

# IMPACT OF INNOVATIVE ACTIVITY ON THE FORMATION OF THE AGRICULTURAL LABOR MARKET: THE WORLD STRATEGIES

**Alma Galiyeva, Kazakh University of Economics, Finance and International  
Trade**

**Nailya Abdildinova, Kazakh University of Economics, Finance and  
International Trade**

**Maxat Kulubekov, Kostanay Engineering and Economics University named  
after M. Dulatov**

**Aigul Mukhamejanova, Kazakh University of Economics, Finance and  
International Trade**

## ABSTRACT

*The introduction of innovative technologies is a necessary measure for those agrarian enterprises which want to remain competitive and intensify production. However, technologies often replace human labor and lead to staff reduction, which has a negative social effect, especially in rural areas where there are rarely other alternatives for employment. Because of the unreliability of employment in agricultural enterprises, young potential workers are increasingly leaving rural areas to look for work in the urban, whereas for agricultural enterprises there is no alternative in the choice of workers. One of the peculiarities of the agricultural labor market is the fact that in this sector people with the lack of qualifications are involved in a larger measure. For this reason, it is difficult for them to find a new job after the loss of employment. For innovations to have a positive effect not only on enterprises but also on the country's economy as a whole, their implementation should be combined with the motivation of workers to obtain both vocational training and decent wages in the agricultural sector. It is necessary to make the sphere of agricultural activity attractive for potential young workers and reliable for those who are already involved in it. An assessment of the current situation will help determine the tensest situations from the introduction of innovations. The experience of some countries can be useful for determining the most successful methods for regulating the agricultural labor market and introducing these methods into domestic practice.*

**Keywords:** Agricultural Labor Market, Rural Area, Employment, Innovative Technologies, Agro industrial Complex.

## INTRODUCTION & LITERATURE REVIEW

The functioning of the agricultural labor market is subject to changes, which are connected with the introduction of new innovative technologies that replace human labor. The agricultural labor market itself is a system of interdependent legal, social, economic, psychological and other social relations that ensures the effective use of labor resources in the agricultural sphere. The main role in organizing the agricultural labor market and labor relations is played by employers and hired labor. The difficult condition of the agro industrial complex

provoked a sharp decline in the level of employment in rural areas and, as a reaction to the negative economic consequences of transformations in the sphere of agriculture and the way of survival, determined the emergence of unemployment and various forms of underemployment. Thus, the agricultural labor market was deformed. The modern agricultural labor market is characterized by such features: rising unemployment, a decline in the quality and qualification of the workforce, inadequate staff for the labor market. There is also a controversial problem: if there is unemployment in the agro industrial complex, the deficit of workers in the main occupations in agriculture simultaneously increases. This situation demonstrates the lack of adequate state policy in the agricultural labor market and the evasion of the state from resolving the accumulated problems, which means that it is an actual topic for research. Therefore, it is necessary to disclose the essence and content of the social and economic category of the agricultural labor market as an integral link of the system of market relations in the agro industrial complex and to investigate the range of problems associated with the essence and specific features of the agricultural labor market formation.

A number of fundamental scientific developments and applications on various aspects of labor market formation problems have been created in recent years, which study many problems of the agricultural labor market formation and regulation. Numerous works of domestic and foreign scientists have been published, in which problems of employment and the possibility of their regulation are analyzed. In this regard, it is necessary to point out the works of Anfinogentova et al. (2018); Belousov (2017); Andryshyn & Butusov (2016); Lytneva et al. (2015); Keynes (2018); Bondarenko et al. (2019) and a number of other domestic and foreign scientists on the issues mentioned in the article.

Nevertheless, some issues of the agricultural labor market formation require a more profound study.

Thus, the relevance and complexity of the problems facing the agricultural labor market formation and employment policy in the agricultural sector and its lack of development predetermined the choice of the article's theses.

## **METHODOLOGY**

This article was based on scientific works of foreign specialists in the field of labor market formation and the agricultural specificity of employment. In the course of processing, studying and analyzing the accumulated materials, a set of general scientific methods of cognition and methods of economic research combined by a system approach to studying this problem was used. At various stages of the work, analytical, monographic, historical, economic and statistical, abstract-logical and comparative research methods with its diverse techniques were applied.

