

DOI: 10.12731/2658-6649-2021-13-2-262-283

UDC 349.422.2

THE IMPACT OF HUMAN CAPITAL ON THE SUCCESS OF AN AGRICULTURAL COOPERATIVE (EXAMPLE OF 'ARLA FOODS')

*S.G. Golovina, I.N. Mikolaychik,
A.L. Poltarykhin, P.V. Zhuravlev*

The article presents the results of a theoretical and empirical study of the leading trends and the latest trends in the development of modern agricultural cooperatives (with an illustration of many years of experience and grandiose achievements in the activities of the world famous multinational dairy cooperative "Arla Foods"), due to various changes in the external environment (market, institutional, political, technological) and determining, as a result, significant changes in the requirements for the quality of human capital. Important scientific conclusions (according to the topic) were obtained on the basis of studying the dynamics of the formation and development of the Arla Foods cooperative, generalizing materials regarding its organizational transformations and mainly relate to (1) the importance of professional management for the success of the cooperative, (2) new requirements for the quality of human resources in connection with technological innovations (digitalization, for example), (3) the role of human capital available in cooperatives (its quality) in overcoming various threats and risks.

The theoretical and practical value of the study lies, firstly, in the (scientifically grounded) concept of a modern agricultural cooperative presented in the work (using the example of Arla Foods as one of its most prominent representatives), and secondly, in the characteristics of the human capital of agricultural cooperatives, adequate to the essence of the evolutionary processes taking place with them.

Keywords: *human capital; cooperation; agricultural cooperative; institutional environment; challenges and threats; organizational innovation*

For citation. *Golovina S.G., Mikolaychik I.N., Poltarykhin A.L., Zhuravlev P.V. The impact of human capital on the success of an agricultural cooperative (example of 'Arla Foods'). Siberian Journal of Life Sciences and Agriculture, 2021, vol. 13, no. 2, pp. 262-283. DOI: 10.12731/2658-6649-2021-13-2-262-283*

ВЛИЯНИЕ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА НА УСПЕХ ДЕЯТЕЛЬНОСТИ СЕЛЬСКОХОЗЯЙСТВЕННОГО КООПЕРАТИВА (НА ПРИМЕРЕ «ARLA FOODS»)

*С.Г. Головина, И.Н. Миколайчик,
А.Л. Полтарыхин, П.В. Журавлев*

В статье представлены результаты теоретико-эмпирического исследования ведущих тенденций и новейших трендов в развитии современных сельскохозяйственных кооперативов (с иллюстрацией многолетнего опыта и грандиозных достижений в деятельности известного в мире многонационального молочного кооператива «Arla Foods»), обусловленных различными изменениями внешней среды (рыночной, институциональной, политической, технологической) и детерминирующих, как следствие, существенные перемены в требованиях к качеству человеческого капитала. Важные научные заключения (согласно теме) получены на основе изучения динамики становления и развития кооператива «Arla Foods», обобщения материалов относительно его организационных трансформаций и касаются главным образом (1) значимости профессионального менеджмента для успеха деятельности кооператива, (2) новых требований к качеству человеческих ресурсов в связи с технологическими инновациями (цифровизацией, к примеру), (3) роли имеющегося в кооперативах человеческого капитала (его качества) в преодолении различных угроз и рисков. Теоретическая и практическая ценность исследования заключается, во-первых, в представленной в работе (научно обоснованной) концепции современного сельскохозяйственного кооператива (на примере «Arla Foods» как одного из наиболее ярких его представителей), во-вторых, в характеристиках человеческого капитала аграрных кооперативов, адекватных сущности происходящих с ними эволюционных процессов.

Ключевые слова: *человеческий капитал; кооперация; сельскохозяйственный кооператив; институциональная среда; вызовы и угрозы; организационные инновации*

Для цитирования. Головина С.Г., Миколайчик И.Н., Полтарыхин А.Л., Журавлев П.В. Влияние человеческого капитала на успех деятельности сельскохозяйственного кооператива (на примере «Arla Foods») // Siberian Journal of Life Sciences and Agriculture. 2021. Т. 13, № 2. С. 262-283. DOI: 10.12731/2658-6649-2021-13-2-262-283

Introduction

The undoubted importance of agricultural cooperation for the successful functioning of farms (as well as agricultural entities of other organizational forms) in the context of rapid changes in their environment (market, political, technological) is comprehensively substantiated by economists and has been exhaustively proven by economic practice (Yu, et al., 2020; Morfi, et al., 218; Golovina, et al., 2019; Martinez et al., 2020).

In the Russian Federation, repeated attempts by the state to revive cooperation in agricultural production in general and in rural areas in particular, the measures taken to support functioning agricultural consumer cooperatives do not actually correlate (at least directly and closely) with the results of these initiatives, namely, they do not turn into rapid growth. cooperative organizations, neither in terms of their number, nor in terms of size and efficiency (Yanbykh, et al., 2019; Golovina, et al., 2020).

On the basis of analytical studies, it is possible to identify the most significant circumstances hindering the successful development of agricultural cooperatives, including (1) small size of organizations, insufficient to gain the economies of scale inherent in the cooperative (the main competitive advantage), and cooperatives are not oriented towards large business at all, (2) established informal institutions (low degree of readiness of agricultural producers for cooperation and cooperation; low level of their mutual trust), (3) formal institutions that fix in legislation and public consciousness a purely traditional cooperative model, (4) inconsistency in the quality of human capital incorporated into participants cooperation, the requirements that are presented, firstly, cooperative activity in general (based on the principles of solidarity, mutual assistance, democracy, trust), and secondly, its modern content (entrepreneurial direction ness, innovation, versatility) (Yanbykh, et al., 2019; Golovina, et al., 2020; Kurakin, et al., 2017; Yumashev et al., 2021). In general, the main reason for the slow development of cooperation in the domestic agrarian economy was the incorrect (outdated) conceptualization of the modern agricultural cooperative, as a result of which this organization appears not as a modern business structure capable of solving the economic and social problems of agricultural producers, but as a patriarchal artifact, which in the past it really demonstrated its effectiveness, but in the new (significantly changed) environment it turned out to be practically unsuitable for existence.

