



# Journal of Community Positive Practices

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- Kemal ERKIŞI, Melike ÇETİN – Immigration, growth and unemployment nexus: A long-run analysis for Türkiye
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## JOURNAL OF COMMUNITY POSITIVE PRACTICES

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Str. Simetriei 18 A, Sector 2, București, România  
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# UKRAINIAN REFUGEES IN BUCHAREST: INTEGRATION, OBSTACLES, AND FUTURE PLANS

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Alexandra DELIU<sup>1</sup>

Elena TRIFAN<sup>2</sup>

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**Abstract:** *The war in Ukraine has multiple consequences, including a considerable number of people fleeing from conflict zones, becoming refugees. For the countries in proximity to Ukraine, including Romania, the main consequence is the transformation into host countries for refugees and, as such, the need to formulate social policies that consider the specific situation of those seeking refuge.*

*. In this context, the research that yielded the data presented in this article aims to investigate the perceptions of Ukrainian refugees in Bucharest regarding access to services (health, education, social services, etc.) and their needs, to contribute to the adequacy of policies and response actions. Here, we refer to employment, education, and future plans, as reported by the respondents at the time of the research.*

**Keywords:** *refugees from Ukraine; access to the labour market; access to the education system; integration.*

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## Introduction

February 24<sup>th</sup>, 2022 marked the beginning of the war in Ukraine, an event with extensive geopolitical, economic, and social consequences. The conflict led to the destruction of infrastructure, disrupting, or limiting access to essential services such as primary healthcare, food, and drinking water, and pushing significant portions of the population into poverty while mental health and individual well-being were severely affected (Data Friendly Space, January 2023; June 2023). Another immediate effect of the war is the emergence of refugees — individuals seeking safety in countries other than Ukraine.

According to UNHCR data, there are currently 82,600 refugees from Ukraine registered in Romania (i.e. 148,170 refugees from Ukraine who have applied for asylum, temporary protection, or other measures (Ukraine Refugee Situation, updated data for Romania as

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<sup>1</sup> PhD, Scientific Researcher at the Research Institute for Quality of Life, Romanian Academy, Bucharest, E-mail: [alexandra.deliu@iccv.ro](mailto:alexandra.deliu@iccv.ro)

<sup>2</sup> PhD, Associate Professor at the National University of Political Science and Public Administration, Bucharest, E-mail: [trifan.elena@gmail.com](mailto:trifan.elena@gmail.com)

of 19.11.2023). The data suggest that for the majority of those coming from Ukraine, Romania was more of a transit country, with 3,620,235 entries into Romania from Ukraine. The high number of departures from Romania to Ukraine, 3,095,530, also indicates that returning, most likely temporarily, to Ukraine is a practice for many refugees. The number of those settled temporarily in Romania is not large compared to the situation in other countries such as Poland (954,600 refugees from Ukraine on 20.11.2023) or the Czech Republic (369,550 refugees from Ukraine on 19.11.2023). However, if we consider Romania's limited previous experience as a destination country for refugees (Voicu et al., 2018), this number becomes considerable and indicates the existence of a new type of reality to be managed, characterized by increased social needs.

Romania's response to the refugee crisis has been immediate and far-reaching, mobilising both ordinary people/private individuals, NGOs, and public institutions. The first response was an emergency one, covering basic needs such as food and shelter, both for those who remained in Romania and for those who continued their journey to other destinations. However, given the continuing critical situation and the influx of refugees, a structured, integration-focused, and longer-term programme was needed. The existence, as early as June/July 2022, of the National Plan of measures to be implemented to facilitate the integration of refugees from Ukraine, provided the general framework for the institutional response (both public and private) to the needs of refugees. The current Romanian legal framework on Ukrainian refugees is regulated by Emergency Ordinance no. 22/12.04.2023 and Government Decision no. 368/26.04.2023. According to these documents, for a period of four months after their first arrival in Romania, they receive unconditional support regarding accommodation and daily expenses. From the 5th month onwards, the general rule is that persons under the age of 65 must be integrated into the labour market and their minor children must be integrated into the educational system (schools or education centres) in order to qualify for state support. These regulations suggest a major shift towards active integration of refugees in the long term.

In this context, closely related to the conditions that refugees from Ukraine have to meet in order to receive state support, the present endeavour aims to identify the situation of Ukrainian refugees living in Bucharest in terms of access to the labour market and access to education services, as well as in terms of how refugees relate to the future. In the following, we briefly present some theoretical perspectives on refugees and their needs, methodological details, followed by a description of the results obtained, conclusions, and a series of recommendations for public policy.

## **Refugees, refugees from Ukraine**

Refugees are a category of population whose needs, usually related to integration into the host society, have been explored at length. The core idea is that refugees require support at their destination to identify and use existing resources. This aid facilitates access to various services such as health care, housing, and labour market entry counselling.

Integration is a complex process that requires a publicly accessible infrastructure of services and resources to be successful (Bešić et al. 2022). Among the issues that can contribute to placing or removing refugees in/from vulnerable situations are access to health services

(Chiesa et al. 2019), decent housing, especially in relation to refugee centres (Leiler et al. 2019). In this context, NGOs play a significant role in complementing the response of public institutions and providing support to refugees who may not have access to government assistance due to administrative requirements (Mayblin and James 2019). Collaboration between local and international NGOs is beneficial in terms of service provision and local NGO development (Adem et al., 2018). In addition, research indicates that the attitudes of the host society as a whole and daily interactions between refugees and locals are pivotal in the integration process (Voicu et al., 2018).

Various studies and reports have underscored different facets of the refugee crisis and the integration of Ukrainian refugees. The importance of a flexible response that addresses more than just basic survival needs, taking into account individualized needs, has been emphasized (UNDP, 2022). While the involvement of ordinary citizens in supporting refugees is vital, a structural response, including a coherent legislative framework, is essential for sustainable long-term support options (Ociepa-Kicińska and Gorzalczyńska-Koczkodaj, 2022). Access to health care services is a critical concern for Ukrainian refugees, both in conflict zones and neutral areas (Bielka et al., 2022). Language barriers significantly impact various aspects of daily life, including education and labour market access, as reported by Ukrainian refugees in Romania (IOM, 2022). Additionally, refugees in Romania face challenges due to limited access to local information and a reliance on informal networks for information exchange (Negru, 2022).

The positive attitude of the public and the active involvement of institutions and NGOs have become increasingly important amidst the ongoing humanitarian crisis and the internal challenges that host countries like Romania face (World Vision, 2022). Furthermore, the socio-economic impact of Ukrainian refugees in the European Union has been a subject of study, highlighting the need for effective migration policies and integration initiatives (Dumitrescu and Constantin, 2022). Ukrainian refugees confront various health-related risks, including limited access to healthcare, housing, employment, and education (Kumar et al., 2002; Kaufman, Bhui, and Katona, 2022; Murphy et al., 2022). Mental health issues, comorbidities, and infectious diseases are common, necessitating collaborative efforts to provide emergency medical care and essential resources (Kaufman, Bhui, & Katona, 2022; Murphy et al., 2022).

Current research emphasizes the importance of societal attitudes and flexible responses, as well as ensuring access to healthcare and education, for the effective integration of refugees. Overcoming language barriers, the pivotal role of NGOs, and collaboration among stakeholders are also highlighted. These studies underline the necessity for tailored support, comprehensive strategies, and the engagement of both public institutions and the general public, in facilitating the successful integration of specifically Ukrainian refugees.

## **Methodology and brief description of respondents**

This research is part of the projects conducted by the Social Incubator Association under the name *Together for Ukraine*. The aim of this research is to identify and analyse the needs of Ukrainian refugees in Romania. To answer the central research question about the perceptions of Ukrainian refugees living in Bucharest about their own needs, we used

both quantitative and qualitative methods. The research was conducted between March and June 2023 and had two components:

Online survey - questionnaire available as a Google form, containing items related to housing, health, employment, education, social services, future plans. The questionnaire, or the link to it, was distributed through both the researchers' personal networks and the networks of The Social Incubator Association. Particularly useful were events where the Association, serving Ukrainian refugees as beneficiaries, provided opportunities to engage with potential respondents and assist them in accessing the questionnaire. A total of 240 responses were registered. Most of the sampled respondents arrived in Romania in 2022 (over 85% of them) and travelled in groups of 3-5 people, accompanied by their own child/children. The percentage of women in the sample is over 98% and the most common age category is 20-39 years.

Regarding educational background, approximately 65% of the respondents in the survey have a higher education degree. Instances of extremely low (completion of primary education or less) or very high education levels (PhD level, completed or not) were relatively rare among the respondents. In our sample, the proportion of individuals living alone is nearly equal to those living with other refugees: 57% and 43% respectively. The '50/20' program was indicated by 44% of respondents as their current accommodation solution. Meanwhile, 29% are residing in refugee centres, and 27% are living independently (with relatives/friends or renting, but not through the '50/20' program).

Interviews with Ukrainian refugees living in Bucharest - to gain a deeper understanding of how Ukrainian refugees in Bucharest perceive their own situation and the challenges they face, the study included twenty-two interviews. These interviews provided more detailed insights into the personal experiences and specific needs of the refugees. The interview guide followed the same thematic logic as the questionnaire, ensuring consistency in the topics explored. Of the twenty-two interviews conducted, three were carried out by a Russian/Ukrainian speaker, four in Romanian with refugees fluent in Romanian/ Moldovan, and the remaining fifteen by the researchers, with the help of a translator.

All the approaches had their advantages and challenges: while it is preferable for interviews to be conducted by experienced researchers, the language barrier and the presence of a translator negatively impacted the dynamics of the interview situation. Additionally, considering the recent and ongoing nature of the trauma, along with uncertainties related to the situation in Ukraine, the discussions often turned out to be fragmented. They were predominantly marked by expressions of gratitude from the respondents, leading to a visible perceived hierarchy where the power dynamics were skewed in favour of the researchers. The respondents' gratitude is partly a result of the selection method, which involved a service provider (The Social Incubator Association) and its beneficiaries. This research experience was unique compared to previous interactions with refugees. The respondents were closer, both in time and location, to their trauma. This proximity contrasts with refugees who have had longer and more complex journeys to their destinations, which often creates a distance from their original trauma sites. This difference in proximity impacts the nature of the interactions and responses in the research.



Given that the size and characteristics of the Ukrainian refugee population in Bucharest are variable, with dynamics given by the evolution of the war, representativeness was not a stake of the quantitative research. The impossibility of designing a representative sample and, therefore, of generalising the findings to the entire population, does not affect the exploratory, descriptive nature of this approach, as the data obtained and presented here contribute to the accumulation of knowledge about refugees from Ukraine (temporarily) settled in Bucharest.

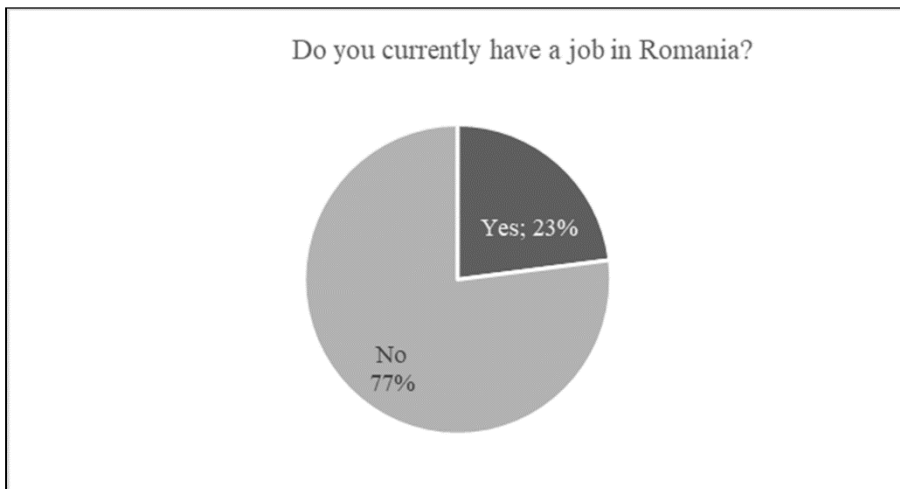
## Results

### Employment/labour market integration

#### Quantitative

Integration into the labour market is a significant challenge for Ukrainian refugees in Bucharest. Only about one-fifth (23%) of survey respondents have found employment. Of those employed, nearly half (43%) secured jobs independently, while the majority (57%) relied on support: from other refugees (26%), Romanian friends (21%), public institutions (6%), or NGOs (4%). This data highlights the importance of personal networking and individual connections, both among refugees and with Romanians, while also indicating the relative inefficiency of formal actors like public institutions and NGOs in job facilitation.

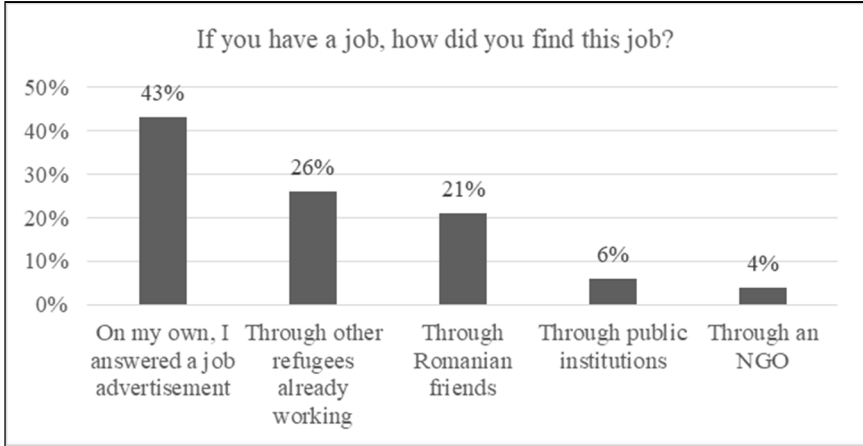
*Figure 1. Current Job Status in Romania of Ukrainian Refugees (%)*



*Data source: The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

Figure 2 highlights the importance of personal networking and individual connections, both among refugees and with Romanians, while also indicating the relative inefficiency of formal actors like public institutions and NGOs in job facilitation.

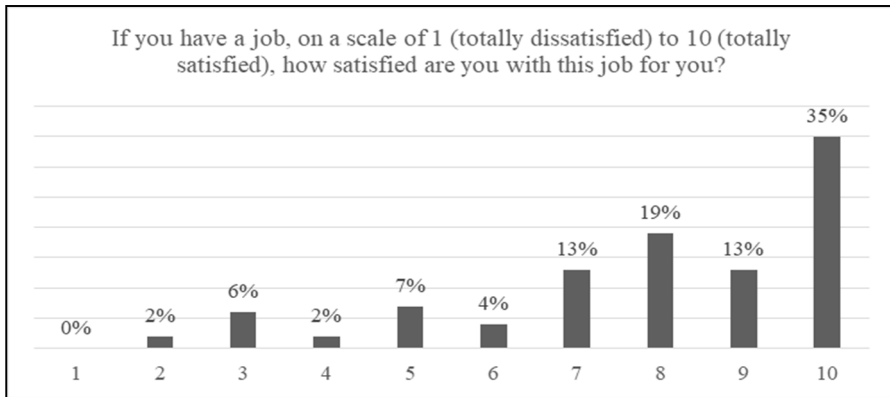
**Figure 2. How Ukrainian Refugees Found Employment in Romania (%)**



Data source: *The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

As shown in Figure 3, more than a third (35%) of respondents who have a job are totally satisfied with it. A high degree of satisfaction (scores of 8, 9 and 10) is shown by 67%, while only 17% are dissatisfied (scores in the range 2-5).

**Figure 3. Job Satisfaction of Ukrainian Refugees in Romania (%)**

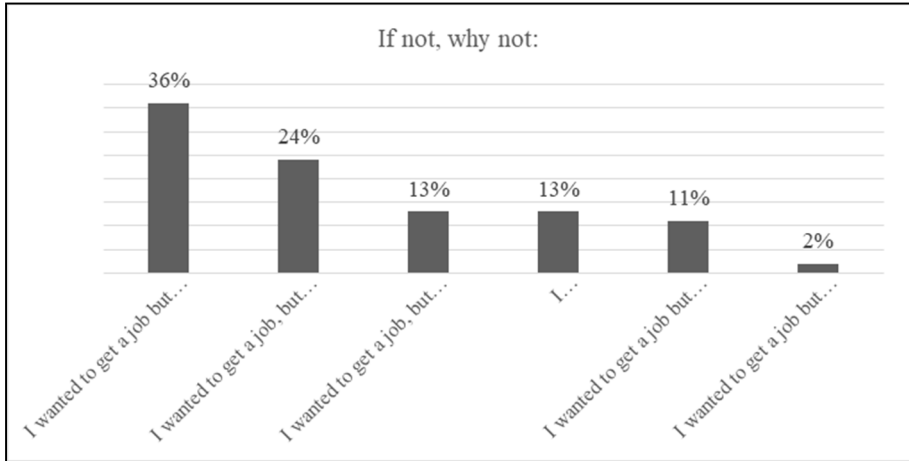


Data source: *The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

Among the respondents who have jobs, challenges and their current workplaces were identified: 25% mentioned being underpaid, 20% felt under-qualified for their roles, 14% had issues with working hours, and 4% each reported problems with overwork or the attitude of colleagues/employers. Among those not working, only 13% are in this

situation because they could not or did not want to work and did not look for work (Figure 4). Employers' reluctance is cited as a reason by 2% of the unemployed respondents, with most respondents saying that the problem is related to working hours (13%), not knowing Romanian (24%) or the need to take care of children (36%).

**Figure 4. Obstacles to Finding Suitable Jobs for Ukrainian Refugees (%)**



Data source: The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)

### Qualitative

Refugees expressed job preferences based on their previous experience and skills. Some showed interest in working in beauty salons, as nail technicians, for example, while others were inclined towards supermarket or clerical jobs. The importance of having job options that match their skills and interests was emphasized, highlighting the need for employment opportunities that are both suitable and fulfilling for them.

Psychological and social factors can play a significant role in refugees' employment decisions. For example, one refugee mentioned the psychological impact of working as a cleaner in a public space where she felt uncomfortable. Social interactions and positive relationships with colleagues were also highlighted as important aspects of work, providing a sense of friendship and support.

*I had a job in Ukraine, but here I don't really know which one I could do. I tried working in the Promenada shopping mall. I went to a job fair and was hired for cleaning, i.e. cleaning job at the mall, but I couldn't resist psychologically. It was impossible for me to get over the barrier that now I am a cleaning woman being very young. If it were a closed room, it would still have been acceptable, but in a large space where people circulate and see me it put a lot of pressure on me. Honestly, I would prefer something in a supermarket, to organize the goods on the shelves or something like that would suit me more and I would like it. In an office I couldn't work because I have a very low level of English and I don't know Romanian. (I, refugee, 29 years old)*

Limited knowledge of English or Romanian, was identified as a barrier to finding a job in certain fields. Refugees with poor language skills expressed great difficulty in obtaining clerical or better paid jobs. This language barrier limits their options and creates difficulties in accessing the labour market.

Some refugees cited care giving responsibilities as an obstacle to their ability to work. Caring for children or family members with permanent needs limited their availability for work outside the home. The desire to work from home and the need for flexible working arrangements were mentioned as potential solutions.

Several refugees reported experiencing age discrimination while seeking employment, with their age being cited as a reason for being overlooked or rejected. This prejudice has created additional obstacles for older refugees in finding suitable employment opportunities, despite their willingness and capability to work.

*I want to work, but they don't want to hire me because I am 75, when they hear how old I am, they refuse, but I still feel capable. (O, refugee, 75 years old)*

Refugees highlighted the role of support organisations in assisting them in their job search, creating CVs and putting them in touch with potential employers. In refugees' accounts, these organisations played a vital role in supporting their integration into the labour market and helping them in the employment process.

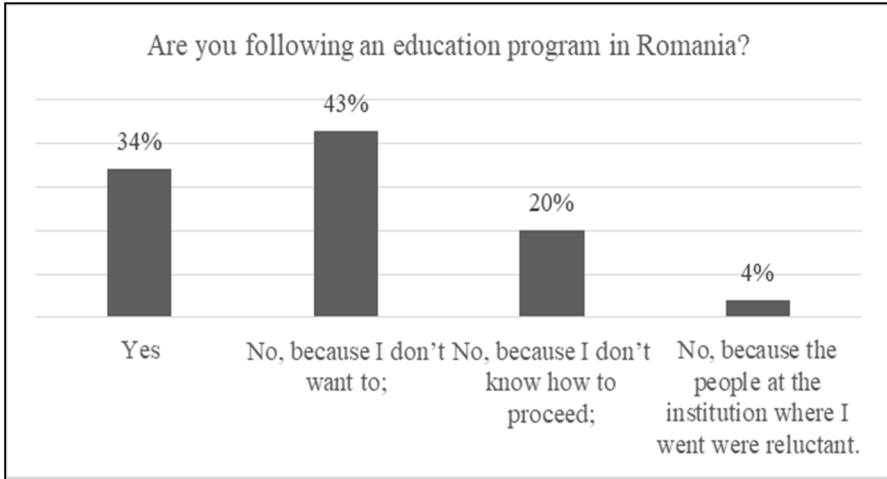
Overall, both the qualitative and quantitative components of the research highlight the importance of addressing language barriers, providing training and education opportunities, offering flexible working arrangements, combating age discrimination, and expanding support services to help refugees find meaningful employment. By addressing these challenges, policy makers, organisations and employers can facilitate the successful integration of refugees into the labour market, harnessing their skills and contributing to their overall well-being and self-sufficiency.

