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NEET-youth in Kazakhstan: features of regional differentiation

Abstract

Object: The purpose of this research is to study trends in indicators in the regional context of young people in the NEET category.

Methods: Methods of system, dynamic, structural and correlation analysis, the spatial autocorrelation of indicators that characterize NEET-youth was evaluated based on the global Moran index.

Results: The results of calculating the Global Moran Index of regional indicators of NEET-youth and youth unemployment using the boundary matrix showed that there is a spatial correlation in the period under consideration, however, it differs in time intervals.

Conclusions: As a result of the study, the material was obtained, the analysis of which allowed us to conclude that the indicators of NEET youth and youth unemployment have a strong relationship for many regions. At the same time, the analysis revealed the importance of taking into account regional differentiation in policies and government programs developed and implemented to reduce youth unemployment, effectively use their labor potential and increase economic activity.

Keywords: youth of the NEET categories, youth, youth employment, regional differentiation, economic activity, youth unemployment, NEET indicators.

Introduction

Currently, the youth is an active component of civil society and the main object of the innovation process. We should say that the competitiveness of the state is directly linked to the growth of human capital, especially the younger generation, as the most vulnerable part of society to innovation. It is important to understand that the youth is a heterogeneous group, whose representatives occupy different places in society: students (schools, colleges, universities), working youth, the unemployed, etc. At the same time, NEET youth is one of the most socially vulnerable categories (Irina, 2018).

It is advisable to begin the analysis of the NEET group by examining its scale and dynamics (Figure 1). Globally, there has been an increase in the involvement of the population in this group, with women being more likely to experience vulnerability than men.

In Kazakhstan, over the past 20 years, the proportion of youth in the NEET category has declined from 18.6% to 6.9%, including a number of state programs and projects that have contributed to this process. In the world rankings, Kazakhstan is in the category of countries with the lowest proportion of NEET youth at 1–9.9% (Azerbaev et al., 2021).

In addition, there is also a decrease in youth unemployment between 2001 and 2021, i.e., from 16.6% in 2001 to 3.8% in 2021.

The relevance of the research topic is related to the emphasis on the problem concerning youth, which presents certain difficulties today.

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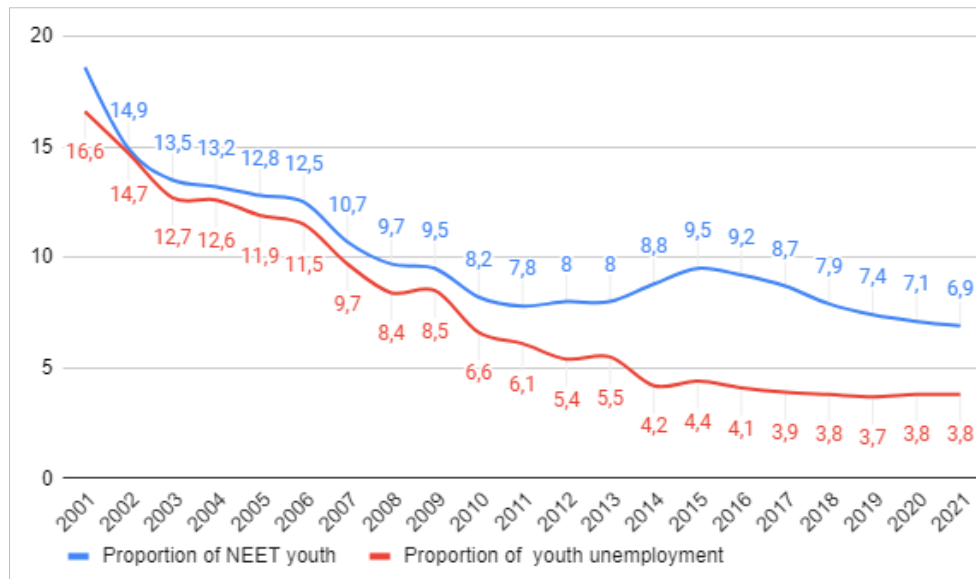


Figure 1. Proportion of NEET youth and youth unemployment in the Republic of Kazakhstan for 2001–2021, (%)

Note – Compiled by the authors on the basis of <https://stat.gov.kz/official/industry/25/statistic/7>

Literature Review

In recent years, there has been increasing interest in the academic community of youth studies in the category of NEET youth in international practice.

