

Заказы	Номер автомобиля						Вес заказа, кг
	1	2	3	4	5	6	
	Тип подвижного состава						
	MAN TGX 18.400	Mercedec-Benz 1844	RenaultMagnu m 500.19T	MAZ-MAN 543268	DAF XF105	MAN TGX 18.440	
Затраты на транспортировку							
	25 141,5	0,0	7 507,5	22 080,6	0,0	0,0	
ГР135	0,0	0,0	0,0	9 763,4	0,0	0,0	9 763,4
ГР136	1 675,4	0,0	0,0	0,0	0,0	0,0	1 675,4
ГР137	0,0	0,0	0,0	3 506,4	0,0	0,0	3 506,4
ГР138	0,0	0,0	0,0	3 275,2	0,0	0,0	3 275,2
ГР139	0,0	0,0	0,0	3 221,5	0,0	0,0	3 221,5
ГР140	0,0	0,0	8 297,5	0,0	0,0	0,0	8 297,5
ГР141	0,0	0,0	1 825,8	0,0	0,0	0,0	1 825,8
ГР142	9 187,8	0,0	0,0	0,0	0,0	0,0	9 187,8
ГР143	6 075,8	0,0	0,0	0,0	0,0	0,0	6 075,8
ГР144	2 121,6	0,0	0,0	0,0	0,0	0,0	2 121,6
Доставлено, кг	19060,6	0,0	10123,3	19766,5	0,0	0,0	48 950,4
Провозная способность, кг	22000	0	22000	22 000	0	0	66 000
Грузоподъемность, кг	22 000	22 000	22 000	22 000	22 000	22 000	132 000
КИГ	0,866	0,000	0,460	0,898	0,000	0,000	0,742
затраты	54729,600						

Рисунок 2 — Затраты на перевозку грузов автомобилями после решения оптимизационной задачи

В представленном решении используются три предложенных единицы подвижного состава из шести:

- автомобилем MAN TGX 18.400 обслуживаются заказы ГР136, ГР142, ГР143, ГР144, общий вес которых составляет 19 060,6 кг. Коэффициент использования грузоподъемности при выполнении рейса составляет 0,866;
- автомобилем Renault Magnum 500.19T обслуживаются заказы ГР140, ГР141, общий вес которых составляет 10 123,3 кг. Коэффициент использования грузоподъемности при выполнении рейса составляет 0,460;
- автомобилем MAZ-MAN 543268 обслуживает заказы ГР135, ГР137, ГР138, ГР139, общий вес которых составляет 19 766,5 кг. Коэффициент использования грузоподъемности при выполнении рейса составляет 0,898.

Три автомобиля не были задействованы в перевозках, т.к. изначально объем заказов был ниже провозной способности автомобилей. Поскольку критерием оптимизации был минимум транспортных расходов, три автомобиля с наибольшими затратами за 1 км пробега в результате решения задачи не использовались.

В результате проведенных расчетов общие затраты на перевозку минимизируются и составляют 54 729,6 р. (см. рисунок 2), в то время как до решения оптимизационной задачи они составляли 54 975 р. (см. рисунок 1).

Экономия транспортных расходов составит 245,4 р. (54 975 р. — 54 729,6 р.) с выполнения рассмотренных десяти заказов.

Коэффициент использования грузоподъемности вырастет в результате оптимизации с 0,556 до 0,742 (см. рисунки 1 и 2), т.е. на 33,45 %.

Заключение. Таким образом, в качестве совершенствования организации перевозочного процесса автотранспортного предприятия предлагается оптимизация распределения заказов по транспортным средствам при перевозке мелкопартионных грузов с применением экономико-математических методов, что позволит сократить затраты на выполнение заказов и повысить эффективность использования подвижного состава.

Список цитируемых источников

1. Королев, А. В. Экономико-математические методы и моделирование : учебник и практикум для бакалавриата и магистратуры / А. В. Королев. — М. : Юрайт, 2016. — 280 с. — Серия : Бакалавр и магистр. Академический курс.