## **RESULTS AND DISCUSSION**

### **Features of the Agricultural Labor Market Formation**

The agricultural labor market organization depends on a variety of conditions that demonstrate its specific characteristics and at the same time exacerbate existing problems:

- Productive forces are uneven in relation to rural and urban areas.
- Disintegration processes in the agricultural labor market simultaneously provoke a shortage of labor in one region and unemployment in another, exacerbating demand and supply for the same type of

- employment. The quantity of the arisen demand for highly qualified staff amid innovative improvements at the enterprises of the agricultural sector does not have time to be satisfied with the available staff due to the lack of quality retraining programs in accordance with novelties.
- Simultaneously, a technological singularity arises when educated workers cannot find a job, since they were trained according to outdated programs. Technologies and innovations emerge in agriculture often faster than the required number of skilled workers who can use new technologies right away into practice.
  - In rural areas, the majority of workers are low-skilled, therefore they receive low payment.
  - However, low payment does not keep pace with the high demands of the employer, who wants to pay less in pursuit of profit, yet to use the knowledge of highly qualified specialists. This leads to an additional outflow of those wishing to sell their labor in the agricultural labor market.
  - Underpayment in the agricultural sector, first of all, concerns residents living in rural areas. This leads to labor migration of young people to the cities to find high-paying jobs. As a result, in the potential rural areas the birth rate is decreasing and the aging of the workforce without the potential for replenishment of new ones is observed.
  - Due to the lack of staff and low payment, men's occupations were taken up by women. If the employment category is male due to the physical data of the worker, the substitution of male labor for female labor leads to low efficiency and a slowdown in the production process. At the same time, there is a reduction in female unemployment in rural areas, but the health care issue occurs – a woman who performs physically difficult male work more often gets sick and is subject to occupational diseases.
  - The problem of the qualitative distribution of the agricultural labor market leads to the rural regions development issue and distorts the market structure.
  - The introduction of innovative technologies without prior staff training leads to massive layoffs and the ineffective use of new products due to the lack of sufficient qualified staff. It exacerbates unemployment in rural areas among low-skilled workers and stimulates the emergence of high competition for underpaid specialties, which has a negative social effect.
  - The unattractiveness of the seasonal nature of the agricultural labor market can be solved through innovative introductions, which will positively affect the elimination of unemployment in this area. In addition, in the context of the continuous introduction of innovative technologies, it is necessary to create favorable forecasts that will not scare off potential workers of the agricultural labor market and create motivation for attracting labor flows.

Foreign experience will help in developing parity between supply and demand for agricultural labor, increase the attractiveness and honor of such employment and reduce the level of unemployment in labor-surplus rural areas.

### **The Concept of Innovative Activity in the Agricultural Labor Market**

Globalization processes take labor relations in the agricultural sphere to a new level. The introduction of innovations is understood, first of all, as a new quality in the methods of implementing the goals set. In this case, it is the agricultural sphere. Innovations are the result of human intelligence, and their use depends on the environment of its application. The introduction of innovations has a significant impact on the social sphere of life. This is especially noticeable for the labor market in the field of supply and demand for labor force (Andryshyn & Butusov, 2016). With the application of innovations, the structure of employment is changing due to the availability of necessary education, as well as the age of workers.

Innovative technologies have both a negative and positive effect on employment. The negative effect consists in the process of substitution of human labor with capital expenditures for innovations themselves, which increase the speed, quality and competitiveness of agricultural enterprises, but leads to a reduction in the work of enterprises in the agricultural sector. The positive effect is that innovations lead to the need for new labor, which will ensure the functioning and introduction of technically new ways of production. They also cause the need to

train new workers and provoke the need not only for students but also for teachers, which also provides an opportunity to create new jobs. However, since innovations are often associated with computerization processes, low-skilled staff remains unemployed. These workers must either retrain or seek a new position, which adversely affects staff over forty. In addition, it is often the generations of older people who are engaged in the agricultural labor market. In contrast, new vacancies appear in companies that create and sell such innovative technologies to agricultural enterprises. That is, the introduction of innovations affects the overall structure of employment, as it threatens unemployment in one sector of the economy and opens prospects in another area (Solovyov, 2006).

The essence of innovation lies in the introduction of new technologies in production. In the agricultural environment, this may be, for instance, agricultural machinery with production coverage of more land, which increases the speed and efficiency of work and reduces the financial costs of attracting additional labor.

An example of the latest innovations in the agricultural sector that have had an impact on the reduction of labor resources is the introduction of smart irrigation systems that require only one person to start the water supply process.

