our analysis, we can conceptually model the process of greening consumption through green industry policy as follows:



**Figure 1. A Conceptual Model of the Process of Greening Consumption Through Green Industry Policy**

Source: Author

## CONCLUSION

Since consumption is one of the main causes of environmental problems, making it sustainable is becoming increasingly urgent. Even when people are aware of the green agenda and environmental problems to some extent, they often hesitate or completely forget about environmental responsibility when making decisions and purchases. Governments should facilitate decision-making for the population in greening consumption by applying consistent and systematic measures targeting both the subject and object of consumption. The conceptual model proposed in this article can serve this purpose.

## REFERENCES

1. Israelsen L. D., Sanders K. K. The Law of Markets as Enunciated by Jean-Baptiste Say //Economics Research Institute Study Paper. – 1996. – Vol. 96. – №. 10. – P. 1.
2. Vernekar S. S., Preeti W. Green consumption //An emperical study of consumers attitude and perception regarding eco-friendly products. opinion. – 2011. – Vol. 1. – №. 1. – P. 66.
3. Connolly J., Prothero A. Green consumption: Life-politics, risk and contradictions //Journal of consumer culture. – 2008. – Vol. 8. – №. 1. – P. 117-145.



4. Xie C., Wang R., Gong X. The influence of environmental cognition on green consumption behavior //Frontiers in Psychology. – 2022. – Vol. 13. – A. 988585.
5. Al Mamun A. et al. Intention and behavior towards green consumption among low-income households //Journal of environmental management. – 2018. – VOL. 227. – P. 73-86.
6. Leonidou L. C., Leonidou C. N., Kvasova O. Antecedents and outcomes of consumer environmentally friendly attitudes and behaviour //Journal of Marketing Management. – 2010. – Vol. 26. – №. 13-14. – P. 1319-1344.
7. Steg L. et al. An integrated framework for encouraging pro-environmental behaviour: The role of values, situational factors and goals //Journal of Environmental psychology. – 2014. – Vol. 38. – P. 104-115.
8. Chen Y. S. The drivers of green brand equity: Green brand image, green satisfaction, and green trust //Journal of Business ethics. – 2010. – Vol. 93. – P. 307-319.
9. Joshi Y., Rahman Z. Factors affecting green purchase behaviour and future research directions //International Strategic management review. – 2015. – Vol. 3. – №. 1-2. – P. 128-143.
10. Vermeir I. et al. Environmentally sustainable food consumption: A review and research agenda from a goal-directed perspective //Frontiers in psychology. – 2020. – Vol. 11. – P. 1603.
11. Henry A. D., Dietz T. Understanding environmental cognition //Organization & Environment. – 2012. – Vol. 25. – №. 3. – P. 238-258.
12. Golledge R. G. et al. Environmental cognition //Environmental Design Research. – Routledge, 2018. – P. 182-260.
13. Chekima B. et al. Examining green consumerism motivational drivers: does premium price and demographics matter to green purchasing? //Journal of cleaner production. – 2016. – Vol. 112. – P. 3436-3450.
14. Paragraph 5 of the Regulation on the Procedure for Voluntary Environmental Labeling of Products in the Republic of Uzbekistan, approved by Resolution No. 435 of the Cabinet of Ministers of the Republic of Uzbekistan dated May 27, 2019..
15. Қосимова Н.Р. Экологик мавзудаги журналистик материаллар самарадорлигининг рейтинг кўрсаткичлари // Scientific-methodological electronic journal “Foreign Languages in Uzbekistan”, 2020, No 4 (33),205-219 <https://journal.fledu.uz> ISSN: 2181-8215 (online). – Б. 209.