UDC 338

P. I. Anufrieva, E. A. Israilova

Rostov State University of Economics, Rostov-on-Don, Russian Federation

DIGITAL ECOSYSTEMS AS A MAIN TREND IN THE MODERN WORLD ECONOMY

Introduction. The article considers the directions of digital ecosystems development in Russia and other countries, defines the features of digital ecosystems as a separate business model, compares the types of ecosystems. The paper analyzes the benefits and risks of creating an ecosystem business for entrepreneurs. The advantages of digital ecosystems for consumers are emphasized. The paper also compares the functioning of digital ecosystems in Russia, China and the United States, reveals the specifics of government control of digital ecosystems.

Main parte. Creation of ecosystems is a key direction in the development of companies operating in Internet markets. The main struggle among large technology corporations takes place in the service sector, and the increased need for online services in the context of COVID-19 only intensifies competition in leading areas.

Digital ecosystems originated in the West, but actively developed and gained their popularity in China at the beginning of the 21st century, due to the promotion of a number of services related to online giants Alibaba and Tencent. In addition to developing and launching their own products, these companies have made more than 1300 investments in start-ups in various fields.

The number of digital ecosystems in the Russian market is growing, and the existing ones are expanding. There are more than 150 digital business ecosystems on the ICT.Moscow map: Sberbank, Tinkoff, Yandex, MTS and Magnit. Large companies are guided by the development of ecosystems, on the basis of which they build their strategy for 5—10 years.

According to McKinsey forecasts, by 2025 the share of ecosystems in the global economy in monetary terms will reach 60 trillion dollars – 30% of global GDP. Already today, 7 of the 9 largest companies in the world are ecosystems (except Saudi Aramco and Tesla) (Figure 1).

Analyzing various interpretations of the concept of “business ecosystem”, we can conclude that this is a set of companies working on a partnership basis and creating a common product. The base of their successful functioning is common goals and interests, the need to respond to the ever-growing and changing needs of consumers. In this business model competition ranks worst.

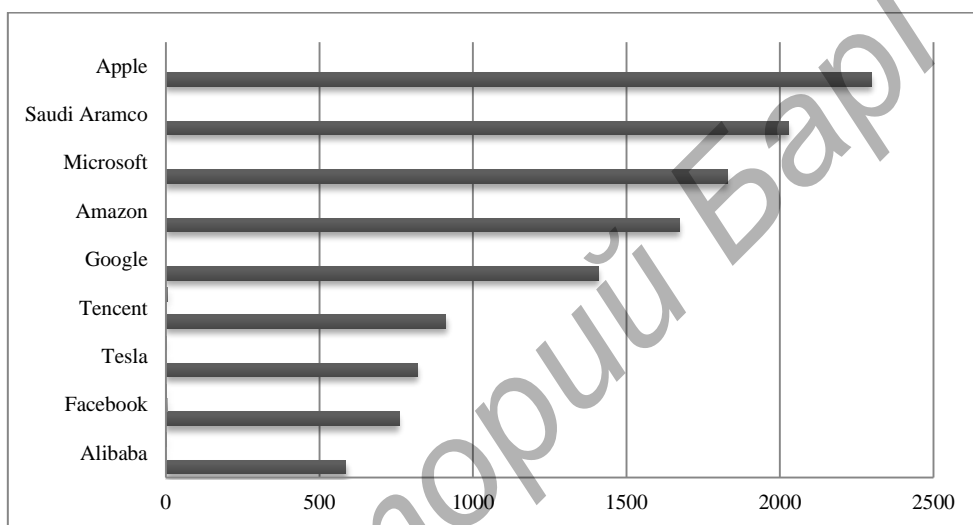


Figure 1 — Top 9 largest companies in the world by capitalization, bn dollars

Source: McKinsey Digital

According to BCG experts, digital ecosystems have a number of important differences. Firstly, it is a modular principle. In ecosystems, the legs of supply may be developed independently, but function together as a whole. Secondly, in an ecosystem, products must be mutually compatible. And thirdly, a characteristic feature of ecosystems is multilateralism and coordination. The digital ecosystem is something dynamic, constantly evolving, bringing together various business units. It is a community of distinct companies with their own characteristics, needs and offers. Nevertheless, they require the same set of tools to solve basic technological problems.

More and more companies realize the need to attract customers with services of different directions, located on the same platform [1, pp. 45]. There are two ways to transfer business to ecosystem rails: create your own ecosystem or join an external one (Figure 2).