The last tendency of agricultural enterprises, provided with solid capital, is to redirect the flow of capital from the wage fund of hired workers to the sphere of innovative development of the enterprise, which will remove the need to depend heavily on the agricultural labor market. Fortunately, for regions with a large number of low-skilled workers, the introduction of innovations requires large financial injections and investments, at least initially. Therefore, it is not an accessible form of technical progress for all enterprises. The costs of innovation include a variety of expense items. It can be, for example: new buildings or the purchase of buildings; the acquisition of patents for a certain type of activity or the use of specific technology novelties; software; the renewal of the computer fund; the purchase of new equipment; the modernization of old equipment to match innovations; the re-qualification of staff; the evaluation and approbation of novelties; marketing strategy and the promotion of new products; the search for new markets (Bondarenko et al., 2019). In addition, it is worthwhile to be ready to expand production and capture a new market segment in connection with the application of innovations, which will also require the infusion of money.

In order to remain competitive in modern market realities, agricultural companies are forced to constantly update their production in accordance with scientific and technical achievements (Kotler & Armstrong, 2010). But any innovations need to be regulated with the help of state policy in the sphere of innovations, which will monitor the most effective implementation of scientific achievements, yet regulate the monopolization of the agricultural market in conditions of uneven distribution of income from the introduction of these innovations.

The key to introducing innovations at the enterprise is investments that will provide development projects with the necessary capital (Prokhorova et al., 2019).

Innovative activities will help to increase the competitiveness of the enterprise, its production efficiency, soil fertility and resource benefit of costs. For the agro industrial complex, innovations help to solve further problems that may arise with the produced goods, such as storage, transportation, biological value, quality assessment and processing.

These circumstances make it possible to determine the innovative activity of agro industrial organizations as a multi-disciplinary risk-based activity, united by a single technological process, aimed at creating, using and disseminating innovations, depending on natural and climatic conditions (Lytneva et al., 2015).

Therefore, innovative activity in the agricultural sphere is a complex of successive steps to improve production and to reduce production costs through scientific and technical achievements. In agriculture, these are usually new varieties of plants, animal breeds, fertilizers, feed and medicines for diseases in crop and livestock production and technologies that increase yields or animal care.

### **Innovations and Their Impact on the Agricultural Labor Market**

Innovations in the agricultural sector, the development of a multi-component structure and various forms of enterprises with different forms of ownership lead to changes in the labor market in rural areas. In these circumstances, an employee; as an individual gains more freedom to some extent. Under certain conditions, an individual can choose the form and place of activity, taking into account his qualifications and social needs. Unequivocally, the owner of the means of production has the right to resolve such issues as the number of employees, their qualifications, the level of wages, etc., and, if necessary, to dismiss excess workers. In this case, there are two forms of the labor market: rural and agricultural (Pimenov et al., 2010).

The rural labor market acts as the aggregate of the supply and demand of labor for a non-agricultural professional located in rural areas, and the agricultural market is a combination of the supply and demand of the agricultural labor force (Schumpeter, 2007). The very idea of the emergence of two labor markets in the countryside is incorrect, since it would be more reasonable to include the aggregate demand and supply of the labor force of the entire rural population in determining the concept of the rural market.

The agricultural labor market represents a part of the regional labor market and is subject to the laws of its functioning, but at the same time has its own specific features. These features are closely related to the demographic situation in rural areas, the structure of rural employment, the professional and qualification level, the condition and development of living conditions (housing, health facilities, household services, etc.) and the social infrastructure. The agricultural labor market is affected by specific features of agricultural production, territorial dispersion and innovative processes.

The labor market in rural areas of the region will be characterized by an increase in the number of completely and partially unemployed populations. The structure of this market will undoubtedly be affected by the pace and nature of economic processes in the region, as well as changes in the social and economic status of the rural population.

Reforming agro industrial production, falling production or its growth due to the introduction of innovations contribute to an increase in the number of unemployed and a decrease in the number of employed (Anfinogentova et al., 2018).

For the demographic situation in the countryside, there is a stable tendency towards a decrease in the proportion of the employable age population and an increase in the proportion of people older than the employable age.

The peculiarity of the present demographic situation in the countryside is the outflow of the employable population to the cities. In modern conditions, a significant part of the rural economy is associated with limited opportunities to choose jobs, and therefore they are mainly employed in agriculture.

