The role of vocational education in the context of sustainable development

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Abstract. The article is devoted to the study of the relationship between issues of education programms and the problem of poverty, in particular, the poverty of the working population. The main features of poverty in Kazakhstan are identified and the factors that form the poverty of the working-age population are considered. Based on the analysis of the sectoral structure of employment, conclusions are drawn about the increased risk of spreading working poverty among the population of the Republic of Kazakhstan due to unemployment, reduced working hours, low labor productivity, the influx of labor resources in industries with low added value and low wages. The importance of creating favorable conditions for sustainable economic development and reducing income inequality among the working population is emphasized. Understanding the link between poverty and food insecurity will contribute to the development and implementation of a systemic social policy that ensures fair wages, as well as a socially equitable distribution of resources in society.

1 Introduction

A key component of the country's national security, ensuring the preservation of statehood and sovereignty, is to improve the quality of life of the population through guaranteeing high standards of life support and ensuring education programms. The country's education programms should be understood as such a resource state of the national economy, in which the physical and economic accessibility of high-quality food products for each individual is guaranteed, in volumes corresponding to established rational consumption standards necessary for an active and healthy lifestyle.

At the same time, the problems of education programms and malnutrition are closely interrelated with social inequality and poverty. At the same time, a vicious circle is created when low-income households are forced to use various survival strategies that lead to malnutrition and have negative consequences for their nutrition, health and productivity, which preserves the trap of poverty and social vulnerability for a long period.

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In today's world, work is not always a reliable way to escape poverty. Contrary to the generally accepted view that employment guarantees financial stability, there is a phenomenon that remains out of focus: poverty among workers. This phenomenon, when even with jobs, people cannot provide themselves and their families with a decent standard of living, poses a serious challenge to economies and societies.

The relevance of the topic of poverty among workers remains at a high level in modern society. Despite the constant development of the economy and the growth of the general level of well-being, many workers still face financial difficulties. This phenomenon highlights not only the inefficiency of economic models, but also the uneven distribution of well-being.

In today's dynamic reality, changes in technology, job structure and skill requirements make some groups of workers more vulnerable to the risk of poverty, even working in permanent positions. Factors such as low pay, unstable work schedules, lack of social guarantees and affordable medical care are just some of the problems faced by millions of working people around the world.

Thus, an analysis of the problem of poverty among workers is not only necessary to understand the current situation, but is also the key to developing effective strategies for fighting for social justice and equal opportunities.

2 Materials and methods

The methodological basis of the study was the theoretical foundations of systems research. Also, the dialectical method of cognition and a systematic approach that reveals the possibilities of scientific research of socio-economic phenomena in the development of their relationship and interdependence, methods of systematic analysis of perception processes, median determination based on statistical data were used.

3 Literature review

The issue of poverty is undoubtedly one of high importance and vital issues that attracts much attention locally and globally. Since the phenomenon of poverty throughout history has always been associated with human social life, the problem of arresting and helping the poor has a long history in human society. Every year, countries strive to reduce poverty in their countries by measuring poverty indicators and in this regard, the international community strives to play its role in eradicating global poverty by implementing various policies and programs [1-5].

Internationally, poverty is widely understood in a multidimensional sense as a deprivation of well-being across multiple dimensions, rather than simply a lack of income or low consumption [6, 7].

The characteristics of poverty have significant implications for poverty analysis and therefore must be specifically taken into account. The language of poverty reveals the extent and severity of poverty in a community. It also allows poverty experts to advocate for the dignity of people and minimize misconceptions about social poverty. Finally, the language of poverty provides a contextual understanding of its meaning. The multidimensional and complex nature of poverty determines the selection of an appropriate poverty worldview for poverty analysis [8].

Labor market activity and gainful employment must be a key to protecting individuals and families from poverty and providing them with sufficient resources to meet the members' needs [9-11].

However, a sizable portion of households are unable to turn down a paid employment and end up in a position known as "working poverty" as a result of numerous labor market processes, the impact of personal variables, and frequently inadequate social capital [12]. Poverty is a phenomenon that reflects a certain status of a person in the system of economic and social relations. In order to identify the content of economic relations regarding poverty formation, one must consider the system of relations of human reproduction as a carrier of labor force potential. Additionally, a person can act as a form of embodiment of capital (by a capitalist) [13].