## Education

### Quantitative

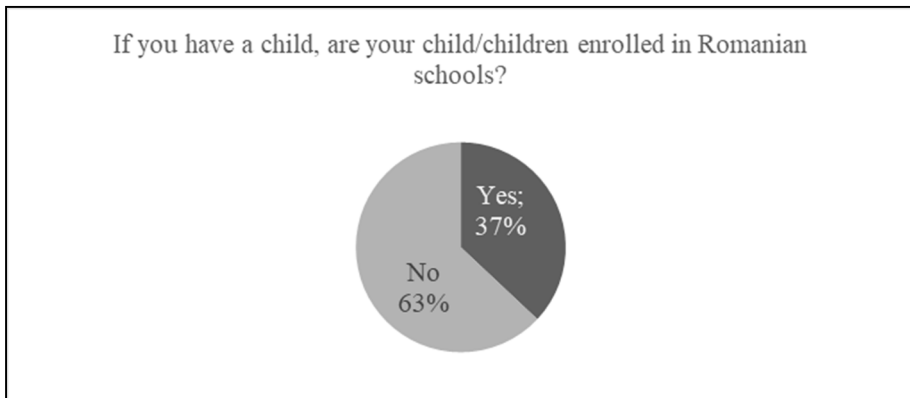
Among the respondents, 34% are enrolled in an educational program in Romania, while 43% are neither enrolled nor interested in enrolling. For 4%, reluctance was the reason for not joining their desired program, and 20% were unsure about the enrolment process. Additionally, 63% of the respondents' children are not attending school in Romania, mainly due to language barriers, with 36% not knowing Romanian.

**Figure 5. Education Status Ukrainian Refugees in Romania (%)**



Data source: *The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

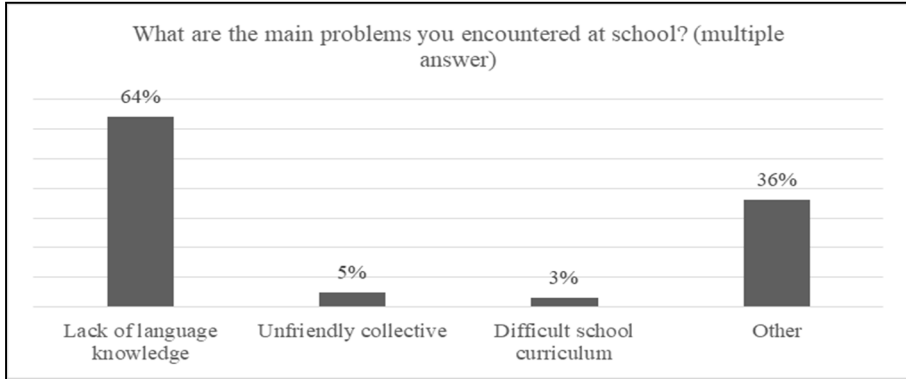
**Figure 6. Education Choices for Ukrainian Children Refugees in Romania (%)**



Data source: *The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

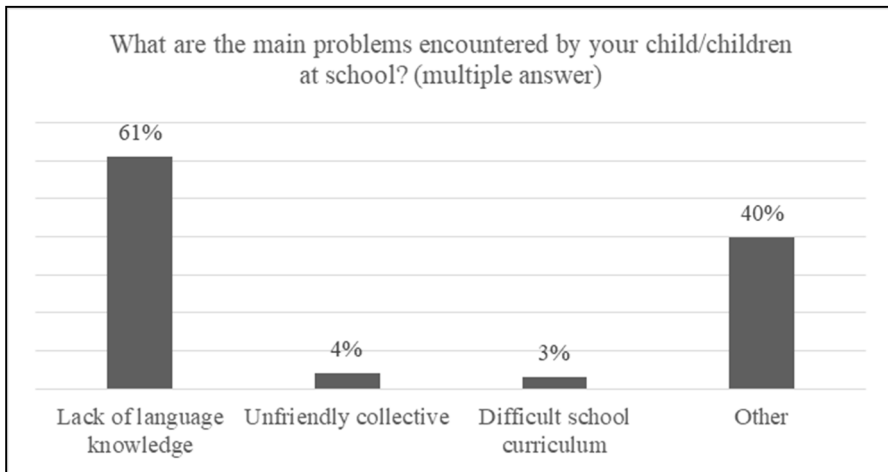
For respondents engaged in the education system, either directly or as parents, the predominant challenge is the lack of language proficiency (Figure 7). This barrier significantly hinders their or their children's effective participation in the educational system. The survey also reveals that adults perceive similar problems for their children (Figure 8), with the majority struggling with language barriers. Instances of a difficult school curriculum and unfriendly staff, though present, are less common.

**Figure 7. Educational Challenges Faced by Ukrainian Refugees in Romania**



Data source: *The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

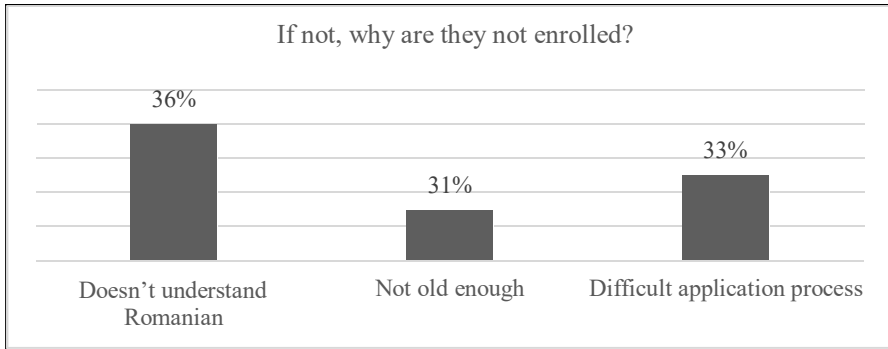
**Figure 8. Educational Challenges Faced by Ukrainian Children Refugees in Romania (parents' perspective)**



Data source: *The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

The research data indicates that the lack of Romanian language proficiency (Figure 9 is also a significant barrier to Ukrainian children's participation in educational programs in Romania.). Additionally, the perceived complexity of the enrolment process in schools is another common obstacle faced by these children and their families. This suggests a need for more accessible language support and a simplified enrolment process to facilitate their integration into the education system.

**Figure 9. Reasons for Non-Enrolment of Ukrainian Children Refugees in Romanian Schools**



Data source: *The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

### Qualitative

The qualitative research highlights that refugee children in Romania face various challenges in accessing education. While some children continue their education through Ukrainian schools or online classes, others, whose parents wish for them to attend Romanian schools, encounter issues like limited availability of places and concerns about health and integration into new student groups. This points to the need for more inclusive and accessible educational options for refugee children.

In the interviews, language learning has been identified as a crucial need among refugees. Many expressed a desire to learn Romanian, recognizing its importance for their children's integration and future educational opportunities. However, attending language classes is challenging for some due to other commitments or limited access to necessary resources.

*We would benefit from some Romanian classes. We have classes organized by ADRA, but I always don't make it to because I am always travelling at fairs [N.A. event organized by NGOs to help refugees]. But on Saturdays I always go to English classes. I would like to come to Romanian classes with my daughter, because I want her to eventually go to a Romanian school. I would also like her to go to SNSPA [N.A. SNSPA's accommodation centre] I know that there are English faculties at SNSPA, it would be good for her. It's easier for my daughter to learn Romanian, but it's far more complicated for me. (I., refugee, 29 years old)*

Online learning and technology are crucial in the education of refugee children. There's a vital need for access to technology like laptops or tablets for online courses. Challenges such as poor internet connectivity, which disrupts the learning process, were also noted. Addressing these technology-related issues is important for ensuring the continuity and effectiveness of refugees' educational experiences.

*My child attends remote school in Ukraine online... Then that's why I a tablet, a phone... but a tablet would be better. (O., refugee, 40 years old)*

The need for psychological support for refugee children is significant. For instance, one refugee, T., emphasized the importance of having a Ukrainian-speaking psychologist for effective communication with children. The language barrier with Romanian-speaking psychologists was seen as an obstacle, potentially affecting children's willingness to engage in therapy.

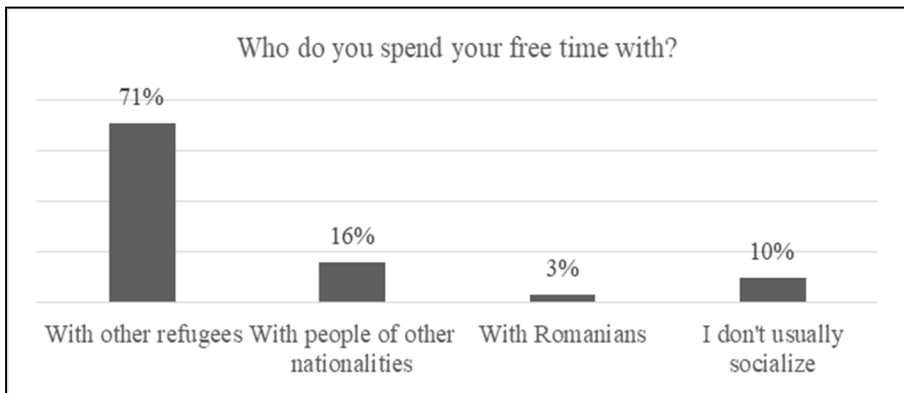
Children's individual preferences regarding language of instruction and their educational future were mentioned. Some children preferred to continue their education in Ukraine, while others expressed their openness to learn Romanian and explore educational opportunities in Romania.

Overall, the interviews highlighted the importance of addressing educational barriers, such as limited availability of schools and language barriers, to ensure access to quality education for refugee children. Providing adequate technological support for online learning, improving internet connectivity, and providing psychological support services in the mother tongue of refugees are crucial steps to address their educational needs. In addition, creating inclusive and welcoming environments in schools can support the successful integration of refugee children into the education system.

## Social relations and free time

Leisure time is insufficient for 26% of the sample. Slightly more than a third of respondents (35%) spend their leisure time shopping or going out, 21% attend cultural events and 18% go to events organised by NGOs (Figure 10).

*Figure 10. Socializing Patterns among Ukrainian Refugees (%)*

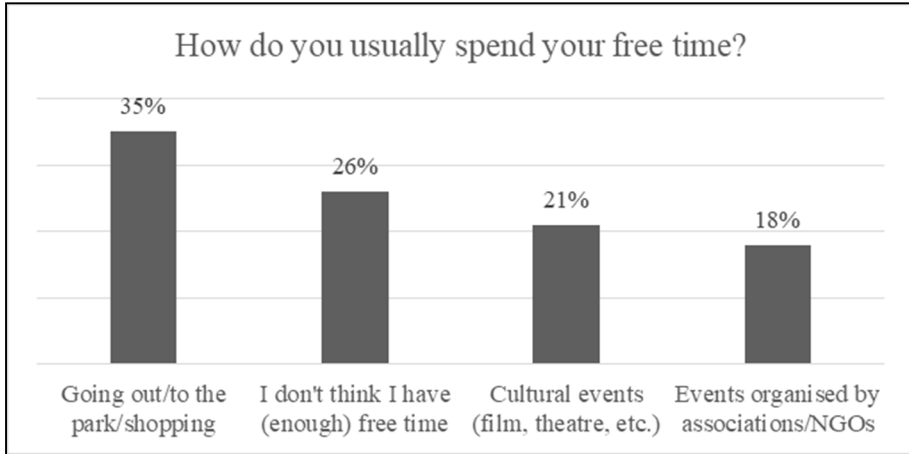


*Data source: The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

Most respondents, 71%, tend to spend their free time predominantly with other refugees, while only a small fraction, 3%, usually spend time with Romanians (Figure 11). This suggests a preference or comfort in socializing within their own community among the refugee population.



**Figure 11. Leisure Activities Among Ukrainian Refugees (%)**



*Data source: The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

### Qualitative

Refugees in Bucharest often spent their leisure time with family in parks, shopping centres, museums, and exploring the city. Watching movies or cartoons at home was also a popular activity. They faced initial adaptation challenges due to language barriers, which were partly mitigated using translators and tools like Google Translate. Positive interactions with friendly and communicative Romanians were a very much appreciated. Additionally, many refugees participated in cultural activities such as theatre, classical music concerts, and symphonies, showing their interest in engaging with Romanian culture.

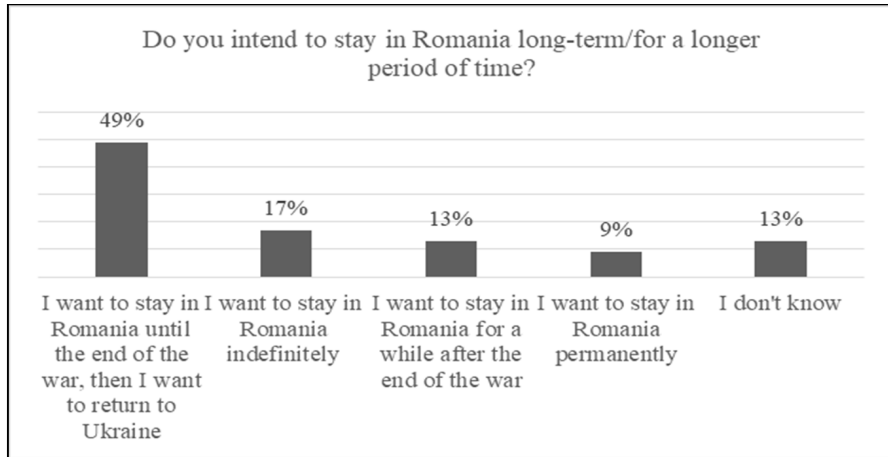
Overall, the analysis shows the refugees' engagement in diverse leisure activities, adaptation to new environments, and the forging of connections with local communities, supported by NGOs. The focus on family time, gratitude for assistance, and cultural exploration reflects their desire for normalcy and connection in their new circumstances.

## Future plans and intentions

### Quantitative

For half of the survey respondents, their future involves returning to Ukraine as soon as the war ends. Thirteen percent are undecided about their future plans, while another 13% wish to stay in Romania for some time after the war concludes. Notably, 26% of respondents have more substantial plans to remain in Romania, with 9% wanting to stay permanently and 17% indefinitely (Figure 12).

**Figure 12. Long-Term Plans and Perspectives: Residency Intentions Among Ukrainian Refugees (%)**



Data source: *The needs and difficulties encountered by Ukrainian refugees in Bucharest, March-July 2023 (n=240)*

### Qualitative

Many refugees expressed a sense of uncertainty about making direct plans because of the unstable and unpredictable nature of their situation. They mentioned the challenges of living in a "fuzzy time", where the future is uncertain and unpredictable. Many refugees harbour a strong desire to return to Ukraine post-war, particularly the older demographic. They exhibit a deep connection to their homeland, emphasizing the emotional significance and longing to go back to their familiar homes, families, and communities. This sentiment reflects a profound attachment to their country and the life they left behind.

*As soon as the war is over, we want to go back home, but will keep your Romania in our hearts. (B., refugee, 73)*

*May the war end so I can go home. I'll be on the bus, you know, and sometimes I hear the ladies talking about their homes, and I start to think, God, do I still have the trees at my house?! I had many flowers there, you know? I don't know... I'm not even thinking about the house [N.A if it's still there]. And I cried for about four days, and they hold my hands, and said, "you are homesick, but if you go home and what are you going to do?" And I said, "you know what, I don't want money or anything, I'd eat bread with salt, or not even that, just to be home". (M., refugee, 45 years old)*

Younger refugees, in particular, have shown interest in staying in Romania, recognizing the potential for a better life compared to the uncertain future of returning to Ukraine. However, concerns about maintaining their refugee status, possible regulatory changes post-war, and the complexities of legal processes have raised doubts about their long-term ability to remain in Romania.

*I would have liked to stay in Romania, but I don't know how things will turn out. The only option to stay would be to marry a Romanian. But I wonder what the conditions will be to stay*

*if the war ends. Will they cancel our refugee status and deport us, or I don't know... but I would really like to stay. (I, refugee, 29 years old)*

Several refugees emphasized the necessity of learning Romanian for integration into Romanian society, recognizing its significance, particularly for their children, to access better opportunities and connections. They expressed gratitude towards the Romanian people and their location, finding comfort in being near their homeland despite the difficulties. The idea of relocating to other countries, like Norway or Germany, was considered, acknowledging the complexities of such decisions.

For the refugees, their future is filled with a mix of hope, uncertainty, and aspirations. They yearn for peace and stability in their homeland. Challenges such as legal status and the need to learn Romanian for better integration are significant. They have expressed gratitude for the support provided by NGOs, volunteers, and the Romanian public, who have assisted with essential items like food, hygiene products, and clothing.

## **Limitations, conclusions, and recommendations**

The data gathered provides insights into how Ukrainian refugees in Bucharest perceive their situation, particularly regarding access to services, resources, and challenges faced. However, this view is not comprehensive. The primary respondents were those in contact with the Social Incubator Association, despite efforts to widely distribute the online questionnaire through personal and professional networks. Consequently, many situations, especially those involving extremely vulnerable individuals who are disconnected from service providers, remain undocumented and unaddressed in this study.

The research indicates that employment is a significant issue for refugees, with only a small portion employed and the majority not integrated into the labour market. The main barriers to employment are language difficulties and working hours, particularly for refugees with childcare responsibilities. Most of the employed refugees secured jobs independently or through personal connections. This suggests that the efforts of public institutions and NGOs in facilitating access to the labour market, especially for those deemed harder to employ, could be enhanced.

Ukrainian refugees in Romania face challenges in participating in the Romanian education system, primarily due to a lack of Romanian language proficiency and complexities in the enrolment process. Despite these obstacles, those who have managed to navigate the system generally report satisfaction with the educational experiences provided. A common concern expressed by refugees was the lack of social connections and friends in their unfamiliar environment. They mentioned a desire to have someone to spend their free time with and to establish a support network. Involvement in social activities and participation in organisations that cater for refugees were seen as important for establishing connections and receiving additional support.

Many refugees wish to return to Ukraine but acknowledge the uncertainty of when this will be possible. Additionally, those considering staying in Romania face concerns about financial sustainability and stability, especially those with limited Romanian language skills, disabilities, age-related issues, or caregiver responsibilities for other relatives.

There's also apprehension related to the uncertainty of their legal status in Romania and how long they might be permitted to stay.

Based on these findings, we propose a set of recommendations that aim to align the resources available for refugee integration with the requirements they must fulfil to receive support. This includes facilitating labour market integration and assimilation into the education system. These guidelines are designed to enhance the overall support system for refugees, ensuring that their needs are met efficiently and effectively.

- Establishing a framework for inter-institutional cooperation as a means of making the response to refugees more efficient and responsive to existing needs, including through partnerships (continuation of existing partnerships, development of new collaborations) between the public and private sectors, as well as between entities working directly with beneficiaries and entities with responsibilities more around legislative decisions.
- Ensuring effective communication of essential information to refugees by utilizing appropriate methods, enabling them to easily access these resources. This approach should focus on making information about services, rights, and processes readily available and understandable to support their integration and well-being.
- Creating social events involving refugees and Romanians to increase the exposure of Romanians and refugees to otherness and encourage informal, everyday interactions between members of the two groups.
- Providing alternative day-care centre services for mothers who are seeking employment. This initiative would provide reliable childcare options, enabling mothers to actively pursue job opportunities without worrying about their children's safety and well-being during their absence.
- Involving NGOs and public institutions as intermediaries of labour demand and supply (specifically, Ukrainian refugees seeking employment).
- Promoting successful examples - refugees integrated into the labour market; employers employing refugees.
- Providing detailed explanation of the school and education enrolment process, ensuring clarity and accessibility for refugees. This guidance should cover necessary steps, documentation, and support services available, aiding in the smooth integration of refugee children and adults into the educational system.
- Encouraging the exchange of experiences/communication between refugees who have integrated into the education system and refugees who want to, but have not yet succeeded, with the aim of popularising ways of doing things.
- Provide Romanian language courses tailored to the specific needs and abilities of refugees, ensuring these courses are perceived as accessible. This approach should focus on facilitating easier integration into Romanian society, particularly addressing language barriers that affect daily life and access to services.

## Authorship

Equal contribution from both authors.

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## Declaration of conflicting interests

The authors declare no conflicting interests.

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# IMMIGRATION, GROWTH AND UNEMPLOYMENT NEXUS: A LONG-RUN ANALYSIS FOR TÜRKIYE

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Kemal ERKIŞİ<sup>1</sup>  
Melike ÇETİN<sup>2</sup>

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**Abstract:** *This study employs VECM, FMOLS, DOLS, and CCR methods to comprehensively explore the diverse effects of total immigration, including regular, irregular, and refugee movements, on unemployment in Türkiye from 2000 to 2022. Model 1 analyzes the overall influence of immigration, revealing a quadratic relationship wherein immigration initially reduces unemployment before triggering subsequent growth. Notably, the study identifies a rise in GDP per capita following increased unemployment linked to immigration, attributed to a surge in refugees, especially post-2013. Refugees, with their informal employment contributions, are seen as positively influencing economic growth, but at the expense of higher unemployment rates. Conversely, Model 2 dissects the effects of regular and irregular immigration, coupled with economic, educational, and inflationary factors, on unemployment. The analysis discerns that irregular immigration heightens unemployment, while regular migration alleviates it. A significant proportion of regular immigration comprises short-term and student permits, contributing positively to economic development and mitigating unemployment. Irregular migration, akin to refugee influx, fosters economic growth through informal employment, adversely impacting formal unemployment rates. The model also reveals a negative association between education and unemployment, emphasizing that heightened education levels lead to skill development and reduced unemployment. Additionally, the study notes the simultaneous rise in unemployment and inflation, potentially linked to informal employment resulting from immigration.*

**Keywords:** *Immigration; Unemployment; Production; Cointegration Regression Estimation*

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## 1. Introduction

Although the adventure of immigration dates back to the beginning of human history, it started to be the subject of scientific research from the end of the 18th century and increased intensified after this date. it has become one of the main policy areas discussed

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<sup>1</sup> Assoc. Prof of Economics, Ph.D., Antalya Bilim University, Department of Economics, Antalya, Türkiye. ORCID:0000-0001-7197-8768. E-mail: kemal.erkisi@antalya.edu.tr

<sup>2</sup> Assist. Prof of Economics, Ph.D., Antalya Bilim University, Department of Economics, Antalya, Türkiye. ORCID: 0000-0001-6744-9337. E-mail: melike.cetin@antalya.edu.tr

in all of its dimensions, especially in the European Union and the United States, with the acceleration of globalization, especially after the 1980s.

Immigration, which often comes as a consequence of political, social, and economic upheaval in the country of origin, can also be the driving force behind change in the country that receives immigrants. When viewed in this light, immigration may be thought of as a process that has economic, social, political, and demographic repercussions on both the country of origin and the country of destination. During this process, it is possible that economic structures, demographic structures, social interactions, cultural values, and the labor market will be directly or indirectly influenced.