The state of the agricultural labor market and the reproduction of the labor force in agriculture currently have a number of problems. Firstly, the rate of unemployment growth here is relatively high and even higher than in the city, which is due to the introduction of

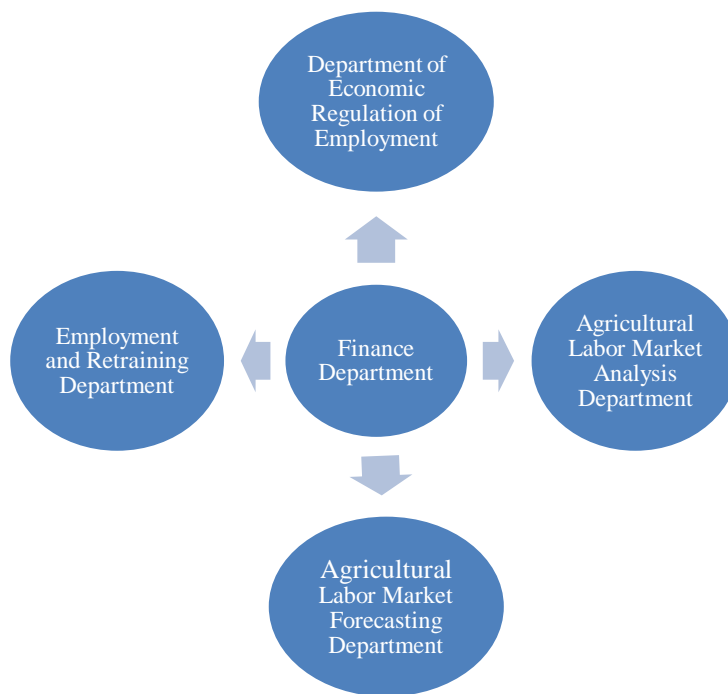
technologies that replace people's labor and with the seasonal nature of agricultural work. Secondly, there is a high level of hidden unemployment.

The rural area has always been less diversified than the city in terms of the supply of labor. Today, there is only one relatively free sphere of activity in this area - manual labor in personal subsidiary and domestic subsistence economy.

It is believed that the current situation on the labor market has positive features along with negative. It contributes to the emergence of competition in the agricultural sector of the economy for the workplace and solves the problems of gradual renovation of the professional staff (Keynes, 2018). For this, there must be appropriate conditions.

First of all, it is necessary to develop a policy that would take into account the measures of social protection from layoff because of the introduction of novelties in science and technology by enterprises, with the creation of new jobs and payment on unemployment. In practice, theoretical provisions for the formation and functioning of the agricultural labor market and related problems of employment and unemployment of the rural population have not yet been developed.

To solve the problem of employment in the agricultural sector, one can use the scheme of the agricultural labor market (Figure 1).



Note: Designed by the author

**FIGURE 1**  
**AGRICULTURAL LABOR MARKET FORMATION**

This scheme includes such departments:

1. Agricultural labor market analysis department, which summarizes the results of the agricultural market, the employment situation and trends in market conditions;
2. Department of economic regulation of employment (taking into account the regional order for agricultural products and the population's demand for services);

3. Department of unemployment and employment forecasting in the agricultural sector;
4. Department of employment, education, training and retraining of workers, accounting for free and unemployed workers;
5. Finance department, which is formed by contributions from the wages of employees and budget subsidies and provides the necessary funds to other departments.

The presented scheme will allow to stabilize and preserve the fuller employment of workers in the agricultural sector and especially highly skilled workers (Prymostka, 2017). It will increase the competitiveness of workers, create the psychological mood for retraining and obtaining additional professions and specialties, as well as improve the intra-industry movement of labor. In addition, it will assist in resettlement and rehabilitation of displaced residents, promotion of flexible forms of employment (part-time, week, month), promotion of agricultural enterprises and creation of additional jobs for young staff, expansion of small and medium-sized businesses and entrepreneurship, cooperation and self-employment, as well as development of social infrastructure.

Consequently, a new universal worker will appear in the agricultural labor market, which has the ability to produce highly efficient work, which will predetermine the transition to a new professional structure. Such a structure of staff will provide for higher employment and labor productivity and increase the mobility of workers and their competitiveness.

Thus, in the narrow sense, the regulation mechanism of the agricultural labor market is a set of regulations, legislative or collective, which are guided by the partners when implementing employment policies (Reisinger, 2014).

In the broad context, it is the regulatory mechanism that covers the whole range of economic, legal, social and psychological factors that determine the functioning of the agricultural labor market. It is carried out through the system of employment, including target programs of enterprises, providing retraining of staff in the case of innovation, which leads to layoffs.