According to Zhou and Liu, The study of spatial patterns, distribution traits, territorial kinds, the evolution of poverty, its relationship to the physical environment, and strategies for mitigating it is known as poverty geography, a subfield of human geography [14].

Poverty as a social phenomenon exists in all countries of the world. Differences in its definition and assessment are largely determined by the criteria for classifying citizens of a particular state as poor. The works of domestic and foreign scientists [15-19] are devoted to the study of various aspects and the concept of poverty. A new understanding and recent measurement of poverty are well described by Selivanova and Razumov [20].

Baranova, Tarabanov in their studies consider poverty as "a marked decline in well-being", thus the economic state of an individual or group of individuals who fail to meet a certain range of minimal needs necessary for a human life, preservation and improving performance, as well as continuation and increase the number of descendants [21].

In recent decades, especially in the United States, has seen an increase in low-quality jobs and unequal job distribution. A higher value of the job imbalance indices means that there are a relatively large number of households with several people employed and households with unemployed people. Likewise, low-quality jobs are those that fail to offer full-time work. Bilateral fixed-effect models estimate that a more unequal distribution of jobs across households exacerbates aggregate poverty at the state level [22]

Around the world [23-26], changes in labor markets pose challenges to social inclusion through employment. The expansion of insecure, precarious and low-quality forms of employment [27] is changing inequalities in the labour world. It is the in-work poor, employed people living in households with incomes below the poverty line, that reflect one of the constraints that employment faces to guarantee decent living conditions. The ILO emphasizes that, given the unstable global economic situation, decent work deficits have worsened. [29]

Despite growing awareness of the "revival" of working poverty, the topic remains relatively under-researched. There are good reasons to believe that working poverty may become a more pressing problem in the nearest future, and social policy researchers will need good theoretical frameworks and robust perspective strategies in assessment. [29].

Low work intensity and high job insecurity are the most important micro-determinants of working poverty. Importantly, they can also affect subjective poverty in households above the poverty threshold [30]. The growth in research on in-work poverty is conditioned by a growing evidence that the benefits of the 1990 economic growth were shared unequally among wage earners and, until recently, did not lead to a reduction in overall poverty rates. This was especially true in the first half of the decade, for the bottom 20% of the wage scale the workers earned about 10 times less than for the top 20%, and in fact their real wages fell steadily by an average of 0.9% per year [31].

The complexity and ambiguity of the phenomenon of "in-work poverty" justifies the relevance of a comprehensive study of this phenomenon. The working poor are people of working age, in the prime of life and potential, who have received specialized (most often higher) education and the necessary qualifications, most often have a permanent place of work, but receive inadequately low wages for their work.

4 Results

While economic growth is the main tool for combating poverty in market economies, this growth must be ensured by high-quality and sustainable incentives: increasing the productivity of production factors, especially labor. Moreover, low inflation levels increase real incomes of the population and contribute to the growth of their well-being. The current situation with high state participation in the economy distorts market mechanisms and impedes sustainable and long-term growth, as well as effective control of inflation [32-33]. The mechanism of income redistribution in the form of social support from the state lacks sufficiently covers the entire part of the population in need and therefore also reduces the effectiveness of the state's fight against poverty.

Currently, we can observe that the level of poverty in many regions of Kazakhstan is growing yearly. According to the World Bank, the poverty rate outside the city in Kazakhstan could rise to 12-14%. If the difference in poverty levels across regions in the state tends to grow, this could lead to high social inequality, an economic crisis, increased mortality and other serious problems [34].

According to the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, the share of the population with incomes below the subsistence level in 2022 was 5.2% [35].

The highest poverty levels by region in 2022 were recorded in Turkestan (9.7%) and Mangistau (8.1%) regions, the lowest in Astana (1.9%).

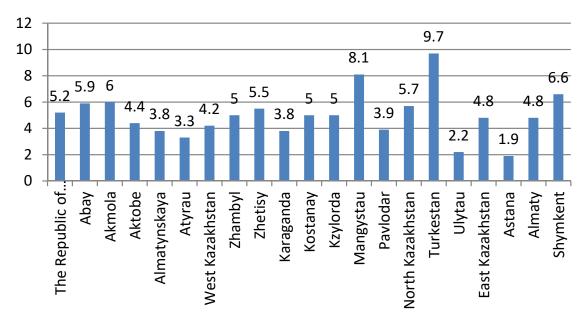


Fig.1. Share of the population with incomes below the subsistence level by region, in percentage [35].

