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PLATFORM EMPLOYMENT: CURRENT STATUS, ANALYSIS AND CHALLENGES

The purpose of this article is to identify and assess the factors influencing the development of platform employment in Kazakhstan. The empirical basis for the study was the data of an online sociological survey. To process the obtained data, modeling methods using structural equations (SEM) based on the SmartPLS program were used. A selection of factors hypothetically influencing platform employment was carried out. Hypotheses about the influence of such factors as education, social protection, labor demand, legal regulation, income, digital skills on platform employment have been put forward and tested. An assessment was given to all incoming indicators and the resulting model as a whole. The factors that showed significant correlation were demand for labor, income, and legal regulation. The main problems of platform employment were identified - weak social protection of workers, insufficient level of education and digital skills. In general, the structural analysis showed that the resulting model is adequate and has a fairly good structure. The results obtained can be useful in evaluating the effectiveness of various social policy instruments, both at the regional and national levels.

Keywords: platform employment, gig economy, social protection, digital skills, education, population income, legal regulation, Kazakhstan, SmartPLS, structural analysis.
Кілт сөздер: платформа жұмыспен қамту, гиг экономика, әлеуметтік қорғау, цифрлық дағдылар, білім, халықтың кірісі, құқықтық реттеу, Қазақстан, SmartPLS, құрылымдық талдау.
Ключевые слова: платформенная занятость, гиг-экономика, социальная защита, цифровые навыки, образование, доходы населения, правовое регулирование, Казахстан, SmartPLS, структурный анализ.

Introduction. One of the labor market trends that is gaining popularity and changing employment conditions is the development of the "freelance economy" or "gig economy". The gig economy is a model in which a business uses a digital platform to find contractors for short-term projects and pays for completed tasks, not for the time worked. Platform employment can provide flexibility and convenience for both workers and employers [1].

However, platform employment also causes a number of social, economic and legal problems, such as income instability, insufficient protection of workers and lack of social guarantees. Therefore, platform employment requires attention from governments, society and business to find more balanced solutions [2].

The main objective of the study is to identify indicators that affect platform employment, determine the nature of the interaction between factors. The study focuses on the key determinants that affect the effectiveness of platform activity. These factors allow for a deeper understanding of the dynamics of interaction between business and workers, and also allow for the development of recommendations to improve their productivity and satisfaction. The data obtained can be used to optimize business processes and create more favorable conditions for platform employment workers.

Scientific novelty is determined by the disclosure of a set of predictors indicating existing gaps in the field of platform employment. The obtained results of the regression analysis help to better understand the mechanisms of influence on the productivity and satisfaction of workers of platform employment.

As part of the study, a sociological survey was conducted using the Google Forms electronic platform. The survey covered more than 1000 residents of Kazakhstan. Data processing was carried out in the Smart PLS program

Literature review. The problems of platform employment have been raised by many authors over the past decades. The growth of this innovative type of employment is accompanied by the rapid development of Internet technologies and is of global importance [3]. At the macro level, one of the most relevant topics

is the concept of legal regulation of platform employment. It is analyzed how platforms affect the economy and society as a whole, what are the economic and social advantages and disadvantages [4]. Measures to improve the working conditions of workers are discussed, such as organizing trade unions, strikes and other forms of activism [5]. Problems of lack of stable income, limited access to traditional labour rights and problems in receiving benefits are particularly pronounced in developing economies [6]. Researcher such as De Stefano, V. have analyzed how the gig economy fosters job insecurity, leading to stress and burnout among workers [7].

Studies by Sergushina E. et al. suggest that the algorithms used by platforms to manage workers and allocate tasks often lack transparency, creating concerns over fairness and accountability [8]. Researches Moody J. and Seltzer E. demonstrates that the economic and social impact of platform work varies significantly across countries and regions, influenced by differences in labor market regulations, technological infrastructure, and socio-economic conditions [9]. Kazakh scientists Kushebina G.M. et al. offer modern tools and methods that will help change the situation with the problems of people working on digital platforms [10].

The main part. The survey covered more than 1,000 respondents in several regions of Kazakhstan (Akmola, Almaty, Karaganda, Shymkent, etc.). The questionnaire consists of 7 blocks of questions: legal regulation of employment, education, income, digital skills, demand for labor, social protection, platform employment. Each block contains three or more questions, which are indicators for latent variables. The survey results were converted into digital form, on a five-point scale, and uploaded to the SmartPLS program. The population survey was conducted online using a Google form.