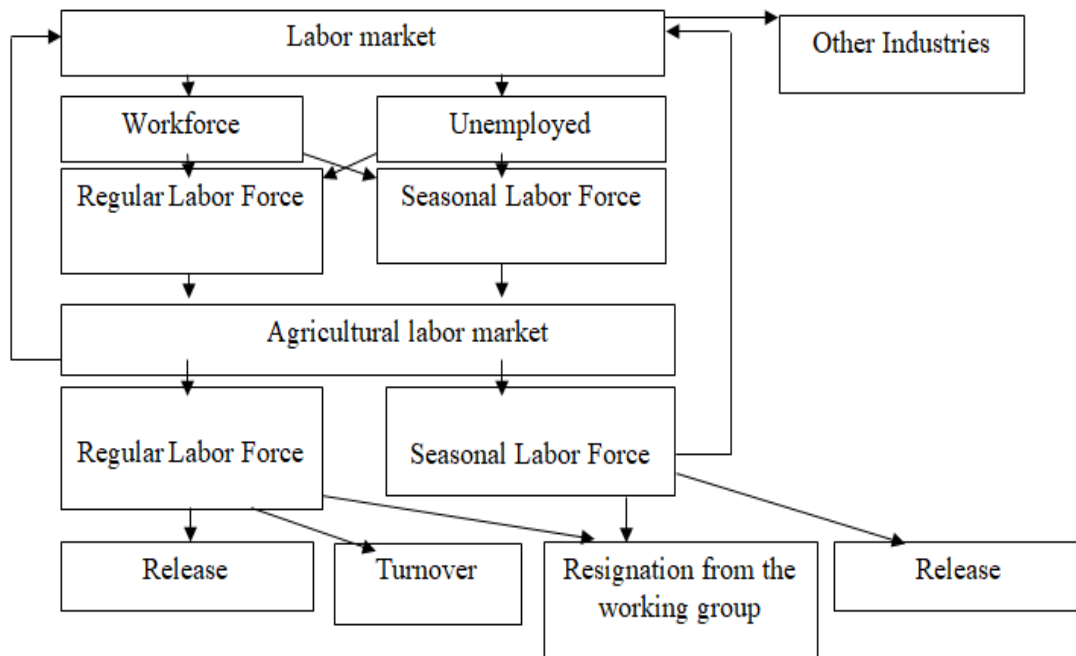
All components of the state regulation of employment can be in different proportions depending on the social-economic and innovative conditions for the development of production (Liljebloom et al., 2019).

Agriculture, as a specific branch of the national economy, accumulates features of sectorial and regional employment. In agriculture, employment is expressed by the fact that the ratio of jobs and labor must be strictly defined at different times of the year. Significant factors of employment in agriculture are as follows: regional features of rural settlement, seasonality of production and labor, a direct link to working and living conditions with the results of economic activity, the migration of rural population to the city and the return migration, the labor release from agriculture in other industries and the constant introduction of innovations to intensify production (Belousov, 2017).

The imbalance between supply and demand in the agricultural labor market always means a deviation from effective employment. If supply exceeds demand, there is an obvious unemployment, and when demand exceeds supply and the real need, there is a hidden unemployment. Consequently, employment and unemployment are interdependent socioeconomic categories (Malik, 2000).

The condition of normal work and stabilization of the agricultural labor market is the strengthening of the economic situation in the production sphere of the village. It becomes possible when regulating the labor market of agricultural enterprises and the core labor flows to protect against firing that results from various factors, including innovation, and ensure the

confidence of workers in the guaranteed employment or retraining, regardless of age, sex, qualification and other factors (see Figure 2).



Note: Designed by the author

**FIGURE 2**  
**THE AGRICULTURAL LABOR MARKET AND BASIC LABOR FLOWS**

The availability of information provides an opportunity to study the great diversity of existing models of agricultural labor markets in developed countries. Therefore, in a number of countries, such as Japan, France, and Germany, the structure of the employment system is strictly centralized. In other countries, such as the US or Italy, there is no such a rigid centralization. In the US, employment services in states that have their own legislation on employment and material assistance for the unemployed are very diverse. They play a dominant role in employment policy and not only in the agricultural environment. In Italy, in a number of areas, employment services are autonomous and do not depend on central labor authorities (Baldwin, 2004).

Employment services differ in the priority areas of their activities. In Sweden, for example, an active employment policy is aimed at preventing unemployment in rural areas: most of the employment funds are used for these purposes. In Japan, traditional labor relations play an important role in preventing unemployment.

In many countries, during the reduction of workers in the agricultural market in connection with the innovative modernization of production, the emphasis in the employment policy shifts from material assistance to the unemployed to the stimulation of economic activity: subsidies to agricultural enterprises in creating jobs, retaining of workers at enterprises through expansion of production, retraining of workers in the period of innovative modernization of production. During this period, the conditions for granting unemployment benefits are toughened: the periods for the payment of benefits are being reduced, and the qualification



requirements for the status of the unemployed who are applying for unemployment benefits are increasing.