On the other hand, the recent immigration ideas are primarily motivated by economic considerations. The majority of immigration research in this setting focuses on labor immigration. This is because, historically, all immigrations resulting from factors such as climate, war, and natural disasters have been realized with the goal of satisfying fundamental economic necessities and gaining a high wage and level of life. Economics-based immigration theories based on supply and demand disparities in countries' labor markets are accepted as the first systematic theories to explain immigration flows. (Kritz et al., 1992). However, the influence of immigration on employment is a continuing and contentious issue that has seen an increase in empirical study.

From an economic point of view, immigration is discussed theoretically and empirically in terms of its effects on unemployment, wages, income and income distribution. Among these effects, it has become a subject of much debate because of the concerns that immigration may increase unemployment in the receiving country and cause a decrease in wages.

However, there is no clear consensus in the discussions on the effects of immigration on unemployment. While some empirical research supports the argument that immigration increases unemployment, some have not found a significant relationship between them. On the other hand, there are empirical research concluded that immigration reduces unemployment.

Most of the research employs partial equilibrium models that divide the workforce into skilled and unskilled categories at a given production technology level and argue that immigrants are perfect substitutes for indigenous skill categories. From this point of view, a rapid influx of unskilled immigrants changes the distribution of skilled-unskilled labor and increases unemployment in the unskilled category by creating an excess supply of low-skilled labor. Moreover, drives down wages for all low-skilled employees (Moreno-Galbis and Tritah, 2016). Even if immigrants and local employees are in the same competency group, if there is no full substitution between them, increased immigration may affect the wages of immigrants in the receiving country (Manacorda et al., 2012).

The partial equilibrium model examines the influence of immigration on unemployment using only labor market in which people are only inputs. Given the competitive market conditions, market forces efficiently adjust prices, and domestic labor wages fall as immigration causes a rise in supply in the labor market. However, the influence of immigration on labor income will be limited in the case that prices are sticky in a downward direction. (Espinosa & Díaz-Empanza, 2021)



On the other hand, immigrants play multiple functions in the receiving economy in general equilibrium models. They boost the labor supply while also increasing the demand for materials produced in the receiving country. As a result, changes in per capita income generated by immigration in the receiving country contribute the income of the immigrant in return, having an unexpected influence on global economies (Dixit and Norman, 1980).

Hagen-Zanker (2008), the majority of contemporary immigration theories can be grouped together under the umbrella term of "neo-classical migration theory." This theory asserts that the fundamental drivers of immigration are variations in labor market supply and demand, as well as differences in the pay earned by workers in industrialized and developing countries.

According to traditional perspectives on immigration, if a country's immigrant labor population possesses the attributes that allow for the optimal combination of its production inputs, then the economy will experience increased productivity and growth. This means that the country grows more with immigration. However, immigration can result in a rise in the number of unemployed people and a reduction in the salaries offered by employers in the labor market if the labor force that is being imported is employed in jobs that

Borjas, (2003), the competitive labor market approach predicts that the increases in labor supply that are the result of immigration will shift the supply and push the equilibrium wage level down, and that the immigrants will partially replace the domestic labor force in the new equilibrium that will be created as a result of the shift. Borjas (2003) argues that the immigration of the native workforce from the sub-regions to other territory of Türkiye is a way to mitigate the negative effects of refugees.

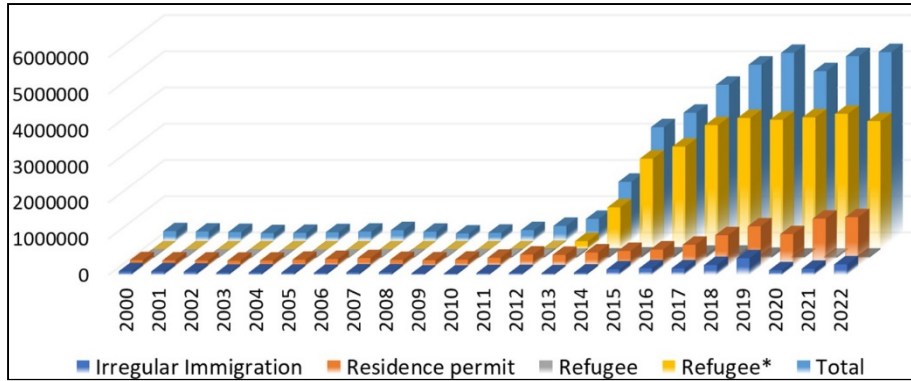
Due to the fact that they have a poor education level and qualifications that comprise of unskilled workers, refugees in Türkiye participate in employment as low-cost labor in industries that are both unsecure and informal (Ceritoglu et al., 2017). Because of this circumstance, there is a possibility of a substitution effect taking place in the labor market between the domestic labor force and the immigrant labor force.

Because of the dread that natives typically face when foreign labor enters the job market and competes with them, immigration has become one of the most debated immigration subjects. There are still disagreements over the impact of immigration on the unemployment of receiving countries, and even the most basic theoretical models cannot provide a clear answer.

Because of its vital geopolitical location and proximity to migratory routes, Türkiye is the country most affected by the world's expanding immigration movement. Consequently, the number of immigrants and refugees residing in Türkiye has increased dramatically during the past decade. The number of people forced to from their homes has considerably increased, primarily as a result of the political unrest in Syria, Iraq, and Afghanistan. The primary objective of this research is to find out if the increasing number of immigrants and refugees in Türkiye is having any effect on the country's high unemployment rate, which remains a problem despite the country's recent economic achievements.

The number of immigrants in Türkiye has grown by more than 2200 percent, from 223,900 in 2010 to 5.1 million in 2022. When the data from the Presidency of Migration Management of Türkiye is examined, the major cause of the growth in the number of foreigners in Türkiye during the previous ten years has been the influx of Syrian refugees. Furthermore, there has been a 720 percent increase in the number of residency permit holders.

*Figure 1: Number of Immigrants to Türkiye (2000–2022)*

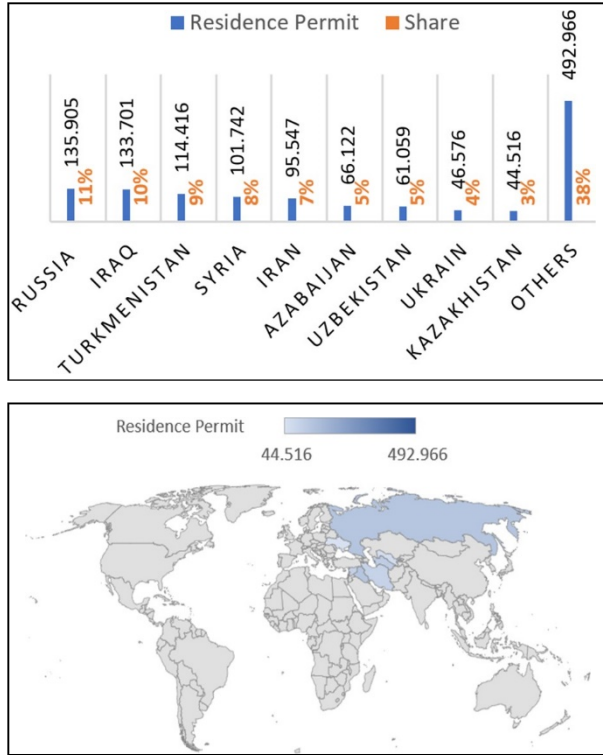


*Source: Author's analysis; \*Syrian refugees*

Figure 1 presents a comprehensive overview of immigration trends in Türkiye between 2000 and 2022. It classifies the intake of immigrants into four categories: irregular immigration, residency permits, refugees, and the overall total. Significantly, there was a surge in irregular immigration in 2000, although it typically declined in the following years. The data on residence permits showed a consistent upward trajectory, suggesting a rise in the number of persons seeking legal authorization to remain. The refugee category saw a tremendous expansion, especially starting from 2013. It is clear that the majority of this rise is the result of Syrian immigration. The cumulative immigration statistics show a consistent rising trend, culminating at 5,208,255 in 2022, highlighting Türkiye's position in immigration.

Based on the data provided by the Republic of Türkiye Ministry of Interior Presidency of Migration Management, the analysis of residence permit numbers reveals that 60% of these licenses are classified as short-term permits, 12% are categorized as student permits, 10% fall under family permits, and the other 18% are classified as other permits. Figure 1 shows the residence permit of top ten countries. Moreover in 2022, it is clear that the vast majority of foreigners who acquire residency permits are from nations such as Russia, Iraq, Iran, Syria and Ukraine, all of which are plagued by war and economic difficulties.

**Figure 2: Residence Permit in 2022 of Top Ten Countries**



Source: Author's analysis by using the dataset of R.TR. Ministry of Interior Presidency of Migration Management

The map in Figure 2 that shows the countries from which people immigrated to Türkiye also illustrates the effect that geography has on immigration due to Türkiye's strategic location and the fact that it is in a transition zone.

## 2. Literature Review

Scholars investigating the economic effects of immigration have typically concentrated their emphasis on three primary concerns. These are the drivers of the volume and structure of immigrant fluxes, the economic consequences of immigration and the assimilation of immigrants in receiving countries.

Because of the dread that natives typically face when foreign labor enters the job market and competes with them, immigration has become one of the most debated immigration subjects. There are still disagreements over the relationship between immigration and the level of unemployment in the nations that are receiving immigrants, and even the most basic theoretical models cannot provide a clear answer.

Chletsos and Roupakias (2012) employed cointegration and Granger Causality tests to investigate whether or not immigration, GDP, and unemployment were causally related in Greece over the course of the period 1980-2011. According to the findings of the analyses, immigration does not result in a decrease in unemployment and does not promote to economic growth in the short run.

The outcomes of the studies indicate that immigration does not result in a reduction in unemployment and does not promote to economic growth in the short-term.

According to Damette and Fromentin (2013), except for Anglo-Saxon countries in the short term, there is little indication of negative impacts on unemployment caused by immigration. The findings also show that unemployment and wages play a role in determining immigration levels, especially in Anglo-Saxon countries.

Applying the panel Granger causality testing method to annual data for 22 OECD countries between 1980 and 2005, Boubtane et al. (2013) examine the causal connection between immigration, unemployment, and economic growth in the receiving countries. Except for Portugal, none of the nations studied had a causal relationship between immigration and unemployment.

Using the OLS approach, Chamunorwa and Mlambo (2014) made an effort to investigate the influence that immigrant labor had on the unemployment rate in South Africa over the course of the period 1980-2010. The study indicated that immigration levels and unemployment rates in South Africa are positively related to one another.

Latif (2015) carried out study utilizing FMOLS, DOLS, and VECM in order to investigate the influence that immigration had on the unemployment rate in Canada between the years 1980 and 2013. The findings of the research showed that immigration had a significant, positive, and unidirectional influence on unemployment over the short term. However, research has shown that immigration does not have a substantial effect on the level of unemployment over the long run.

According to Balkan and Tümen (2016), who used a method called "difference-indifferences" to investigate the connection between immigration from Syria to Türkiye and price changes, migration has an impact on the informal labor market. According to the findings of the study, immigrants take the position of native workers on the informal labor market, which results in a fall of 2.5 percentage points in the overall levels of consumer prices.

Ceritoglu et al. (2017) showed that the influx of refugees from Syria decreased the informal employment-population ratio by approximately 2.3% in Türkiye. According to the findings, the detrimental effects of the surge of refugees are experienced most keenly by indigenous women and the less educated members of the informal indigenous sector.

The research conducted by Breunig et al. (2017) between the years 2003 and 2012 revealed no evidence to suggest that immigration had an impact on the employment of native-born workers in Australia.

Škuflić and Vučković (2018) investigated the effect of immigration on unemployment in 9 European Union member countries for the period 2004-2015. In this study, in which

Fixed Effects Panel Data Analysis was performed, it was concluded that increases in the level of immigration reduce unemployment. Accordingly, immigration affects unemployment negatively.

Using the Granger Causality technique, Nurdoğan and Şahin (2019) investigated whether or not immigration had an impact on unemployment in Türkiye between 1995 and 2019. The results point to immigration as a long-term contributor to the unemployment.

Between 1990 and 2016, Özcan (2020) analyzes the relationships between immigration, wages, and income in 15 US states using a Panel Granger causality technique. The results demonstrate that in seven states immigration increases unemployment whereas in the other eight states it has no effect on unemployment.

Using the VECM technique, EbuAlsoud, Alqudah, and Elish (2020) examined the dynamic short-and long-run relationship between immigration, unemployment, labor income, and GDP per capita in Australia over the period 1980 to 2016. They were unable to determine whether the economic effects of immigration on the labor market were positive or negative. The report offers policymakers compelling proof of the favorable spillover impact of the Australian government's immigration programs

Esposito et al., (2020) use a Panel ECM to determine the short- and long-term effects of immigration on unemployment for 15 EU nations between 1997 and 2016. In the long run, immigration only decreases unemployment in nations on the periphery, although in the short run, unemployment falls in all tested countries.

Using panel regression analysis, Gündoğmuş and Bayır (2021) looked at the impact of international immigration on unemployment in 27 European nations between 2000 and 2017, and they found no statistically significant relationship between the variables.

Sertaş and Uluöz, (2021) used ARDL, DOLS, FM-OLS, and CCR methodologies to assess the impact of Syrian immigrants on unemployment in Türkiye from 2011:11 to 2020:02. The results revealed that Syrian refugee immigration has a considerable negative influence on the level of unemployment in the long run, implying that Syrian immigrants reduces unemployment in Türkiye.

Sengupta and Mihalache, (2021) The impacts of migration on unemployment were examined for 33 OECD countries from 1990 to 2017 using the Panel ECM, FMOLS, and DOLS methodologies. The outcomes indicate that immigration decreases unemployment in the short as well as the long run.

Faccioli and Vella (2021) concluded that immigration had a dominant job-creation effect using a structural VAR technique using monthly data from 2006 to 2019. That is, native unemployment reduces, causing overall unemployment to diminish, but foreign unemployment rises.

Tomohara, (2022) conducted research examining the effect that immigration had on the unemployment rate in Japan's manufacturing sector from 2009 to 2018. The study covered the years 2009 to 2018. As the number of immigrants increased in labor-scarce industries, the unemployment rate declined, according to the study of the data. This

method exposes sector-specific migration repercussions when applied to the examination of unemployment rates using industrial sector units.

Ajzenman et al., (2022) employed two-way fixed effects model with 2SLS model to determine whether immigrants have an effect on labor outcomes in Chile. The research reveals that, while immigration does not have a systematic effect on employment levels, it generates an increase in unemployment-related anxieties. The findings provide a logical explanation for anti-immigrant sentiment: a misunderstanding of immigration's effect on labor market conditions.

The empirical literature demonstrates that research on the interaction between immigration and native unemployment has been conducted for a number of countries and different timeframes, making use of a wide array of data and techniques. The most important takeaway from the study conducted on this subject is that it has not produced a consensus in either the short or the long term.

### **3. Empirical Analysis**

In the empirical analysis, we delve into the intricate relationship between total, regular, and irregular immigration to Türkiye and the corresponding unemployment rates spanning the years 2000 to 2022. Following the presentation of our research model, it is fitting to provide details on pre-tests, parameter estimation techniques, and diagnostic tests to assess the validity of the model in our empirical investigation. In order to get reliable prediction findings in time series analysis, it is necessary for the series to exhibit stationarity. The stationarity of the variables was evaluated in this context using the Augmented Dickey-Fuller (ADF), Phillips-Perron (PP), and Zivot-Andrews (ZA) tests. Once the optimal lag-length was chosen, Johansen tests were performed to identify if there was a long-term link between the series, before proceeding to estimate cointegration regression. The estimation of long-term parameters was conducted using Vector Error Correction Model (VECM), Fully Modified OLS (FMOLS), Dynamic OLS (DOLS), and Canonical Cointegrating Regression (CCR) methodologies. The model's validity and diagnostic tests were assessed by a range of examinations, which included Breusch-Pagan/Cook-Weisberg, Cameron & Trivedi's IM, Breusch-Godfrey LM, Durbin's alternative, Jarque-Bera, Ramsey REST, and Variance Inflation Factor (VIF) tests.

#### **3.1. Model Specification and Data Set**

Table 1 presents a thorough summary of the essential variables and their corresponding proxies that are crucial to our investigation. The variables consist of Unemployment (UEM), which is assessed by the unemployment rate, Irregular Immigration (IIM), which represents irregular immigration trends, Regular Immigration (RIM), which is determined by statistics on residency permits, and Total Immigration (TIM), which is a combination of IIM, RIM, and Refugee numbers. Additionally, Inflation (INF) is captured through the consumer price index, while Education (SSE) is represented by secondary education data. The variable Income (GDP) is gauged using the GDP, PPP (current international \$). Notably, the data sources encompass reputable entities such as the World Bank and

the Republic of Türkiye Ministry of Interior Presidency of Migration Management Statistics Database.

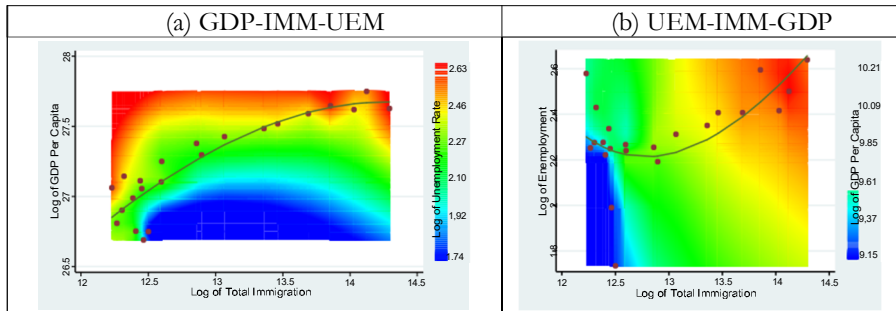
**Table 1: Variables**

Variable	Notation	Proxy	Source
Unemployment	UEM	Unemployment rate	World Bank
Irregular immigration	IIM	Irregular immigration	PMM of Türkiye <sup>(1)</sup>
Regular immigration	RIM	Residence permit	PMM of Türkiye <sup>(1)</sup>
Total immigration	TIM	IIM+RIM+ Refugee	PMM of Türkiye <sup>(1)</sup>
Inflation	INF	Consumer price index (2010 = 100)	World Bank
Education	SSE	Secondary education	World Bank
Income	GDP	GDP, PPP (current international \$)	World Bank

Source: <sup>(1)</sup> Republic of Türkiye Ministry of Interior Presidency of Migration Management Statistics Database

Once we have a solid grasp of the important variables, we can begin visually analyzing the data to identify patterns and potential connections. The graphical representations below provide a dynamic perspective for observing trends, variations, and potential correlations among the variables. Through the use of the following plots, our goal is to provide a comprehensive analysis of the factors influencing the correlation between immigration and unemployment in Türkiye from 2000 to 2021. These visualizations not only improve our understanding of how variables change over time, but also lay the foundation for further quantitative analyses.

**Figure 3: Visualizing the Multidimensional Relationship among Key Variables**



Source: Author's analysis

Figure 3 illustrates potential relationships between unemployment, production, and immigration. In panel (a) of Figure 3, the relationship between immigration and GDP per capita is depicted using a scatter plot and fractional-polynomial prediction plot. The unemployment variable is added to the graph as a third dimension, represented by colors ranging from blue to red. Accordingly, in Figure 3 (a), as immigration increases, GDP per capita also increases, and this increase is accompanied by changes in the unemployment rate.

In Figure 3 (b) panel, the relationship between unemployment and immigration is illustrated similarly, employing a scatter plot and a fractional-polynomial prediction plot. In this case, the GDP per capita series is added to the graph as a third dimension through a colored contour plot. In Figure 3 (b), it is observed that an increase in immigration initially reduces unemployment up to a certain level. However, as immigration continues to rise, a turning point is reached, leading to an increasing trend beyond a certain minimum. The graph shows an increase in GDP per Capita in the region where it has a negative slope and beyond. While formulating the empirical model, we considered this quadratic relationship between immigration and unemployment.

In the model, unemployment is defined as the dependent variable, while immigration and economic growth are defined as independent variables. The functional formulation of the model can be seen in the equations as presented below (1) and (2).

Model 1:  $UEM = f(TIM, TIM^2, GDP)$  (Eq. 1)

$$\ln UEM_t = a + \beta_1 \ln(TIM)_t + \beta_2 (\ln(TIM))_t^2 + \beta_3 \ln(GDP)_t + \varepsilon_t$$

In Model 1,  $a$  represents the constant term,  $\beta_1$  captures the linear impact of total immigration on unemployment,  $\beta_2$  accounts for the quadratic impact of total immigration, reflecting the curvature in the relationship and  $\beta_3$  represents the coefficient for the GDP variable, capturing its linear impact on unemployment.  $(\ln(TIM))_t^2$  represents the squared term of total immigration, introducing a nonlinear element.  $\varepsilon_t$  is the error term, representing unobserved factors influencing unemployment that are not explicitly included in the model. This expanded expression allows for the exploration of how both total immigration and GDP, along with their quadratic and linear components, collectively influence the dynamics of unemployment.

Model 2:  $UEM = f(IIM, TIM, GDP, SSE, INF)$  (Eq. 2)

$$\ln UEM_t = a + \beta_1 \ln IIM_t + \beta_2 \ln RIM_t + \beta_3 \ln GDP_t + \beta_4 \ln SSE_t + \beta_5 \ln INF_t + \varepsilon_t$$

In Model 2,  $a$  represents the intercept term,  $\beta_1 \dots \beta_5$  are the coefficients associated with the natural logarithm of GDP per Capita (GDP), irregular immigration (IIM), regular immigration (RIM), education (SSE), and inflation (INF), respectively. The error term is denoted by  $\varepsilon_t$ .

### 3.2. Estimators in Econometric Analysis

The Vector Error Correction Model (VECM) is a special case of the Vector Autoregressive (VAR) model that includes cointegration relationships among the variables. The general form of a VECM for a system with  $k$  variables is expressed as follows:



$$\Delta Y_t = \Pi_{t-1} + \Gamma_1 \cdot \Delta Y_{(t-1)} + \dots + \Gamma_{(p-1)} \cdot \Delta Y_{(t-p+1)} + \varepsilon_t \quad (Eq. 3)$$

$Y_t$  is a  $k \times 1$  of vectors at time  $t$ ,  $\Delta Y_t$  is a  $k \times 1$  of vectors of first differences of  $Y_t$ ,  $\Pi$  is a  $k \times k$  matrix of coefficients on lagged differences,  $\varepsilon_t$  is a  $k \times 1$  vector of white noise disturbances at time  $t$ , and  $p$  is the lag order of the model. The cointegration coefficients in  $\Pi$  represent the long-run relationships among the variables, and the lag matrices  $\Gamma_1, \dots, \Gamma_{p-1}$  capture the short-run dynamics. The error correction term in the model accounts for the adjustment process toward the long-run equilibrium when variables deviate from it.