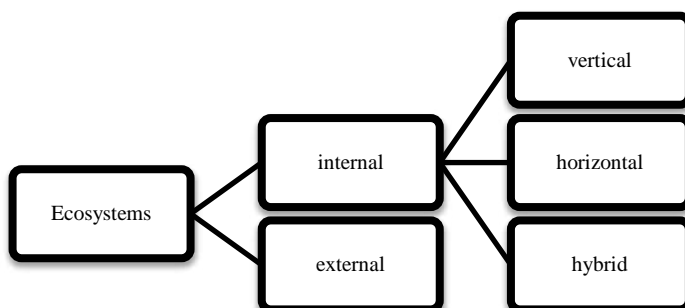


Figure 2 — Classification of digital ecosystems

Source: based on the data BCG Global



Figure 3 — Benefits of digital ecosystems for business

Source: based on data BCG Global

Having a local ecosystem contributes to efficient processing of incoming requests, streamlining business processes and merging with partners who can provide related services to customers. The size of the business does not play a key role here, as the main task of such an ecosystem is to increase the efficiency of processing and resolving issues of potential customers.

Own ecosystems are divided into vertical, horizontal and hybrid. Vertical ecosystems are characterized by the development of a product by the company itself and the providing of consumers with this product or service by the same organization. Horizontal ecosystems focus on the coverage of the whole area: products are offered by independent vendors. Hybrid ecosystem — synthesis of horizontal and vertical models. The focus is on the sale of own products with the offer of additional services from partners.

External ecosystems are focused on businesses with a limited flow of applications. Here the priority is to increase traffic. The main advantage that a company receives after joining an external ecosystem is the expansion of its client base because the company enters both a global marketplace in its field and a partner platform with its service offer.

The integration itself within the ecosystem is based on the win-win principle: each of its participants benefits from this kind of cooperation. Thus, partners find new clients that were previously unavailable due to limited resources. The company collects and analyzes customer data to develop customer engagement plans (Figure 3). And the client acquires the necessary products or services that the company was able to offer him/her through the system of recommendations [2, pp.105—107].

The advantages of digital ecosystems lie in the ease of use and customer benefit. Seamless identification and a single platform make ecosystems practical. All services in the same ecosystem recognize the user by a single client ID and are often accessible from the same application [3].

A company that is part of an ecosystem gets an opportunity to expand its customer base and increase sales of its products. Thus, thanks to the connection to the Sber ecosystem, the Okko cinema sped up increasing of the client base by about 12 times. Ecosystem members can exchange information, best practices and best activities, and therefore better and faster meet customer needs.

However, ecosystems are not always profitable. Business loses the opportunity to innovate due to the enlargement and cumbersomeness of the organizational structure due to the development of ecosystems.

Four American technology companies are commonly referred to as leading international ecosystems: Google, Apple, Facebook and Amazon (so-called GAFA); and two Chinese: Alibaba and Tencent. These giants of the technology industry, due to the successful use of digital platforms and natural entry into adjacent market segments, have significantly strengthened their influence, which has led to their financial success and an increase in the client base.

Chinese corporations primarily target the domestic market due to its size and population. Their activities in the world market are not as pronounced as their American competitors. Chinese ecosystems, when leaving the domestic market, are focused on supporting the national economy: they promote Chinese producers abroad [4].

Today in Russia there are two giant digital ecosystems — Yandex and Sberbank. But do not forget about other ecosystems, a little smaller one. They are formed around large banks, mobile operators, retailers (MTS, Magnit, X5 RetailGroup).

In addition to commercial digital ecosystems, there are also state digital ecosystems (the Unified Public Services Portal and its Moscow partner Mos.ru), the bank's digital ecosystem — Internet banking, mobile banking, round-the-clock support service, purchase services and a single loyalty program for all this — and a digital corporate ecosystem. The basic elements of the company's ecosystem are mini-ecosystems that exist between different products of the same vendor. 1C ERP, 1C Accounting, 1C ZUP integrate with each other almost without outside help.

Conclusion. Today, digital platforms and ecosystems are the most prospective and successful form of doing business. The requirements for digital ecosystems are mostly focused on the protection of personal data of customers, verification of the content of posted content, equal access to monetized information of a behavioral nature (requests, data on purchases and transactions, customer) and antimonopoly law [5].

