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AUDIT FOR GREEN BUSINESS ECOSYSTEM OPERATION

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Abstract: Organizations are currently motivated to organize green entrepreneurship in parallel with traditional business, with the aim of increasing the reputation of their commerce and gaining competitive positions in the market.

However, green entrepreneurship cannot be activated, if an appropriate ecosystem is not formed around it. The article interprets the peculiarities of the green entrepreneurship ecosystem operation, and based on it, audit approaches for evaluating the efficiency of the system are proposed.

Keywords: business ecosystem, audit for green entrepreneurship, sustainable development assessments, ecosystem function valuation, integral indicator

JEL code: M40, M41

Research objectives: interpret the green entrepreneurship ecosystem and present the need for an audit of its operations

Research novelty: an approach to evaluating effectiveness of green entrepreneurship ecosystem activities was proposed by presenting the model of audit analysing from the sustainable developmentperspective.

Introduction

Currently, the organization of green entrepreneurship has become a strategic requirement in any organization, at any firm size. If the entrepreneurial activity is only aimed at making a profit, bypassing environmental and social issues, then it clearly loses competitive positions in the market, because apart from private interests, it does not serve public expectations. In this sense, along with traditional business, it is important to organize green business processes, with the aim of preventing the damage caused to the environment as a result of the business activities (Famiyeh, Samuel, 2018). However, green entrepreneurship will not be successful if there is no active effective green business ecosystem. Therefore, there is a demand to evaluate the key elements of the ecosystem architecture for green entrepreneurship in practice, when there is a global problem of clarifying both the scope and functions of that ecosystem, as well as their impact on the final results of green

entrepreneurship (Savastano et al., 2022; Tshughuryan A, Khachatryan N. 2023).

It is obvious, that if the components included and interrelated in nature's ecosystems are not provided with stable activity, then as a result, the balance of the ecosystems is disturbed, and in some cases the existing ecosystems could even collapse. The same happens in entrepreneurial ecosystems, supporting green entrepreneurship, when any component included in it does not function normally, after the balance of the ecosystem is disturbed and as a result, green entrepreneurship fails due to the lack of harmony of economic and non-financial factors that support it. Therefore, a continuity evaluation and audit of the green ecosystem for entrepreneurship becomes a necessity in companies (Iluta Arbidane, Nonna Khachatryan, & Narine Mirzoyan, 2023).

Research results

In the professional literature, eco audit is interpreted as a means of evaluating the environmental impacts and natural resources use functions of organizations. Eco-audit statements report on the extent to which organizations demonstrate consistency in environmental protection during their business operations (Magon, Renata Bianchini, 2018). However, we propose to organize an audit of the green entrepreneurship ecosystem in parallel, which will provide an opportunity to evaluate and present to the beneficiaries the risks that may be an obstacle to the organization of green entrepreneurship.

Studies show that the effective implementation of green entrepreneurship is not only determined by the goals of the

organization (Adams C. A., Larrinaga C., 2019). It is difficult to implement it if there is no proper ecosystem in place. In general, the components of the green business ecosystem interact with each other for one common goal of preventing business-related environmental issues (Li, Dayuan, 2018).

Therefore, the audit of the green business ecosystem first of all finds out the extent to which the ecosystem is equipped with the appropriate components that form harmony in the application of environmental protection functions. Moreover, the eco-system of green entrepreneurship includes not only economic, but also legislative, educational and management components (see Figure 1).

Thus, if a supermarket aims to implement a policy of waste collection and treatment and offers its customers to abandon single-use plastic bags and shop with reusable cloth bags, it will be difficult for the organization to implement this if customers do not have a sufficient level of environmental awareness and education. Therefore, a green business audit should find out to what extent the customers of the supermarket respect the environmental requirements of the organization and what measures are taken to improve the consumers' environmental behavior. And if there are shortcomings here, the audit of the green business ecosystem should report on it in its statements.