To determine the directions of development and tools for supporting domestic agricultural cooperation by all stakeholders interested in it (the state, public organizations, rural communities, etc.), foreign experience in the functioning of agricultural cooperatives, including modern opportunities for their development

and features of organizational transformations, as well as the most appropriate evolutionary trends taking into account high uncertainty, challenges and threats (political, environmental, biological).

Thus (based on the above), the purpose of the study, the results of which are presented in this article, is (1) an overview and analysis of the activities of a modern agricultural cooperative (using the example of the dairy cooperative “Arla Foods”), (2) the specification of trends inherent in its development in modern conditions, (3) identification of factors that determine new requirements for the quality of human capital, (4) identification of transformations that inevitably occur with the human capital of modern cooperatives in the course of their adaptation to a fluctuating environment.

Materials and methods

In order to get an answer to the question of how exactly organizational and technological innovations in cooperative activities affect the quality of human capital demanded by a cooperative, it is advisable to turn to the practices of cooperatives that are experiencing processes characteristic of many modern cooperative structures. As a result, the dairy cooperative “Arla Foods” is presented as an object of research, while the choice is due to the fact that in various aspects of its activities it is possible to trace many possible trends in the development of modern cooperatives in general.

The scientific basis for the study of the processes observed in modern Western agricultural agricultural cooperatives was provided by the most valuable materials of theoretical and empirical research on the characteristics (including problems) of the functioning of European cooperatives, in particular one of such outstanding representatives as the dairy cooperative “Arla Foods”, the development of which is accompanied by the tendencies inherent in many successful cooperatives: consolidation (through mergers and acquisitions); diversification of production; acquiring a transnational character of activity (Azuayi, 2016; Gaither, et al., 2008; Andersen, 2007; Belousova et al., 2021; Vigliarolo, 2020; Cheremisina et al., 2018). In addition, the work used statistical (and other) information about the functioning of “Arla Foods” obtained from the official website of the company, including from its two latest reports: 1) 2019 report, the emphasis in which is mainly on economic and financial results of the cooperative’s activities (Leading Through Sustainable Business Performance); 2) the 2020 report, reciting the data given in it around the problem of the company’s sustainable development, including during the COVID-19 pandemic and overcoming its consequences (Accelerating Sustainability Actions in Challenging Times).

Results

As for the history of the cooperative “Arla Foods”, it begins in 2000, when the Swedish cooperative “Arla” (after serious preparatory work) merged with a similar Danish cooperative “MD Foods” in the largest transnational cooperative called “Arla Foods”. The competitive position of the new structure, formed by the merger of two representative and successful cooperatives, is strengthened by the amalgamation of several advantageous positions, such as (1) the solid capital of the Arla cooperative accumulated in previous years due to favorable government policies, (2) the existing access to markets, (3) specific competencies and other important skills concentrated in the MD Foods cooperative (Nilsson, et al., 2009; Voronkova et al., 2019; Yemelyanov et al., 2020). Moreover, after 2010, two more small Swedish dairy cooperatives join Arla Foods, and now this cooperative, whose business model is still based on the ownership of farmers and their active participation in cooperative activities, firstly, ranks fourth in the world among dairy companies in terms of the volume of collected and processed milk, and secondly, it is the world’s largest producer of organic dairy products. The cooperative’s slogan is interpreted as “the desire to bring health and inspiration to the world”, and the mission is “to ensure the maximum value of milk supplied from farmers who are members of the cooperative, creating opportunities for the successful development of their production” (Arla, 2019). At the end of 2020, 9406 owner-farmers are members of the cooperative, and their farms have 1.5 million cows (Arla, 2020). The cooperative annually collects about 13.7 billion kg of raw milk, which comes mainly from the farms of its members, now located in seven countries of the world. As a result, the cooperative annually produces 6.7 billion kg of various nutritious dairy products, which are sold in 151 countries around the world (Arla, 2019), thereby constantly improving the financial condition of Arla Foods.

It is pertinent to note that if in 2020 the owners of the Arla Foods cooperative were (as noted above) 9406 milk producers from various countries (Sweden, Denmark, Great Britain, Germany, Belgium, the Netherlands and Luxembourg), then two years earlier (in 2018) the cooperative had 10,319 owners. The quantitative decline of farmers (cooperative members) is partly due to the fact that some of them stopped producing milk (or their business was acquired by another participant), and to a lesser extent due to the fact that farmers began to supply milk to another dairy company (cooperative or investor). -oriented corporation). In recent years, the number of farms has also been decreasing (with their simultaneous enlargement), which corresponds to the general trends observed in the dairy sector over the years both in Europe and around the world (Nilsson, et al., 2009).

Of course, the cooperative differs not only in the scale of its activities, but also in the innovativeness in its organization, including in approaches to strategic planning. For example, in 2019, Arla Foods is developing a new tool based on artificial intelligence, with which it is possible to determine with high accuracy, taking into account certain nuances, exactly how many kilograms of milk the cows on the farms of this cooperative will produce (at that time their number was 1.5 million). The result of this approach to the organization of strategic planning is, first of all, an improvement in forecasts (quickly and accurately) regarding the volume of milk received, in addition, an innovative development allows the use of raw milk with a higher return (the cooperative produced 200 million kg of milk in 2019). An important fact. The use of artificial intelligence determines both new progressive opportunities in Arla Foods and new serious requirements for the human capital of this organization (professional competencies of personnel, their personal and business qualities) (Asaliev, et al., 2014; Cherepovitsyn et al., 2016; Poghosyan, 2018; Mustafin, 2015), especially in connection with the significant expansion of the geography of the company's activities.