Often, financial regulators have no legal basis to intervene in digital ecosystems because they are not openly marketed. In general, ecosystem management depends on a number of factors: the availability of local ecosystems /platforms in the market, socio-economic development priorities for the next 5—10 years, and historical approaches to regulating new areas.

List of cited sources

1. *Khalin, V. G* Ekonomicheskie ekosistemy i ih klassifikaciya. Management consulting / V. G. Khalin, G. V. Chernova, S. A. Kalaida — 2021, — № 2 (146). — P. 38—53.
2. *Volodina, N. L.* Preimushchestva sozdaniya cifrovoj ekosistemy / N. L. Volodina — 2021. — № 4. — P. 104—111.
3. Digital ecosystems 2.0: climbing to the next level // McKinsey Digital. — Available at: <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/ecosystem-2-point-0-climbing-to-the-next-level> — Accessed: 5 October 2022.
4. Do you need a business ecosystem // BCG Global. — Available at: <https://www.bcg.com/publications/2019/do-you-need-business-ecosystem> . — Accessed: 6 October 2022.
5. Ekosistemy: podhody k regulirovaniyu [Ecosystems: regulation approaches] // Bank of Russia. — Available at: https://cbr.ru/Content/Document/File/119960/Consultation_Paper_02042021 — Accessed: 5 October 2022.

UDC 330

Deniz Ismail Aslan

*Federal State Budgetary Educational Institution of Inclusive Higher Education "Moscow State University of Humanities and Economics",
Moscow, Russian Federation*

ARE BUSINESS ETHICS UNPROFITABLE

Introduction. What is business ethics? Let's start by identifying the main topic of our essay. Business ethics refers to the standards for morally right and wrong conduct in business. It can be said that business ethics' are a sort of a "bible" in the business world, in theory, all of the organizations should stay loyal to business ethics and follow them. However, unethical doesn't always mean illegal, and that is where things get more interesting. Some companies choose to bypass business ethics in order to increase profits. Though, are business ethics unprofitable, or are some companies just looking for an easier way out?

Main parte. The implementation of ethics in an organization can be profitable. There are many different ways in which a business organization can benefit from the application of ethics. It's worth pointing out that following business ethics brings its own benefits to different stakeholders of a business, such as the society, the employees of the company, and the company itself. Business ethics improves the brand image and reputation of the business. In a business where there are ethics, most of the outsiders will tend to accept that organization. Good business ethics creates a good name in the society hence most of the customers will go for its products. This increases its selling potential leading to increased profit making. For example, a company dealing with food products should practice healthy behavior. This can be achieved through maintaining cleanliness and offering good services to clients. This can be made known to clients through advertising. This makes increased number of customers to buy from such an organization. Eventually, this results in increased revenue because of the good public image [1].

Employees of an organization which follows business ethics are also privileged. Working for an ethical company means gives a feeling of a high job security, since the company is very unlikely to fire its workers unless it is in a very difficult situation. An ethical company also tends to pay all of its bills on time, including the wages of its employees. These factors of motivates employees and thus acts as a positive incentive for the profits of the company, since the employees will be motivated to keep their job and help the company to reach its goals. Also, motivated employees are always willing to communicate and provide feedback [2].

Business ethics creates a good relationship between the company's employees and management. It creates good and strong working relationships and increases trust amongst the employees. In this case, it turns the work place into a place where people can nurture one another. It can be noted that the employees earn respect, and are fairly treated through the implementation of business ethics in an organization.

However, business ethics can in fact be disadvantageous to the organization in some ways, which can also affect the profits. Being an ethical company can sometimes increase costs, which, in theory, could be overlooked if the company went for the unethical way. For instance, some companies following business ethics can be forced to using materials of higher costs in their production. This can be implemented in different vectors of the organization, which means that higher costs could be caused due to following some of the business ethics. Therefore, introduction of business ethics can be expensive and time consuming. Business ethics decreases the overall amount of revenue that is gained by the company. This is when the business has to eliminate illegal activities that it has been doing regardless of the potentiality of such activity to increase sales. This illegal business activity may be in violation of the company's principles of ethics [3].