The first stage of the analysis included the selection of the most likely influential predictors, such as legal regulation, population income, education, digital skills, social protection and labor demand.
At the second stage, research hypotheses were put forward (Table 1).

Table –1

Research hypotheses

Name	Statement of the hypothesis
H1	Increase in income of platform workers leads to growth in the number of people employed on electronic platforms
H2	Increasing the level of education of workers affects the growth of the number of people employed on electronic platforms
H3	There is a significant relationship between government regulation of employment and platform employment
H4	Strengthening social guarantees leads to an increase in the number of people employed on electronic platforms
H5	Growing demand for labor directly affects the growth of employment on digital platform
H6	High digital skills of people affect the number of workers on digital platforms

* compiled by the authors

Model building
A survey of the population of Kazakhstan made it possible to construct a model demonstrating correlation and regression relationships between the factors under study (Figure 1).
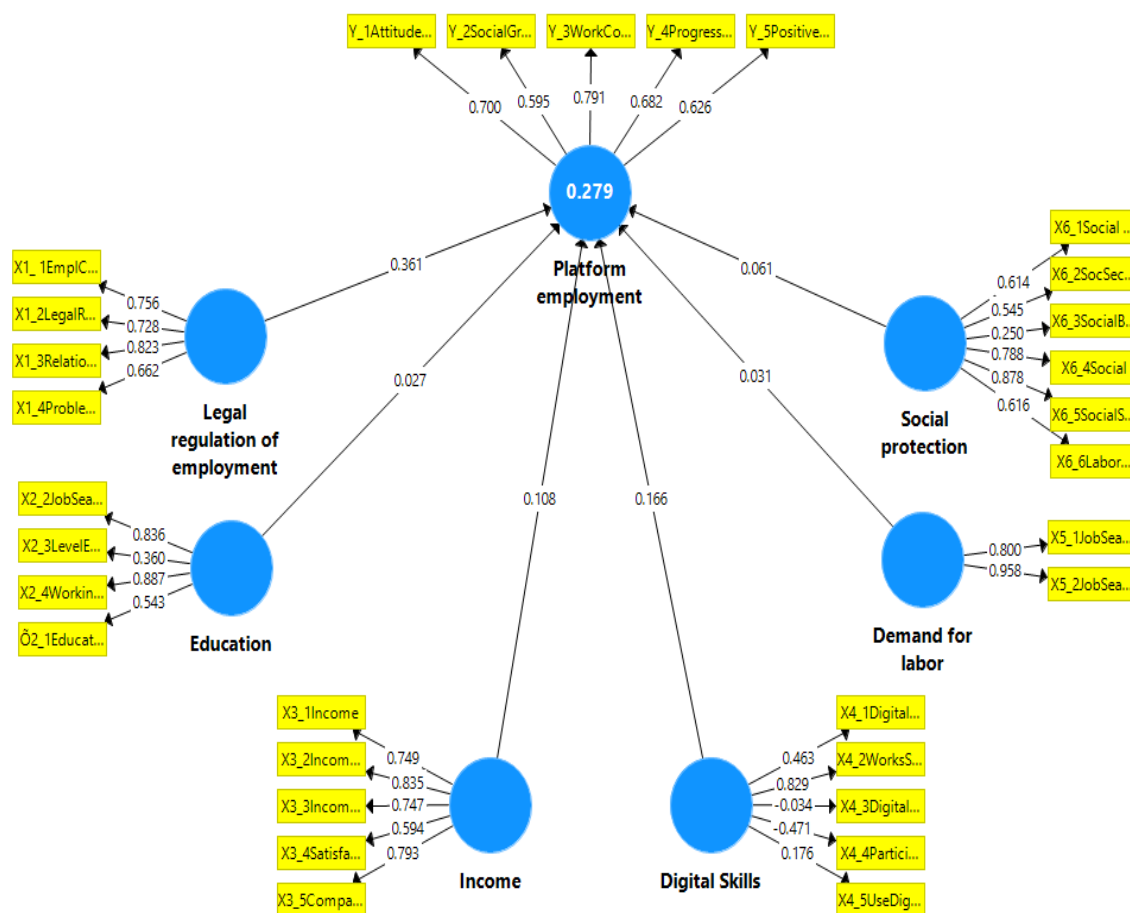
Figure –1. **Platform employment model**
* compiled by the authors

As Figure 1 shows, the numerical values of some indicators were below the threshold value of 0.7. This fact indicates the existing problems in certain questions, or large differences in the answers of the respondents, which demonstrates the heterogeneity of the results obtained. All indicators with low values are removed from the model.