NEET youth is a specific social group, which has formed as a result of a variety of objective and subjective changes in modern society. The number, structure, and condition of NEET youth depend on the socio-economic and cultural features of each country, but the appearance of such a group is always a concern to society because of the threat of their marginalization, poverty, and social exclusion (Bulanova & Artamonova, 2020).

This group first became the focus of specific research by British scientists in the late 1980s, during the period when many unemployed youths who refused to participate in vocational training programs because of the revision of the conditions for receiving unemployment compensation in Great Britain were denied the right to register as unemployed and receive the corresponding benefit. As a result, they were excluded from both employment and training and retraining. In the early 2000s, the category “NEET” is widely used in the scientific literature, as well as in analytical and program documents of international organizations to describe and analyze the condition of youth (Varshavskaya & Stuken, 2017).

Many reasons for the transformation of young people into the NEET category are highlighted by the team of authors (Henderson, Hawke, & Chaim, 2017). Some young people face barriers to entering the labor market, such as poor labor market conditions, lack of job skills, or psycho-social problems, while others are temporarily suspended but plan to return to school (e.g., a “gap year”), and others show no interest in either school or the labor market.

Being a heterogeneous group, NEET youth are distinguished into two groups: the unemployed and the economically non-active (Varshavskaya, 2016). The term “unemployed” refers to young people who are looking for work but cannot find work, and instead (a) inactive youth are defined as young people who express a willingness to work despite not actively looking for work, and young people who work but are not immediately available for work (i.e. the NEET “potential workforce” subgroup) and (b) youth who are not looking for work and are not available for work (i.e. the NEET “unavailable workforce” subgroup). The inactive group NEETs include people with various motives for not working, such as young mothers who are caring for their kids, young people who are on disability pensions, or who are unable to work (Amendola, 2021). Thus, the NEET group includes people with different characteristics, experiences, and needs (Yates & Payne, 2006).

Eurostat currently offers a classification consisting of seven groups that clearly indicate the reasons for joining the ranks of NEET youth: “returning”, short-term unemployed, long-term unemployed, economically inactive because of illness and disability, economically inactive because of family responsibilities, hopeless

young people who have stopped the active search, other non-active. In addition, Bulanova M.V. also included in the list the eighth group “those who voluntarily chose this lifestyle” (Bulanova, 2019).

Methods

The empirical analysis conducted in this paper covered the period from 2001 to 2021. The sample includes 14 regions. The main data for the analysis were the official statistics of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. The logic of the study consisted of several stages.

The spatial autocorrelation of indicators characterizing NEET youth (the share of NEET youth and the level of youth unemployment in the Republic of Kazakhstan by region) was assessed in the first stage. The presence of spatial dependence is the main criterion for the possibility of constructing spatial models. The assessment was conducted by calculating one of the most popular methods, the Moran Global Index (Timiryanova, 2020). The Moran Global Index measures spatial autocorrelation using data on the location of objects and values of the analyzed indicator.

$$I = \frac{N}{\sum_{i=1}^n \sum_{j=1}^n W_{ij}} \frac{\sum \sum (Y_i - \bar{Y})(Y_j - \bar{Y})}{\sum (Y_i - \bar{Y})^2}, \quad (1)$$

where, N – number of objects (regions) (in the paper N=14, according to the number of regions in 2001-2021.); Y – value of the analyzed indicator; \bar{Y} - average value of the indicator; W_{ij} – the value of the matrix of spatial Scales (Pavlov & Koroleva, 2014).