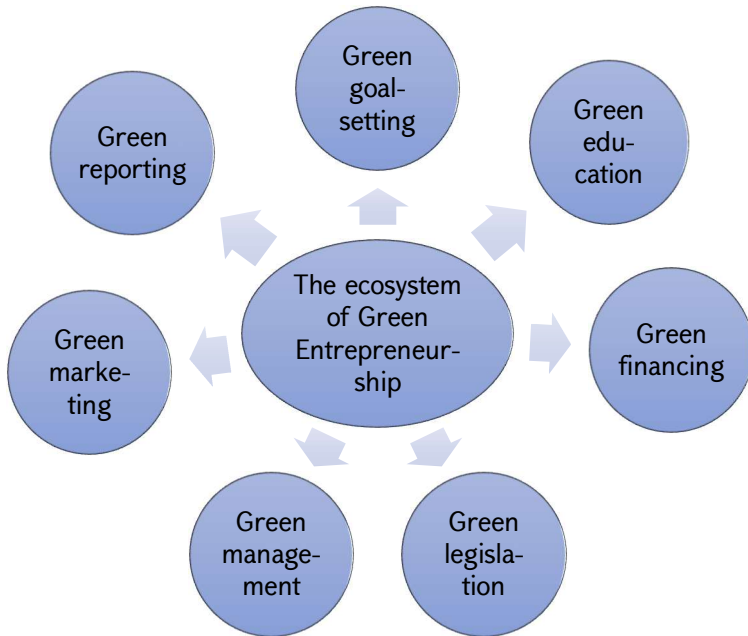


Figure 1. The key components of green entrepreneurship ecosystem¹⁰

Furthermore, the green business ecosystem will not function effectively, if organizations do not have access to green finance. As a rule, such sources of financing are somewhat cheaper and have simplified obtaining regulations (Shi et al., 2022). Basically, sources of green financing are the issuance of green bonds, the acquisition of commercial bank green loans, the provision of various environmental grants (Liu et al., 2022). Thus, if a demand is made for the use of alternative energy consumed by a supermarket in order to maintain the necessary level of refrigerator operation and the climate control of the sales halls but the commercial bank does

¹⁰ Composed by authors

not provide green loans at low rates, then the process of acquiring and using solar panels will simply fail. And this, in turn, will negatively contribute to the green entrepreneurship ecosystem.

Organizations' green entrepreneurship cannot function effectively if appropriate managerial motivated functions are not implemented. Even in the service sector, it is possible to organize a circular economy and support green entrepreneurship. Thus, if a supermarket, under the condition of offering price discounts, organizes the collection of household food scraps and accepts processed household food in its warehouse for the purpose of issuing animals fodder from customers, then returnable waste management will be implemented and a circular economy will be introduced. The same can be arranged for the return of empty plastic bottles, when buyers returning a specified number of empty plastic bottles to the supermarket will receive a free bottle of fruit juice (Young and Gerard, 2021). Therefore, in the case of organizing a circular economy flow, managerial motivational levers should be implemented.

The harmonious operation of the ecosystem of green business largely depends on the existing legislation. When the volumes of consumption of natural resources are regulated, punitive legislative levers are defined for environmental pollution as a result of business, and taxation benefits for environmental activities put in place. Without appropriate legislative interpositions and economic incentives, the green entrepreneurship ecosystem encounters difficulties.

The congruous functioning of the green entrepreneurship ecosystem is facilitated by the proper organization of accountability

(Hakobyan A., Tshughuryan A., & Martirosyan G., (2023). The beneficiaries of green entrepreneurship should be informed about the results of sustainable business and thereby strengthen their partnership with organizations. The GRI as well as the IFRS-S international accounting standards are currently in use to guide organizations in reporting on green entrepreneurship (IFRS-S1, 2023). By applying these standards, organizations present to stakeholders the risks and opportunities of sustainable business development, which are the basis for potential investors to make decisions. Whether such accountability is absent, it negatively affects the applicable functioning of the green entrepreneurship ecosystem.

Emphasizing the scope of the green entrepreneurship ecosystem, the question arises as how the audit of the connected activities should be performed. In our opinion, an operational audit should be carried out by the organization itself in order to highlight the weaknesses and strengths of the existing ecosystem and provide appropriate assessments (Standards of professional activity of the internal audit, 2011).

For this purpose, the internal audit departments of the organization should develop specific KPIs of the business ecosystem activities which are used during audit monitoring. Every year, the operational audit assesses the compliance of the green business ecosystem's activities with the defined KPIs, and thereby analyzes the achievements or omissions in the sustainable development of the organization. The basis for the evaluation, are the results of the actual achievement of the defined KPIs with their relative indicators (see Table 1).

Table 1. Evaluating the performance of the green entrepreneurship ecosystem based on set up KPIs¹¹

KPIs	Previous year	Accountable year	Growth ratio
Proportion of customers with green behaviors	40%	45%	1,125
Share of green financing in total business fundraising	25%	15%	0,6
The rise of green legislative initiatives	5%	8%	1,6
The growth of the circular economy	7%	6%	0,857
The rise of green marketing operations	4%	5%	1,25
Expanding the green accountability	6%	9%	1,5
Integral averaged indicator			1,1553

From the audit viewpoint, we propose to implement the effectiveness of the green entrepreneurship ecosystem on a factorial scale, evaluating up to 1.0 level in terms of achieving efficiency as backward, and above 1.0 as progress (see Figure 2). Moreover, in the case of such an assessment, those components of the green business ecosystem, which are a weak link and worsen the normal functioning of the system (in our example, green financing, circular economy) become the subject of audit analysis.