Model validation. The resulting model is assessed using Cronbach's alpha coefficient. This indicator is used to assess the reliability of a questionnaire. It measures how well a set of questions or items reflects the same concept (Figure 2).
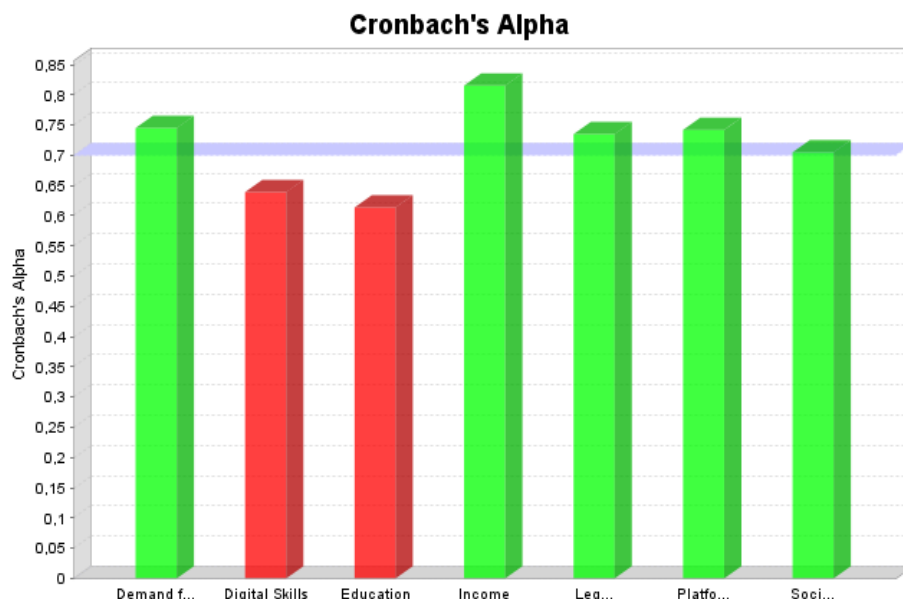
Figure –2. **Cronbach's Alpha coefficients**
* compiled by the authors

The graph shows the Cronbach's Alpha coefficients for various factors measured in the study. The value of 0.7 is a threshold, factors above this line have sufficient internal consistency, and below - insufficient.

Factors with high reliability are: Demand for labor, Income, Legal regulation, Platform employment, Social protection. These factors have good consistency and can be used for analysis.

Factors with low reliability: Digital Skills, Education. These variables have low internal consistency, which may indicate a high scatter of respondents' answers, insufficient consistency of the questionnaire questions, a possible need to revise or adjust these factors in the study.

Hypothesis testing. Table 2 presents data on accepted and rejected hypotheses.

Table –2

Analysis results

№	Hypotheses	Original Sample	T Statistics	P Values	Hypothesis status
H1	Demand for labor -> Platform employment	0,231	1,993	0,000	Accepted
H2	Digital Skills -> Platform employment	0,166	1,839	0,067	Rejected
H3	Education -> Platform employment	0,027	0,709	0,479	Rejected
H4	Income -> Platform employment	0,108	2,377	0,018	Accepted
H5	Legal regulation of employment -> Platform employment	0,361	9,859	0,000	Accepted
H6	Social protection -> Platform employment	0,061	1,447	0,149	Rejected

* compiled by the authors

The results of the analysis (Table 2) show that hypotheses H1, H4, H5 are accepted. According to the respondents, the greatest influence on platform employment is exerted by "legal regulation of

employment". The high value of the coefficient of legal regulation of employment (0.361) confirms the importance of legal acts adopted by the state, their significant influence on platform employment.

The influence of the factor "Labor demand" also has a positive correlation with platform employment (0.231). The rapid development of the World Wide Web has created favorable conditions for remote work, the spread of the gig economy, where the employer and employee communicate through online platforms.

No less important role in the development of platform employment is played by the factor "Income of the population" (0.108). Income is the main motivation for people to work through online platforms.

According to the results of the study, hypotheses H2, H3, H6 were rejected. That is, the acute problems today are:
- insufficient level of digital skills;
- educational level for entering the platform employment market;
- absence or low social protection of platform employment workers.

In the labour market, people with high levels of digital skills have access to greater employment opportunities. They are much easier to find and secure jobs on online platforms, and they may also have more specialized skills, which can make them more attractive to potential employers.