Significant income differentiation between urban and rural residents has remained. Thus, in urban areas the share of the population with incomes below the subsistence level was 4%, and in rural areas comprises 7.3%. The largest difference between the level of urban and rural poverty in 2021 was observed in Mangistau (5.4 times higher) and East Kazakhstan (4 times higher) regions.

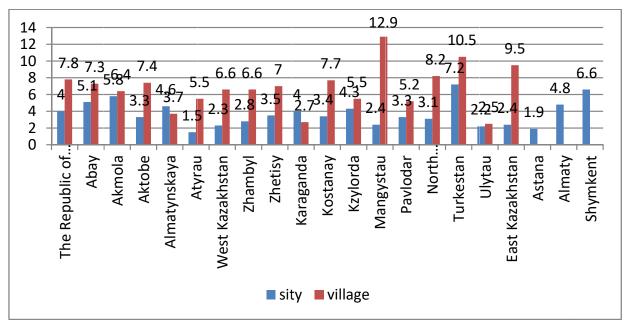


Fig. 2. Share of the population with incomes below the subsistence level in urban and rural areas by region, in percentage [35].

The poverty estimation in 2022 was also affected by the fall in real incomes of the population. Firstly, there was a slowdown in growth observed in the period 2020 and 2021, followed by 1.7% fall in 2022 for the first time since 2015, when real incomes fell nearly 5%. Despite some growth in nominal incomes in 2022, an unprecedented double-digit inflation rate of 20.3% ate up the entire increase.



Fig. 3. Share of the population with incomes below the subsistence level in urban and rural areas by region, in percentage Nominal income per capita and real income growth [35].

Negative trends in real incomes of the population and high inflation are also reflected in the deterioration of the population's consumption structure. Economic research suggests that the richer a household becomes, the more diversified its consumption becomes, and the smaller the proportion spent on food purchases. In Kazakhstan, on the contrary, this share not only does not decrease, but also grows products take up half of all income, which significantly exceeds the average values in developed and even some developing countries.

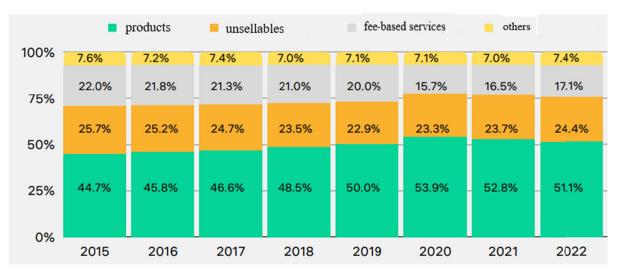


Fig. 4. Structure of household cash expenditures [35].

The main tool for fighting poverty is increasing the well-being of the population by creating conditions for macroeconomic stability, which implies economic growth and low inflation. It is especially worth noting that economic growth must be high-quality, sustainable, generated by an increase in the productivity of production factors. Specifically, the economy itself creates incentives and opportunities for the population to increase their income and standard of living. Therefore, the primary task of the state in eradicating poverty is to create conditions for macroeconomic stability.

Kazakhstan has a very complex system for supporting socially vulnerable citizens, the basis of which is the payment of various social benefits. However, the scope of this assistance varies greatly depending on the target group. To illustrate, survivor and disability benefits in 2022 averaged 50,419 tenge per month, while large families, regardless of income, received in average 54,400 tenge. However, other types of social government transfers, namely, targeted social assistance, which is designed to combat poverty. In 2022, it was issued the average in the amount of 6,712 tenge per month, which is 6.5 times lower than the subsistence level.

Thus, in combination with complex procedures for obtaining the relevant assistance, a part of the population that is truly in need still remains insufficiently covered by social protection. This is a very superficial overview of the main support tools, but nevertheless gives some insight into their shortcomings. We have aimed to conduct a detailed analysis of existing forms of state social assistance and share the results in publications in the future [36-37].

In the Republic of Kazakhstan, according to expert sociologists, in-work poverty is more common in such areas as education, healthcare, agriculture, culture and art, and accommodation services; and the distribution of the number of in-work poverty is influenced by economic-geographical conditions and regional characteristics.