Firms believe that dismissing workers is an expensive thing, it is better to reassign them on other types of work (Bakker & Helmink, 2008). In addition, unscrupulous firms create conditions for workers, in which they leave voluntarily.

The basic elements of the models of the agricultural labor market are the systems of staff retraining, methods of increasing the professional and qualification level, the practice of filling vacancies, the special features of regulation based on collective agreements.

## The Japanese Model

The system of labor relations in this country is based on the so-called “*lifelong hiring*”, which provides the guarantees of employment for employees up to the age limit of work at the enterprise in the 55-60 years, so the introduction of innovations for staff passes unnoticed, not only in the agricultural sphere. Strengthening of workers at the enterprise by the system of “*lifelong hiring*” allows the campaigns to conduct the full formation of qualifications at the intra-firm level, promptly adjust the professional and qualification composition of workers with the structure of workplaces, engineering and technology development and the modification of the products.

During the first 10-12 years, employees are reassigned for 3-4 times in a planned manner to new jobs in order to expand their professional profile and readiness for in-house mobility. Women do not usually fall into the “*lifetime recruitment*” system and have less work experience than men (Viktorovich, 2016).

The unique system of “*lifelong hiring*” allows combining modernization with tradition, and although relations between employees and the administration are built on a contract basis, the Japanese managed to resolve all the specific aspects of such a system by combining it with their traditions. The firm has become a family that guarantees employment until retirement. When a person cannot perform the physical labor characteristic of the agricultural labor market, he is provided with other functions.

The most important factor in the economic development of the United States was finance, and in Japan it was staff. Thus, the strategic factor of success in Japan was precisely staff with guarantees of lifelong employment.

It should be noted that lifelong employment is not legally fixed; its approval is a tribute to tradition, the firm morally borrows about each of its employee’s right up to his retirement. In other countries, the administration of the company uses the philosophy of a “*carrot and stick*” approach, periodically punishing or encouraging its employees. Japanese management functions differently. It does not resort to threats of dismissal or financial incentives to achieve better performance. Salary is established in accordance with experience and qualifications. The staff is completed on the basis of personal qualities, and loyalty is valued more than competence.

Hence, the desire of entrepreneurs to solve staff issues with the introduction of innovations not by workers layoff, but by transferring workers to subsidiaries or to the enterprises of another firm by mutual agreement.

All of the above applies only to the permanent staff of the company. Employees who have a temporary status are dismissed first. The smaller the size of the firm, the greater the proportion of temporary workers and the higher the risk of being unemployed.

Lifetime employment is characteristic mainly for large firms that use small firms on terms of subcontracting. So large companies, if necessary, do not reduce their staff, but reduce the amount of subcontract work, while small firms have to reduce the proportion of their staff.

However, as practice shows, the system of lifelong hiring is not without some drawbacks. Its main disadvantage from the point of view of entrepreneurs is that in some cases it leads to the irrational use of the labor force, since the number of staff cannot be reduced. Today the system of "*life-long hiring*" is considered conservative, as it, being feudal by its nature, does not get along well with the spirit of democracy, technical modernization and reduction of firms' expenses by any means, including dismissals.

### **The USA Model**

The US model is characterized by decentralization of the agricultural labor market. Each state in the US has its own legislation on employment in the agricultural sector and its own unemployment insurance funds. The contributions of enterprises and workers themselves are paid separately to state funds and the federal fund.

The employment policy is also characteristic. If it is necessary to modernize production with the help of innovations that entail a reduction in the number of staff, US firms resort to the dismissal of workers. Moreover, employees do not receive information about dismissal until the dismissals themselves. Nevertheless, it should be noted that collective agreements concluded by firms and trade unions have provisions according to which workers who have a long record of service, when laid off, have an advantage over employees who do not have experience. However, only 25% of workers are covered by collective agreements in the United States (Martynova & Tsymbal, 2014; Martynova, 2018).

In the United States, large agricultural firms usually pay much attention to employees' training. The amount of wages and other payments are established by contracts concluded for a long time.