In addition, for the development of a long-term profitable business, from the point of view of the company's leaders, the markets of several regions have significant potential, such as Northern Europe, the Middle East, North Africa, China, Southeast Asia, West Africa, North America, and Russia. It is important to keep in mind that the cooperative's products are widely represented in emerging markets, and the cooperative itself is gradually being incorporated into local value chains in their respective segments. As for the international activities of the cooperative, it is significantly expanding, for example, (1) the company's position in the Middle East (in Bahrain, for example), (2) in China, Arla Foods works in partnership with the local dairy giant Mengniu. In general, the Arla Foods cooperative is committed to the belief that the constantly growing population of the planet needs food, and the healthy and nutritious products it produces play an important role in meeting this need.

Arla Foods, for example, marks a special year for Arla Foods as branding and communication teams strengthen the Arla brand by implementing key initiatives to improve its visual identity and, as a result, stimulate equity growth, increase assets, increase sales ... At the same time, the cooperative "Arla Foods", maintaining its high image, seeks to build its activities in the context of the most pressing social problems, supporting the global trend of sustainable development, focusing on reducing the negative impact on the environment, while taking measures to improve it. The members and management of the cooperative

are confident that intelligent (in terms of technology) dairy production can be part of their contribution to preserving the environment and preventing the effects of climate change. In their opinion, some concrete actions can contribute to this, for example, (1) sustainable production at the farm level (improving the efficiency of the use of feed and other agricultural resources, monitoring animal health, estimating carbon emissions on all farms owned by Arla Foods, increased carbon sequestration, support for research and innovation in sustainable dairy farming), (2) production of zero carbon dairy products (today Carbon Net Zero products are manufactured in Sweden under the Arla EKO brand), (3) promotion of environmentally friendly packaging (product packaging renewal, recycling or reuse, continuous innovation in packaging technologies, closer collaboration within the value chain to reduce packaging waste), (3) switch to renewable energy sources at company facilities and offices, (4) improved energy efficiency, increased no use of biogas, (5) minimization of food and other waste (strengthening cooperation along the value chain to minimize production waste, organizing activities to reduce food waste, improving the efficiency of manure use).

We would like to emphasize that in the activities of Arla Foods, environmental control is given high importance at different stages of the technological chain, various measures are taken to prevent (detect, reduce) certain violations in relation to the environment. The company itself, classifying environmental pollution, presents them as Scope (categories) 1, 2, 3, in particular: 1) emissions of the first category generated by activities under the direct control of the cooperative, which mainly include technological operations carried out by cars and other vehicles, as well as (in general) operations for the production, packaging and transportation of dairy products (since 2005, their CO₂ emissions have decreased by 25%; 2) emissions of the second category are indirect emissions caused by the use of energy which Arla Foods buys from its business partners, namely electricity, steam, heating or cooling (reducing environmental damage in this area is associated primarily with the consumption of energy from renewable sources, which in 2019 amounted to 33% of total consumption); 3) the third category is represented by emissions from purchased goods and services (for example, raw milk from the owners of the cooperative, packaging and external transport), as well as from waste management at the facilities of the cooperative, which (as follows from the analytical data of the company itself) make up 96% (Arla, 2019).

The sustainable development strategy implemented by the cooperative is fully consistent with both changing market conditions and consumer trends.

This means that the majority of consumers are concerned about what they can personally do to help protect the environment (according to surveys conducted by the company, the population of both Europe – 62%, and the United States – 59%). At the same time, consumers (and their number is increasing every year), in order to preserve the natural potential and ecology of the planet, are ready to pay a larger amount of money for purchased products and, of course, for packaging material.

In promoting the products of the cooperative, such an aspect as healthy food is no less important. In this regard, according to experts, the company “Arla Foods”, on the one hand, has a wide range of nutritious and healthy products in the list of manufactured products, on the other hand, it conducts constant and scrupulous work aimed at developing environmentally friendly and high-quality products of various types., attracting highly qualified innovative specialists to work. In addition, Arla Foods invests substantial sums in scientific research, one of the main goals of which is to increase the nutritional value of its products without compromising its quality and taste. The systematic work of Arla Foods with the public deserves attention, for example, (1) open days are organized on farms, the purpose of which is to establish close contact between farmers and consumers, (2) various kinds of food festivals and fairs are constantly held, where master classes of correct and balanced nutrition (3) great attention is paid to informing consumers about the possibilities of healthy and nutritious nutrition.

An important element of Arla Foods’ strategy is to support local communities, which in practice means, firstly, the development of local value chains in the production of dairy products, and secondly, the generation of innovative partnerships of the company with local customers and consumers, in- third, reaching consumers in regions where access to quality food is hampered by some difficulties. At the same time, the company, showing concern for its employees and taking care of their health, cultivates true cooperative (and also recognized by society) universal values in collectives, provides its employees with jobs (including inclusive ones) with equal access to vacancies for everyone.

As regards the principles of the Arla Foods cooperative, institutionalized in the structure of its management, they demonstrate (mostly) traditional (classical) character. For example, Arla Foods (a cooperative owned by 9406 farmers from seven countries according to information for 2020) is managed so that the voice of each owner is taken into account when making important decisions. Farmers elect members to the Board of Representatives, which in turn elects the Board of Directors. As a result, the management of the company is divided

between both elected and executive bodies. Note that the democratic principles in the management of the Arla Foods cooperative are implemented through a mechanism involving the delegation of the cooperative owners (farmers) of decision-making authority to the Board of Directors and Board of Representatives, the main economic tasks of which are (1) specifications of the strategic directions for the development of the cooperative, beneficial for its members, (2) the growth of the cooperative's assets, (3) the annual determination of the directions of profit distribution (including the quantitative parameters of this process). As for the social tasks, they include (1) the protection of cooperative democracy, (2) the development of leadership qualities among the farmers-owners, (3) the stimulation of the involvement of the members of the cooperative in all aspects of its activities. Moreover, the procedure for electing the governing bodies of the cooperative, being democratic, assumes that the owners of the cooperative gather for an annual meeting in their countries (first, within the boundaries of the municipalities to select representatives to the district councils, and then the members of the district council elect farmers who further express the interests of their farmers. district (district) in the Council of Representatives, which, according to the Charter of the cooperative, is the supreme body that makes all strategic decisions. It usually has 187 members, of which 175 people are owners (members) of the cooperative, and 12 are representatives of employees who are not Arla Foods has 20,020 full-time employees in various spheres of cooperative activity, as demonstrated in 2020 statistics (for comparison, in 2019 there were 19,174 employees).