¹¹ Composed by authors

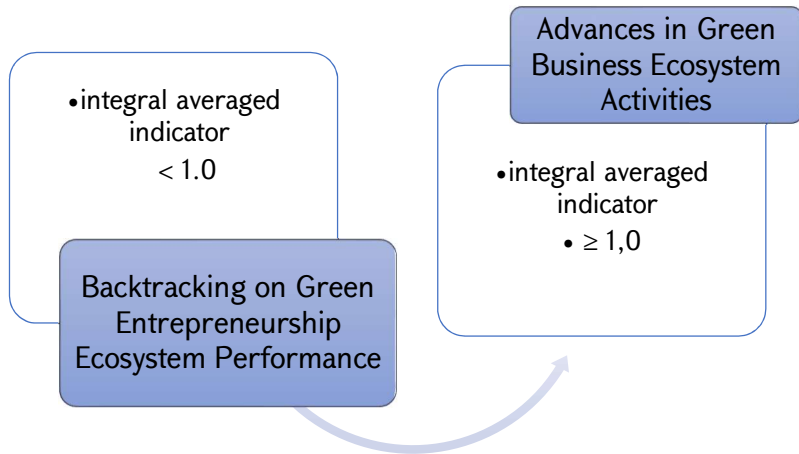


Figure 2. Audit assessment of green business ecosystem performance¹²

Conclusion

When developing a green entrepreneurship strategy, organizations should assess the ecosystem shaped around the process. If such an ecosystem is incompletely formed, or works non-harmoniously, the effectiveness of green entrepreneurship is drastically reduced. The assessment of the functioning of the green entrepreneurship ecosystem can be carried out through operational audits, organized by firms. In this regard, the implementation of KPIs on green entrepreneurship in companies and the application of their audit analysis are highlighted. As a result, it will be possible to measure the degree of achievement to

¹² Composed by authors

the relevant KPI and also to evaluate the efficiency of operating the green entrepreneurship ecosystem.

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ԿԱՆԱԶ ՁԵՌՆԱՐԿԱՏԻՐՈՒԹՅԱՆ ԷԿՈՀԱՄԱԿԱՐԳԻ ԳՈՐԾՈՒՆԵՈՒԹՅԱՆ ԱՈՒԴԻՏԸ

Արմեն Ճուղուրյան

Հայաստանի պետական տնտեսագիտական համալսարան,
Հյուսիսային համալսարան
տնտեսագիտության դոկտոր, պրոֆեսոր

Մարկո Սավաստանո

Հռոմի Սափիենզիայի համալսարան, տնտեսագիտության
թեկնածու, կառավարման ֆակուլտետ

Բանալի բառեր - գործարարության էկոհամակարգ, կանաչ ձեռնարկատիրության աուդիտ, կայուն զարգացման գնահատումներ, կանաչ ձեռնարկատիրության ներուժի գնահատում

Գործնականում էկոաուդիտը մեկնաբանվում է որպես կազմակերպությունների կողմից բնապահպանական և բնօգտագործման գործառույթների գնահատման միջոց: Էկոաուդիտի հաշվետվությունները տեղեկացնում են, թե որքանով են կազմակերպությունները իրենց գործարարության ընթացքում ցուցաբերում հետևողականություն շրջակա միջավայրի պահպանության հարցում:

Սակայն մեր կողմից առաջարկվում է դրան զուգահեռ կազմակերպել նաև կանաչ ձեռնարկատիրության էկոհամակարգի աուդիտ, որը հնարավորություն կտա գնահատելու և շահառուներին ներկայացնելու այն ռիկերը, որոնք կարող են

խոջընդոտ հանդիսանալ կանաչ ձեռնարկատիրության կազմակերպման ճանապարհին:

Կազմակերպությունները կանաչ ձեռներեցության ոազմավարություն մշակելիս անհրաժեշտ է գնահատել այդ գործընթացի շուրջ ձևավորվող էկոհամակարգը: Եթե նման էկոհամակարգը թերի է ձևավորված, կամ գործում է ոչ ներդաշնակորեն, ապա կտրուկ նվազում է կանաչ ձեռներեցության արդյունավետությունը: Կանաչ ձեռներեցության էկոհամակարգի գործունեության գնահատումը հնարավոր է իրականացնել կազմակերպությունների կողմից կազմակերպվող գործառնական աուդիտի միջոցով:

Այս առումով, կարևորվում է կանաչ ձեռներեցության գծով KPI-ների ներդրումը և դրանց աուդիտորական վերլուծության իրականացումը: Արդյունքում, հնարավորություն է ստեղծվում չափելու համապատասխան KPI-ների հասանելիության աստիճանը և գնահատելու կանաչ ձեռներեցության էոհամակարգի գործունեության արդյունավետությունը:

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Conflicts of Interest:

The authors declare no ethical issues or conflicts of interest in this research.