Education is a strong indicator of people's professional positions in their activities. Employees with higher education voluntarily choose platform employment as a means of earning additional income. Thus, education can improve your chances of finding a job and perhaps even improve your quality of work (e.g. higher wages, career advancement, improved financial situation).

The rejected hypothesis H6 confirms the existence of problems related to social guarantees. Platform employment workers feel socially unprotected or protected at a very low level. This is explained by the fact that among the respondents, the majority of respondents are deprived of social security due to the lack of an official employment contract.

The rejected hypotheses indicate the existence of problems that need to be solved at the state level. In this regard, in the next section, we propose to implement some measures to solve the above-mentioned problematic issues.

Conclution. In general, based on the study, the following are proposed as suggestions and recommendations:

1) Revise professional educational programs in educational institutions. Scientific progress, changes in the technological order are accompanied by the processes of changing old and the emergence of new professions. The transformation of professions inevitably changes the requirements for the competencies of new employees, a new qualification model of the employee of the future is being formed. This increases the requirements for skills, knowledge, educational level of the employee. According to the results of the study, digital platform workers feel a lack of sufficient competencies and professional skills in the digital labor market.

2) Increasing the level of digital skills of the population through the organization of additional education and advanced training courses.

Working with modern technologies requires highly qualified personnel with a fundamentally new set of knowledge and skills, able to make non-standard decisions, act in conditions of uncertainty, see the problem as a whole and be ready to organize working groups to solve them. Today there is a need for mass retraining of personnel. It is necessary to stimulate the workforce to undergo vocational training and regular advanced training.

3) The main direction of regulation of digital labor platforms should be, first of all, the social protection of workers. To achieve this goal, it is necessary to establish control over labor platforms by exchanging data on platform workers with regulatory authorities. Such data may include information about the number of hours worked, the salary received by the service provider, that is, information that will help, for example, the Tax Authorities to determine the amount of pension and social payments. To achieve this objective, platforms must share their policies and performance data with regulators. Regulators, in turn, must ensure that platforms have room to maneuver, provided that they comply with mutually agreed thresholds (criteria).

The main task of the state should be to create a legal and regulatory environment for employment on the platform, which will provide social support, improve working conditions, benefits and general safety for platform workers.

REFERENCES

1. Falck O., Heblich S., Lameli A. The impact of the gig economy on worker well-being: A systematic review // Journal of Economic Surveys. – 2019. – № 33(3). – P. 1015–1045. – doi: 10.1111/joes.12281.

2. Veen A. The dark side of platform work: Understanding the relationship between digital labour platforms and precarious employment // Triple Helix. – 2017. – № 4(1). – P. 1–20. – doi: 10.1186/s40604-017-0051-9.

3. Abaeva G., Kuzhukeeva K., Kazhikova Zh., Danijarova M. Zanjatost' naselenija v uslovijah cifrovizacii // Vestnik Kazahskogo universiteta jekonomiki, finansov i mezhdunarodnoj torgovli [Employment of the population in the context of digitalization // Bulletin of the Kazakh University of Economics, Finance and International Trade] – 2024. – № 4(57). – S. 236–244. – doi: 10.52260/2304-7216.2024.4(57).27 [in Russian].

4. Kunjazova S., Kunjazov E., Karimbergenova M., Kadyrova A. Zanjatost' kak odin iz instrumentov social'no-jekonomicheskoj politiki Kahahstana // Vestnik Kazahskogo universiteta jekonomiki, finansov i mezhdunarodnoj torgovli [Employment as one of the instruments of socio-economic policy of Kazakhstan // Bulletin of the Kazakh University of Economics, Finance and International Trade] – 2021. – № 3(44). – S. 15–21. – doi: 10.52260/2304-7216.2021.3(44).2 [in Russian].

5. Sembekov A., Tazhbayev N., Ulakov N., Tatiyeva G., Budeshov Ye. Digital modernization of Kazakhstan's economy in the context of global trends // Economic Annals-XXI. – 2021. – № 187(1–2). – P. 51–62. –doi: 10.21003/ea.V187-05.

6. Berg J., Furrer M., Harmon E., Rani U., Silberman M. S. Digital labour platforms and the future of work: Towards decent work in the online world // International Labour Organization. – 2020. - URL: https://www.ilo.org/global/topics/future-of-work/publications/WCMS_645337/lang--en/index.htm.

7. De Stefano V. Platform work in Europe: Recent trends and policy responses // European Trade Union Institute. – 2021. -https://doi.org/10.21953/lse.00004035.