The functional expression for The Fully Modified Ordinary Least Squares (FMOLS) can be represented as (Phillips and Hansen, 1990):

$$\Delta Y_t = a_0 + a_1 \cdot \Delta X_t + \sum_{i=1}^p \gamma_i \cdot \Delta Y_{(t-i)} + \sum_{i=1}^p \delta_i \cdot \hat{u}_{(t-i)} + v_t \quad Eq. (4)$$

In Eq.(4),  $\Delta$  denotes the first difference,  $p$  is the lag order,  $a_0$  and  $a_1$  are the FMOLS estimates of the intercept and slope,  $\gamma_i$  are the coefficients on the lagged differences of  $Y_t$ ,  $\delta_i$  are the coefficients on the estimated residuals from the first step, and  $v_t$  is the error term. The FMOLS estimator involves a two-step process. First step is to regress each variable on a set of lags of itself and other relevant variables. This is done to remove the endogeneity arising from the correlation between the variables and their errors. Denote the estimated residuals as  $\hat{u}$  and the estimated parameters such as constant and slope. Regress the differenced dependent variable on the lagged differences of the dependent variable and the residuals obtained from the first step. The coefficients obtained from this regression provide the FMOLS estimates.

The Dynamic Ordinary Least Squares (DOLS) estimator is used to estimate parameters in models with integrated regressors. The functional expression for DOLS involves transforming the model in levels to a stationary form, similar to FMOLS. The DOLS estimator involves augmenting the model with lagged differences of the variables to remove the endogeneity problem. The general functional expression for DOLS can be represented as (Stock and Watson, 1993):

$$\Delta Y_t = a_0 + a_1 \cdot \Delta X_t + \sum_{i=1}^p \gamma_i \cdot \Delta Y_{(t-i)} + \sum_{i=1}^p \delta_i \cdot \Delta X_{(t-1)} + v_t \quad Eq. (5)$$

The explanations of mathematical operators and symbols were provided in Eq.(4), so they are not reiterated here. Similarly, Canonical Cointegrating Regression (CCR) can be expressed as follows (Park & Phillips, 2001):

$$\Delta Y_t = a + \beta_1 \cdot \Delta X_{1t} + \beta_2 \cdot \Delta X_{2t} + \dots + \beta_k \cdot \Delta X_{kt} + \varepsilon_t \quad Eq. (6)$$

In Eq.(6)  $\Delta Y_t$  is the differenced dependent variable at time  $t$ .  $\beta_1, \beta_2, \dots, \beta_k$  are the cointegrating vectors associated with the differenced independent variables  $\Delta X_{1t}, \Delta X_{2t}, \dots, \Delta X_{kt}$ .  $\varepsilon_t$  is the error terms.

### 3.3. Assessment of the Model and Parameter Estimation

Table 2 displays descriptive statistics that provides the complex relationship between socioeconomic factors and immigration patterns using a dataset consisting of 23 observations. Our study covers a variety of important factors, providing insights into the complex dynamics that influence modern societies. The unemployment rate is a crucial parameter that provides valuable insights into the fluctuations of the labor market. On average, it stands at 10.31%. In addition, the numbers for irregular immigration show significant fluctuations, with an average of around 101,942 people and a wide range from 16,996 to 454,662. Regular immigration, with an average of 400,200 individuals, plays a crucial role in demographic shifts. The overall immigration, which includes both irregular and regular streams, demonstrates an average influx of 1,656,248 individuals, underscoring the intricate nature of immigration patterns. The inflation rates, averaging at 122.18, highlight the economic dynamics, while the education levels, with an average of 8,608,566, and the income per capita, averaging at 19,039, offer a comprehensive socioeconomic context.

**Table 2: Descriptive Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max
Unemployment rate	23	10.31	1.90	5.67	14.00
Irregular immigration	23	101942	98836	16996	454662
Regular immigration	23	400200	339436	152203	1354094
Total immigration	23	1656248	1987750	204467	5188479
Inflation	23	122.18	76.82	20.60	314.81
Education	23	8608566	2215320	5658333	11531571
Income per capita	23	19039	7251	9280	30472.38

*Source: Author's calculations*

Table 3 presents the results of unit root tests for various socioeconomic indicators, examining both their levels and first differences. The Augmented Dickey-Fuller (ADF), Phillips-Perron (PP), and Zivot-Andrews (ZA) tests are employed to scrutinize the stationarity properties of the Unemployment Rate (UER), Total Immigration (IIM), Irregular Immigration (IIM), Regular Immigration (RIM), Inflation (INF), Education (SSE), and Income per Capita (GDP).

**Table 3: Unitroot Tests**

Variable	ADF-Test		PP-Test		ZA- Test	
	I(0) t-Stat	I(1) t-Stat	I(0) Z(t) Stat.	I(1) Z(t) Stat.	I(0) t-Stat	I(1) t-Stat
UER	-2.560	-4.244*	-1.644	-4.449*	-3.590	-4.488**
TIM	-0.127	-5.458**	-1.729	-6.062*	-2.130	-6.097*
IIM	-2.205	-4.249*	-2.336	-4.121*	-2.094	-8.042*
RIM	1.553	-4.627*	0.567	-6.681*	-0.625	-7.062*
INF	1.640	-2.999*	6.371	-5.487*	-0.926	-6.775*
SSE	-0.659	-4.631*	-1.870	-4.516*	-2.410	-5.366*
GDP	0.355	-3.063**	-1.596	-3.514**	-3.611	-4.881**

Source: Author's calculations, \*  $p < .01$ , \*\*  $p < .05$

The results from the ADF, PP, and ZA tests collectively indicate the presence of unit roots in the levels of all series examined. However, all three tests reject the null hypothesis of a unit root when the first differences are taken into account, thereby confirming the stationarity of the series.

Selecting an optimal lag length that balances model complexity and goodness of fit, crucial for robust and accurate time series analysis. In Table 4, we present the results of our optimal lag-length selection process, crucial for determining the appropriate time lags in our model.

**Table 4: Optimal lag-length selection**

lag	LL	LR	Prob.	FPE	AIC	HQIC	SBIC
0	-320.62			12904	17.9789	18.0249	18.1108
1	-193.514	254.21	0.000	18.2938	11.4174	<b>11.6017*</b>	<b>11.9453*</b>
2	-184.226	18.575	0.029	<b>18.2263*</b>	11.4014	11.7239	12.3252
3	-178.836	10.781	0.291	22.9499	11.602	12.0626	12.9216
4	-165.69	<b>26.291*</b>	0.002	19.3046	<b>11.3717*</b>	11.9704	13.0871

Source: Author's calculations

In Table 4, different lag lengths (0 to 4) are evaluated based on various statistical criteria. The optimal lag length is determined by considering measures such as log-likelihood (LL), likelihood ratio test (LR), probability (Prob.), final prediction error (FPE), Akaike Information Criterion (AIC), Hannan-Quinn Information Criterion (HQIC), and Schwarz Bayesian Information Criterion (SBIC). The asterisks denote the selected lag length for each criterion. Given that both the HQIC and SBIC propose a lag length of 1, we shall use a lag length of 1 in our analysis.

Table 5 presents the results of Johansen tests for cointegration, which assess the presence of common stochastic trends among variables. The analysis is conducted for different hypothesized numbers of cointegrating equations (CE) and ranks, providing various statistics and critical values for evaluation.

**Table 5: Johansen tests for cointegration**

$H_0$ : No. of CE(s)	Parms	LL	Eigenvalue	Trace Stat.	%5 Critical Value
$r = 0$	36	130.9165	.	190.184	82.49
$r \leq 1$	47	171.1841	0.98217	109.6487	59.46
$r \leq 2$	56	196.2662	0.91859	59.4845	39.89
$r \leq 3$	63	210.711	0.76413	30.5949	24.31
$r \leq 4$	68	220.9406	0.64047	10.1357*	12.53
$r \leq 5$	71	224.6267	0.3083	2.7636	3.84
$r \leq 6$	72	226.0085	0.12906		

Source: Author's calculations

In Table 5, we present the results of the Johansen tests for cointegration, a critical analysis for exploring the long-term relationships among variables. The null hypothesis ( $H_0$ ) posits the absence of cointegrating relationships, and the test assesses this hypothesis for different potential numbers of cointegrating equations ( $r$ ). The parameters (Parms) represent the degrees of freedom in each test. The likelihood ratio test reveals compelling evidence against ( $r=0$ ) cointegrating equations, as the trace statistic of 190.184 exceeds the 5% critical value of 82.49. This implies the existence of at least one cointegrating relationship in the system. Subsequent tests for ( $r \leq 4$ ) continue to support the presence of cointegration, as the trace statistic remains above critical values. However, at ( $r \leq 5$ ), the evidence weakens, and by ( $r \leq 6$ ), there is insufficient support to reject the null hypothesis. This suggests that the system's cointegrating relationships are adequately captured with up to ( $r \leq 4$ ) equations. That is, these outcomes support the presence of at least four cointegrating equations in the system.

Since the Johansen tests confirm the presence of long-term relationships among the series, we can now proceed to the estimation of long-term parameters. VECM, FMOLS, DOLS, and CCR cointegration regression methods were employed for the estimation of long-term parameters. The results of the empirical models shown in Eq.(1) and Eq.(2). using these methods are collectively reported in Table 6.

**Table 6: Estimations**

$\ln UEM$	VECM		DOLS		FMOLS		CCR	
_ce1	-0.820** (.352)	-0.711* (.273)						
$\ln TIM$	-5.72* (.819)		-4.370* (1.118)		-3.985* (.407)		-4.038* (.520)	
$(\ln TIM)^2$	.204* (.029)		.156* (.040)		.143* (.015)		.145* (.019)	
$\ln GDP$	.595* (.060)	-.418* (.022)	.528* (.127)	-.454* (.136)	.409* (.050)	-.620* (.073)	.397* (.044)	-.535* (.0107)
$\ln IM$		.0431* (.008)		.060** (.026)		.066* (.011)		.059* (.0008)
$\ln RIM$		-.035** (.016)		-.158* (.057)		-.233* (.033)		-.161* (.0051)
$\ln SSE$		-.738* (.023)		-.068* (.191)		-.044 (.085)		-.274* (.0108)
$\ln INF$		.776* (.022)		.657* (.077)		.814* (.057)		.787* (.0048)
R <sup>2</sup>			.70	.90	.72	.83	.74	.97

Source: Author's calculations. Note: \*\*  $p < .05$ , \*  $p < .1$

In Model 1, the estimated coefficients for the log of total immigration (Log TIM), its squared term (Log TIM<sup>2</sup>), and the log of GDP per Capita (Log GDP) provide insights into the relationships with log unemployment. For Log TIM, the negative coefficients across all models (-5.72, -4.370, -3.985, -4.038) suggest that an increase in the log of total immigration is associated with a decrease in log unemployment. Similarly, in the case of Log TIM<sup>2</sup>, the presence of positive coefficients (0.204, 0.156, 0.143, 0.145) suggests a quadratic correlation. This implies that the effect on unemployment first drops, but eventually starts to climb when overall immigration levels rise above a certain threshold. Additionally, Log GDP exhibits a positive relationship with log unemployment in all models, with statistically significant at 1% level. The goodness of fit is reflected in the R-squared values, with higher values (0.70 to 0.74) indicating a substantial proportion of the variance in log unemployment is explained by the models.

The coefficients in Model 2 for the variables Log GDP, Log IIM, Log RIM, Log SSE, and Log INF give insight into their unique associations with log unemployment. The log GDP per capita consistently exhibits negative coefficients (-0.418, -0.454, -0.620, -0.535) in all models, indicating a negative relationship with log unemployment at a significance level of 0.01. According to the VECM, DOLS, FMOLS, and CCR models, there is a consistent pattern where a 1% rise in log GDP per capita leads to a drop in log unemployment by 0.418%, 0.454%, 0.620%, and 0.535%, respectively.

The Log IIM has positive coefficients (0.0431, 0.060, 0.066, 0.059) demonstrate a positive connection between log irregular immigration and log unemployment. More precisely, a 1% rise in Log IIM leads to a proportional rise in log unemployment of 0.0431%, 0.060%, 0.066%, and 0.59%, respectively.

The coefficients (0.035, 0.158, 0.233, 0.161) of the Log RIM variable suggest a positive association between the logarithm of regular immigration and the logarithm of unemployment. Specifically, the VECM, DOLS, FMOLS, and CCR models indicate that a 1% increase in Log RIM results in corresponding increases in log unemployment of 0.035%, 0.158%, 0.233%, and 0.161%, respectively.

Log SSE has negative coefficients (-0.738, -0.068, 0.044, -0.274), indicating a negative association between the logarithm of education and the logarithm of unemployment. Specifically, a 1% rise in the log SSE is linked to a commensurate drop in the logarithm of unemployment by 0.418%, 0.454%, 0.620%, and 0.535%. The effect is statistically significant in the VECM, DOLS, and CCR approaches, but not in FMOLS.

Log INF) reveals a positive correlation between log inflation and log unemployment, as seen by the positive coefficients (0.776, 0.657, 0.814, 0.787). The results indicate that a 1% rise in log INF is linked to a corresponding increase in log unemployment of 0.78%, 0.66%, 0.81%, and 0.79%, respectively.

The R-squared values in Model 2, ranging from 0.83 to 0.97, reflect the goodness of fit, indicating the proportion of variance in log unemployment explained by the models. However, further testing is required for the validity of the models. For this purpose, tests related to “Model Validation” have been conducted under the following section.

### 3.4. Model Validation

In evaluating the validity of our model, we conducted a series of diagnostic tests, the results of which are presented in Table 7.

**Table 7: Diagnostics for Model Validity**

Test	Hypothesis	Statistics	Prob.
Breusch-Pagan/Cook-Weisberg	“H <sub>0</sub> : constant variance”	$\chi^2 = 2.42$	0.12
Cameron & Trivedi's IM Test	“H <sub>0</sub> : homoscedasticity”	$\chi^2 = 5.07$	0.41
Breusch-Godfrey LM test	“H <sub>0</sub> : no serial correlation”	$\chi^2 = 1.16$	0.28
Durbin's alternative test	“H <sub>0</sub> : no serial correlation”	$\chi^2 = 0.83$	0.36
Jarque-Bera test	“H <sub>0</sub> : residual norm. distributed”	$\chi^2 = 0.90$	0.64
Ramsey REST test	“H <sub>0</sub> : model has no omitted variables”	F = 1.54	0.243
Mean VIF	“H <sub>0</sub> : no multicollinearity”	3.65	-

*Source: Author's calculations*

“The Breusch-Pagan/Cook-Weisberg test”, which examines the assumption of constant variance, resulted in a  $\chi^2$  statistic of 2.42 with a probability of 0.12. The findings indicate that there is insufficient evidence to reject the null hypothesis of constant variance at a significance level of 0.05. “The Cameron & Trivedi IM Test”, which examines the assumption of homoscedasticity, yielded a  $\chi^2$  value of 5.07 with a probability of 0.41. The results indicate that the residuals of the model demonstrate homoscedasticity, since the null hypothesis is not rejected. When testing the hypothesis of no serial correlation, both the “Breusch-Godfrey LM test” and “Durbin's alternative test” yielded  $\chi^2$  statistics of 1.16 and 0.83, respectively. The associated probabilities for these values were 0.28 and 0.36. These data suggest that there is no substantial evidence rejecting the null hypothesis of no serial correlation. “The Jarque-Bera test”, which is used to evaluate the normality of residuals, yielded a  $\chi^2$  value of 0.90 with a probability of 0.64. The results suggest that the residuals adhere to a normal distribution, as the null hypothesis is not rejected. Turning our attention to the “Ramsey REST test”, which examines the presence of omitted variables, the F-statistic was calculated as 1.54 with a probability of 0.243. The test does not provide significant evidence against the hypothesis that the model incorporates all relevant variables. Lastly, “the Mean VIF”, a measure of multicollinearity, yielded a value of 3.65. This result indicates that there are no substantial issues with multicollinearity, as the mean variance inflation factor remains below a predetermined threshold.

In conclusion, based on the outcomes of these diagnostic tests, our model appears to satisfy key assumptions, including constant variance, homoscedasticity, no serial correlation, normality of residuals, and adequacy in terms of variable inclusion and multicollinearity. These results bolster the confidence in the reliability and robustness of our model for the specified analysis.

## 4. Conclusion

A substantial amount of applied research has been performed to establish the link between immigration and employment in receiving countries. However, studies throughout time vary significantly, and no definitive conclusion has been reached to demonstrate a relationship between these characteristics. The purpose of this research is to determine, with the use of data from Türkiye, whether immigration has a major influence on the unemployment rate.

Given Türkiye's geographical location in the world, it becomes clearly evident that the country is susceptible to large-scale immigrant movements due to the political, economic, and social conditions that exist in the nations that surround it. It is plain to see that there has been a significant improvement in this mobility over the course of the previous ten years. It is of the utmost importance to do research into the economic effects of immigrant mobility, which are influenced by forces around the globe. One of these economic repercussions is the impact that immigration has on the rate of unemployment.

The analysis of immigration patterns in Türkiye reveals a significant surge in the influx of refugees, particularly starting from 2013. Additionally, it is observed that this significant surge in refugee influx has also stimulated the growth of informal employment. Therefore, two models have been used to examine the topic in this context.

The study analyzes the influence of total immigration, which includes both regular and irregular migration as well as refugees, on unemployment in Model 1. In Model 2, the study investigates the effects of regular and irregular migration on unemployment.

A quadratic model has been developed to represent the total immigration empirically. The analytical findings indicate that overall immigration first decreases unemployment and later leads to its growth. Curiously, it has been noted that a rise in unemployment linked to immigration is followed with a rise in GDP per capita. This phenomenon is attributed to a substantial increase in the influx of Syrian immigrants, particularly after 2013. Immigrants with refugee status are considered to have positively influenced economic growth by augmenting informal employment. Consequently, it is hypothesized that total immigrants have also contribute to the rise in unemployment rates inside the formal sector.

On the other hand, the impact of regular and irregular migration, along with other factors such as economic growth, education, and inflation, on unemployment has been examined in a separate model. Across all methods used in the analysis, including VECM, FMOLS, DOLS, and CCR, it is observed that irregular immigration increases unemployment, while regular immigration reduces it. Upon analyzing the constituent elements of regular immigration, it is seen that a substantial proportion (72%) comprises of short-term permits (60%) and student permits (12%). It is believed that regular immigration contributes positively to economic development by means of increased spending, hence mitigating unemployment. Irregular immigration increases unemployment, and this is accompanied by an increase in GDP per capita. Similar to refugee immigration, irregular migration, by increasing informal employment, contributes to economic growth, thereby negatively affecting unemployment in the formal economy. The model indicates a

negative relationship between education and unemployment, suggesting that an increase in education levels enhances skill levels, leading to a reduction in unemployment. Rising inflation is thought to be related to economic growth. However, the simultaneous increase in unemployment and inflation during the analyzed period is considered to be associated with informal employment due to immigration.

It is thought that it would be appropriate to evaluate the cost of the increase in the unemployment rate due to immigration, taking into account the positive effect of immigration on economic growth and its burden on the public. In future studies, it would be best to look at the economic effects of migration as a whole. This could be done by looking at both the negative effects on the public budget from higher transfer costs caused by immigration and the positive effects on economic growth.

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# CHALLENGES IN INTERNATIONAL HUMANITARIAN LOGISTICS: PROBLEM AREAS

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Derya Atlay IŞIK<sup>1</sup>  
Ferhat DINLER<sup>2</sup>

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**Abstract:** *The objective of this study is to identify crucial problem areas related to the logistics of international humanitarian aid by compiling and analyzing current academic literature. The study findings shed light on significant problem areas that need to be addressed in international humanitarian aid logistics. The study comprises an analysis and compilation study based on a sample of twenty qualitative studies published between 2000 and 2022. In the field of international humanitarian aid logistics, which includes multiple variables and a dynamic structure, we identified the three most emphasized problem areas as well as the fourth factor that had an impact. Our analysis determined that the most crucial issue is the lack of collaboration and coordination among the actors involved. Presenting a focused approach to the challenges encountered in humanitarian logistics, this qualitative compendium study will aid in developing improvement strategies in detail. It will contribute to subsequent studies, particularly the national literature on the subject, and benefit practitioners, particularly those involved in humanitarian aid, and public institutions. This study offers a valuable perspective.*

**Keywords:** *Natural disaster, humanitarian logistics, problems in humanitarian logistics, stakeholders in natural disasters*

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## 1. Introduction

Humanitarian crises resulting from both man-made and natural disasters, including armed conflicts and social violence (Hotho & Girschik, 2019, p. 202), generate numerous victims who require urgent assistance. Among the many concerns in these situations, logistics operations within the domain of humanitarian aid operations are of paramount importance, as they make up 80% of the total effort (Kovács & Spens, 2007, p.99).

The impact of a disaster is worsened by population growth, climate change, and poverty. Although the capability of society to alleviate the aftermath of natural disasters has improved with industrialization, and disaster prediction has become more precise with

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<sup>1</sup> Assoc. Prof. Dr., Muğla Sıtkı Koçman University, Fethiye Faculty of Business Administration, Department of International Trade and Logistics, [deryaatlay@mu.edu.tr](mailto:deryaatlay@mu.edu.tr)

<sup>2</sup> PhD Student, Muğla Sıtkı Koçman University, Social Sciences Institute, Department of International Business and Trade, [f\\_dinler@hotmail.com](mailto:f_dinler@hotmail.com)

technological advances, relief efforts in disaster-stricken areas heavily rely on the training and preparedness of the responding personnel (Salam & Khan, 2020, p. 1457).