The matrix of scales is in the form of a square. The columns of the spatial scales matrix show the scales reflecting the influence of each region on that region. The values on the main diagonal are zero. Thus, the matrix takes into account the influence of regions on each other but excludes the influence of the region itself. Consequently, the measurement matrix elements describe the spatial proximity of objects i and j. The boundary matrix was used for calculating the Moran index, i.e., in the boundary matrix, the element is either equal to one (if there is a common boundary) or equal to zero (in the opposite case). The definition of the boundary matrix resulted in $W_{ij}=52$.

Qualitative characteristics of spatial autocorrelation are analyzed by calculating the expected value of the Moran Index (Balash, 2012):

$$E(I) = -\frac{1}{N-1} \quad (2)$$

If $I > E(I)$, there is positive spatial autocorrelation (i.e. values in neighboring regions are similar), and if $I < E(I)$, there is negative autocorrelation (i.e. values in neighboring regions are different), if $I = E(I)$, there is no autocorrelation (values are randomly located) (Makarova, 2021).

The presence of spatial autocorrelation and its character (positive or negative) are determined by testing the hypothesis of the significance of the Moran Global Index using z-statistics:

$$z = \frac{I - E(I)}{SD(I)} \quad (3)$$

If the neutral hypothesis is not accepted, then $z > 0$ shows positive spatial autocorrelation, and $z < 0$ - negative (Nevzorova, Kireenko, & Majburov, 2020).

In the second stage, a correlation analysis was conducted between NEET youth and youth unemployment indicators to determine the regional differentiation of NEET unemployment. In addition, the paper used analytical, search, comparative, statistical, and other methods.

Results

2001–2021 against the background of the average Kazakhstani NEET youth indicators, there are a number of differences between the regions. Thus, over 20 years, the lowest value was characteristic of West Kazakhstan and Aktobe regions, and the highest value was shown by the Kyzylorda region (Figure 3).

The coefficient of variation of the share of NEET-youth of Kazakhstan regions was 0.299536. According to the interregional differentiation of the NEET level, Shymkent had the lowest (0.138571), and the highest was in the West Kazakhstan region (0.654308).

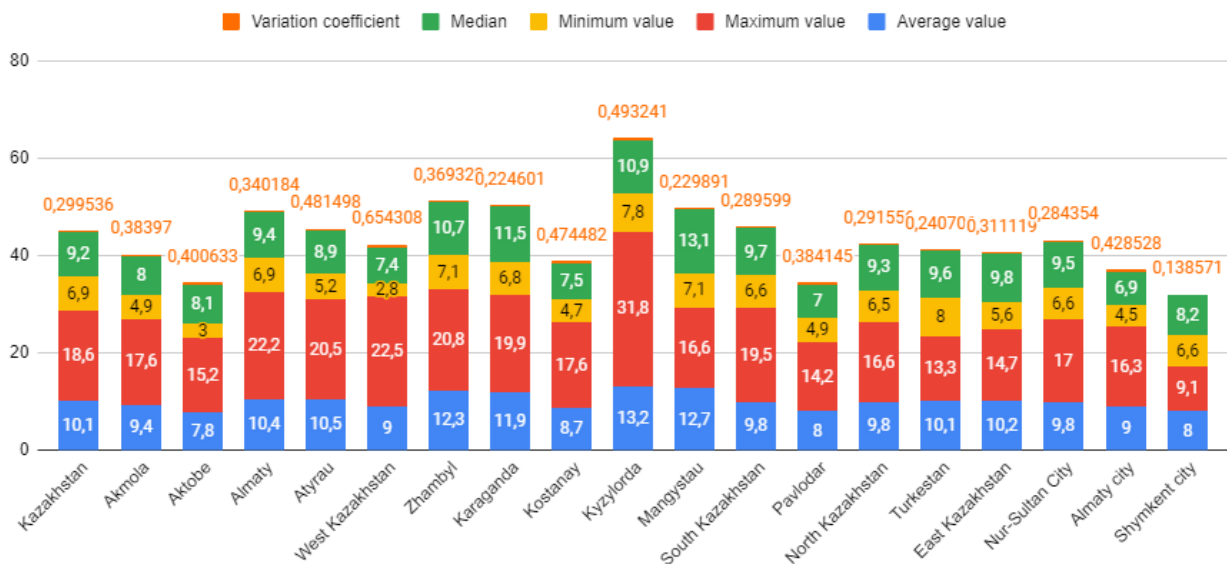


Figure 3. Regional differentiation of NEET-Youth indicators 2001–2021, %

Note – Compiled by the authors on the basis of <https://stat.gov.kz/official/industry/25/statistic/7>

The global Moran index was calculated using the border Matrix based on data on NEET-youth and youth unemployment by regions for 2001, 2011, and 2021 (Table 1).

