

“GREEN GROWTH” MEASURING CHALLENGES IN THE BUSINESS SECTOR

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Abstract: Green growth assessment is considered relevant in assessing the effectiveness of sustainable organizations. However, while internationally recognized “Green growth” indices are used in the macroeconomic sphere, simultaneously green growth assessments are not yet regulated at the microeconomic level. The article explains the specifics of green growth in the business environment and presents recommendations on their accountability and measurability. In particular, it is recommended to assess the green growth generated by organizations using KPIs and implement appropriate accountability in this regard.

Keywords: *green growth interpretation, sustainable business, sustainable management, green entrepreneurship*

Introduction

Entrepreneurship has traditionally been considered a way to create material goods, generate additional profit, and improve people's well-being. Entrepreneurs always pursue private interests when carrying out economic activity, on the one hand, gaining profit in the competitive market and aiming to increase their entrepreneurial capital, on the other hand, by creating material goods or organizing services, contributing to the growing socio-economic needs of people's satisfaction. However, by using entrepreneurial services, the population is already making a public demand to preserve the planet Earth, to take care of the surrounding environment, which is often neglected in the course of the business, that appears in the race for profit formation and, unfortunately, does not enter into the enterprise within the framework of the goals of the owners (Tshughuryan A, Khachatryan N., 2023, 71-94).

As a result, the business mercilessly "devours" everything on its way that contributes to the formation of super profits, not sparing people's health, harming nature, recklessly

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wasting natural resources, and polluting water and air basins with harmful waste. Therefore, in the striving for super profit, new requirements arise, the purpose of which is the organization of an enterprise, which makes it possible to use socio-economic resources in such a way, that they are transferred to future generations and thus the business becomes continuous as well. in the foreseeable future, having a stable development course (Hakobyan A., Tshughuryan A., and Martirosyan G., 2023, 169-76).

Today, economic activity is dramatically shifting to the sphere of sustainable business. People are trying to implement management tools, that promote sustainable entrepreneurship. The scope of socially responsible investments is being expanded, and the formats of reports published by organizations are being transformed to inform everyone how successful business activities are in terms of both private interests and public expectations (Thshughuryan A., Savastano M., 2024, 44-55). Both internal and external beneficiaries of the economic activity are already interested in the evaluations of the sustainable development of the organization, and if they are not encouraging, then risks of losing business partners and weakening of competitive positions in the market arise in the organization (Khachatryan N., 2024, 44-55).

In this regard, the research aimed to separate the growth of green activities from the economic benefits of traditional businesses and propose approaches to recognizing and measuring green growth.

Results and findings

The problems of green growth measurement were formed in the 70s of the last century when it became clear to the community of businessmen striving for profit, that the relentless exploitation of the subsoil, and the pollution of the surrounding environment would cause catastrophic damage to the planet Earth, which will no longer be possible to intersect, or to re-establish even business with the resulting super profits. It became obvious, that the activity contributing to the positive growth of people's socio-economic level at the same time contains negative environmental, social, and managerial risks, the mismanagement of which leads to irreversible damages and future instability. And the instability can be formed due to the merciless exploitation of natural resources, their absence, violations of environmental balances, as a result of the instability of the business society (Khachatryan N., 2024, 24-31).

The concept of sustainable development at the initial stage of its formation was presented as "the exploitation of natural resources at the present moment in such a way as to create an opportunity for future generations to use these resources. In other words, initially, sustainable development was built based on the principle of intergenerational solidarity, when humanity, satisfying its current demands for natural resources, enables future generations to also satisfy their demands for using natural resources (Arbidane I, Khachatryan N., Martirososyan N, 2023).

In such a case, resource-saving technologies, substitutes, and efficient approaches to natural use are used. From the beginning, the source of inspiration for the implementation of these ideas was the process of using forest wood, when people were well aware that the damages of deforestation should be restored with new tree plantations, which will be a wood resource for the next generations (Khachatryan N., Karapetyan S., 2024, 67-74).

In the simplest interpretation, in the case of green growth, we strive to transfer the Earth to future generations with the possibilities of natural use, that we once received from our ancestors. Naturally, in this case, stability is mainly related to ensuring a "stable

level" of natural resources. Years later, the green growth of the business was practically considered by the international community in a broader context, which, in addition to effective land use, also included poverty reduction, access to education, "green energy" use, and climate recovery requirements (Arbidane I., Khachatryan N., 2024, 23-31).