The United Nations has estimated that approximately 274 million individuals will require humanitarian aid in the year 2022. This estimate represents an increase of 40 million in comparison to the prior year, indicating a widening of the discrepancy between humanitarian needs and available resources worldwide (European Civil Protection and Humanitarian Aid Operations, 2022). International humanitarian logistics management aims to enhance logistical efficiency when delivering scarce resources to an increasing number of people each year. Considering its crucial role in disaster response operations by connecting disaster preparedness and response (Costa et al., 2012, p. 599), the topic requires both conceptual and empirical research as it continues to be a source of interest and concern (Kovács & Spens, 2009, p. 521). Within the framework of the principle of "better, safer and more efficient aid" stated at the 2016 World Humanitarian Summit in Istanbul, this study aims to pinpoint significant issues in the area of humanitarian aid logistics. The objective is to provide support to humanitarian aid logisticians.

The Fritz Institute, located in San Francisco, provides a definition of humanitarian logistics as "the efficient, cost-effective movement and warehousing of goods and materials from the point of origin to the point of consumption with the purpose of alleviating the suffering of vulnerable individuals. It encompasses the planning, implementation, and management of relevant information and includes functions such as preparation, planning, procurement, transport, storage, monitoring, and customs clearance." More precisely, humanitarian aid logistics entails the management of temporary supply chains under pressure to meet performance targets and address the aftermath of natural or man-made disasters (Chandes & Paché, 2010, p. 321).

International humanitarian aid logistics exhibits distinctive features that are widely acknowledged (refer to Table-1), and its research field is relatively nascent. Academic literature on humanitarian logistics often concentrates on disaster relief preparation. However, it has potential significance for business logistics and commercial supply chains as it relates directly to managing volatile environments (Kovács & Spens, 2007, p. 110).

**Table 1: Characteristics of International Humanitarian Aid Logistics**

Purpose	To alleviate the suffering of people in need
Stakeholders	There are stakeholders without links. Usually consists of governments and government agencies and humanitarian organizations
Basic Qualities	Preparedness, emergency response, rebuilding, diversity of supply, high supply, irregular and uncertain demand
Supply Chain Philosophy	The push strategy is implemented.
Transportation	There is uncertainty in the supply of food and medical supplies due to inadequate infrastructure.
Time	Lack of timely logistics can lead to human casualties
Information Flow	As disasters require immediate response, creating a supply chain requires detailed knowledge and planning.
Supplier Structure	Sometimes undesirable suppliers are employed because the options are limited.
Control	There is a lack of control over the operation.

*Source: Kovács & Spens, 2007, p. 108*

The paper is structured into three main sections. The methodology and literature section outlines the study's principles and sample creation. The findings section analyses and identifies the most critical problem areas highlighted in the sample. Lastly, the conclusion section presents potential solutions to the problems and suggests avenues for future research.

## **2. Methodology and Literature Review**

Literature reviews and methodological studies hold significant importance in academic research. They build on existing literature, gathering useful information about the subject, while keeping academics informed of recent developments. Furthermore, these reviews provide new interpretations by bringing together data from various perspectives (Herdman, 2006, p. 2). Systematic reviews conduct an analysis of academic research studies and allow for the evaluation of literature to identify its limitations and strengths (Çinar, 2021, p. 310).

The literature review was implemented in three steps, including sorting, classification, and analysis stages. A literature review was conducted using keywords and phrases including "humanitarian logistics", "relief supply chains", and "humanitarian disaster logistics management". In addition, UN official websites were examined. The search was carried out across several databases including Google Scholar, Taylor & Francis, Springer Link, Science Direct, Emerald Insight, and Turkish Thesis Centre. A literature review was conducted on humanitarian aid logistics from 2000 to 2022, with previous studies excluded from the scope. The subject's dynamic structure and rapidly evolving concepts were taken into account during the review process.

In the second stage, 67 studies were sorted and evaluated for their focus on issues encountered in humanitarian aid logistics, out of hundreds of results obtained from databases. Twenty studies were selected based on their relevance to the subject matter. A sample was formed by excluding other studies.

In the third stage, the twenty selected studies were comprehensively examined, and their data and content were compiled for analysis. Table-2 provides essential information on the academic articles. To highlight the effectiveness of the reviewed articles, the number of citations was determined using the Dimensions data server.

Table 2: Studies Reviewed by Authors

R.N.	Year	Paper	Author	Nation	Publisher	Natural Disaster Type	Natural Disaster Region	Category (Descriptive, Explanatory, Exploratory survey)	Methodology (Case, Theory-oriented, Interview)	Number of Citations	Most Important Issue Identified
1	2006	Humanitarian aid logistics: supply chain management in high gear	L N Van Wassenhove	France	Journal of the Operational Research Society	Multiple	Multiple	Descriptive	Multiple Case Study	992	Supply Chain Management and Procurement problems
2	2007	Humanitarian logistics in disaster relief operations	Gyongyi Kovacs ve Karen M. Spens	Finland	International Journal of Physical Distribution & Logistics Management	None	None	Explanatory	Theory-oriented	690	Cooperation and Coordination Issues Among Stakeholders
3	2008	Facility location in humanitarian relief	B. Balciik and B. M. Beamon	USA	International Journal of Logistics: Research and Applications	None	None	Exploratory survey	Theory-oriented	724	Deployment problem of disaster relief logistics
4	2009	Investigating humanitarian logistics issues: from operations management to strategic action	Je'ro'me Chandes ve Gilles Pache	France	Journal of Manufacturing Technology Management	Earthquake	Peru (August 2007)	Exploratory survey	Case Study	98	Shipping and Distribution Issues
5	2009	Identifying challenges in humanitarian logistics	Gyongyi Kovacs ve Karen Spens	Finland	International Journal of Physical Distribution & Logistics Management	Earthquake	Gana, (2007)	Exploratory survey	Case Study	310	Uncertainty of the Logistics Environment
6	2010	Transforming humanitarian logistics: the journey to supply network management	Peter H. Tatham ve Stephen J. Pettit	England	International Journal of Physical Distribution & Logistics Management	None	None	Descriptive	Theory-oriented	99	Supply Chain Management and Procurement Issues
7	2010	Coordination in humanitarian relief chains: Practices, challenges and opportunities	Burcu Balciik, Benita M. Beamon, Caroline C.Krejci, Kyle M. Muramatsu, Magaly Ramirez	USA	Int. J. Production Economics	None	None	Explanatory	Theory-oriented	576	Cooperation and Coordination Issues Among Stakeholders

R.N.	Year	Paper	Author	Nation	Publisher	Natural Disaster Type	Natural Disaster Region	Category (Descriptive, Explanatory, Exploratory survey)	Methodology (Case, Theory-oriented, Interview)	Number of Citations	Most Important Issue Identified
8	2012	Supply Chains in Humanitarian Operations: Cases and Analysis	Sergio Ricardo Argollo da Costaa, Vânia Barcellos Gouvêa Camposb, Renata Albergaria de Mello Bandeirab	Brazil	Procedia - Social and Behavioral Sciences	Multiple	India Pakistan Japan	Descriptive	Multiple Case Study	56	Shipping and Distribution Issues
9	2012	Comparative performance of alternative humanitarian logistic structures after the Port-au-Prince earthquake: ACEs, PIEs, and CANS	José Holguín-Veras, Miguel Jaller, Tricia Wachtendorf	USA	Transportation Research	Earthquake	Haiti (January 2010)	Exploratory survey	Case Study	69	Shipping and Distribution Issues
10	2012	Employing a systems-based perspective to the identification of interrelationship within humanitarian logistics	Graham Heaslip, Amir M. Sharif, Abraham Althonayan	England	Int. J. Production Economics	None	None	Descriptive	Theory-oriented	83	Cooperation and Coordination Issues Among Stakeholders
11	2012	On the unique features of post-disaster humanitarian logistics	José Holguín-Veras, M. Jaller, L.N.V. Wassenhove, N. Pérez, T. Wachtendorf	USA	Journal of Operations Management	None	None	Explanatory	Multiple Case Study	361	Uncertainty of the Logistics Environment
12	2012	Coordination in humanitarian relief chains: chain coordinators	P. Akhtar, N.E. Marr, E.V. Garnevska	New Zealand	Journal of Humanitarian Logistics and Supply Chain Management	Earthquake	South Asia (2005)	Explanatory	Case Study	119	Supply Chain Management and Procurement Issues
13	2014	Rights and obligations in international humanitarian assistance	George Kent	USA	Disaster Prevention and Management	None	None	Explanatory	Theory-oriented	7	Legal vacuum in humanitarian aid logistics



R.N.	Year	Paper	Author	Nation	Publisher	Natural Disaster Type	Natural Disaster Region	Category (Descriptive, Explanatory, Exploratory survey)	Methodology (Case, Theory-oriented, Interview)	Number of Citations	Most Important Issue Identified
14	2015	Segmenting critical factors for enhancing the use of IT in humanitarian supply chain management	Gaurav Kabraa ve A. Rameshb	India	Procedia - Social and Behavioral Sciences	None	None	Exploratory survey	Theory-oriented	23	Inadequate use of information technologies
15	2015	Identification and prioritization of coordination barriers in humanitarian supply chain management	Gaurav Kabra, A.Ramesh, Kaur Arshinder	India	International Journal of Disaster Risk Reduction	-	India (2015)	Exploratory survey	Case Study	94	Cooperation and Coordination Issues Among Stakeholders
16	2019	Synchronized Humanitarian, Military and Commercial Logistics: An Evolving Synergistic Partnership	Pablo Yuste, J. Campbell, D. Canyon, Mark Childers ve Benjamin J. Ryan	USA	Safety	None	None	Descriptive	Theory-oriented	7	Cooperation and Coordination Issues Among Stakeholders
17	2019	Corporate engagement in humanitarian action Concepts, challenges, and areas for international business research	Jasper Hotho ve Verena Girschik	Denmark	Critical Perspectives on International Business	None	None	Explanatory	Theory-oriented	14	Cooperation and Coordination Issues Among Stakeholders
18	2020	Lessons from the humanitarian disaster logistics management	Mohammad Asif Salam veSami A. Khan	Saudi Arabia	Benchmarking An International Journal	Earthquake	Haiti (January 2010)	Exploratory survey	Case Study	17	Cooperation and Coordination Issues Among Stakeholders
19	2021	Identifying Challenges and Improvement Approaches for More Efficient Procurement Coordination in Relief Supply Chains	ChristianWankmüller ve Gerald Reiner	Austria	Sustainability Journal	None	None	Exploratory survey	Interview	4	Supply Chain Management and Procurement Issues

R.N.	Year	Paper	Author	Nation	Publisher	Natural Disaster Type	Natural Disaster Region	Category (Descriptive, Explanatory, Exploratory survey)	Methodology (Case, Theory-oriented, Interview)	Number of Citations	Most Important Issue Identified
20	2021	Localisation of logistics preparedness in international humanitarian organisations	L. Frennesson, J. Kembro, H. de Vries Luk V. Wassenhoveve M. Jahre	Switzerland-Netherlands	Journal of Humanitarian Logistics and Supply Chain Management	None	None	Exploratory survey	Interview	10	Logistics deployment and resistance to change

### 3. Findings

The twenty scientific studies surveyed were divided into three categories, comprising nine exploratory studies, five descriptive studies, and six explanatory studies. Of these, nine were theory-oriented, nine were case studies, and two were conducted using the interview method.

The studies revealed a prominent issue of "lack of cooperation and coordination among stakeholders" as the primary concern for analysis. The focal point of seven studies, accounting for 35% of the total sample, is this particular problem area. The second most vital issue, concerning supply chain management and purchasing problems, has been thoroughly investigated in four out of the 20 studies, representing 20% of the sample. With regards to the third most significant problem, transportation and distribution issues, this constitutes 15% of the sample, as determined by Table 3.

**Table 3: Distribution of Studies by Focused Problem**

PROBLEM	STUDIES (According to Table-2 Ranking)	TOTAL
Lack of Stakeholder Cooperation and Coordination	2, 7, 10, 15, 16, 17, 18	7
Supply chain management and Procurement Issues	1, 6, 12, 19	4
Shipping and Distribution Problems	4, 8, 9	3
Uncertainty of the Logistics Environment	5, 11	2
Logistics Deployment	3, 20	2
Information Technologies and Lack of Information Sharing	14	1
Legal Issues	13	1

Nine of the analysed studies were carried out by scholars from different European countries, six by academics from the United States, and five by scholars from other countries. Based on this finding, it can be inferred that research on the topic is

predominantly conducted in Europe. This suggests that Western societies are taking the lead in addressing the problems encountered in humanitarian aid logistics, and that further scientific approaches need to be developed.

#### **4. Problems in International Humanitarian Aid Logistics**

Humanitarian logistics encompasses diverse activities including mitigation, preparedness, response and recovery during any phase of emergency management (Holguín-Veras et al., 2012, p. 496).

Humanitarian organisations worldwide encounter several intricate challenges in their disaster response efforts (Vaillancourt, 2016, p. 64). Regrettably, they are lagging behind the private sector by almost 15 years, which early on acknowledged the significance of utilising supply chains (Van Wassenhove, 2006, p. 476). Despite the tendency of humanity to save others from the plight of others and the application of commercial logistics experience to humanitarian aid, problems are experienced due to the unique differences of humanitarian aid logistics, so the international community is trying to improve the process of providing and distributing aid in a coordinated and integrated manner (Salam & Khan, 2020, p. 1458).

A supply chain founded on long-term commitments between stakeholders sharing common commercial goals is unsuitable for humanitarian logistics (Salam & Khan, 2020, p.1459). Moreover, there are several supplementary obstacles to overcome when compared to commercial logistics. These include physical challenges in reaching beneficiaries due to severe transport infrastructure deterioration (Hotho & Girschik, 2019, p. 203; Tatham & Spens, 2011, p. 10).

- There is inadequate time to identify necessary materials.
- The communication infrastructure lacks reliability, hindering information flow.
- Inter-agency partnerships in standards, strategy, and processes are lacking.
- There is resistance to organizational learning.
- Safety concerns in the relief area, particularly during man-made disasters.
- The duration of logistic needs and the uncertainty of continuity status.

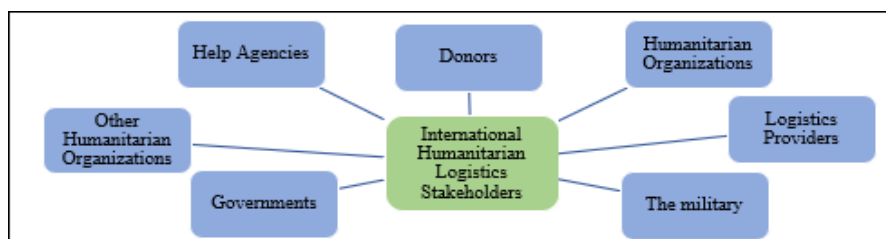
Humanitarian aid logistics is a means of delivering direct support to communities affected by disasters and to those assisting them. The aim is to enhance the delivery process of necessary goods to save lives and restore damaged infrastructure (Chandes & Paché, 2010, p. 322).

The challenges of humanitarian logistics include short delivery times, unpredictable demand, high risks of timely deliveries, and limited resources (Kovács & Spens, 2009, p. 507). This study identifies and discusses the top three issues found in literature, while collecting other problems under a separate section.

#### 4.1. Cooperation and Coordination Issues Among Stakeholders

The allocation of scarce resources presents a significant challenge, especially when communication infrastructures have completely collapsed. Humanitarian logistics demands a vision that surpasses traditional logistics principles. The reason being that it must organize different actors who lack partnerships between stakeholder sectors and must share processes and distribution channels to work together effectively. The Haiti earthquake experience reveals that aid workers possess inadequate awareness about pre-disaster arrangements. Regrettably, organizations concentrate on delivering aid instead of conducting preparations during disasters (Salam & Khan, 2020, pp. 1465-1468). In this context, the foremost challenge highlighted in the international humanitarian aid logistics literature is the coordination of logistics activities (Kovács & Spens, 2009, p. 506) and the difficulties in ensuring collaboration between aid organisations (Balcik et al., 2010, p. 22). Other factors, including human resource planning, resource allocation, inter-agency relationships, and information exchange between stakeholders (refer to Figure 1), have an impact on the effectiveness or failure of coordination processes (Wankmüller & Reiner, 2021, p. 6).

*Figure 1: International Humanitarian Logistics Stakeholders*



*Source: Kovács & Spens, 2007, p. 106*

As a participant in humanitarian logistics, the military is involved in many of the same logistic endeavours related to aid. Military logistics play a significant role in situations of natural disasters, as their abilities in heavy transportation, communication, and security are unmatched. Notwithstanding the highly effective and advantageous short-term impact of military actors on the ground, incongruities in cost, appropriateness and comprehension between military and humanitarian aid actors present difficulties for the continuation of aid. Military logistics is particularly effective for first responders, albeit costly, and thus, its sustainability remains challenging. Furthermore, there is a lack of standardization between civil and military logistics (Yuste et al., 2019, p. 3). Military aid operations are generally coordinated from a specific coordination centre. However, the management of humanitarian aid operations is inconsistent, as aid is distributed through numerous centres of various aid organisations (Kovács & Spens, 2007, p. 103).

Insufficient and inefficient coordination is evident through low levels of information sharing and poor cooperation among non-governmental organisations (NGOs), often resulting in coordination errors. After the 2004 tsunami in Bandar Aceh, over 72 coordination meetings took place per week and 170 distinct organisations participated in

post-tsunami sanitation meetings. Nevertheless, the outcome did not meet expectations as meetings transformed into information exchange tools rather than a means of attaining integrated management (P. H. Tatham & Pettit, 2010, p. 615). Coordination issues stem from inadequate communication between NGOs and the lack of mutual trust and respect, exacerbated by challenging working conditions. Such issues were evident during the 2004 Indian Ocean tsunami, hurricane Katrina, the 2010 Haiti earthquake, and the ongoing COVID-19 epidemic. Studies have also revealed that resources in the aid chain are not being used effectively, leading to some extent of wastage, and aid delivery is frequently delayed. These coordination difficulties often result in duplicated efforts and excess relief supplies being sent to a specific disaster area, whose consequences, such as ineffective aid distribution, increased casualties and higher costs for survivors receiving deliveries, are often considered catastrophic in the aftermath of disasters. These coordination difficulties often result in duplicated efforts and excess relief supplies being sent to a specific disaster area, whose consequences, such as ineffective aid distribution, increased casualties and higher costs for survivors receiving deliveries, are often considered catastrophic in the aftermath of disasters. (Wankmüller & Reiner, 2021, p. 2). In brief, the challenges of coordination include cultural conflicts, time loss in coordination meetings, lack of cooperation among state officials, insufficient skilled workers, and language barriers (Akhtar et al., 2012, p. 98).

Another challenge in institutional engagement in humanitarian action is to encourage businesses to partake in the delivery of humanitarian aid and to guarantee their continued involvement at various stages of the crisis. Traditional humanitarian actors operate by adhering strictly to the principles of humanity, impartiality and independence. However, when non-humanitarian actors engage in humanitarian activities, adherence to these principles cannot be guaranteed. Firms may be unaware of, or choose not to comply with, these principles, particularly when they clash with their commercial interests or motivations (Hotho & Girschik, 2019, p. 211-212).

Thus, four main groups of factors hindering organizational cooperation can be identified. These include: the perception of logistics as a core organizational competency; cultural differences and mutual distrust; lack of transparency regarding potential and current benefits; and insufficient assistance capacities (Heaslip et al., 2012, p. 390).

#### **4.2. Supply Chain Management and Procurement Issues**

The humanitarian aid supply chain may be defined as the process of efficiently planning, implementing, and controlling the flow and storage of goods, information, and materials, from the starting point to the point of consumption, at a cost-effective rate. This is done to satisfy the needs of the end beneficiary (Lewin et al., 2018, p. 519).

The variations in the forms and features of humanitarian aid logistics for each disaster (earthquake, flood, fire, internal conflicts, etc.) and the specific conditions of each event determine the required special supplies. While basic human needs such as eating and drinking remain identical, the distinct medication, shelter, infrastructure necessities, transportation opportunities, and constraints associated with different geographies make advance preparation a challenge. Each event requires unique planning criteria.

The importance of preparedness has been underlined by UN member states through the Sendai Disaster Risk Reduction 2015-2030 Framework, which aims to decrease disaster risk and minimize the harmful impacts of disasters. This process encompasses various actions such as evaluating requirements, acquiring resources, storing and delivering items, managing waste and gauging effectiveness to mitigate the distress of individuals in need (Frennesson et al., 2020, p. 86).

The supply chain in humanitarian logistics can be viewed as temporary chains established for specific operations (Jahre et al., 2009, p.1009). This distinguishes it from commercial supply chain management. Commercial supply chains are more stable and operate with mostly predictable supply patterns. Conversely, humanitarian aid logistics face highly uncertain demand which makes it challenging to operate. Trade sourcing involves trade items that provide advantages for customers who wish to purchase the goods (pull strategy). On the other hand, the humanitarian supply chain oversees resources and products such as evacuation vehicles and shelter that cater to fulfilling basic human needs. The humanitarian aid supply network goes beyond "humanitarian" organizations (donors, aid organisations, NGOs, etc.) and operates with distinct dynamics. In commercial procurement, stakeholders generally include factories, distributors, retail stores, and customers. In contrast, in humanitarian aid procurement, key stakeholders involve international and local NGOs, governments, charities, private sector companies, and beneficiaries (Wankmüller & Reiner, 2021, p. 5), (Kovács & Spens, 2009, p. 512). It is important to note that these designations may be subject to contextual variations.

Charities have evolving agendas and strategic objectives and are responsible to their donors. They prioritize front-end procedures, such as water or vaccine delivery, over back-end procedures, like establishing efficient supply chain networks. Developing effective supply chain management is challenging due to the intricacy of interorganizational relationships and connections with donors (Salam & Khan, 2020, p. 1459). Furthermore, within the realm of humanitarian aid logistics, cash donations and non-monetary goods and services can be incorporated into the supply chain either intentionally or inadvertently procured from suppliers (Falasca & Zobel, 2011, p.154).

Humanitarian crises differ in duration. While some, like the chronic famine that hit Somalia in 2017, may persist for a long time, others, such as the tsunami that hit Sulawesi island in 2018, are short-lived (Hotho & Girschik, 2019, p. 203). However, prolonging supply times can impede the supply chain's efficacy (Negero, 2018, p. 97). Furthermore, Kabra et al. (2015, p. 135) assert that the foremost concern in the disaster supply chain is the actors' technological capabilities, due to the lack of strategic planning and unequal opportunities in information technologies.