Table 1. Moran's global index indicators for NEET youth and youth unemployment by boundary matrix

| Years | I | E(I) | z | Spatial autocorrelation |
|---|----------|-------|----------|-------------------------|
| the proportion of NEET youth | | | | |
| 2001 | -0,02283 | -0,07 | -0,31219 | negative |
| 2011 | -0,39737 | -0,07 | 0,51933 | positive |
| 2021 | 0,070767 | -0,07 | -0,52916 | negative |
| In the rate of youth unemployment between the ages of 15–28 years | | | | |
| 2001 | 0,171436 | -0,07 | 0,58311 | positive |
| 2011 | -0,53572 | -0,07 | 0,63629 | positive |
| 2021 | -0,20818 | -0,07 | 0,30285 | positive |

Note – Compiled by the authors on the basis of <https://stat.gov.kz/official/industry/25/statistic/7>

Moran's index as a whole indicates a positive statistically significant relationship between regional levels of NEET youth, which is characteristic only of the 2021 indicator of the NEET youth proportion in the Republic of Kazakhstan and the 2001 youth unemployment rate from 15 to 28. Consequently, this means that during these periods the regions of Kazakhstan were surrounded by other regions similar in value to NEET and unemployment rates. Analysis of z-statistics values allowed us to draw a conclusion about the non-random nature of the spatial distribution of values for the share of NEET youth in the regions, and on the contrary the level of youth unemployment. Comparing I with the threshold value E(I) indicates the presence of negative spatial autocorrelation. This suggests that there are statistically significant differences in the values of the indicator NEET youth in neighboring regions. Thus, there is an asymmetry in the region in terms of NEET youth.

To determine NEET unemployment by region, a correlation analysis was conducted between the NEET level of youth and the share of youth unemployment by region of Kazakhstan (Figures 2, 3).