Green growth is an approach to addressing environmental challenges that relies on the advancement of science and innovation. It is interconnected with various factors, including the economy, resources, environment, technology, politics, market, culture, and society (Quacoe, D.; Kong, Y.; 2023).

Regulations for sustainable business development ultimately formed the ideology of the "green economy". And the green economy cannot function efficiently without "green entrepreneurship". Perhaps, until now, there is no universal definition of the term "green economy", but international structures, when presenting various interpretations in this direction, are guided not only by environmental but also by social, effective management, and reasonable resource use approaches intending to secure the sustainable development of management (see Table 1)

Table 1

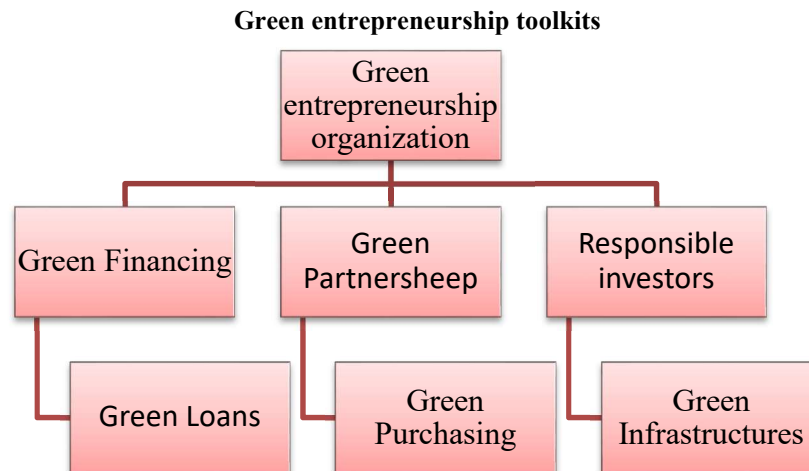
Definitions of "green economy" according to international authoritative structures.

Organization	Definition
United Nations Environment Program (2011)	The "green economy" leads to improved human well-being and social equity by reducing environmental risks.
United Nations Conference on Trade and Development (2011)	"Green economy" is a component arising from the goals of sustainable development, which leads to the improvement of people's well-being and the reduction of inequalities, without transferring environmental risks and ecological scarcity problems to generations.
International Chamber of Commerce, Green Economy Task Force	In the "green economy", economic growth and environmental sustainability mutually cooperate, supporting progress and social development.
EEA (2013)	Environmental, economic and social policies and innovations in the "green economy" make it possible to effectively use resources, improving people's well-being, preserving natural systems.

In this sense, "Green Enterprise" basically focuses on investments, capital, infrastructure, employment level, and social and environmental positive results. It is defined as low-carbon, resource-efficient, and socially inclusive management, aimed at reducing environmental risks, handling limited resources, and sustainable development. Fostering green enterprises not only addresses environmental concerns but also unlocks economic, social, and technological opportunities that can drive holistic and sustainable development (Anna Misztal, 2023). It works with the structure of achieving employment and income growth, by attracting investments, through which the reduction of carbon emissions and pollution, the improvement of energy and resource use efficiency, and the preservation of biodiversity are realized. Thus, "green entrepreneurship" cannot be aimed only at increasing profit through "green procedures". It should enable necessary structural changes in the composition of used resources, management methods, level and structure of consumption, export in the context of actions aimed at reducing emissions and losses, as well as climate change prevention (Sahakyan N., 2023, 104-108).

Green entrepreneurship seeks to create more value year after year by introducing innovations in business while preserving natural systems and mitigating environmental damage with a special toolkit (see Figure 1.). In addition, the green entrepreneurship process can be applied in whole or in part, depending on the scale of the business.

Figure 1



Source: Developed by authors.

Consequently, green growth has three main characteristics:

- Low level of negative impact of business on the environment, wise use of natural resources, growth with low emissions implies the development and application of such strategies that will contribute to the sustainable economic growth of the enterprise.

- Resource efficiency, which contributes to increasing the efficiency of resource use, thereby extending their life and reducing the environmental impact associated with their entire life cycle.

- Social inclusion, when creating opportunities for the vulnerable classes of society to participate in the development processes of the green economy and to have an impact on them.

Therefore, "Green Growth" is a model focused on the harmonious coexistence of people and nature, with the main principles of its operations (Abesadze O., Martirosyan G. 2023, 44-56).

1. Principle of sustainability, based on which policies for environmental, social, and economic development are developed.