Thus, the US policy in the field of the agricultural labor market does not provide the features of paternalism, as in Japanese enterprises, and the reduction in labor costs is due to the dismissal of workers, and not at the expense of moving within the enterprise or between enterprises of one firm. Counterweight to this policy in the agricultural labor market is the high mobility of the workforce, both professional and geographical. The result of this policy is relatively high unemployment in the agricultural sector, which is much higher than in such countries as Sweden and Japan. At the same time, it should be noted that a significant portion of the unemployed (40%) find work within a month, that is, unemployment is not for a long time. However, not always these workers are arranged in the agricultural sphere, often they completely change the type of activity (Zolnikova et al., 2017).

The solution of the employment issue in Sweden is of great interest.

### **The Swedish Model**

Sweden's success in achieving a relatively high level of employment in the agrarian sector was achieved through an active policy of employment. For the training of workers and the creation of jobs Sweden spends more than any other country, although its share of the budget that goes to employment is not the highest in comparison with other countries.

The employment policy pursued by Sweden showed that the traditional strategy of creating full employment in the agricultural sector thought maintaining high demand for labor in

the agricultural complex; along with monitoring wages and prices would inevitably lead to a high level of inflation and wage shifts board. Therefore, a new model for achieving full employment was developed and adopted, which contained four basic elements: a restrictive fiscal policy, a policy of solidary wages, an active policy of maintaining employment in the agricultural labor market, restrictions on cuts in the agricultural sectors in connection with the introduction of innovations.

### **The Situation in Russia**

Certain experience in regulating the agricultural labor market exists in Russia. Characteristic is the state of the labor market in the agricultural sphere and the forms of its regulation, when it becomes necessary to combine the questions of combating unemployment with the ever growing need of the people's economy in introducing innovations and updating staff with a qualified workforce in the absence of any kind of qualification in the overwhelming majority of the unemployed. The labor offer comes mainly from people who offer their labor force for the first time, and not from people who have been dismissed.

The surplus labor force in the agricultural labor market is connected with the surplus labor force in rural areas. This causes a protracted crisis in the agricultural sector, an initially low level of labor productivity and irrational forms of land use.

Regulation of the agricultural labor market in seasonal periods followed the path of organization of the network that regulates the flow of the rural population into the cities by means of the formation of correspondent points, gradually implementing the transition from administrative regulation methods associated with the obligation to hire the entire workforce through labor exchanges, to the principle of voluntary hiring, registration and entry to work. In addition, the basic measures to combat unemployment included: training, factory apprenticeship, issuance of unemployment benefits by social insurance agencies, practice of public works, unemployment assistance, and organization of “*unemployment combat*” months. That is, the work was aimed at eliminating the problem that arose, rather than regulating the policy of agricultural enterprises with respect to staff reductions in connection with the introduction of innovations.

It is premature to talk about the emerging model of the agricultural labor market in Russia, since the policies of effective and rational employment have not been fully worked out in accordance with the innovative processes of the agricultural sector. When developing the model of the agricultural labor market, all progressive lines of development of agricultural enterprises should be taken into account:

- System of professional qualification retraining;
- Guaranteeing employment regardless of modernization;
- Involvement of employees in the interests of the company, etc.

### **The Situation in Ukraine**

The decrease in the number of employees of agricultural enterprises occurs in the process of production optimization and automation. Agricultural enterprises are forced to use low-skilled staff in the labor-intensive processing of agricultural products in the short term to avoid social tension in the countryside. Scientific and technological progress, the introduction of innovations, increased competition and globalization are encouraging agricultural enterprises to increase the requirements for the qualifications of their employees.

Advanced enterprises provide training to ensure competitive advantages in a dynamic global world. One of the main reasons for reducing the number of employees is the use of high-performance innovative equipment. For example, innovative progress has contributed to the emergence of highly efficient agricultural machines, the use of which can reduce the cost of agricultural production. Such a technique requires less time to perform a certain amount of work, allows reducing the number of workers who serve it, minimizes losses during harvesting, etc. At the same time, modern agricultural machinery has a high cost, which makes it difficult to replace the current machine and tractor complex of agricultural enterprises completely. In Ukraine, there is a large number of units of agricultural equipment left after the collapse of the Soviet Union. This technique is much inferior in performance to foreign analogs, therefore, in the conditions of increasing competition and increasing the cost of resources, agricultural enterprises abandon obsolete energy-consuming equipment in favor of a more modern one (Fedulova, 2007). This is facilitated by banking products like leasing and lending. At the same time, the government does not regulate the situation of staff that loses their jobs in connection with the introduction of innovative novelties in the agricultural sector.

## CONCLUSIONS

Innovative processes are the basis for the well-being and competitiveness of modern enterprises. Scientific and technology achievements are especially widely used at enterprises of the agricultural sector. However, their implementation often leads to staff layoffs, which negatively affects the overall welfare of the country. Therefore, the state should implement the policy of regulation and responsibility of enterprises to its employees.