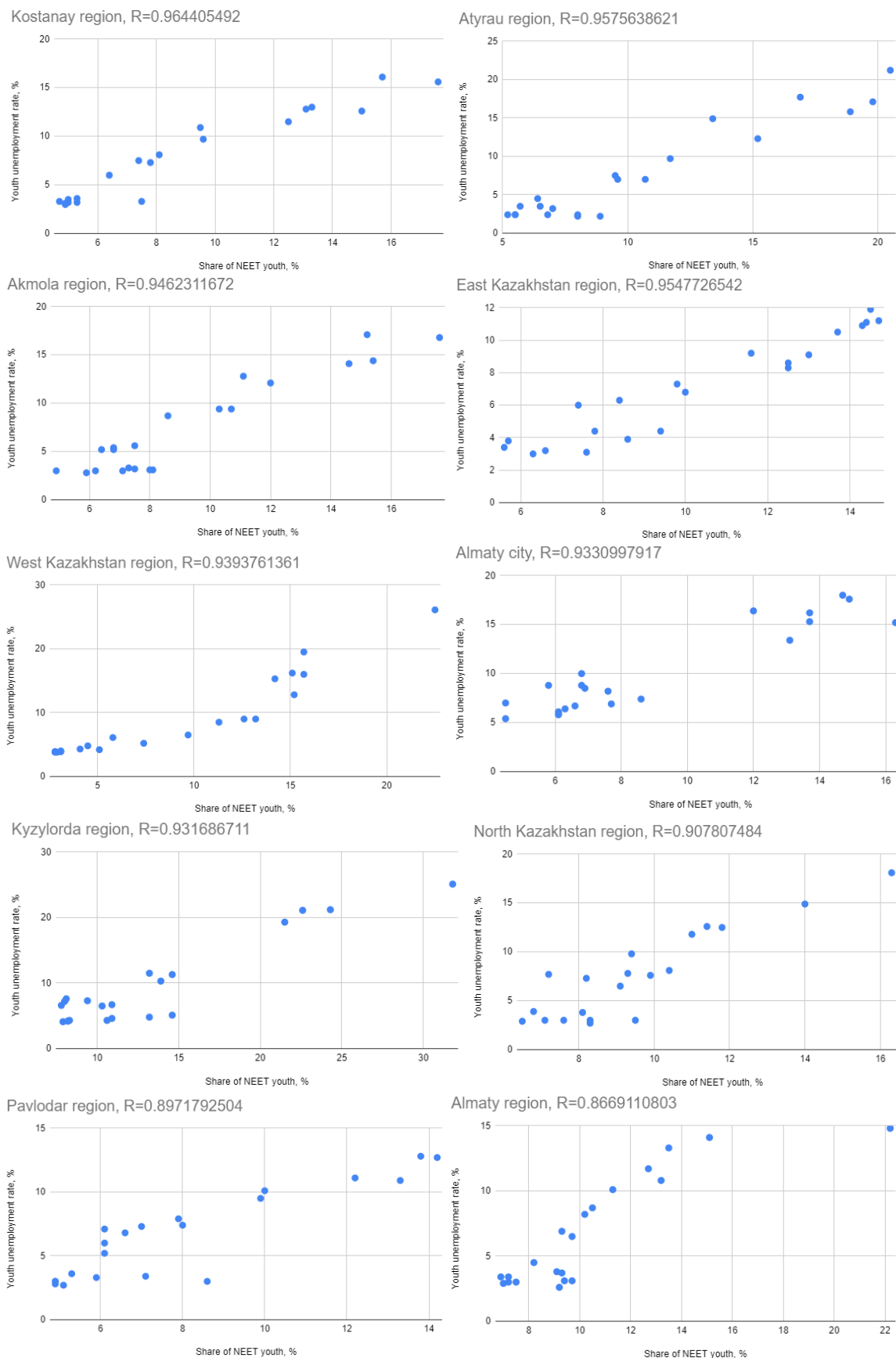


Figure 2. Correlation between youth unemployment among NEET youth by regions

Note – Compiled by the authors on the basis of <https://stat.gov.kz/official/industry/25/statistic/7>

