Non-economic predictors of migration intentions of the youth of big industrial city with an unfavorable ecological status

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Abstract. Despite the growing interest of researchers in the problem of youth migration from territories with an unfavorable ecological status, the non-economic factors of this process have not been studied enough. The present study fills this gap by identifying the relationship between non-economic variables and the migration intentions of students in an industrial city. The results of the study allow us to conclude that there are moderate links between the migration intentions of students in an industrial city and some non-economic (subjective) factors. In particular, the factors hindering the migration intentions of students are the presence of clear goals, a sense of happiness and satisfaction with life, motivation to interact with other people, trust in them, as well as the belief in family support (but not financial). On the contrary, the lack of clear goals, the feeling of loneliness and dissatisfaction in the present moment, the unwillingness to count on the support of family and relatives, distrust of people are factors that push people to move to another country.

1 Introduction

An important area of scientific research remains the quality of human life, its factors and results [1]. One of the results of changes in the quality of life, as well as the result of comparing the quality of life in different countries and regions, is migration intentions. Today, interest in it is associated with attempts to assess the migration potential and thereby predict migration flows [2]. The question of the migration intentions of young people is especially relevant, since, as studies show [3], it is precisely the migration plans of young people that can be used as a predictor of the population dynamics of both this age cohort and the community as a whole.

Numerous studies aim to study the factors influencing migration intentions [4]. Although there are various attempts to classify these factors, most studies reduce all factors into two groups: economic (objective, related to the standard of living and the situation in the city / country) and non-economic (subjective, depending on a particular person and his perception of the situation) [5]. However, the problem of the contribution of economic and non-economic factors to the formation of migration intentions is interpreted ambiguously.

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In addition, non-economic factors of migration have been studied to a lesser extent than economic ones. Most often, social ties and psychological attitudes, satisfaction with conditions in a given place of residence, satisfaction with social status and financial situation (curiosity, desire to test oneself in new conditions, motivation for success, risk appetite, patience, perseverance, optimism) are considered as such [6], expectation of difficulties in adaptation, possible discrimination [7], self-efficacy [8], resilience, satisfaction with past and present, territorial identity.

The most complete systematic review of non-economic (subjective) predictors of migration intentions was made in [9]. The authors propose a model of factors influencing the decision to migrate, which includes subjective and intangible factors. They identified four main groups of factors: Imagination – the mental pictures people make when contemplating migration, imagining and visualizing themselves in a future time and place; Personality – specific personality traits such as extraversion, patience and adaptability, as well as individuals’ risk tolerance or risk aversion; Emotions and feelings – the layers of emotion dispersed in the decision-making process, including (lack of) hope, love and intimacy, place attachment and feelings of discrimination/inequality; Beliefs and values – internalised norms and individual beliefs, including religious or political beliefs, and values, such as family orientation.

Many scientists study the causes of population migration from rural areas to cities [10], while a relatively small number of works are devoted to predictors of migration from large industrial cities. All this led to the purpose of this study - to identify the relationship between non-economic variables and the migration intentions of students in a big industrial city.

2 Materials and methods

Based on the subjective factors of migration intentions [9], we examined such variables as personal qualities (purposefulness, responsibility), emotions and feelings (satisfaction, happiness, anxiety), beliefs and values (orientation towards family, friends).

The study was conducted in Chelyabinsk (Russia). The Chelyabinsk region is one of the largest economic units of the Russian Federation. The industrial development of the region is determined by the metallurgical, machine-building, fuel and energy, construction, and agro-industrial sectors. The leading sector in the economy is the metallurgical sector, which produces more than 60% of industrial output. The flip side of industrial development is the unfavorable environmental status of the city - one of the lowest in Russia in 2021.

The main research method was a survey developed within the original methodology of the INTERGEN project (http://intergen-theory.eu/). From February 2021 to August 2022 the INTERGEN survey was done in eight countries (Albania, Bulgaria, Iran, Poland, Romania, Russia, Serbia and Uzbekistan) in total with 4001 respondents (students and alumni). In this paper we will focus mostly on the 279 respondents from Chelyabinsk State University, Russia and partly on the 289 respondents from Angel Kanchev University of Ruse, Bulgaria ([12, 13]).

Questionnaire statements in the course of factor analysis form several factors that are considered as non-economic factors of migration intentions. Migration intentions (and their absence) were diagnosed with the statement: “In general, I prefer to live in my country and build a career here.”

A total of 279 students living in Chelyabinsk (Russia) were interviewed, 84 men, 195 women aged 19-22. The study was conducted electronically using the Google Form resource in November-December 2021.

The University of Ruse “Angel Kanchev”, Bulgaria, did their survey in 2021, too, with the same questionnaire under INTERGEN with 289 students – most of them were females.
(220) and some males (69). Both universities have done the surveys in the period of COVID-19 pandemic restrictions.

As the main method of mathematical statistics, factor analysis by the method of principal components and correlation analysis with the r-Spearman coefficient were used. The calculations were carried out using the IBM SPSS Statistics RUS V.24.0 software.