8. Sergushina E., Leontyev D., Kozhukalova O., Dambayeva I., Bekhorashvili N. Digital economy as a factor in increasing the competitiveness of countries and industries: a quantitative analysis // Economic Annals-XXI. – 2021. – № 188(3–4). – P. 69–76. – doi: 10.21003/ea.V188-08.

9. Moody J., Seltzer E. Riding the wave of the gig economy: Understanding the determinants of participation and performance on gig platforms // Social Science Research. – 2017. – №67. – P. 102–118. – doi: 10.1016/j.ssresearch.2017.07.009.

10. Kushebina G., Abaeva G., Seitova G., Zhusupbekova G.E. Vlijanie cifrovizacii na razvitie platformennoj zanjatosti // Vestnik Kazahskogo universiteta jekonomiki, finansov i mezhdunarodnoj torgovli [The Impact of Digitalization on the Development of Platform Employment // Bulletin of the Kazakh University of Economics, Finance and International Trade]– 2024. – № 1(54). – S. 174–181. – DOI: 10.52260/2304-7216.2024.1(54).22 [in Russian].

11. Lehdonvirta V., Sun Y. Platformization and the future of work: Towards decent platform work in China // China Economic Journal. – 2022. – № 15(1). – P. 1–20. – doi: 10.1080/17538963.2022.2029786.

12. Aronovich E., Marczak R. Platform labor: on the gendered and racialized exploitation of low-income workers in the gig economy // Feminist Media Studies. – 2020. – № 20(4). – P. 558–574. – doi: 10.1080/14680777.2019.1690247.

13. Ghezzi A., Riva M. Regulating the gig economy: What role for employment law? // Comparative Labor Law & Policy Journal. – 2019. – № 41(3). – P. 319–350. – doi: 10.1177/1094670519875237.

14. Wood A., Graham M., Lehdonvirta V., Hjorth I. Good gig, bad gig: Autonomy and algorithmic control in the global gig economy // Work, Employment and Society. – 2019. – № 33(1). – P. 56–75. – doi: 10.1177/0950017018785616.

ЛИТЕРАТУРА

1. Falck O., Heblich S., Lameli A. The impact of the gig economy on worker well-being: A systematic review // Journal of Economic Surveys. – 2019. – № 33(3). – P. 1015–1045. – doi: 10.1111/joes.12281.

2. Veen A. The dark side of platform work: Understanding the relationship between digital labour platforms and precarious employment // Triple Helix. – 2017. – № 4(1). – P. 1–20. – doi: 10.1186/s40604-017-0051-9.

3. Абаева Г.И., Кужукеева К.М., Кажикова Ж.Н., Даниярова М.Т. Занятость населения в условиях цифровизации // Вестник Казахского университета экономики, финансов и международной торговли – 2024. – № 4(57). – С. 236–244. – doi: 10.52260/2304-7216.2024.4(57).27

4. Кунязова С.К., Кунязов Е.К., Каримбергенова М.К., Кадырова А.С. Занятость как один из инструментов социально-экономической политики Кахахстана // Вестник Казахского университета экономики, финансов и международной торговли – 2021. – № 3(44). – С. 15–21. – doi: 10.52260/2304-7216.2021.3(44).2

5. Sembekov A., Tazhbayev N., Ulakov N., Tatiyeva G., Budeshov Ye. Digital modernization of Kazakhstan's economy in the context of global trends // Economic Annals-XXI. – 2021. – № 187(1–2). – P. 51–62. –doi: 10.21003/ea.V187-05.

6. Berg J., Furrer M., Harmon E., Rani U., Silberman M. S. Digital labour platforms and the future of work: Towards decent work in the online world // International Labour Organization. – 2020. - URL: https://www.ilo.org/global/topics/future-of-work/publications/WCMS_645337/lang--en/index.htm.

7. De Stefano V. Platform work in Europe: Recent trends and policy responses // European Trade Union Institute. – 2021. -https://doi.org/10.21953/lse.00004035.

8. Sergushina E., Leontyev D., Kozhukalova O., Dambayeva I., Bekhorashvili N. Digital economy as a factor in increasing the competitiveness of countries and industries: a quantitative analysis // Economic Annals-XXI. – 2021. – № 188(3–4). – P. 69–76. – doi: 10.21003/ea.V188-08.

9. Moody J., Seltzer E. Riding the wave of the gig economy: Understanding the determinants of participation and performance on gig platforms // Social Science Research. – 2017. – № 67. – P. 102–118. – doi: 10.1016/j.ssresearch.2017.07.009.