2. A principle of justice, that promotes equality in the distribution of natural resources between generations.

3. Principle of dignity, which respects the rights of employees and actively supports the development of new "green jobs and careers". It contributes to the self-development of employees.

4. The principle of a healthy planet, by which entrepreneurship preserves the integrity of the environment, ensures the wise use of natural resources.

5. Principle of inclusiveness, which ensures participatory decision-making in green entrepreneurship for all stakeholders.

6. The principle of effective management and accountability, when not only the sustainable progress of environmental, social, and economic measures is recorded, but also the beneficiaries are presented with a report on the fulfillment of obligations undertaken

in the field of "green development".

7. Principle of flexibility, which promotes the harmonious and interconnected activities of different models of green entrepreneurship development, aimed at cultural, social, and environmental issues.

8. Principle of resource efficiency, which aims at zero emissions and production waste, as well as considers renewable energy and resource recovery as a priority for resource use.

9. Principle of generations, by which investments in the "green economy" are made to ensure the well-being of current and future generations.

"Green growth" implies long-term business planning, when resources used to create any value do not disturb the simple and natural rules of "coexistence" between man and nature. Therefore, the business organized according to such principles is able, while preserving nature, to be as human-centered as possible, to ensure well-being (higher quality health care and education, safe work, social equality), to promote the process aimed at reducing negative impacts on the environment, as well as curbing ecological risks. "Green growth" provides an opportunity to create sustainable livelihoods by creating "green jobs", thereby increasing the availability of sustainable infrastructure and services.

The economic growth formed as a result of entrepreneurial activity is mainly connected with the increase of the profit of the organization or the expansion of the managed capital. However, when organizations make the transition to "green entrepreneurship", traditional approaches to assessing economic growth are revised, taking into account several factors of environmental, social, and corporate responsibility. In this case, along with the economic growth of the business, the "green growth" related to the result of entrepreneurship is also evaluated. Therefore, one of the important features of the entrepreneurial activity of the transition to the green economy is the necessity of recording "green growth", thus refusing to measure economic growth exclusively by profit.

"Green growth" formed as a result of entrepreneurship is not clearly understood in practice, and it is not at all determined only by solutions to environmental problems. This is also evidenced by the current definitions of international structures related to "green growth" (see table 2).

Table 2

Definitions of "green growth" according to international structures

OECD (2011)	"Green growth" refers to promoting the development of economic growth while ensuring that natural assets continue to provide the resources and environmental services on which human well-being is based.
World Bank (2012)	Growth that is efficient in terms of the use of natural resources minimizes pollution and environmental impact. It considers natural hazards and the role of environmental resource management and natural capital in preventing physical disasters.
United Nations Economic and Social Commission for Asia and the Pacific (2012)	"Green growth" is a strategy for sustaining economic growth and creating jobs aimed at overcoming poverty in the face of resource depletion and climate crisis.

It should be noted, that at the country level, a "green growth" index is currently calculated, which combines the sustainable development goals approved by the United Nations, as well as the assessments of the determinants of the Paris climate agreement, with

the following four pillars (Green Growth Index, 2023):

- efficient use of resources,
- protection of natural capital,
- opportunities for green economy development,
- social inclusion.

Moreover, the green growth index for each country is evaluated on the following 100-point scale: 80-100 efficient, 60-80 high, 40-60 moderate, and 20-40 low efficiency.

However, evaluations of "green growth" formed as a result of entrepreneurial activity are made with other approaches, relating to the micro-level business environment. And the environment of entrepreneurship requires financing, marketing, managerial, and legislative arrangements, which will act in terms of "green activity". Therefore, it is necessary to evaluate "green growth" with an integral indicator, taking into account the above-mentioned factors. In practice, it is easier to apply the evaluation of "green growth" from the point of view of performance, when key evaluation indicators (KPI) are defined for the functions of sustainable development accompanied by entrepreneurship, assessing the degree of their availability. At the same time, it is more appropriate to evaluate the performance of "green entrepreneurship" with percentage measurement, because the result indicators are presented with different measurement units and their comprehensibility in the integral index is possible through percentage measurements (Khachatryan N., 2024, 24-31).

Based on the characteristics of the enterprise, the range of "green growth" evaluation indicators can be expanded, or the definition of key indicators can be revised. However, a business should always strive for 100% "green growth" performance. Therefore, it is important to measure the "resultant growth of green entrepreneurship" and use a sound methodology of evaluation based on the directions of sustainable entrepreneurship.