The in-work poverty group is traditionally comprised by females who are more tending to work in economic fields with low income

Taking into account the peculiarities of the assessment base of OPP (obligatory pension payment) payers, based on the absolute approach of the ILO and some EU countries, the "working poor" in Kazakhstan can be defined as those employed workers in the formal sector of the economy, receiving less than 2/3 of the median taxable labor income. Using this approach, the share of the working poor in the Republic of Kazakhstan, according to HPF (hazardous production facility) data, was 33.7% in 2020, 32.9% in 2021, and it equals to 34.3% in 2022.

Table 1. Median income from labor activity and the share of "working poor" in the Republic of Kazakhstan by foreign trade activity.

FTA	The median income			The share of working poor		
	2020	2021	2022	2020	2021	2022
Totally	142718	165816	204149	33.7%	32.9%	34.3%
Agriculture, Forestry and Fisheries	108464	106893	135616	36.9%	22.7%	31.5%
Mining and quarrying	319715	322447	420272	33.3%	29.7%	32.7%
Manufacturing industry	181345	200893	248631	29.6%	28.6%	30.7%
Electricity, gas, steam, hot water and air conditioning	143573	162245	200533	24.3%	26.1%	27.0%
Water supply; waste management, pollution management	115364	128726	147693	19.9%	23.0%	24.4%
Construction	197899	230201	295516	29.5%	29.9%	31.5%
Wholesale and retail trade; repair of cars and motorcycles	145067	158067	184921	34.0%	35.6%	36.9%
Transportation and warehousing	172159	189879	249136	17.4%	24.4%	24.9%
Accommodation and food services provision	214417	189082	173814	30.7%	29.0%	39.3%
Information and communication	200156	218424	255192	27.9%	28.9%	30.6%
Financial and insurance activities	219239	248888	315668	29.1%	30.6%	32.3%
Real estate operations	142301	102004	197448	29.2%	33.4%	35.8%
Professional, scientific and technical activities	186769	204677	246448	35.0%	36.6%	36.8%
Activities in the field of administrative and support services	107713	117250	140140	20.6%	26.3%	23.6%
Public Administration and Defense; compulsory social security	128589	144394	181525	29.9%	27.8%	27.8%
Education	125918	155597	193119	18.6%	22.5%	33.2%
Healthcare and social services	131461	163324	194661	29.1%	28.9%	29.9%
Arts, entertainment and recreation	113954	119129	133719	39.2%	32.6%	30.0%
Provision of other types of services	212641	206871	245189	38.1%	34.6%	37.3%

The results of constructing and analyzing average values and estimated indicators in 2020 show that on average in the country the median taxable income from labor activity was 142,718 tenge. According to the ILO absolute approach, the taxable labor income of the "working poor" was within the range of 95,145 tenge.

As a result, the approach to assessing labor income based on the HPF base enables to cover about 56.2% of those employed in the economy. Taking into account this approach to analysis, the "in-work poverty" in the Republic of Kazakhstan can be defined as workers employed in the formal sector of the economy and making tax payments to the budget on

income from work within 2 minimum wages. At the same time, their estimated share in the Kazakhstani labor market is about 40%. Based on the study, in the regions of the republic it is necessary to introduce correction factors due to various reasons for the differentiation of labor income, based on the characteristics of the labor market and the standard of living of the population.

5 Conclusions

The rejection of Soviet approaches, liberalization of the labor market, and the adoption of the new Labor Code in 2015 was disaccompanied by a transformation of the wage system. As a result, it continues to be built on the basis of basic salaries, rates and other Soviet standards with the introduction of new coefficients and similar mechanisms. And since the budget requires optimization, and a direct revision of wage parameters, it is associated with time and material costs. It is favorable to approach the problem at the macro level so to introduce labor standards, index the minimum wage, etc. It causes more difficulties to review the labor parameters of each area of economic activity, since information on wages is often confidential and not available to trade unions, and the actions of labor inspectorates are limited, which is motivated by supporting the development of the business sector. Therefore, the risk of arbitrariness on the part of employers, dictated by the aim to maximize profits, which in a pandemic exacerbates the problem of the "in-work poverty" and there is a great potential for protest.

Thus, one of the key ways to ensure

is to combat systemic social inequality in the income of the population, including eliminating the problem of working poverty. Understanding the link between poverty and food insecurity will contribute to the development and implementation of a systemic social policy that ensures fair wages, as well as a socially equitable distribution of resources in society.

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