In the research carried out by Kabra et al. (2015), administrative, technological, cultural, human, and organizational barriers are presented as the fundamental challenges in streamlining the coordination of the humanitarian aid supply chain. In a recent study conducted by (Wankmüller & Reiner, 2021), issues related to joint purchasing were classified as follows: wasteful resource use (overestimation of needs), insufficient transparency in information sharing, reluctance to change (procurement coordinators tend to resist improvement practices and exhibit behaviour patterns averse to change), inadequate information exchange, and disparate approaches towards preparedness (pre-

disaster procurement protocols vary across NGOs). Some organisations have prearranged agreements with their suppliers to expedite the procurement process when necessary. Some organizations do not adequately prepare for relief supply procurement. Additionally, there are varying approaches to needs assessment, with some institutions deeming it unnecessary and failing to hold important coordination meetings. These organizations independently conduct demand assessment. Furthermore, NGOs compete for financial resources by striving to maximize their media exposure. Another factor contributing to competition amongst civil society organizations (CSOs) is the absence of incentive systems to encourage organizations to collaborate instead of competing with each other. Additionally, ineffective resource management and the manipulation of prices can further exacerbate this issue. High-intensity disasters often call for the mobilization of numerous organizations of various sizes to provide relief operations. Smaller NGOs depend on local producers if they cannot source from global suppliers or lack knowledge of their own resources. The media's impact is crucial in the funding performance of humanitarian organizations. During recent humanitarian responses, the media has been both beneficial and detrimental. Complex bureaucratic obstacles and lack of transparency in supplier selection pose significant risks to customers and beneficiaries in disaster areas, as delivered products may not meet appropriate standards.

The coordination of urgently required relief supplies presents a complex challenge. Decentralised task coordination tends to result in duplicated efforts and the delivery of inappropriate supplies to individual disaster areas. A study conducted in 2021 highlighted the significant challenges involved in procurement coordination, including a lack of cooperation incentives, poor communication, unclear power division, and non-compliance with standards and regulations. The findings from interviews with business experts indicate that integrating social media, increasing purchasing flexibility and improving coordination can assist NGOs in the development of purchasing activities (Wankmüller & Reiner, 2021, p. 2).

### **4.3. Transportation and Distribution Issues**

Transport and distribution play significant roles in disaster relief operations. Delivering aid to the final destination following a disaster can prove to be a difficult task for relief organisations (Balcik et al., 2010, p. 24). After a natural disaster, attempts are made to provide logistics through numerous distribution points spread over a wide area. Debris often damages delivery vehicles and infrastructure, leading to significant uncertainty about the state of the transportation network, which can also be congested (Holguín-Veras et al., 2012, p. 497).

Establishing a local network is crucial for delivering appropriate resources to the necessary recipients, and an effective transportation link with the network and relevant stakeholders is pivotal for accomplishing successful disaster management (Salam & Khan, 2020, p. 1462). Furthermore, the diminishing authority of the local government in the region, the destruction of infrastructure, and the inability of local officials to perform their duties due to stress and panic hinder the delivery of relief supplies to the end user (the needy) (Pateman et al., 2013, p. 90).

Insufficient logistics coordination among NGOs may result in a surplus of inert materials, including unwanted donations and materials, which in turn can obstruct the operations of airports and warehouses (Heaslip et al., 2012, p. 379). Consequently, this adversely affects the direct distribution process. Moreover, an absence of consistent labeling protocols for materials further complicates aid distribution to various regions (Kovács & Spens, 2007, p. 104).

Transport crises occurred during the response to the 2010 flood in Pakistan. The delivery of aid was impeded due to transportation bottlenecks, limited access to affected regions, and scarce vehicles (Gralla & Goentzel, 2018, p. 436). The South Asian Earthquake in 2005 presents another illustration, whereby distribution expenses escalated because of the shortage of time, high demand, and danger, along with increased truck and vehicle fees (Akhtar et al., 2012, p. 95). Following the Haiti earthquake, a widespread global aid network was established with thousands of planes and ships delivering aid and tens of thousands of volunteers assisting with the response. Despite these efforts, significant supply chain disturbances occurred due to damage inflicted upon crucial transport infrastructure including the Port-au-Prince airport and the connecting road to the Dominican Republic. The failure of certain agencies in tracking down the lorries required to distribute relief supplies sparked a "lorry crisis". This resulted in lorry loads being labelled as one of the foremost three priorities for landing at the airport and necessitated urgent appeals to international donors by the Dominican Republic Government for lorries. Moreover, the establishment of an assortment of distribution points and the provision of security to safeguard convoys have encountered substantial setbacks. A significant quantity of aid has amassed at the airport in Port-au-Prince, which is being distributed to aid camps via aerial and airborne drop-offs due to the urgent situation. The foremost reasons for the issues encountered after the earthquake were the unavailability of crucial supplies for the survivors and the absence of a local transportation network, impeding delivery. This catastrophe has highlighted the importance of integrating collaborative aid links as an official partner in relief efforts to ensure healthy humanitarian logistics (Holguín-Veras et al., 2012, p. 1623-1638). The lessons learned from this earthquake distinctly demonstrate that the negative impact of infrastructure and transportation systems caused disruptions to disaster relief transportation. Logisticians must be mindful of the strong possibility of encountering such situations.

#### **4.4. Other Issues**

In addition to the aforementioned challenges, several difficulties fall under one grouping that contributes to the complexity of international humanitarian aid logistics. The foremost of these pertains to the legal dimension of humanitarian aid operations, which though present, remains opaque. Clearing the obligations and privileges of various parties concerning international humanitarian aid are necessary steps towards greater clarity. In respect of donor rights and the entitlement of those in need to receive aid, numerous states stress their ability to offer international humanitarian aid but are disinclined to accept a duty to do so (Kent, 2014, pp. 214-221). In brief, there is a dearth of unambiguous and adept global legislative frameworks that set out the scope of humanitarian aid operations.



Additional complexities surrounding the flow of resources can arise from indirect issues, including customs. While it is necessary to develop common customs procedures for all humanitarian organizations, it should be noted that challenges in customs procedures indicate a lack of disaster preparedness in countries (Kovács & Spens, 2009, p. 522).

Additionally, differences in culture, education, and objectives among aid actors pose a problem. International providers, stakeholders, and aid recipients hold diverse cultures and values, which may lead to disruptions. It is important to consider the intra-organisational challenges faced by most NGOs, as staff members, including volunteers and paid employees, must work in tandem. Different levels of expertise and motivation within different groups of staff can result in various predicaments (Wankmüller & Reiner, 2021, p. 6).

Additionally, limitations on aid may arise due to a country's national security concerns or defense mechanisms. Although certain governments receive international aid, they may refuse assistance to protect their sovereignty. These countries may fear that humanitarian intervention could be used for political purposes (Kent, 2014, p. 219).

While information technologies (IT) are vital in humanitarian aid logistics, many researchers overlook their potential benefits and efficiency. In recent years, the implementation of information technology (IT) has proved to be an effective approach to enhance the overall performance of the humanitarian supply chain.

The logistics managers should be mindful of security issues as well. In certain conflict zones, like war-torn regions, insurgent groups may seek to block the delivery of aid and other crucial supplies. Looting can occur after natural disasters, and vehicles can often be stopped and redirected from their intended destination (Kovács & Spens, 2007, p. 107). The risk is not limited to the material. Logisticians dealing with man-made disasters, including those involving armed conflict and political crises, may face abductions and murders of humanitarian aid workers, in addition to security challenges related to material.

Furthermore, a lack of qualified personnel is an indirect factor that hampers disaster logistics (Kovács & Spens, 2009, p. 510). Additional training is essential for local transport service providers, as well as for those involved in logistics for local humanitarian initiatives or humanitarian logistics more broadly (Kovács & Spens, 2009, p. 522).

## **5. Conclusion**

### **5.1. Suggestions for Logistics Problems**

In summary, the effectiveness of humanitarian logistics is contingent upon various factors including the location and type of disaster, number and severity of casualties, condition of local infrastructure, and availability of transportation resources. Chandes and Paché (2010, p. 323) affirm these criteria. Furthermore, research has shown that executing strategies is comparatively more challenging than devising them in this context. Nonprofits and other stakeholder groups face a high level of complexity while dealing with financial, political, and social pressures. According to literature, several obstacles

hinder successful implementation of strategies (Frennesson et al., 2020, p. 87). The identification of problems plays a crucial role in focusing on their resolution.

The primary objective of humanitarian logistics is to establish connections and relationships. Government agencies, the military, NGOs, local communities, and victims ought to collaborate to produce solutions customised to disaster shock (Salam & Khan, 2020, p. 1455). Augmenting the establishment of local networks and aligning them with long-term and short-term humanitarian preparedness scenarios could significantly enhance future responses. Continuous investment in strategic coordination and knowledge management efforts is crucial to achieving better coordination outcomes (Lewin et al., 2018, p. 526). Humanitarian logisticians should be aware of several challenges, ranging from inadequate logistics infrastructure management to coordination and technological barriers, as well as the fragmented state of knowledge management and people's unwillingness to share information (Salam & Khan, 2020, pp. 1456-1458).

Developing standard templates and systems is crucial to enhance humanitarian interoperability. Despite significant efforts to facilitate online information sharing and the development of a Logistics Operational Guide in 2010, there are still numerous variations of templates for conducting needs assessment and tracking ordered items (Kovács & Spens, 2011, p. 35). The implementation of standardized terminology in the humanitarian sector can enhance management by promoting transparency, integration, data sharing, and harmonization (Lewin et al., 2018, p. 525).

Rather than waiting passively for a crisis to happen anywhere in the world to prompt humanitarian aid operations, it can be beneficial to take a proactive approach by anticipating and mobilising resources, both tangible and intangible. Furthermore, the procurement and delivery of adequate relief materials from local and/or international suppliers post-disaster is often a time-consuming and costly process. Aid agencies undertake preparedness activities to enhance their logistical capabilities when responding to emergencies. An effective strategy deployed is the pre-positioning of critical aid materials in strategic locations worldwide (Balcik & Beamon, 2008, p.102). This strategy greatly simplifies the fulfillment of demand in the initial hours following a disaster, as the first demand can be met expeditiously with pre-positioned aid items (Wankmüller & Reiner, 2021, p.5).

In general, the response to a disaster depends on its level of predictability, while specific types of disasters are linked to particular geographical regions (Kovács & Spens, 2009, p. 509). It is possible to predict geographically the likelihood of earthquakes near the existing major fault line and their potential severity as well as the intensity of precipitation. To ensure preparedness, it is imperative to make an informed decision regarding the location of the "strategic centre" (or "logistics centre") to be established in high-risk regions (Chandes & Paché, 2010, p. 327). The World Food Programme (WFP) has strategically pre-positioned disaster relief stockpiles at six United Nations Humanitarian Response Depots located in a global network situated in Ghana, the United Arab Emirates, Malaysia, Panama, Italy, and Spain. Major warehouses managed by the WFP are strategically located at key transportation hubs for road, rail, air, and sea freight. This ensures that relief supplies can be transported within 24 to 48 hours within the region

(Yuste et al., 2019, p. 7-8). Figure-2 displays the exact locations of these United Nations warehouses.

**Figure 2: United Nations Humanitarian Response Depot-UNHRD**



*Source: United Nations Humanitarian Response Depot-UNHRD*

A significant majority concurs on the necessity of dispersing logistics readiness, whereas only a minor proportion encourages centralisation (Frennesson et al., 2020, p. 97). The notion underlying this belief is that creating a more widespread logistics network and warehouse system will enhance response speed and ability.

Pursuing commercially effective solutions may also be considered and implemented, if suitable. For instance, numerous commercial enterprises employ third- or fourth-party logistics providers (3PL/4PL). In principle, such an approach may be considered for use in the humanitarian sector. Following the 2004 tsunami, a logistic agglomeration study was performed to remove redundancies amongst UN agencies (P. H. Tatham & Pettit, 2010, p. 616).

Often, utilising military capabilities in disaster logistics saves lives. After the earthquake in Haiti, the United States Air Force operating portable air traffic control equipment arrived the day after, enabling aid planes to take off and land due to the functional runway (Holguín-Veras et al., 2012, p. 1626). Joint workshops and exercises in areas of mutual interest should be encouraged among military and civilian personnel to ensure mutual learning from divergent perspectives (Heaslip et al., 2012, p. 379).

It may appear unconventional to utilise a military approach to addressing issues, but considering the nature of an emergency situation, there are evident similarities between humanitarian assistance and military logistical operations. The parallels between a war-stricken environment and a disaster-struck one can be delineated by "uncertain events in the future, significant harm inflicted on physical infrastructure, a substantial number of fatalities, casualties, and/or psychologically distressed individuals, and an intense curiosity from the global media, the ramifications of which cannot be precisely anticipated" (P. Tatham & Spens, 2011, p. 15).

## **5.2. Limitations and Suggestions for Future Studies**

Numerous challenges identified in our study have a substantial impact on the logistics of providing humanitarian aid, with three crucial issues distinguished within the literature. These being, firstly, the inadequate cooperation and coordination amongst stakeholders; secondly, supply chain management and procurement concerns; and thirdly, transportation and distribution complications.

Further research is necessary to discover new and inventive approaches in developing intricate coordination mechanisms, relationships, and contracts in the humanitarian supply chain. This study highlights problem areas within international humanitarian aid logistics, providing insight for future studies focused on solving these issues.

The study emphasises the need to prioritise particular obstacles in future research. Though predominantly English literature was reviewed, local findings and studies in disaster-prone countries were unfortunately excluded. Only studies addressing accessible concerns within humanitarian aid logistics were included in the sample. The topic was discussed generally, however, future studies will benefit from focusing on a singular problem area and incorporating a variety of languages.

More extensive analysis and evaluation of natural disasters will provide a more precise understanding of institutional solutions. We anticipate that through the experience gained, the intersection of practices, the sharing and development of common solutions, and the scientific analysis of these studies, the identification of key points will be made possible.

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# AN EXPLORATORY PAPER ON CIVIL SOCIETY IN JIU VALLEY. THE CASE OF COALITION "VALEA JIULUI IMPLICATĂ"

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Edi Dragoş BESERMAN<sup>1</sup>

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**Abstract:** *Up to this date very few empirical studies that address the civil society sector in Jiu Valley have been conducted. If they touch upon this topic, they discuss only the associational life of the miners. However, this does constitute their main objective. Thus, civil society actors beyond the miners' unions are neglected. Recognizing the scarcity of research on this topic, the paper seeks to address this gap, by taking the case of the coalition of Valea Jiului Implicată/Jiu Valley Involved. In order to find out more about this coalition and its members, I used a mixed method approach consisting of both quantitative and qualitative methods. Results show that the coalition was formed by educated individuals with an experience of migration, that managed to bring together volunteers and NGOs so that they can address different problems affecting the region.*

**Keywords:** *Civil Society, Jiu Valley, Coalition Jiu Valley Involved, Valea Jiului Implicată, Non-governmental organizations, civic engagement*

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## Introduction

By taking the case of the coalition Valea Jiului Implicată/Jiu Valley Involved, the present study aims to bring a contribution to the understudied topic of civil society in Jiu Valley. Specifically, the paper is interested in understanding (1) the reasons that contributed to the formation of the coalition, (2) their main objectives and the projects that have been undertaken to address them and (3) who are the members of this coalition, in terms of demographics and how they stand out compared to the broader population of Jiu Valley. In order to address these objectives, I used a mixed-methods approach of both quantitative and qualitative research methods. For the first 2 objectives, insights were gathered from semi-structured interviews with 2 of the 4 founding members. For the 3rd objective, I collected data from 25 members through an online questionnaire. Additionally, for comparison reasons, I used data from the 2016 IRES survey, which was carried out on a representative sample of the Jiu Valley population.

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<sup>1</sup> PhD candidate at the Research Institute for the Quality of Life of the Romanian Academy and Research Fellow at the Research Institute of Făgăraş, E-mail: [edibeserman@gmail.com](mailto:edibeserman@gmail.com)



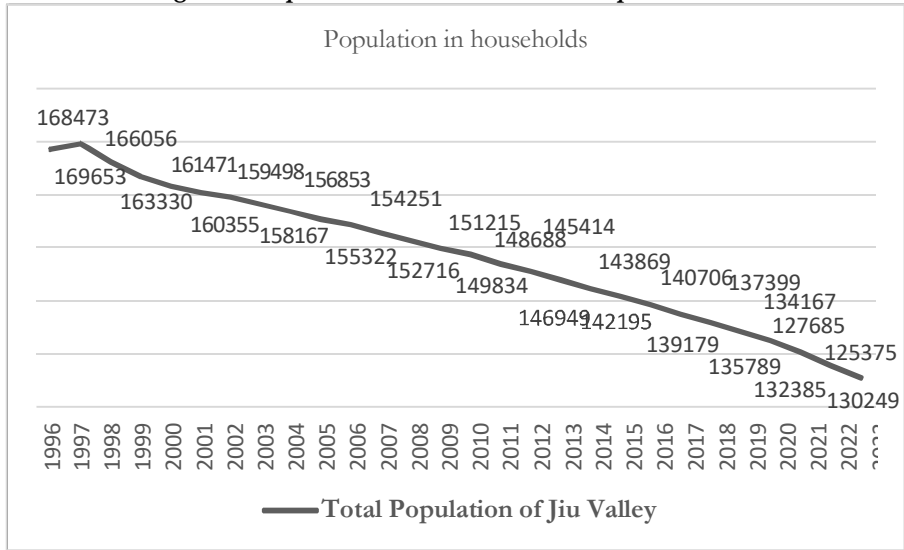
Results show that the coalition was formed by very educated individuals, with migration experience and a social network expanding outside the region. These are obvious relevant factors that helped them recognize different problems that affect the region as well as finding ways of approaching them. The coalition emerges as an alternative to politically controlled civil society entities, particularly labor unions with links to political parties; to address challenges within the local civil society of the Jiu Valley who have a potential for collective action but haven't discovered it; to fill the expertise gap within the local administration by bringing together competent experts from various fields; initiate projects for social, economic, and cultural development within the Jiu Valley; or ensuring that the needs of the community are addressed in the region's economic, social, and environmental development strategies. The rest of the members of this coalition are also very educated and relatively young, with a decent income. They stand as different from the rest of the population of the region when it comes to questions that deal with the main problems in the Valley, who should solve these problems, or trust patterns.

Moving forward, I will provide a brief contextualization and overview of the general situation in Jiu Valley, focusing on associational life in the region, particularly among the miners.

## **General context**

Prior to the mining exploitation started by the Austro-Hungarian Empire in the region, the population of Jiu Valley consisted primarily of peasants whose main focus was on agriculture and animal husbandry (Burlacu et al., 2019). The local economy was initially dominated by pastoral activities, but it later shifted to coal mining (Burlacu et al 2019). Economic and social life were organized around coal production (Țoc and Alexandrescu, 2022), coal mining becoming the region's identity (Kideckel, 2018). As mining operations began, followed by urbanization and industrialization during the communist period, the population of Jiu Valley experienced substantial growth (Baron, 1998).

Figure 1 (below) shows the evolution of the population in households in all 6 cities of Jiu Valley. The peak was attained in 1997, with a total of 169653 inhabitants. Starting with the year 1998, the population is in continuous decline until today, with a total of 44278 of inhabitants that left the region and with an average of 1703 of inhabitants that left per year. Such a trend started with mass layoffs and closing of the mines without creating alternatives, without long term programs of professional reconversion of the dismissed miners (Burlacu et al 2019) and due to corruption (Rus, 2007). The greatest decrease in population can be found from 1997 to 1998, with a decrease of 3597 inhabitants. The second decrease is from 1998 to 1999 when Jiu Valley lost 2726 inhabitants, third decrease from 2021 to 2022 with 2564 lost inhabitants, and fourth in 2022 from 2023 with 2310 fewer inhabitants. Along with demographic decline, other social problems such as aging of the population, unemployment or reduced opportunities for employment, poverty, inadequate living conditions, declining quality and attractiveness of urban life, all contribute to the characterization of these cities as shrinking cities (Țoc and Alexandrescu, 2022).

**Figure 1. Population in households in the period 1996-2023**

*Source: National Institute for Statistics Romania*

Although the social context in the region is characterized by economic, housing, infrastructure, demographic and identity crises due to the closing of the mines (Țoc and Alexandrescu, 2022), Jiu Valley is not a poor region compared with other similar urban zones in the country (Sandu and Stănculescu, 2004). It's very vulnerable when it comes to poverty, considering high rates of unemployment and dependencies which are comparatively higher than in other similar zones (Sandu and Stănculescu, 2004). While corruption is the same as in other cities under 50.000 inhabitants, higher levels can be found within the business environment and interactions with county authorities (Sandu and Stănculescu, 2004).

Shifting the attention from structures to individuals, a social category that was extremely affected by the closing of the mines we're the miners. They share a common perception of their lives, marked by stress, dangers and a sense of detachment from both society and the community (Kideckel, 2010). While their image as miners was exalted in the communist period (Rus, 2007; Cesereanu, 2016), it slowly started to decline after the fall of the regime (Rus, 2007). They became discredited, defamed or even considered worthy of pity by others, such a perception being influenced by the militancy and questionable acts of labor unions, and by the negative and exaggerated manner in which the press painted them (Kideckel, 2010; Kideckel, 2018; Rus, 2007; Cesereanu, 2016). The questionable actions of the labor unions we're most visible in the mineriads, but they can be seen even in their relationship with the management of the mining company (Ciocodeică and Prodanciuc, 2010). In one example, recognizing that the financial requests made to the company will only be addressed when the unions assert themselves forcefully, the union's leadership adopts a stance akin to that of the company's leadership,

and also arrange work-related meetings with government officials to address the company's financial challenges (Ciocodeică and Prodanciuc, 2010). Furthermore, it should be mentioned that the labor unions did not always promote the interests of the miners, with many miners sharing such a view (Ciocodeică and Prodanciuc, 2010). At the same time, the unions movements became more fragmented due to internal divisions and because of the pride of the union leaders', many whom wished to become big personalities (Stegar, 2014). The case of the last mineriad stands as an ideal example of these aspects. The president of the league of unions and miner's leader Miron Cozma, along with the other union leaders under his command, started the march towards Bucharest in order to prevent the authorities from carrying out the arrest warrant issued under his name and due to his deteriorating image as a leader (Rus, 2007).