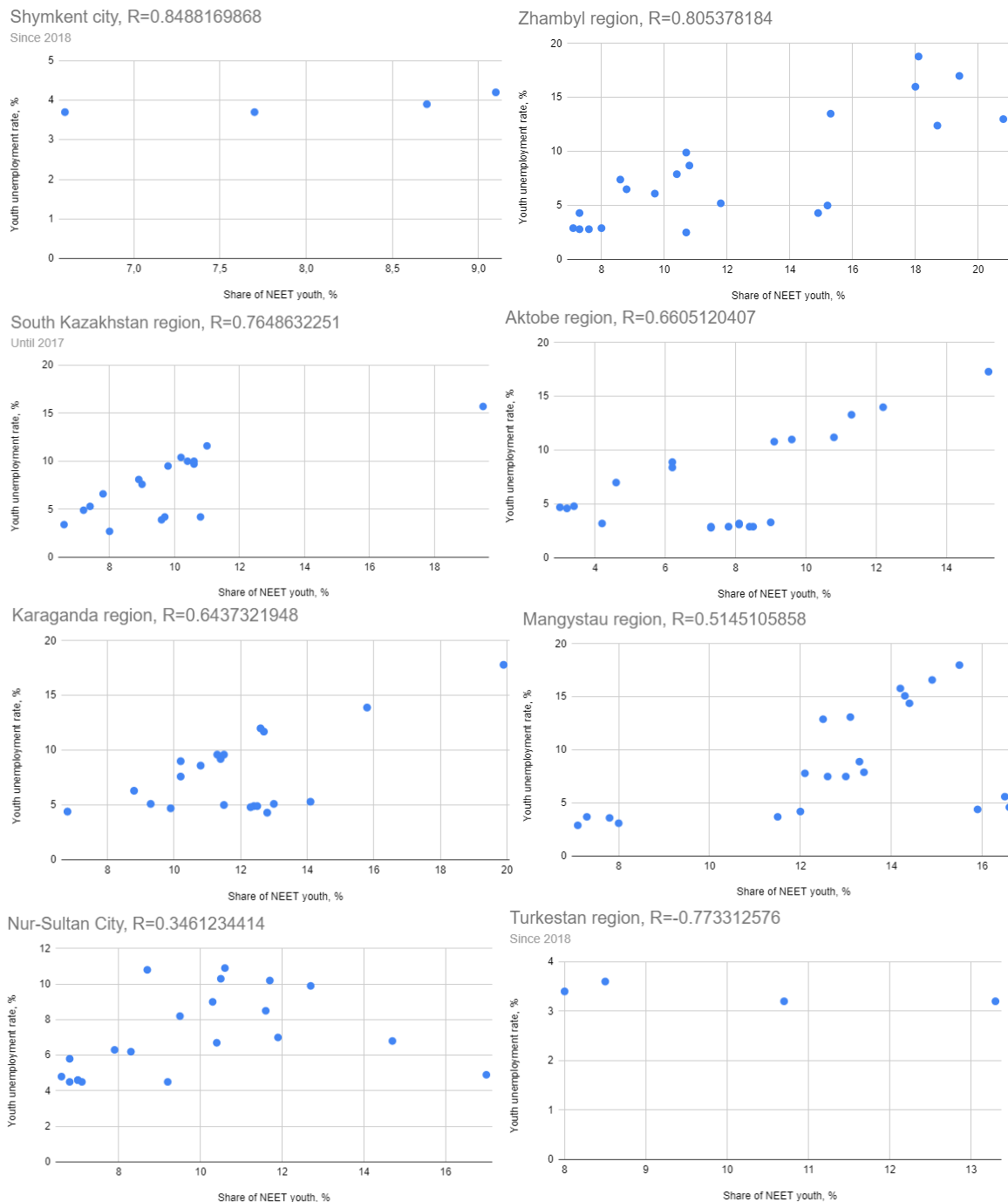


Figure 3. Correlation between youth unemployment among NEET youth by regions

Note – Compiled by the authors on the basis of <https://stat.gov.kz/official/industry/25/statistic/7>

As a result of the analysis, there is a close correlation between youth unemployment and NEET youth by regions. A group of regions with a high correlation coefficient can be highlighted: Kostanay, Atyrau, Akmola, East Kazakhstan, West Kazakhstan regions, Almaty city and Kyzylorda, North Kazakhstan regions. Consequently, there is a high correlation between youth unemployment and NEET youth, and we can say that NEET unemployment is characteristic of these regions. A weak correlation is observed in Nur-Sultan. Turkestan region stood out in this analysis, where there was an inverse correlation.

Discussions

Faced with the problem of the inclusion and integration of youth in work, education or vocational training, it is necessary to recognize, demonstrate, and understand the characteristics of this problem with its heterogeneity of contexts, characteristics, needs, risks, and consequences to develop strategic actions,

concerted efforts to facilitate the transition between the education, or training system and the labor market (Frias, Alcoforado, & Cordeiro, 2020). Despite different characteristics, NEET youths may face similar problems as they transition from adolescence to adulthood and may be at risk for negative consequences, such as continued NEET status in their future lives, unemployment, dissatisfaction, and problems in life (Baggio et al., 2015).