As practice shows, the management structure in large European agricultural cooperatives is currently largely unified, although, of course, there are some specific subtleties. Specifically, the Arla Foods cooperative, as a rule, representatives of the owners are elected every two years (usually in odd-numbered years). Consequently, the last election took place in May 2019, when 55 new members were elected to the Council of Representatives (Arla, 2020). Then the Council of Representatives elects the Board of Directors, which also participates in determining the strategic directions of cooperative activities, but, in addition, monitors the company's activities, asset management, is responsible for scrupulous accounting, appoints the Executive Board. In general, the mission of the Board of Directors is, first of all, the management of the cooperative, taking into account the opinion of the best (active, efficiently functioning) farmers and making optimal decisions regarding the ownership structure and "investment portfolio". At the same time, the Board of Directors is called upon to take into account the interests of other interested parties (business partners), such

as creditors, investors, hired workers (employees), in the company's activities. The board of directors of the Arla Foods cooperative is currently represented by 15 individuals elected by farmers (cooperative members), three individuals nominated by employees (non-cooperative members) and two external consultants. During the 2019 election campaign, four new members were added to the Board of Directors, and two new consultants were appointed to ensure that the competence of the Board of Directors covers all important areas for conducting international business (Arla, 2020).

Structurally, the Board of Directors, representing the interests of farmers-owners of each geographic zone, includes four territorial (regional) councils, which, in fact, are subcommittees of the Board of Directors and consist of both members of the Board of Directors and members of the Board of Representatives. Regional Councils function in four territorial segments such as Sweden, Denmark, Great Britain, Central Europe (Germany, Belgium, Netherlands and Luxembourg). Management at Arla Foods is split (based on responsibilities) between the Board of Directors and the Executive Board, which is appointed by the Board of Directors and is directly responsible for the implementation of company policy. The Executive Board consists of both the Chief Executive Officer and the Chief Commercial Officer, who work with the Board of Directors to determine the strategic directions of the company, ensuring that they are followed in the future (while ensuring proper long-term growth of assets and profitability), implementing proper risk management, control, compliance with legal regulations and requirements.

Finally, another structural unit in the executive management of the cooperative is the Executive Management Team, which is appointed by the Executive Board and develops the tactics of the company, plans the operating structure, and is responsible for the daily business operations of the cooperative. In its composition, firstly, the members of the Executive Board themselves, and secondly, five employees, one of whom is a commercial leader in charge of the international commercial segment, and the rest (four people) are functional experts (their activities cover such areas of management, like finance, information technology, law, marketing, innovation, human resources, supply) Members of the Administrative Management Team inform each other about all important events (each in their own field of activity) and coordinate all intersectoral interactions.

Deserves the attention of theorists and practitioners (including from the point of view of the possibilities of using foreign experience of cooperation in Russia) and the taxation issues of Arla Foods (large assets, international in terms of geography of their members and consumers, entrepreneurial from the stand-

point of using modern financial instruments) ... Thus, one of the initiatives of the Organization for Economic Cooperation and Development (OECD) determines the development of new tax principles and requirements for documentation for European multinational companies, while adhering to the International Financial Reporting Standards. In particular, the cooperative Arla Foods, based in Denmark, is subject to Danish tax legislation developed specifically for cooperatives (profits are not accumulated in them, but returned to the owners in the form of the highest possible price for milk). In this regard, the income of the cooperative is considered as the personal income of the owners (members of the cooperative), and therefore, is subject to income tax (on the difference between the amount received for milk and the costs), which is collected from the members of the cooperative in the amount established in accordance with tax legislation the country where the farmer operates. In addition, the Arla Foods cooperative (as a multinational entrepreneurial cooperative) owns several subsidiaries around the world, which, in their new status (as a limited liability company), are subject to normal corporate taxation.

Regarding the financial activities of the cooperative “Arla Foods”, it should be specially noted that the company pays significant attention to risk management (effective identification, understanding, assessment, elimination), involving narrow (highly professional) specialists in this work, “mitigating” the adverse consequences of the impact of internal and external factors, using every opportunity to maximize the value of the company. The calculation takes into account both medium-term risks that threaten the implementation of the strategy chosen by the cooperative, and short-term risks that accompany, in fact, the daily business processes carried out by the company. By classifying these risks, it is possible to single out (1) strategic risks arising from external or internal trends or events that (realistically or potentially) have a significant impact on the implementation of the stated goals, (2) operational risks that threaten the performance of the cooperative’s business functions, (3) financial risks that could cause unexpected volatility in milk prices, net sales, profitability or market share, (4) legal risks associated with changes in legislation or regulation that could have a significant impact on the implementation of existing business goals.

Strategic risks. Given that the UK market has a significant share of the Arla Foods cooperative market (25%), the strategic risks of the company are associated with the negative consequences of Brexit, mainly such as restrictions on the movement of goods, devaluation of the pound sterling, changes in legislation and regulatory frameworks. activities of British farmers (members of the coop-

erative). Equally dangerous for the company's bottom line is the transformation of consumer preferences, especially when they (as has happened in recent years) increasingly prefer plant-based alternatives to dairy products and question the place of dairy products in healthy diets (Arla, 2019). Expecting sales of plant-based alternatives to dairy products to grow rapidly in the coming years, the company's management (by promoting information about the health benefits of dairy products) is focusing its activities on expanding its innovative product portfolio, enhancing it with an assortment that takes into account the most sophisticated consumer tastes (sustainability of food, primarily). And finally, the digitalization of the economy, primarily the development of e-commerce, has a no less significant impact (and, consequently, the threat) on the functioning of the cooperative. The emergence and expansion of digital commercial channels disrupts established marketing chains, leading to a significant increase in transaction costs. The development of new technologies for delivering products to the consumer is being updated against the background of the COVID-19 pandemic and its consequences (disruption of inter-territorial ties, social isolation, instability of production activities, fluctuations in the volume of consumption of dairy products by public catering enterprises).