Such images showcase that the associational life of the miners was marked by personal and social struggles and manipulations. Most studies that refer to Jiu Valley discuss these aspects, but they do not constitute their main objective (see for example Rus, 2007; Kideckel, 2010; Kideckel, 2018, Larionescu, Rădulescu and Rughiniş, 1999; Fulger, 2007; Stegar, 2007; or Stegar, 2014). The authors most often write about labor unions and miners, and barely or don't refer at all to the civil society located beyond unions. One exception could be considered Constantinescu, Dascălu and Sucală's (2017) paper, which describes from an activist perspective the struggle encountered by the actors involved in saving the Petrila mine from demolition. Their initiative and the movie they made about this, called Petrila Planet, later influenced the forming of the NGO with the same name. This NGO was one of the 4 which founded the coalition of Valea Jiului Implicată/Jiu Valley Involved. Until the end of 2023, there are no scientific studies that address this coalition.

## **Methodology**

To address this issue, I set to find out why the coalition formed in the first place, what are their objectives, what projects have been undertaken and who are their members. Thus, I conducted semi-structured interviews with 2 of 4 founders of the coalition, as their insights regarding why they have come together to form a coalition, what objectives they have set for themselves and what type of projects have been implemented to address these objectives will offer a more nuanced responses to these questions. To find out who the rest of the members of the coalition are, I was specifically interested in:

- assessing the demographic profile of the members. What is their education level? What is their income? In what domains do their NGOs activate?
- identifying their attitudes regarding different matters that encompass Inglehart's self-expression values (Inglehart, 2019). The reason for choosing attitudes aligned with self-expression values is due to the fact that these are considered civic values or a civic form of modern individualism (Welzel, 2010). They are also interpreted as a sign of altruism and strong social capital. Welzel (2010) shows, with evidence from the World Values Survey, that the data supports a civic view on self-expression values, and that

they are associated with altruism, high levels of trust in people and peaceful collective action, characteristics which define civil society;

- explore what differences exist between the members of the coalition and the rest of the population of Jiu Valley on matters such as trust, what are the problems of the region and who should solve them. For such a comparison to be made, I used data from IRES 2018 study on Jiu Valley and included some of the questions from there in the survey aimed at the members of the coalition.

To address these additional objectives, I collected data through an online survey which was distributed via the Coalition's WhatsApp group and by e-mail. The sample consisted of a total of 25 subjects. Since the coalition is not formally founded, there is no information on how many members are there and how many people are active.

## Results

### Qualitative analysis

In 2019 the first civil society coalition that gathers multiple non-governmental organizations and volunteers formed. It was formed by the decision of 4 individuals, members of Jiu Valley Development Society Project, Caritas Petroșani, Planeta Petrila (Petrila Planet) and Noi Orizonturi (New Horizons Foundation) organizations, and it gathers until 2023, 27 non-governmental organizations, according to the founders, but no real track of how many volunteers. The coalition does not have a formal status and is not officially registered. It was established through a project submitted to a call for projects for the consolidation of civil society, initiated by the French Embassy in Romania.

According to the founders, the coalition sets out 3 objectives: (1) strengthening civil society in the Jiu Valley by encouraging civic engagement, sharing the best practices, and enhancing collaboration among its members. (2) promoting the principles of good practice in the sustainable development of the Jiu Valley and highlighting civil society in the region as a particularly significant factor in the process of formulating strategic development documents for the area. (3) fostering collaboration between civil society in the Jiu Valley and public authorities from local, county, regional, national, European, and international level as well as the private sector and academia.

Prior to its formation, the local civil society was regarded as small and less united than it is now. Very few actors interacted with each other and the interactions that occurred were limited to similar domains, primarily social work and arts. When one of the founders of the coalition started her NGO, her knowledge of other organizations was limited and the absence of openly engaged individuals in the community, prompted her to involve her family members in its creation: *"When I founded Valea Jiului Society, I didn't know about any organizations that are now members, even if I was firstly trying to find an existent NGO to support [...] I was then trying to identify people motivated to be involved, but finally I founded Valea Jiului Society with my mom, dad and sister, because I couldn't find by then any person that was open and involved"*. Such aspects we're present and continue to be present even within the coalition itself, where many members initially did not know about each other or their NGOs area of activity.

Furthermore, labor unions were the most spread forms of associational life in the Valley, and the solidarity among its members was not as strong as it was often portrayed (Rus, 2007). Unions did not always represent the interests of the miners and at the same time had manipulative leaders with ties to political parties (see Rus, 2007; Fulger, 2007; Ciocodeică and Prodanciuc, 2010). Aware of such aspects, one of the founders argued that a reason for forming this coalition, was also to present an *"alternative to politically controlled civil society, in the form of labor unions"*. To strengthen the idea, they have set as a primary condition to join the coalition, to not be a member of a political party.

The establishment of the coalition was also motivated to address such issues within the civil society in Jiu Valley, while recognizing the potential of these actors for collective action, given their relatively limited influence when operating individually. Acting together will benefit the entire community in the region, because collaboration is perceived as a vital aspect which will lead to increased visibility of civic initiatives and a more significant impact in the region. As one of the founders explains: *"A united and engaged civil society is essential for the development of the local community and the region. In a smaller, close-knit community like Jiu Valley, individual civic initiatives are less visible. This is where the importance of a coalition of local NGOs comes into play, providing a framework for common action and collaboration within the local civil society. This allows these NGOs to support each other, implement joint projects with shared resources, and make community-driven initiatives more visible, resulting in a greater impact on the community"*. At the same time, their intention was to bring the necessary expertise that can address the lack of capacity within the local administration. Important to note here is that all 4 members that formed the coalition are experts in their professional areas, 3 of them obtaining their skills and education from universities outside the valley. This also contributed in expanding their networks beyond the region and even outside the country, through which they managed to bring experts from abroad. Moreover, the coalition is composed of NGOs with competent experts in various fields such as social work, urban regeneration, architecture or sociology. As the quantitative part of this papers shows, many members are highly educated individuals, further emphasizing the significance of this need for expertise.

The context of their formation is relevant to mention and the founding members also acknowledge this. During that period, the strategy for economic, social and environmental development (for 2022-2030) began to take shape. Understanding the importance of such a strategy, they managed to get involved in its development, with the objective of ensuring that it resonated closely with the aspirations and needs of the local community. Building further on their involvement, they managed to mobilize and implement one of their first projects, that aimed to revitalize a part of the center of Petroșani city and simultaneously bringing into discussion the post-coal future of the region. The project was centered around the first mural painting done in Jiu Valley, an idea initiated by Greenpeace organization (which also provided the funds), but implemented by the coalition together with the town hall of Petroșani. The event inspired one of the founders of the coalition to continue and extend the idea of revitalizing spaces in the area. Thus, Vibrant Jiu Valley project was born, one that is directed at revitalizing not only spaces, but also the communities in Jiu Valley, through art and culture. Vibrant Jiu Valley first started in august 2022, as a pilot project with an initial aim of *"restoring spaces to the community, through the creation of three mural paintings"*. Consequently, around these

murals were organized different activities for people of all ages. Part of the expenses were covered through the Functional Areas in the EU project, by the World Bank and the European Commission. After the success of the pilot project, at the end of April 2023, the 1st official edition of Vibrant Jiu Valley took place. Over the span of a week, a number of events unfolded across various locations in the region, encompassing activities such as debates, workshops, hikes or visits to museums. This time, the project was made possible with funds from the Transformative Action Award 2022, won by Jiu Valley Development Society Project association, and smaller projects won by other NGOs members of the coalition. During the same year at the beginning of August, the 2nd edition of Vibrant Jiu Valley started. It included a new project under the name of Vibrant Communities in Jiu Valley, with support from the program "In a state of well-being" (În stare de bine), funded by Kaufland Romania and coordinated by Civil Society Development Foundation in Romania (Fundăția pentru Dezvoltarea Societății Civile). Its aim is to activate marginalized communities through art and culture. More specifically "*three spaces within these communities will be arranged and redesigned through art, in collaboration with the residents, so that the people in the area will have a place where they can more easily organize various community activities*". The project will last 7 months, and is marked by a diversity of activities such as artistic works, workshops dedicated to painting, drawing, craftsmanship, recycling through art and development through theater; first aid courses, robotics competitions or rides with bicycle trolley and velocipede.

As the most representative project of the coalition, the Vibrant Jiu Valley manages to bring together not only the intended beneficiaries of these projects, but also some of the organizations from the coalition, each of the involved organization offering support to this project by realizing different activities. Outside this project, the NGOs involved in the coalition usually carry out their activities under the coalition's banner or connect their activities with the Vibrant Jiu Valley project. Other projects and activities of the coalition worth mentioning are: a podcast started by one of the founders and 2 volunteering members, which had various experts from diverse fields to speak about the problems of Jiu Valley; several workshops for the community on subjects like public speaking or financial education; different activities to support the local community during the pandemic (communication activities about the Covid 19, support for the medical staff, for elderly and marginalized communities); the mural painting in Lonea mine (not connected to Vibrant Jiu Valley) or the Urban Talks Jiu Valley conference organized together with the University of Petroșani, the University of Liège, the University of Agricultural Sciences and Veterinary Medicine from Timișoara in partnership with UrbanizeHub, Climate Kic Hub, and Bankwatch Romania. Many of these events brought experts from the founder's social networks, some of which were involved or later on participated in different projects and activities initiated by the coalition (as the Vibrant Jiu Valley, the mentioned workshops and conference or the podcast).

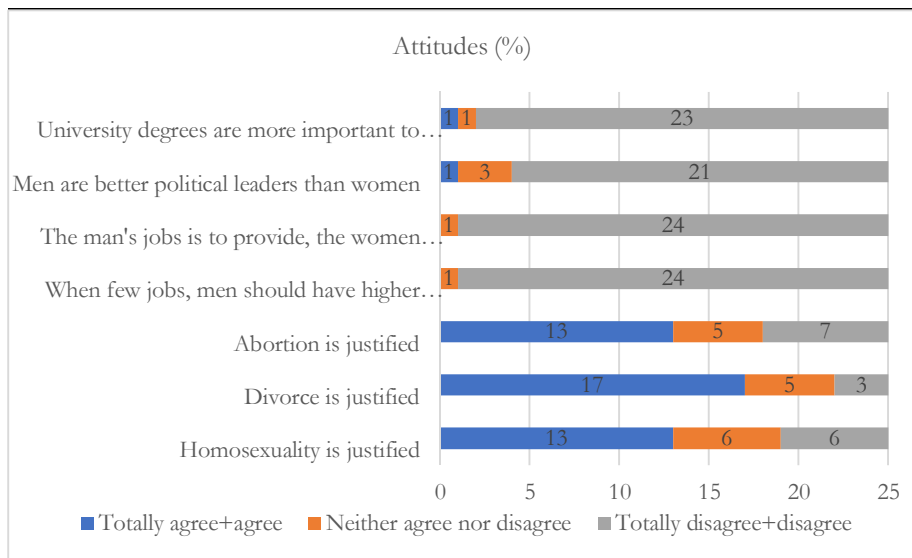
But even after more than 3 years of existence, the founders acknowledge that the coalition's work is still at the beginning. The realization that "*we still have a lot of work to do*" reflects their recognition of the ongoing challenges that lie ahead. Moreover, they argue that the coalition hasn't reached a level of consolidation, but remains at a phase of proposing ideas and courses of action, as well as verifying and validating them. Although some challenges they sought to address in the beginning are still present, there is a dose

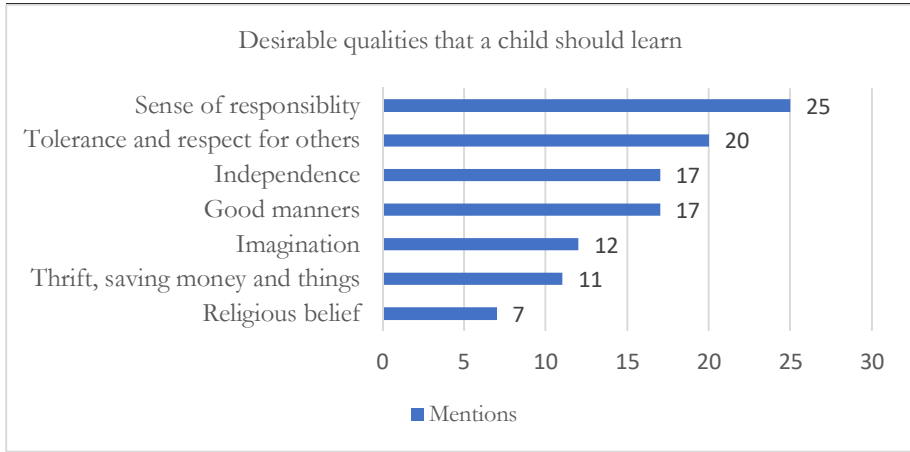
of optimism. What is important for them is that they should continue in the right direction so they can improve through their actions the quality of life at the local level. To do this, it is important to remain active and united because: *“An active civil society is relevant in any context and in any community. Even more so in the Jiu Valley, after a long period of unjust and poorly planned transition, a period that has left behind a lot of pessimism and mistrust in the Valley”*.

### Quantitative analysis

The survey results indicate a nearly even split between genders, with 12 males and 13 female respondents. The age of respondents spans from 22 to 62 years, with an average age of 38 years, capturing insights from different generations. When considering income, the average stands at 2682 lei, ranging from a minimum of 0 lei to a maximum of 8700 lei. The median income value is 2900 lei. The educational profile of the respondents is predominantly characterized by higher education. A significant portion (17) possess university degrees. A smaller number hold post-university qualifications (7), showcasing a commitment to continued learning and professional development. Considering occupation, 3 are students, 3 are pensioners, 1 is unemployed, 4 of them own a business and 14 are employed. Concerning the areas of activity of their organizations, only 19 provided an answer. Out of those that answered, the domains of their organizations are as follows: 4 of the organizations are businesses, 6 organizations are focused on social services, 3 focused on tourism and sport, 2 in education, 2 in culture, 1 in youth, and 1 in local development.

Figure 2. Attitudes



**Figure 3. Traits**

Figures 1 and 2 show the items by which self-expression values are measured and the members the attitudes towards the matters invoked. On figure 1, the first 4 items relate to the equal opportunity component of self-expression values, in the area of gender equality. Agreeing with most items taps to a certain degree into traditional and survival values, while disagreeing taps into self-expression values (Welzel, 2010). The last three items relate to sexual freedom. Agreeing with all items taps to a certain degree into self-expression values, while the opposite into traditional and survival ones (Welzel, 2010). On figure 2, the items relate to an emphasis on personal autonomy in educating children. The items independence and imagination are interpreted as positive indications of an emphasis on personal autonomy, while obedience and faith are interpreted as inverse indications and tapping into survival and traditional values (Welzel, 2010). All items encompass Inglehart's self-expression values (Inglehart, 2019), as part of the theory of existential security. What this theory argues is that processes of modernization and post-modernization bring cultural changes at the values level. In short, we see a shift from traditional and survival values that put emphasis on physical survival, to self-expression values which prioritize the emancipation of the individual. Such change is driven by high levels of existential security, defined as decreased vulnerability in face of natural and man-made dangers, and where survival is assured. Individuals socialized in secure conditions will develop self-expression values and will prioritize individual freedom, creativity, education, will have active and democratic political orientations and will be more civically engaged (Inglehart, 2019; Welzel, 2010)

In Figure 2, for the first set of items addressing equal opportunities in the area of gender equality, most members disagree with all statements. The only exceptions, with one individual each in agreement, are the statements about men being better political leaders than females, and the significance of university degrees being higher for boys than girls. Notably, both agreeing individuals are males. Regarding statements concerning sexual freedoms, even though most people agree, we find more people that disagree than in



previous statements or have a neutral position. This situation can be partially explained by ongoing discourses within Romania's public and political spheres, particularly those concerning LGBTQ communities, as well as the emphasis on traditional values centered around family, faith, and national identity.

In figure 3, relating to desirable qualities a child should learn, while half of the mentioned responses gravitate towards imagination, and more than half lean towards independence, these two desirable qualities do not stand as the foremost priorities. In contrast, a strong sense of responsibility garners nearly all the mentioned responses. The relatively lower prioritization of independence and imagination in comparison with responsibility and tolerance suggests that some members may not strongly uphold self-expression values. This could stem from various reasons such as cultural influences that prioritize responsibility over personal expression, or individual inclinations towards conforming to social norms and societal expectations.

**Figure 4. What are the main problems in Jiu Valley (open question)**

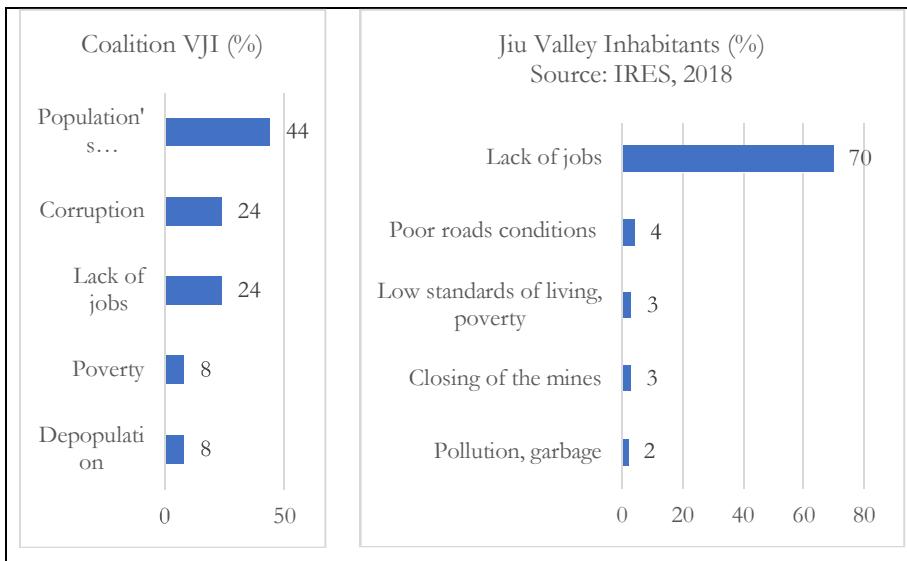


Figure 4 shows that the primary concern among most Jiu Valley's inhabitants (70%) is the lack of jobs. This problem stands out significantly as the most pressing problem and appears to be the only issue on which a consensus has been reached, as all other responses each account for less than 5% of the total. Conversely, the coalition members attribute less significance to this problem, with only 24% acknowledging it as a concern, thus being ranked third in the Valley's list of problems in the members perception. The main problem for most coalition members is considered the mentality, lack of vision and

citizen involvement from the population, accounting for 44% of their responses. Following closely is the issue of corruption, cited by 24% of the members.

Results from Figure 5 indicate another discrepancy in perceptions, this time regarding who is responsible for solving the region's problems. The majority of the inhabitants attribute the primary responsibility to the local authorities or government, considering them the principal agents in solving the issues. Among the coalition members there is a more comprehensive viewpoint, as their answers reveal that a collective effort would be necessary. 68% of the members consider that all entities mentioned in the survey should contribute to solving the region's problems.

**Figure 5. Who should solve the problems in the community**

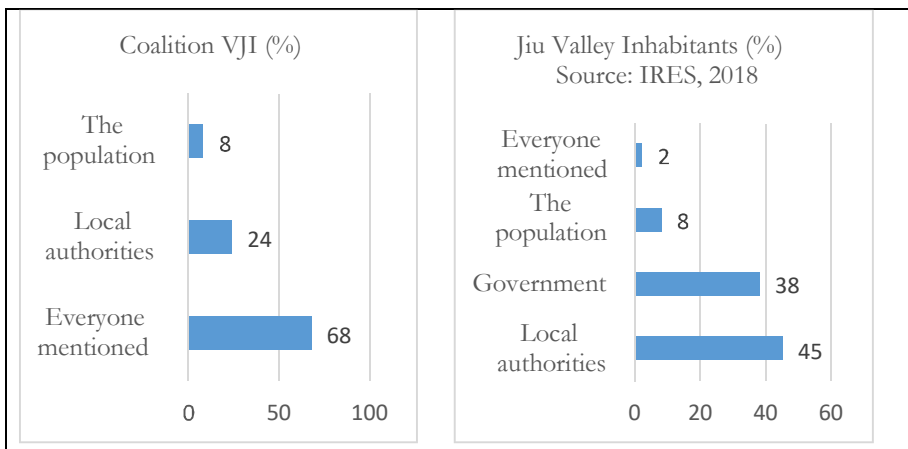
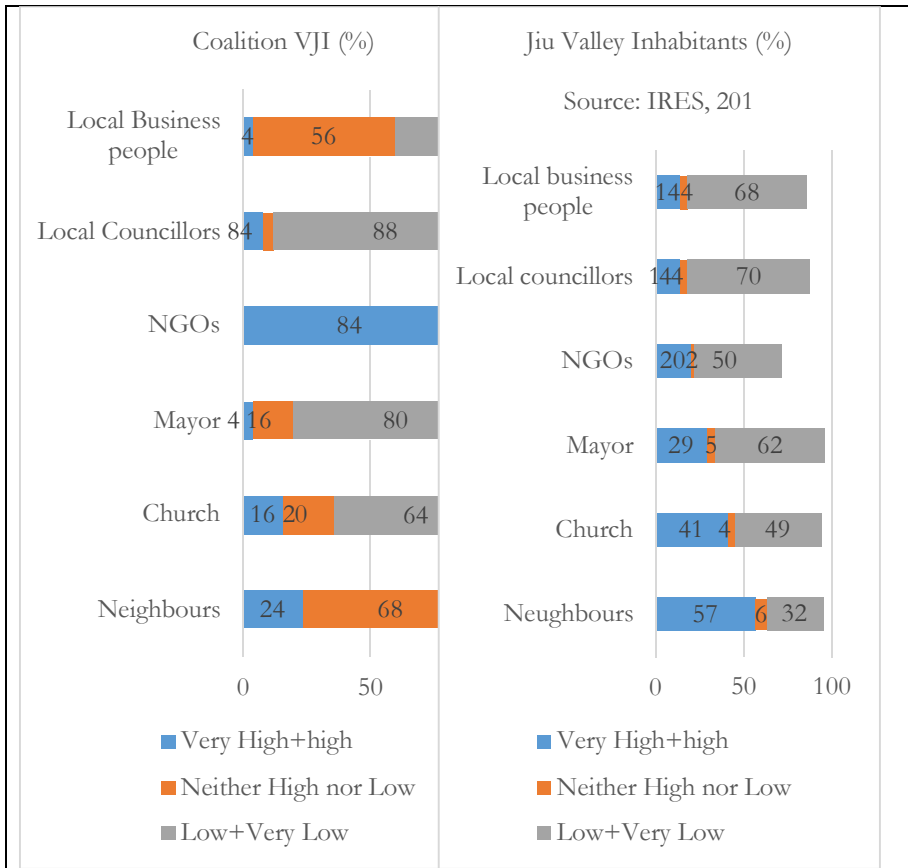


Figure 6 deals with trust. The residents of the region exhibit the highest levels of trust in their neighbors, followed by the church. In the case of the coalition members, NGOs gather most trust, with no respondents expressing low levels of trust. Such a finding is expected due to the fact that the respondents are themselves members of NGOs. Still, 16% of the respondents have neither high, nor low levels of trust. Similarities can be found between the 2 groups when it comes to local authorities. Both the coalition members and inhabitants have low levels of trust in the mayor and the local councilors.