3 Results

At the first stage of the study, the severity of students' migration intentions was revealed. Frequency analysis results (Fig. 1). show that almost half of the students from Chelyabinsk have expressed intentions not to leave the country in the future. In Fig. 2 we show the answers of the students from the University of Ruse “Angel Kanchev”.

![Chelyabinsk respondents, 2021](image)

Fig. 1. Expression of migration intentions among Chelyabinsk students of a big industrial city.
Slightly more than half of the Chelyabinsk respondents express their firm intention to stay and work in the country (26.2% + 25.8%), while small portion of the students (7.5% + 8.6) want to leave Russia. Almost a third (31.9%) still have doubts if to stay in Russia or emigrate to a foreign country. Almost 90% of the respondents from URAK, Bulgaria, prefer to stay in their country than to emigrate. This distribution indicates the relevance of this study. The results of factor analysis (according to the method of principal components with Varimix rotation) made it possible to identify 6 factors, which were further considered as non-economic (subjective) factors of students’ migration intentions (Table 1).

Table 1. Results of factor analysis of the questionnaire statements in Chelyabinsk., 2021.

<table>
<thead>
<tr>
<th>Statements</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>My priority is to achieve important goals</td>
<td>.724</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe that I perform my duties admirably</td>
<td>.711</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I have a clear goal and direction for the future</td>
<td>.672</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I am a happier person than my friends</td>
<td>.659</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can say that I am satisfied with my life</td>
<td>.563</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I can call myself a happy person</td>
<td>.562</td>
<td></td>
<td></td>
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<tr>
<td>For the past month, I've been very angry because things didn't go my way.</td>
<td>.755</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>At the end of the day, I usually feel exhausted</td>
<td>.682</td>
<td></td>
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</tbody>
</table>
For the past month I have felt like everything was out of my control. .681
I keep thinking about the problems I need to solve. .654
I feel anxious when I think about my future. .650
Most of the time I feel alone. -.753
Most of the time I'm sad. -.680
I feel the support of my friends when I am in trouble. .538 .390
I appreciate and support the people around me. .495
In this world, success can only be achieved by relying on yourself. .367
If I start my own business, I will turn to friends and acquaintances for competent advice. .721
When making decisions, I turn to my relatives and friends for advice. .690
To start something, I need the support of my family and best friends. .657
When I have a problem, I share it with family and friends .631
I can convince my parents to give me seed money for my business. .659
I am convinced that my family will always support me. .637
If my parents were suppliers/contractors for my business, they would support me financially. .370
I believe that if my business has a face (trademark), then customers will remember me. .672
I would like to have my own business. .609
I am ready to start my own business even without the support of relatives and friends. .503
If I produce a low-tech product / service, I can still win the trust of customers. .353

The first factor was named "Goals, Responsibility, Happiness". It reflects the relationship between the feeling of happiness, life satisfaction and purposefulness of the respondents. The second factor, in many ways opposite to the first, reflects the negative emotional state of the student. It was called "Dissatisfaction and anxiety." The third factor reflects motivation on others or on oneself. It has been called "Other Focus vs. Loneliness". The fourth factor registers the willingness to seek social support from friends and relatives - "Confidence in the support of the family." The fifth factor is closely related in content to the fourth, while it also includes the willingness to accept financial assistance from the family “Confidence in the financial support of the family”. Finally, the sixth factor reflects the students' intentions to do their own business - "Readiness to do business."

At the next stage, a correlation analysis of the obtained factors and migration intentions was carried out. The results of the correlation analysis showed a moderate relationship between migration intentions and non-economic (subjective) factors. The factor of purposefulness and happiness is associated with the lack of desire to leave one's city \( r = .292 \) \( p=0.000 \). That is, students who are clearly aware of their goals and are more satisfied with life in general have less expressed migration intentions. At the same time, however, no
significant relationship was found between migration intentions and anxiety, dissatisfaction with life.

A weak correlation was found between motivation to interact with other people, trust in them (r = .141 p=0.018) and low migration intentions. On the contrary, the feeling of loneliness and readiness to rely only on oneself increases the desire to migrate among students of an industrial city.

A moderate correlation was found between belief in family support (but not financial support), orientation towards interaction with relatives and friends, and low migration intentions (r = .177 p=0.018). On the contrary, those students who do not count on the support of relatives are more ready to move to another country. At the same time, there were no significant relationships between students' migration intentions and readiness to do business.

4 Conclusions

The results of the study allow us to conclude that there are significant links between the migration intentions of students in an industrial city and some non-economic (subjective) factors. In particular, the factors hindering the migration intentions of students are the presence of clear goals, a sense of happiness and satisfaction with life, motivation to interact with other people, trust in them, as well as the belief in family support (but not financial). On the contrary, the lack of clear goals, the feeling of loneliness and dissatisfaction in the present moment, the unwillingness to count on the support of family and relatives, distrust of people are factors that push people to move to another country.

The study contributes to the study of youth migration predictors by expanding the understanding of non-economic (subjective) factors of migration intentions of students in a big industrial city. The study is expected to continue in identifying the correlation between non-economic and economic factors of migration intentions, including environmental factors, as well as expanding the sample to include older people from other social groups.

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