Operational risks are determined primarily by price volatility inherent in a specific market for a given product, and fluctuations in milk volumes inherent in the production of dairy products according to its nature. Although 2019 showed unprecedented stability in milk prices, with only significant fluctuations in the relative prices of protein and fat, the overall volatility in the dairy markets in the coming years (the coronavirus crisis) could negatively impact sales and earnings. Operational risks should also include threats related to the mobility of key personnel holding strategic positions in the cooperative. Of course, it is people (human capital incorporated in them) that are the key element (resource) of any organization, and therefore Arla Foods, relying on their talents and competencies, seeks to involve in its activities (at all levels - local, regional, in general; for the fulfillment of all goals and objectives - strategic goals, daily business operations) of the most qualified employees. It should be specially noted that as the company becomes more and more "digital" and integrated into common IT systems, another channel of operational threats arises, associated with such serious risks as various kinds of information security breaches (cyber attacks, unauthorized access, etc. e), which can not only lead to disruption of business processes, but also adversely affect the position of the cooperative in the market and its reputation.

Turning to financial risks (the next group of risks), it is necessary to rank them from the most global to the narrowest. So, given (from the point of view

of various aspects) the international nature of the activities of the cooperative “Arla Foods” and the fact that 57% of its income is generated in currencies other than euros or Danish kroner (currencies of the location of the cooperative), one should start with the risks associated with fluctuations in exchange rates. Financial risks also include tax risks. Being, as already noted, a transnational company, the cooperative “Arla Foods” is constantly faced with the increasing requirements (more and more stringent) of the transparency of the company’s activities, the specific tax policies of the countries where its members are located, which increases the burden on the cooperative in terms of exchanging information with tax authorities, the volume of tax reporting, the number of tax audits, requiring additional funds and business efforts to comply with local tax requirements, track tax risks, and engage in tax planning.

Finally, legislative and regulatory risks are of undoubted scientific interest. Firstly, they are due to the tightening of requirements for the quality and safety of food, the violation of which leads to the withdrawal of products from production and, as a result, to significant losses. It is important to emphasize that, in light of today’s societal preferences, food safety and health and safety are the top priorities for operations throughout the chain and the marketing segment of a company’s business. Therefore, this aspect of Arla Foods’ activities is part of its social obligations, reflected in such an internal document as the Code of Conduct, and the ongoing food quality and safety management program involves transforming the supply chain to ensure efficiency and safety. Secondly, the sources of risks of this nature (legal risks) are, in addition to those noted, such circumstances unacceptable for the business environment as non-compliance with legal regulations, corruption, fraud and other manifestations of unethical (improper, illegal) business behavior, the occurrence of which increases the risk of fines, criminal prosecution, damage to reputation. Taking all these risks into account, the cooperative maintains a system of internal control over all business processes and seeks to prevent (timely identify) violations at all levels, both managerial and executive. Thirdly, as a result of the development of innovative technologies and the digitalization of information storage procedures, strict instructions for companies (of all levels and forms) on the observance of data confidentiality have become widespread (first of all, this concerns the personal data of employees, customers, other business partners), the violation of which Like many of the other requirements outlined above, it carries the risk of significant fines imposed by regulators and, of course, loss of reputation.

Nevertheless, taking into account all types of risks, Arla Foods provides the owner-farmers with stable and competitive milk prices (36.9 cents per kg of

milk in 2020, 36.6 in 2019), what is most important for her as an organization owned by farmers. Moreover, as noted in the company's report, profitability, profitability and cash turnover in 2020 reach the maximum possible values for all key performance indicators (Arla, 2020): revenue – 10.6 billion euros, profit – 352 million euros, investments – 704 million euros. A complete list of performance indicators of the Arla Foods cooperative is available in the company's financial report only for 2019, therefore, the statistical materials provided in the article contain data obtained mainly from this document (table 1).

Table 1.

Key financial indicators of the cooperative “Arla Foods”

Indicator	2015 г.	2016 г.	2017 г.	2018 г.	2019 г.
Income (sales proceeds), million euros	10262	9257	10338	10425	10527
Profit, million euros	295	356	299	301	323
Total assets, million euros	6736	6382	6442	6635	7106
Non-current assets, million euros	3903	3714	3550	3697	4243
Current assets, million euros	2833	2668	2871	2938	2863
Shares, million euros	2148	2192	2369	2519	2494
Long-term liabilities, million euros	2084	1742	1554	1694	2304
Current liabilities, million euros	2504	2448	2499	242	2308
Net interest debt, including pension liabilities	2497	2017	1913	1867	2362
Net working capital, EUR million	999	831	970	894	823
Cash flow from operating activities, million euros	669	806	386	649	773
Cash flow from investment activities, million euros	-402	-167	-286	-425	-456
Profit rate,%	2,8	3,6	2,8	2,8	3,0
Equity ratio,%	31	34	36	37	34

A source: Leading Through Sustainable Business Performance. Arla Foods. Consolidated Annual Report. 2019. Available at: <https://www.arla.com/company/investor/annual-reports/>

As noted in the annual report (referring to 2019), despite an unfavorable global macroeconomic environment characterized by lower GDP rates (compared to previous years), uncertainty about the potential consequences of Brexit, a global trade conflict between the US and China, increased tensions in the Middle East, the decline in the growth rate of per capita consumption of dairy products in Western and developing markets, the positive results of the cooperative were influenced by such global trends as the stability of the major currencies

with which Arla Foods deals, the unprecedented stability of milk production in Europe and its prices, favorable shifts in the prices of fats and proteins, determining the growth of profitability for some categories of the cooperative's products (Arla, 2019).