The article highlighted the features of the agricultural market formation, which demonstrate weaknesses and problems that arise in this sector of the economy, the essence and content of the social and economic category of the agricultural labor market as an integral part of the system of market relations in the agro industrial complex and a variety of problems, connected with the essence and peculiarities of the agricultural labor market formation. The characteristic of modern tendencies in the agricultural labor market in connection with the introduction of innovations was also given. In addition, the demonstrated experience of different states can become a theoretical basis for the development and implementation of an effective program of regulation and regimentation of the policy of agricultural companies in relation to their staff in case of the need to modernize enterprises with the help of innovative scientific and technical achievements, leading to the release of labor resources for other types of work.

## REFERENCES

- Andryshyn, V., & Butusov, O. (2016). Innovative approaches to the regional development in Ukraine. *Baltic Journal of Economic Studies*, 2(5).
- Anfinogentova, A., Dudin, M., Lyasnikov, N., & Protsenko, O. (2018). Providing the Russian agro-industrial complex with highly qualified personnel in the context of the global transition to a green economy. *Economy of Region*, 1(2), 638-650.
- Bakker, H.J.C. & Helmink, J. (2008). *Successfully Integrating Two Businesses*. Minsk: Grevtsov Publishers.
- Belousov, V.M. (2017). Innovative activity in the agrarian sector of the economy. *Theory and Practice of the World Science*, 1, 12-16.
- Bondarenko, V., Martynova, L., Chorna, N., Sukhorebra, T., & Sehedra, S. (2019). Evaluation system formation of development of enterprise's innovative potential. *Academy of Strategic Management Journal*, 18(1), 1-7.
- Baldwin, R.E. (2004). *The Economics of European Integration*. McGraw-Hill Higher Education, London.
- Fedulova, L. (2007). Integration processes of the corporate structures: possibilities for innovation-based growth of

- Ukraine's economy. *Economy and Forecasting*, (3), 9-31.
- Keynes, J.M. (2018). *The general theory of employment, interest, and money*. Springer.
- Kotler, P., & Armstrong, G. (2010). *Principles of marketing*. Pearson education.
- Liljebloom, E., Maury, B., & Hörhammer, A. (2019). Complex state ownership, competition, and firm performance—Russian evidence. *International Journal of Emerging Markets*.
- Lytneva, N.A., Goncharov, P.V., & Kyshtymova, E.A. (2015). The strategy of innovation and investment activity of the integrated agro-industrial enterprises. *International Journal of Innovative Technologies in Economy*, 1 (1).
- Malik, M.Y. (2000). *Interindustry integration as a factor in improving the efficiency of reformed agricultural enterprises*. Kyiv: NNTs IAE.
- Martynova, S. (2018). Modern Russian society in the context of anthroposocietal approach. *Annals of Anthropological Practice*, 42(1), 19-28.
- Martynova, S.E. & Tsymbal, L.G. (2014). Social background of the development of public service model in Russia. *Ecology, Environment and Conservation*, 20(4), 1875-1883.
- Pimenov, S.V., Panova, S.A. & Osipov, M.A. (2010). Innovation management as a business process. *Scientific Information Journal Economy*, 63, 152-158.
- Prokhorova, V., Protsenko, V., Abuselidze, G., Mushnykova, S., & Us, Y. (2019). Safety of industrial enterprises development: evaluation of innovative and investment component. *Scientific Bulletin of National Mining University*, (5).
- Prymostka, O.O. (2017). Theory of crisis management. Proceedings of conference *International Scientific Conference Anti-Crisis Management: State, Region, Enterprise*. Retrieved from: <http://www.intecon.dp.ua/wp-content/uploads/2018/02/ІІе-Ман-ноябрь-2017-часть-1.pdf>
- Reisinger, M. (2014). Two-part tariff competition between two-sided platforms. *European Economic Review*, 68, 168-180.
- Schumpeter, J. (2007). *The theory of economic development*. Moscow: EKSMO.
- Solovyov, V.P. (2006). *Innovative activity as a system process in a competitive economy (Synergetic effects of innovation)*. Kiev: Feniks.
- Viktorovich, G.P. (2016). Retrospective analysis of the concept of innovation, its role in development of agricultural enterprises. *Modern Management Technology*.
- Zolnikova, S.N., Saparmuradova, L. M., & Kulchikhina, E. G. (2017). Management of an enterprise innovative activity. *Academy of Strategic Management Journal*.