10. Кушебина Г.М., Абаева Г.И., Сеитова Г.Т., Жусупбекова Г.Е. Влияние цифровизации на развитие платформенной занятости // Вестник Казахского университета экономики, финансов и международной торговли – 2024. – № 1(54). – С. 174–181. – doi: 10.52260/2304-7216.2024.1(54).22

11. Lehdonvirta V., Sun Y. Platformization and the future of work: Towards decent platform work in China // China Economic Journal. – 2022. – № 15(1). – P. 1–20. – doi: 10.1080/17538963.2022.2029786.

12. Aronovich E., Marczak R. Platform labor: on the gendered and racialized exploitation of low-income workers in the gig economy // Feminist Media Studies. – 2020. – № 20(4). – P. 558–574. – doi: 10.1080/14680777.2019.1690247.

13. Ghezzi A., Riva M. Regulating the gig economy: What role for employment law? // Comparative Labor Law & Policy Journal. – 2019. – № 41(3). – P. 319–350. – doi: 10.1177/1094670519875237.

14. Wood A., Graham M., Lehdonvirta V., Hjorth I. Good gig, bad gig: Autonomy and algorithmic control in the global gig economy // Work, Employment and Society. – 2019. – № 33(1). – P. 56–75. – doi: 10.1177/0950017018785616.

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ПЛАТФОРМАЛЫҚ ЖҰМЫСПЕН ҚАМТУ: АҒЫМДАҒЫ ЖАҒДАЙ, ТАЛДАУ ЖӘНЕ ҚИЫНДЫҚТАР

Аңдатпа

Бұл мақаланың мақсаты – Қазақстанда платформалық жұмыспен қамтуды дамытуға әсер ететін факторларды анықтау және бағалау. Зерттеудің эмпирикалық негізі социологиялық онлайн сауалнама деректері болды. Алынған деректерді өңдеу үшін SmartPLS бағдарламасына негізделген құрылымдық теңдеулерді модельдеу (SEM) әдістері қолданылды. Платформаның жұмысқа орналасуына гипотетикалық әсер ететін факторларды таңдау жүргізілді. Платформаның жұмысқа орналасуына білім, әлеуметтік қорғау, еңбек сұранысы, құқықтық реттеу, табыс, цифрлық дағдылар сияқты факторлардың әсері туралы гипотезалар алға тартылып, тексерілді. Барлық кіріс индикаторлары және тұтастай алынған модель бағаланды. Талдау нәтижелері көрсеткендей, бүгінгі таңда өзекті мәселелер: платформа жұмысшыларының әлеуметтік қорғалуының болмауы немесе төмендігі; цифрлық платформаларда лайықты және жақсы төленетін жұмыс

орындарын алу үшін білім деңгейі мен цифрлық дағдылардың жеткіліксіздігі. Тұтастай алғанда, құрылымдық талдау нәтижесінде алынған модель адекватты және жеткілікті жақсы құрылымға ие екенін көрсетті. Алынған нәтижелер аймақтық деңгейде де, ұлттық деңгейде де әртүрлі әлеуметтік саясат құралдарының тиімділігін бағалауда пайдалы болуы мүмкін.

Притворова Т.П., Атабаева А.К.

ПЛАТФОРМЕННАЯ ЗАНЯТОСТЬ: ТЕКУЩЕЕ СОСТОЯНИЕ, АНАЛИЗ И ПРОБЛЕМЫ

Аннотация

Целью данной статьи являлось выявление и оценка факторов, влияющих на развитие платформенной занятости в Казахстане. Эмпирической базой для исследования послужили данные проведенного социологического онлайн опроса. Для обработки полученных данных были использованы методы моделирования с помощью структурных уравнений (SEM) на основе программы SmartPLS. Проведен подбор факторов, гипотетически влияющих на платформенную занятость. Выдвинуты и протестированы гипотезы о влиянии таких факторов как образование, социальная защита, спрос на труд, правовое регулирование, доходы, цифровые навыки на платформенную занятость. Дана оценка всем входящим индикаторам и полученной модели в целом. Результаты анализа показали, что на сегодняшний день острыми проблемами являются: отсутствие или низкая социальная защита работников платформенной занятости; недостаточные уровни образования и цифровых навыков для получения достойной и хорошо оплачиваемой работы на цифровых платформах. В целом, структурный анализ показал, что полученная модель адекватна и имеет достаточно хорошую структуру. Полученные результаты могут быть полезными при оценке эффективности разных инструментов социальной политики, как на региональном, так и национальном уровне.