Is available in the company's report only for 2019, therefore, the materials provided in the article contain data obtained on the basis of the last reporting year (2019).

Directly in 2019, the positive factors that had the greatest impact on revenue growth were (1) mergers and acquisitions carried out within the cooperative, (2) favorable changes in the exchange rate, significant investments in the company's human capital. As a result, despite the fact that the increase in volumes and the improvement in the range of products was to some extent offset by the decrease in prices, the proceeds from the sale of products still increased (Arla, 2019). The positive dynamics of revenue from different types of products also differs. Thus, sales of branded products (in higher margin segments) increased, while sales of private label products (in profitable segments) decreased, which generally led to a slight increase in revenues. As for the price effect, in 2019 it was slightly negative, with different price dynamics in different markets and in different segments. Such innovative investments (mastered by 2019) as the acquisition of the cheese-making business, the Kraft® production site (from Modeneléz International in the Middle East), the annual effect of the Yeo Valley Dairies Ltd. license agreement had a positive impact on revenue. in the UK, the acquisition in 2018 of the remaining 50% stake in Arla Foods Ingredients SA in Argentina.

Net profit of Arla Foods is also showing positive dynamics and in 2019 reaches 323 million euros (3.0% of revenue, with target values of this indicator in the range of 2.8 to 3.2%). According to the company's management, this allows them to accumulate unallocated capital for future investments, provide additional payments to owner-farmers, pay in good faith the maximum possible share of the profit through the prepaid milk price, and on an ongoing basis (Asaliev, et al., 2014; Strizhenok et al., 2019). In general, the stable financial position of the cooperative gives it the opportunity (1) to invest in the implementation of the strategy developed for 2020 "Good Growth 2020", (2) to implement the common vision for the development of the dairy industry in the near future. Despite the fact that for the economy in general and for the cooperative in particular, there is a macroeconomic and political environment that can hardly be called favorable (geopolitical tensions, escalation of trade conflicts, the coronavirus pandemic, Brexit, slower growth in many countries of the world), the prospects for the dairy industry still remain encouraging. As global supply and

demand are expected to remain reasonably balanced, the outlook for dairy prices remains stable. Nevertheless, it should be borne in mind that a change in the general economic situation may well have a significant impact on stability, as a result of which the performance of the Arla Foods cooperative in subsequent years may slightly decrease (although, judging by the company's Sustainable Development Report for 2020 year, they still have a positive trend, even despite the consequences of the COVID-19 pandemic). In any case, the experience of the functioning of a cooperative (including illustrative examples of its adaptation to changing circumstances) is indicative and useful for importing some of its elements into domestic (Russian) economic (cooperative) practice, including for the mandatory emphasis on the importance of human capital, its direct role in the development of modern cooperatives in a rapidly changing environment.

Discussions

Despite the significant and indisputable achievements of the theory of human capital, there are many questions regarding the interactions between human resource management and the development of organizations (including cooperative ones), namely: 1) reverse causation (not only skillful management leads to the effective functioning of organizations, but also successful organizations have greater opportunities for investment in human capital management; a profit-sharing policy leads to higher returns for the organization, but an organization with a higher profitability has the opportunity to implement the practice of widespread employee involvement in the management of companies; 2) possible difficulties in strict adaptation of management methods human resources to the strategies adopted by the firm, the reasons for which lie in the constantly changing content of the environment and the occurrence of unforeseen circumstances, which makes the process of applying flexible management practices much more difficult and problematic personal; 3) the degree of significance of the phenomenon under consideration (human capital) for organizational development (meaning, if human capital really has such a significant impact on the functioning of companies, then why do some organizations, despite some problems associated with human resources, achieve good results, achieve the goals) (Becker, et al., 1996; Guest, 1997; Korableva et al., 2020). These and some other questions concerning the relevance of the human capital available in the cooperative to its current state and development trends are relevant not only for countries with age-old cooperative trends and successful practices, but also for the domestic (Russian) situation, when the development of agricultural cooperation is associated with large difficulties and unfavorable circumstances.

Conclusion

In general, summarizing the review and analytical study of the activities of one of the modern agricultural cooperatives (dairy cooperative “Arla Foods”), the results of which are presented in this article, it is important to emphasize that the importance of human capital for the success of the development of cooperative organizations is obvious and is confirmed by both modern scientific research (Baker, et al., 2018; Boon, et al., 2018) and international economic practice (the results of the functioning of agricultural cooperatives in different countries of the world).

Summing up the analysis carried out, we emphasize that the high results of the cooperative’s activities are associated, firstly, with significant organizational and technological innovations undertaken by it in order to adapt to environmental changes, and secondly, with highly effective methods of working with personnel, which is becoming a cornerstone in the activities of any organization, be it a cooperative or an investor-oriented firm. Moreover, despite the fact that each of them in its own way identifies its policy, mission, goals, values, modern companies still have much in common with respect to methods of highly effective management: 1) development of career ladders, emphasis on learning ability, encouragement of diligence; 2) a high level of functional flexibility with the rejection of rigid job descriptions; 3) reduction of hierarchies and limitation of differentiation of professional statuses; 4) formation of teams and careful thoughtfulness of the team structure to solve problems (current, tactical, strategic) and, of course, emerging problems; 5) exemplary job design that promotes employee satisfaction; 6) new forms of assessments and incentive systems; 7) high involvement of employees in quality management and other processes. As a result, all these innovations (best practices) pursue the goal of the fullest use of the human capital of firms (organizations), the personal qualities of their employees to achieve the policies, missions and goals formulated by the organization.