Conclusions

This study reveals different regional trends in NEET group indicators in Kazakhstan over 20 years. Based on the calculation of the Moran Global Index of regional NEET youth and youth unemployment by the boundary matrix the existence of spatial correlation is shown in the period under consideration. However, this criterion differs from year to year in two indicators. Thus, for the share of NEET youth in the Republic of Kazakhstan, there is a predominantly negative autocorrelation, and for the level of youth unemployment aged 15 to 28 years, there is a complete positive spatial correlation, which indicates the interrelation of labor markets. At the same time, the correlation analysis conducted between NEET youth and youth unemployment indicators allowed to identify regions with a high correlation between these indicators (Kostanay, Atyrau, Akmola, East Kazakhstan, West Kazakhstan regions, Almaty city and Kyzylorda, North Kazakhstan regions) as a result of determining the regional differentiation of NEET unemployment.

The findings highlight the importance of a regionally differentiated approach to the development and realization of employment policy, aimed at the effective use of labor potential, reducing youth unemployment and increasing economic activity (Varshavskaya & Stuken, 2017). More detailed attention to NEET subgroups can ensure the development of individualized social support policies that take into account the special characteristics and needs of each subgroup (Lusing, 2007).

Acknowledgements

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Қазақстандағы НЕЕТ-жастары: өңірлік сараланудың ерекшеліктері

Аңдатпа

Мақсаты: Зерттеудің мақсаты НЕЕТ санатындағы жастардың аймақтық контексіндегі көрсеткіштердің тенденцияларын зерттеу.

Әдісі: Жүйелік, динамикалық, құрылымдық және корреляциялық талдау, сондай-ақ Моран жаһандық индексі негізінде НЕЕТ-жастарды сипаттайтын көрсеткіштердің кеңістіктік автокорреляциясы бағаланды.

Қорытынды: Шекаралық матрица бойынша НЕЕТ-жастардың және жастар жұмыссыздығының өңірлік көрсеткіштерін Моран жаһандық индексін есептеу негізінде қарастырылған кезең аралығында кеңістіктік корреляцияның бар екенін, дегенмен жылдар аралығында ерекшелінетінін көрсетті.

Тұжырымдама: Зерттеу нәтижесінде мынадай материал алынды, оның талдауы НЕЕТ жастар мен жастар жұмыссыздығының көрсеткіштері көптеген өңірлер үшін өзара тығыз байланысты деген қорытындыға келді. Сонымен бірге, жүргізілген талдау жастар арасындағы жұмыссыздықты азайту, олардың еңбек әлеуетін тиімді пайдалану және экономикалық белсенділігін арттыру мақсатында әзірленетін және жүзеге асырылатын саясат пен мемлекеттік бағдарламаларда өңірлік саралауды ескерудің маңыздылығын анықтады.

Кілт сөздер: НЕЕТ санатындағы жастар, жастар, жастардың жұмыспен қамтылуы, өңірлік саралау, экономикалық белсенді қызмет, жастардың жұмыссыздығы, НЕЕТ деңгейі.

Ж.С. Хусаинова, М.Р. Газизова, Е.А. Вечкинзова

НЕЕТ-молодежь в Казахстане: особенности региональной дифференциации

Аннотация:

Цель: Целью настоящего исследования является изучение тенденций показателей в региональном контексте молодежи категории NEET.

Методы: Используются методы системного, динамического, структурного и корреляционного анализа, а также на основе Глобального индекса Морана была оценена пространственная автокорреляция показателей, характеризующих NEET-молодежь.

Результаты: Результаты расчета Глобального индекса Морана региональных показателей NEET-молодежи и молодежной безработицы по граничной матрице показали, что в рассматриваемом периоде существует пространственная корреляция, однако она отличается по временным промежуткам.

Выводы: В результате исследования был получен материал, анализ которого позволил заключить, что показатели NEET молодежи и молодежной безработицы имеют сильную взаимосвязь для многих регионов. Вместе с тем проведенный анализ выявил важность учета региональной дифференциации в политике и государственных программах, разрабатываемых и реализуемых в целях снижения безработицы среди молодежи, эффективного использования их трудового потенциала и повышения экономической активности.

Ключевые слова: молодежь категории NEET, молодежь, молодежная занятость, региональная дифференциация, экономическая активная деятельность, молодежная безработица, показатели NEET.

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