Case study

Along with traditional management, the supermarket is transitioning to green management. In this regard, is setting the task of realizing the following goals:

- use of alternative energy, by setting solar panels,
- application of green logistic structures,
- introduction of circular consumption-production process.

The corporate social responsibility (CSR) of supermarkets necessitates that the outcomes of green entrepreneurship be distinctly separated from the indicators of traditional operations, with specific metrics being employed through a robust methodology. This methodology involves the measurement of key performance indicators (KPIs) and incorporates the present value of cash flows. To facilitate this, an annuity coefficient of 8% is applied, based on the prevailing bank deposit rate.

Supermarket management can use the following motivational levers to promote green entrepreneurship:

- recognizing the costs of installing electric panels on the roofs as a double deduction in the calculations of profit tax in the legislative way,
- providing a 3% discount to product buyers, if they present a receipt to charge their electric vehicles in the supermarket parking lot,
- making a 2% surcharge to the suppliers of goods, if the delivery is made by trucks powered by electric motors,
- in case of receiving 30 kg of household food waste from buyers, 2 kg of pork

meat is provided to them for free.

➤ buyers receive one bottle of carbonated drink for free, when they provide 40 empty plastic bottles.

For assessing of Green growth is used information from tables 3-5.

Table 3

Annual report on the performance of the supermarket "green activity" results

#	Green activities	KPI	Actual
1.	Installation of electrical panels	120m ³	110m ³
2.	Charging electric cars of customers	2500 kw/h	2700 kw/h
3.	Deliveries of cargo with electric motors	6400 t	6100 t
4.	Collection and realization of household food waste	3950 t	4200 t
5.	Collection and realization of plastic bottles	15 000 pcs	15 200 pcs

Source: Developed according to authors' calculations.

Table 4

Expected economic results of the organization's "green activities" (million AMD)

#	Green activities	Investment costs	Years of project implementation	Expected annual benefits
1.	Installation of electrical panels	75 000	7	15 000
2.	Charging of electric cars	65 000	8	12 000
3.	Deliveries of cargo with electric motors	50 000	5	14 000
4.	Collection of household food waste	54 000	4	17 000
5.	Collection of plastic bottles	4000	8	700

Source: Developed according to authors' calculations.

Table 5

Calculation of the integral indicator of "green growth" of supermarket activity

#	Green Activates	KPI	Actual	Performance (%)
1.	Installation of electrical panels	120m ³	110m ³	91,6%
2.	Charging of electric cars	2500 kw/h	2700 kw/h	108%
3.	Deliveries of cargo with electric motors	6400 t	6100 t	95%
4.	Collection of household food waste	3950 t	4200 t	106%
5.	Collection of plastic bottles	15 000 pcs	15 200 pcs	81%
"Green Growth"		X	X	96,32%

Source: Developed according to authors' calculations.

The economic confidence of the supermarket's sustainable entrepreneurship strategic goals, using an annuity factor of 8%, will be presented by the following calculations:

Installation of electrical panels

- investment: = 75,000

- discounted benefit inflow = 15,000*5.2064 = 78,096

- Positive NPV 78 096 > 75 000

Electric vehicle charging

- investment: = 65,000

- discounted benefit inflow = 12 000* 5.7466 = 68 959

- Positive NPV 68,959 > 65,000

Logistics with electric motors

- investment: = 50,000

- discounted benefit inflow = 14 000* 3.9927 = 55 899

- Positive NPV $55\,899 > 50\,000$

Collection and disposal of household food waste

- investment: = 54,000

- discounted benefit inflow = $17\,000 \cdot 3.3121 = 56\,307$

- Positive NPV $56\,307 > 54\,000$

Acceptance/disposal of plastic bottles

- contribution: = 4 000

- discounted benefit inflow = $700 \cdot 5.7466 = 4022$

- Positive NPV $4\,022 > 4\,000$

Conclusion

Green growth measurements in the business sector of organizations create an opportunity to assess the opportunities for business to support sustainable development. In this regard, it is important to identify the green development tendencies of businesses, based on the specifics of the business activities of organizations and identify the opportunities for their implementation. In this regard, the use of a system of KPIs for green growth will be considered quite useful, which will not only analyze the directions supporting green growth, but also assess the results of sustainable development at the level of organizations along with business activities. By supplying such information, an opportunity will be created to considerably improve green business management effectiveness at the business entity level and to implement effective management decisions in this direction. Currently, organizations are increasingly focused on ensuring accountability for corporate social responsibility, with KPIs designed to measure green growth being recorded in accordance with industry-specific characteristics, as illustrated in the case of supermarket.

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