In conclusion, referring to fundamental research on the importance of human capital for the development of organizations in general and the personal qualities of employees in particular, one should cite the conclusions of M. Patterson and his colleagues presented in the article “The Impact of People Management Practices on Business Performance” (Patterson , et al., 1997), in which the authors, proving the importance of the material and moral state of employees, their job satisfaction, argue a positive relationship between organizational culture, human resource management, interpersonal relationships in the company, on the one hand, and the success of the company (organizations) - on the other. With regard to human capital, scientists identify three most significant

areas: 1) selection of highly qualified employees and permanent development of their skills; 2) a reasonable design of the duties of employees, implying their professional flexibility, creativity, responsibility for results; 3) leadership and teamwork. The relevance of the theoretical conclusions of the researchers for the practical activities of modern cooperative organizations is confirmed by the above experience of functioning in the conditions of the prevailing realities of the dairy cooperative “Arla Foods”.

Acknowledgements. The reported study was funded by RFBR, project number 19-29-07315.

References / Список литературы

1. Andersen H. J. The Issue «Raw Milk Quality» From the Point of View of a Major Dairy Industry. *Journal of Animal and Feed Sciences*, 2007, vol. 16, no. 1, pp. 240-254. <https://doi.org/10.22358/jafs/74201/2007>
2. Arla Foods. Leading Through Sustainable Business Performance. *Consolidated Annual Report*. 2019. <https://www.arla.com/company/investor/annual-reports/>
3. Arla Foods. Accelerating Sustainability Actions in Challenging Times. *Corporate Responsibility Report*. 2020. <https://www.arla.com/company/investor/annual-reports/>
4. Asaliev A.M., Zhuravlev P.V., Alkhimenko O.N. Intellectual Capital Management as the Aspect of Upgrading of Modern Company’s Management. *Life Science Journal*, 2014, vol. 11, pp. 363-366.
5. Azuayi R. Internationalization Strategies for Global Companies: A Case Study of Arla Foods, Denmark. *Journal of Accounting & Marketing*, 2016, vol. 5, no. 4, 1000191. <https://doi.org/10.4172/2168-9601.1000191>
6. Baker T., Welter F. Contextual Entrepreneurship – An Interdisciplinary Perspective. *Foundations and Trends in Entrepreneurship*, 2018, vol. 14, no. 4, pp. 357-426. <http://dx.doi.org/10.1561/03000000078>
7. Becker B., Gerhart B. The Impact of Human Resource Management on Organisational Performance: Progress and Prospects. *Academy of Management Journal*, 1996, vol. 39, no. 4, pp. 779-801. <https://doi.org/10.2307/256712>
8. Belousova M., Aleshko R., Zakieva R., Karabasheva M., Gorovoy S., Kozhemov S. Development of equipment management system with monitoring of working characteristics of technological processes. *Journal of Applied Engineering Science*, 2021, vol. 19, no. 1, pp. 186-192. <https://doi.org/10.5937/jaes0-28855>
9. Boon C., Eckardt R., Lepak D.P., Boselie P. Integrating Strategic Human Capital and Strategic Human Resource Management. *The International Journal of*

- Human Resource Management*, 2018, vol. 29, no. 1, pp. 34-67. <https://doi.org/10.1080/09585192.2017.1380063>
10. Cheremisina O.V., Sergeev V.V., Alferova D.A., Ilyna A.P. Quantitative x-ray spectral determination of rare-earth metals in products of metallurgy. *Paper presented at the Journal of Physics: Conference Series*, 2018, vol. 1118, 012012. <https://doi.org/10.1088/1742-6596/1118/1/012012>
 11. Cherepovitsyn A., Moe A., Smirnova N. Development of transboundary hydro-carbon fields: Legal and economic aspects. *Indian Journal of Science and Technology*, 2016, vol. 9, no. 46. <https://doi.org/10.17485/ijst/2016/v9i46/107527>
 12. Gaither T.K., Curtin A. Examining the Heuristic Value of Models of International Public Relations Practice: A Case Study of the Arla Foods Crisis. *Journal of Public Relations Research*, 2008, vol. 20, no. 1, pp. 115-137. <https://doi.org/10.1080/10627260701727051>
 13. Golovina S., Antonova M., Abilova E. Assessment of Agricultural Cooperatives' Performance in Russia: The Case of the Kurgan Region. *Advances in Social Science, Education and Humanities Research*, 2020, vol. 392, pp. 370-376. <http://dx.doi.org/10.2991/assehr.k.200113.077>
 14. Golovina S., Hess S., Nilsson J., Wolz A. Networking among Russian Farmers and their Prospects for Success. *Post-Communist Economies*, 2019, vol. 31, no. 4, pp. 484-499. <http://dx.doi.org/10.1080/14631377.2018.1537737>
 15. Guest D.E. Human Resource Management and Performance: A Review and Research Agenda. *International Journal of Human Resource Management*, 1997, vol. 8, no. 3, pp. 265-276. <https://doi.org/10.1080/095851997341630>
 16. Korableva O.N., Gorelov N., Kalimullina O. Contemporary Issues of Intellectual Capital: Bibliographic Analysis. In J. P. Liyanage, J. Amadi-Echendu, & J. Mathew (Eds.), *Engineering Assets and Public Infrastructures in the Age of Digitalization - Proceedings of the 13th World Congress on Engineering Asset Management, WCEAM 2018*. pp. 457-464. (Lecture Notes in Mechanical Engineering). Springer Nature. 2020. https://doi.org/10.1007/978-3-030-48021-9_51
 17. Kurakin A., Visser O. Post-Socialist Agricultural Cooperatives in Russia: A Case Study of Top-Down Cooperatives in the Belgorod Region. *Post-Communist Economies*, 2017, vol. 29, no. 2, pp. 158-181. <https://doi.org/10.1080/14631377.2016.1267974>
 18. Martínez R.H., Arutyunyan S., Karabasheva M., Yesturliyeva A. Diagnostics and control of sustainable development of regions: Branch aspects. *Journal of Security and Sustainability Issues*, 2020, vol. 9, no. 3, pp. 1065-1076. [https://doi.org/10.9770/jssi.2020.9.3\(30\)](https://doi.org/10.9770/jssi.2020.9.3(30))

19. Morfi C., Nilsson J., Österberg H. Why Farmers Involve Themselves in Co-Operative District Councils. *Annals of Public and Cooperative Economics*, 2018, vol. 89, no. 4, pp. 581-598. <https://doi.org/10.1111/apce.12206>
20. Mustafin A. Coupling-induced oscillations in two intrinsically quiescent populations. *Communications in Nonlinear Science and Numerical Simulation*, 2015, vol. 29, no. 1-3, pp. 391-399. <https://doi.org/10.1016/j.cnsns.2015.05.019>
21. Nilsson J., Ollila P. Strategies and Structures in the European Dairy Co-operative Industry. *Journal of Co-operative Studies*, 2009, vol. 42, no. 2, pp. 14-23.
22. Patterson M., West M., Lawthorn R., Nickell S. *The Impact of People Management Practices on Business Performance. Issues in People Management*. London: Institute of Personnel and Development, 1997.
23. Poghosyan V. Philosophies of social behavior research: Meta-analytic review. *Wisdom*, 2018, vol. 11, no. 2, pp. 85-92. <https://doi.org/10.24234/wisdom.v11i2.212>
24. Strizhenok A.V., Korelskiy D.S., Kuznetsov V.S. The wastewater disposal system modernization during processing of amber deposit as a way to reduce the anthropogenic load on the baltic sea ecosystem. *Journal of Ecological Engineering*, 2019, vol. 20, no. 3, pp. 30-35. <https://doi.org/10.12911/22998993/99731>
25. Voronkova O., Antonov S., Lamanov E., Sterlikov F., Shafranskaya C., Yashin D. Entrepreneurial activity as an important factor in the development of the “green” economy. *International Journal of Innovative Technology and Exploring Engineering*, 2019, vol. 9, no. 1, pp. 2492-2496. <https://doi.org/10.35940/ijtee.A4633.119119>
26. Vigliarolo F. Towards an ontological reason law in economics: principles and foundations. *Insights into Regional Development*, 2020, vol. 2, no. 4, pp. 784-801. [http://doi.org/10.9770/IRD.2020.2.4\(5\)](http://doi.org/10.9770/IRD.2020.2.4(5))
27. Yanbykh R., Saraikin V., Lerman Z. Cooperative Tradition in Russia: A Revival of Agricultural Service Cooperatives? *Post-Communist Economies*, 2019, vol. 31, no. 6, pp. 751-771. <http://dx.doi.org/10.1080/14631377.2019.1607439>
28. Yemelyanov V.A., Yemelyanova N.Y., Shved E.V., Nedelkin A.A., Fatkulin A.R. Modeling of the multilayer perceptrons for image recognition of the steel microstructures. *2020 IEEE Conference of Russian Young Researchers in Electrical and Electronic Engineering (EIConRus)*, 2020, pp. 952-955. <https://doi.org/10.1109/EIConRus49466.2020.9038971>
29. Yumashev A.V., Fateminasab S.M., Marjani A., Lirgeshas A.B. Development of computational methods for estimation of current efficiency and cell voltage in a Chlor-alkali membrane cell. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 2021. <https://doi.org/10.1080/15567036.2021.1897194>

30. Yu L., Huang W. Non-Economic Societal Impact or Economic Revenue? A Performance and Efficiency Analysis of Farmer Cooperatives in China. *Journal of Rural Studies*, 2020, vol. 80, pp. 123-134. <https://doi.org/10.1016/j.jrur-stud.2020.08.010>

DATA ABOUT THE AUTHORS

Svetlana G. Golovina, Doctor of Economics, Professor, Chief Researcher, Research Institute of Agrarian and Environmental Problems and Agricultural Management
Ural State Agrarian University
42, Karl Liebknecht Str., Yekaterinburg, 641300, Russian Federation
s_golovina@yahoo.com
ORCID: 0000-0002-1157-8487

Ivan N. Mikolaychik, Doctor of Agricultural Sciences, Professor, Vice-Rector for Research
Kurgan State Agricultural Academy named after T. S. Maltsev
Lesnikovo village, Ketovsky District, Kurgan Region, 641300, Russian Federation
min_ksaa@mail.ru
ORCID: 0000-0001-5189-2174

Andrey L. Poltarykhin, Doctor of Economics, Professor
Plekhanov Russian University of Economics
36, Stremyanny lane, Moscow, 113054, Russian Federation
poltarykhin@mail.ru
ORCID: 0000-0003-2272-2007

Pavel V. Zhuravlev, Doctor of Economics, Professor
Plekhanov Russian University of Economics
36, Stremyanny lane, Moscow, 113054, Russian Federation
kafedra-etiz@yandex.ru
ORCID: 0000-0002-6061-9935

ДАнные ОБ АВТОРАХ

Головина Светлана Георгиевна, доктор экономических наук, профессор, главный научный сотрудник НИИ аграрно-экологических проблем и управления сельским хозяйством

*Уральский государственный аграрный университет
ул. Карла Либкнехта, 42, г. Екатеринбург, 641300, Российская Фе-
дерация
s_golovina@yahoo.com*

Миколайчик Иван Николаевич, доктор сельскохозяйственных наук, профессор, проректор по научной работе
*Курганская государственная сельскохозяйственная академия имени
Т. С. Мальцева
с. Лесниково, Кетовский р-он, Курганская обл., 641300, Российская
Федерация
tin_ksaa@mail.ru*

Полтарыхин Андрей Леонидович, доктор экономических наук, профессор
*Российский экономический университет им. Г.В. Плеханова
Стремянный пер., 36, 113054, г. Москва, Российская Федерация
poltarykhin@mail.ru*

Журавлев Павел Викторович, доктор экономических наук, профессор
*Российский экономический университет им. Г.В. Плеханова
Стремянный пер., 36, 113054, г. Москва, Российская Федерация
kafedra-etiz@yandex.ru*