Figure 6. How much trust do you have in



## Conclusions

The present research paper wishes to bring a contribution to the topic of civil society in the region of Jiu Valley, by moving beyond the associational life of the miners, which constitute the main point of interest in studies that address with this subject. The results are of interest not only to those interested researchers, but also to the coalition itself or other civic organizations in the region. The paper's aim is exploratory, striving to lay the groundwork for future empirical research on the subject of civil society in the Jiu Valley region. By establishing a foundational understanding of the Coalition of Valea Jiului Implicată and its members, future studies can delve deeper into the specificities of this coalition or other civic groups, contributing to a more comprehensive and nuanced understanding of their role and impact in the region.

The study has revealed a sample that consisted of relatively young and very educated individuals, with half of them that have an income which is close to the average income in Romania. Moreover, regarding attitudes, we can observe some specific differences between the respondents. While most agree on matters relating to equal opportunities in the realm of gender equality, what qualities a child should learn or the sense of responsibility and tolerance towards others, we see divergent attitudes when it comes to matters that relate to sexual freedom and the presence of a desirable quality such as religious faith which taps into traditionalism. This suggests that only a portion of members may hold self-expression values, while for some others it may be in an incipient stage since we still see some pieces of traditionalism. There are larger differences between the surveyed members of the coalition and the rest of the population of Jiu Valley.

Other important aspects should be noted. One deals with the founder's experience of migration. This can be regarded as an important element in the establishment of the coalition. Obtaining skills and knowledge from different social settings could have motivated them to envision and actualize the coalition as a means of bringing change in the Jiu Valley. Furthermore, the experience of migration helped them create networks which played an important role in the coalition's projects. Because of their networks, which expand beyond the region, they managed to attract experts and garner financial resources, both to support several of their projects. A perspective focused on social networks, values and experience of migration could be starting points to future empirical studies that treat the topic of civil society, how it functions or its role in the development of the region.

Nevertheless, the paper has certain limitations. The use of quantitative methods permits comparison between the members of the coalition and the rest of the population, but the sample is small. The same problem rests with qualitative methods, a small sample consisting of 2 of 4 founding members which were available for interviewing. Future studies can focus mainly on qualitative methods by interviewing most of the members, not only the founders, for more nuanced findings on who are they, where do they work, what are their values and so on. Determining the value profile of the members considering Inglehart's self-expression values needs to be assessed by confirmatory factor analysis, but such a statistical analysis is not fit for a small sample consisting of 25 people. Further research is necessary to determine self-expression values but should be extended to encompass the entire civil society sector in Jiu Valley.

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# CHALLENGES ENHANCING HEALTHY LIFESTYLE BEHAVIORS IN COMMUNITY SETTINGS IN INDONESIA: THE ROLE OF SOCIAL LITERACY, RELIGIOUS INVOLVEMENT, AND TECHNOLOGY-EQUIPPED SYSTEMS

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Muria HERLINA<sup>1</sup>, Sukri PALUTTURI<sup>2</sup>  
Sri Putri PERMATA<sup>3</sup>, Yusuf HUSMIATI<sup>4</sup>  
Laila Meiliyandrie Indah WARDANI<sup>5</sup>, Adi FAHRUDIN<sup>6</sup>  
M. Rezaul ISLAM<sup>7</sup>

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**Abstract:** *The primary objective of this study was to investigate the impact of social literacy, religious involvement, and technology-equipped systems on the promotion of healthy lifestyle behaviors in community settings in Indonesia. The study utilized a mixed-method research approach and was carried out in three villages within an Indonesian province. Quantitative data was gathered from 235 respondents through face-to-face structured interviews using a simple random sampling procedure.*

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<sup>1</sup> PhD., Department of Social Welfare, Faculty of Social and Political Sciences, Universitas Bengkulu, Indonesia; e-mail: mherlina@unib.ac.id, ORCID: 0000-0002-6245-6754

<sup>2</sup> PhD, Department of Health Administration and Policy, Faculty of Public Health, Universitas Hasanuddin, Makassar, Indonesia, Email: sukripalutturi@unhas.ac.id, ORCID: 0000-0002-1074-7445

<sup>3</sup> PhD., Department of Social Welfare, Faculty of Social and Political Sciences, Universitas Bengkulu, Indonesia; Email: sppermata@unib.ac.id, ORCID: 0000-0003-0914-568X

<sup>4</sup> PhD., Badan Riset dan Inovasi Nasional, Jakarta, Indonesia, Email: husmiati@brin.go.id, ORCID: 0000-0001-5449-6062

<sup>5</sup> PhD., Department of Psychology, Faculty of Psychology, Universitas Mercu Buana, Jakarta, Jakarta, Indonesia; Email: laila.meiliyandrie@mercubuana.ac.id ORCID: 0000-0001-8299-5037

<sup>6</sup> PhD., Department of Psychology, Faculty of Psychology, Universitas Bhayangkara Jakarta Raya, Jakarta Raya, Jakarta, Indonesia; E-mail: adi.fahrudin@dsn.ubharajaya.ac.id, ORCID: 0000-0001-7140-6006

<sup>7</sup> PhD., Professor, Institute of Social Welfare and Research, University of Dhaka, Dhaka, BANGLADESH; and Center for Family and Child Studies, Research Institute of Humanities and Social Sciences, University of Sharjah, Sharjah, UNITED ARAB EMIRATES; E-mail: rezauldu@gmail.com, ORCID: 0000-0002-2217-7507

*while qualitative data was collected from 28 respondents through a semi-structured interview schedule using a purposive sampling procedure. Additionally, observations were conducted in the three selected communities. The study found that socio-cultural factors, including religious systems, social systems, and technology, significantly influenced healthy lifestyle behaviors in Indonesian communities. Strong associations were observed between these factors and various aspects of healthy living, such as physical activity, fruit and vegetable consumption, not smoking or drinking alcohol, routine health checkups, environmental hygiene, and latrine use. These findings underscored the significance of social support, religious involvement, and technology-equipped systems in promoting and improving healthy behaviors within community settings. Findings would be important guidelines for policymakers and health practitioners for designing and implementing effective health promotion strategies to enhance healthy lifestyle behaviors in community settings.*

**Keywords:** *Healthy lifestyle behaviors, Community settings, Social literacy, Religious involvement, Technology-equipped system, Indonesia*

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## 1. Introduction

The promotion of healthy living has been a long-standing goal of public health efforts worldwide. Healthy lifestyle behaviors such as regular physical activity, proper nutrition, and adequate sleep have been linked to reduced risk of chronic diseases, improved mental health, and enhanced overall quality of life (World Health Organization, 2021). In Indonesia, the importance of healthy living has been recognized in various government policies and initiatives such as the National Movement of Healthy Living (Gerakan Hidup Sehat, GERMAS) and the Healthy Indonesia Program (Program Indonesia Sehat) (Ministry of Health, 2018). However, there is still a need for effective strategies to promote healthy behaviors in communities, particularly in rural areas where access to health services and information may be limited. Integrating social literacy, religious beliefs, and technology is a potential approach to fostering healthy living movements. Social literacy involves comprehending and navigating social structures and norms, which can have an impact on health behaviors (Paek & Hove, 2012). Religion influences health behaviors by virtue of its values, beliefs, and practices (Musa et al., 2015). Technology enables access to health information, facilitates communication and social support, and allows for behavior tracking and self-monitoring (Lee & Kim, 2017).

In recent years, there has been a growing recognition of the importance of incorporating cultural and contextual factors in health promotion interventions (Resnicow et al., 2014). This approach acknowledges that health behaviors are influenced by social, cultural, and economic factors and interventions that consider these factors are more likely to be effective and sustainable. In Indonesia, cultural and religious beliefs are integral to daily life and can significantly impact health behaviors (Musa et al., 2015). The Covid-19 pandemic has further emphasized the importance of maintaining a healthy lifestyle to prevent the spread of the virus and mitigate its impact (Wijayanti & Rachmi, 2020). The pandemic has disrupted various aspects of life, including access to healthcare, social support networks, and economic opportunities in Indonesia. In this context, promoting healthy living movements becomes crucial for community resilience. Therefore, culturally

and contextually appropriate interventions are essential for the successful promotion of healthy living movements in communities.

Promoting healthy living movements in communities is crucial for reducing the disease burden and improving population productivity. Promoting healthy lifestyle behaviors in community settings poses a crucial public health challenge, especially in Indonesia, where socio-cultural factors play a significant role. However, there is a lack of comprehensive understanding regarding how social literacy, religious involvement, and technology-equipped systems can enhance healthy behaviors within Indonesian communities. Understanding the factors that influence healthy lifestyle behaviors in community settings is essential for developing effective health promotion strategies. The inclusion of social literacy, religious involvement, and technology-equipped systems as potential determinants in this study will provide valuable insights into their significance and potential impact on promoting healthy behaviors. This research finding will guide policymakers and health practitioners in designing targeted interventions to enhance healthy lifestyle behaviors in Indonesian communities.

## 2. Literature Review

Healthy lifestyle behaviors encompass actions individuals take to enhance their physical, mental, and social well-being. These behaviors include regular physical activity, a balanced diet, avoidance of harmful substances, sufficient sleep, and stress management (World Health Organization, 2021). Maintaining healthy lifestyle behaviors is vital in the prevention of chronic diseases such as diabetes, cardiovascular disease, and cancer, which are major contributors to morbidity and mortality globally. In Indonesia, there has been a rapid increase in the prevalence of chronic diseases, affecting approximately 25% of the population (Rachmawati et al., 2019). Promoting healthy lifestyle behaviors is thus a key public health priority in Indonesia and other countries. Efforts to promote these behaviors in Indonesia take various forms, such as health education programs, community-based interventions, and policy initiatives. For instance, the Indonesian government has implemented a national health insurance program to improve healthcare access and outcomes. Additionally, community-based interventions targeting schools, workplaces, and religious institutions aim to promote healthy behaviors and prevent chronic diseases (Wibowo et al., 2021).

Social literacy, religious involvement, and technology-equipped systems are interconnected factors that synergistically promote healthy lifestyle behaviors. Social literacy involves skills like critical thinking, communication, and cultural competence, enabling individuals to make informed health decisions and access support from social networks. Religious involvement influences values and behaviors related to health in Indonesia, providing social support and ethical frameworks (Tsoraya et al., 2022). Technology-equipped systems, including digital tools like mobile apps and social media, play a significant role in promoting healthy behaviors, especially among younger generations (Lee et al., 2022). Understanding the interplay between these elements is crucial for effective health promotion interventions in diverse cultural contexts.

Research on social literacy, religious involvement, and technology-equipped systems highlights their importance in promoting healthy lifestyle behaviors within communities.



Goswami et al. (2010) demonstrated a positive association between social support and physical activity levels in older adults. Thorton et al. (2006) found that social support from family and friends contributed to maintaining a healthy diet. Jung (2022) discovered a positive relationship between religious involvement and healthy behaviors, including physical activity and healthy eating. Tristão Parra et al. (2018) revealed that participation in faith-based health interventions improved diet and physical activity. According to Coughlin and Stewart (2016), the utilization of wearable fitness devices, such as Fitbits, has been shown to enhance physical activity levels among older adults. Laranjo et al. (2021) reported that the use of mobile health apps led to improvements in physical activity and diet.

Social literacy, religious involvement, and technology-equipped systems have the potential to enhance healthy lifestyle behaviors in community settings. Community movements aimed at reducing disease burden, and healthcare costs, and promoting productivity can foster clean and healthy living habits from an early age (Nasiatin et al., 2020; Watts et al., 2019). Public health models can strengthen primary healthcare programs, improving overall health outcomes (Assefa et al., 2019). The success of social movements in healthcare requires consideration of the interaction between society and the government, with participation, empowerment, and co-governance strategies being crucial determinants of health (González-Agüero et al., 2022). The People's Health Movement has played a significant role in strengthening healthcare systems through its collective efforts and collaboration with health institutions (León et al., 2020). Enhancing healthcare quality necessitates improved health facility infrastructure, as it positively impacts health utilization and reduces costs (Sacks et al., 2020).

Public health plays a crucial role in promoting healthy living initiatives (De Biasi et al., 2020). Engaging in artistic activities fosters purpose, meaningful relationships, and well-being (Poulos et al., 2019). Understanding the local context is essential for effective disease prevention, management, and global governance (Heller et al., 2019). Communication across cultures relies on movement skills and knowledge (Quennerstedt, 2019). Religion and cultural practices are integral to disease control and can be adapted to local contexts (Javaid et al., 2020; Winiger & Peng-Keller, 2020; Daher-Nashif et al., 2021). Technology facilitates access to information, benefiting communities (Javaid et al., 2020).

The community movement in realizing local health has not been implemented. The social system and religion influence public health and the technology used. Religion has not been fully implemented in implementing a healthy life, especially for the local community. The existing social system has not been able to realize a healthy lifestyle. Culture has played an essential role in environmental health perspectives (Prescott & Logan, 2019). The use of technology has not yet become the main focus in disseminating news and information because of the low level of knowledge. Online health information-seeking behavior influences offline health-related behavior among the population (Moreland et al., 2016).

Sociocultural factors influence physical activity, with the religious system impacting various health behaviors such as consuming vegetables and fruits, avoiding smoking and alcohol, and maintaining environmental hygiene (Schickedanz et al., 2019). Technology

and equipment also play a role in promoting healthy behaviors like vegetable and fruit consumption, regular health checks, and access to restrooms. These components encompass the seven indicators of implementing healthy living community movements. Community involvement, guided by community leadership and participation, is crucial for improving quality of life and achieving social, religious, cultural, and technological systems (Schickedanz et al., 2019). Social mobilization exemplifies community participation in national public health systems development (León et al., 2020). Starting with families, communities, and appropriate technology, the movement for a healthy living community can be fostered.

Limited research has explored the effectiveness of integrating social literacy, religious involvement, and technology in promoting healthy lifestyle behaviors in community settings. While some studies have examined social support and technology, the influence of religious involvement on healthy behaviors is not well understood. Technology research has primarily focused on individual-level interventions, overlooking their potential impact in community settings. This study aims to address these gaps by examining the combined effects of social literacy, religious beliefs, and technology on promoting healthy behaviors in communities. By investigating these factors, this study seeks to enhance our understanding of their role in promoting healthy lifestyles. Further research is needed to explore the integration of these elements in community-based interventions for promoting healthy behaviors.

### **3. Research Method and Data**

This study employed a mixed-method approach, combining both quantitative and qualitative methods to gather comprehensive data. A total of 235 respondents from three villages in Bengkulu province, Indonesia, were selected through simple random sampling based on the Slovin formula (Martha & Kresno, 2016). Quantitative data was collected using a structured questionnaire that covered various topics related to the research questions, including demographic information, experiences, and socio-cultural aspects. The study used social system/community organization, religious system, and technology as independent variables, and physical activity, consumption of vegetables and fruits, non-smoking, abstinence from alcohol, health checkup, environmental hygiene, and latrine/toilet usage as dependent variables. In contrast, qualitative data was obtained through in-depth case interviews with 28 individuals. A semi-structured interview questionnaire was employed to understand the local context and sociocultural realities aligned with the research objectives. Additionally, the researchers conducted daily observations of three selected communities for three months, documenting their daily activities and livelihood patterns relevant to the study objectives, using an observation checklist.

For quantitative data analysis, the study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to estimate complex cause-effect relationship models, incorporating both latent and observed variables (Hair et al., 2021). On the other hand, for qualitative data analysis, the researchers utilized NVIVO software (Wong, 2008). The participants who responded to the research announcement received the questionnaire, and their return of the questionnaire indicated their consent to participate. The study followed research ethics by obtaining approval from the appropriate institutional review

board and securing informed consent forms from all participants. Before data collection, the research objectives, and the benefits of taking part in the study were clearly explained to the respondents. The researchers emphasized that participation was voluntary, and they assured the confidentiality of the participants' data.

## 4. Results

Table 1 presents the sociodemographic profile of respondents, providing insights into their characteristics. Regarding age distribution, the majority of respondents fall within the 40-49 age group, constituting 41.06% of the sample, followed by those aged 20-29 (14%) and 50-59 (18.84%). Education levels vary, with a significant proportion (40.10%) having completed junior high school, while 29.47% attended primary school and 15.56% reached high school. Surprisingly, 6.28% of respondents never attended school, indicating some lack of formal education. In terms of income, a considerable percentage (59.52%) earn between 3-4.49 million Indonesian Rupiah (US\$200 -326), while the lowest income bracket (900,000 and less) (US\$60) represents only 1.93%. The majority of respondents work in agricultural roles, with 54.59% identified as farmers and 27.54% as farm laborers. The Serawai ethnic group represents the largest share (58.94%) among the respondents, followed by Rejang (16.43%) and Java (12.08%). This sociodemographic overview provides valuable information for understanding the characteristics and diversity of the surveyed population.

**Table 1: Sociodemographic profile of the respondents**

Sociodemographic information	%
<i>Age</i>	
20	1.93
20-29	14
30-39	11.11
40-49	41.06
50-59	18.84
60	13.04
<i>Education</i>	
Never went to school	6.28
Not graduated from elementary school	10.14
Primary school	29.47
Junior high school	40.10
High school	15.56
<i>Income level (Indonesian Rupiah)</i>	
900,000 and less	1.93
1-2.9 million	19.32
3-4.49	59.52
<b>Sociodemographic information</b>	<b>%</b>

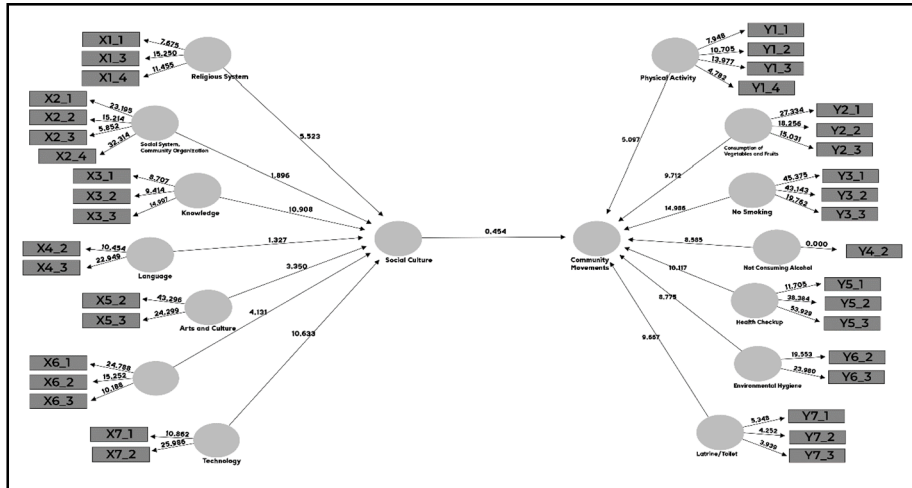
5-6.9	14.98
7 million and higher	4.35
<i>Number of dependencies</i>	
2	3.86
3-4	13.04
5-6	64.73
7-8	8.21
8 and more	10.14
<i>Occupation</i>	
Farmer	54.59
Farm labourer	27.54
Trade	6.76
Casual	10.14
Follow the child	1.93
<i>Ethnicity</i>	
Serawai (B/S)	58.94
Rejang	16.43
Java	12.08
Pesemah (South Sumatra)	7.73
Campul	4.83

**Table 2: R-Square Value**

<b>Variable</b>	<b>R Square</b>
Socio-Cultural	0.781
Healthy living community movement	0.948

Table 2 presents the R-Square values for two variables. The variable ‘socio-cultural’ has an R-Square value of 0.781, while the variable ‘healthy living community movement’ has an R-Square value of 0.948. This finding showed that socio-cultural aspects such as religious systems, social systems, and equipment/technology have affected socio-cultural societies by 78.1%. Meanwhile, the behavior of healthy living movements was indicated by 94.8% by physical activity, vegetable, and fruit consumer patterns, not smoking, not drinking alcohol, routine health checks, environmental hygiene, and using latrines in the family. The measurement of research variables is presented in Figure 1.

**Figure 1: Path Coefficients for the direct relationship between religious systems, social systems, and equipment/technology have affected sociocultural societies**



Before analyzing the structural model, this study ensured that there were no lateral collinearity issues. Although the vertical collinearity criterion for discriminant validity was met, the problem of lateral collinearity (predictor-criterion collinearity) may occasionally lead to subtly misleading conclusions because it can hide the model's strong causal effect. This frequently occurs when two variables that are believed to be causally related measure the same notion. All the Inner VIF values for the independent variables (Social system /community organization (X2), religious system (X1), and technology (X3)) were evaluated for lateral multicollinearity that was less than 5, indicating that lateral multicollinearity was not an issue in this study. Figure 1 shows the results of the path coefficient for the direct relationship, while Table 3 presents the hypothesis testing analysis for the direct relationship structural model.

**Table 3: Significant between Independents and dependent variables**

Dependents variables	Independent Variables	Original sample (O)	Standard error (STERR)	T Statistics (O/STERR)	T-Table
Physical activity (Y1)	Social system/ community organization (X2)	0.241982	0.070501	3.432318**	1.960
Consumption of vegetables and fruits (Y2)	Religious system (X1)	0.135849	0.059077	2299515**	1.960
	Technology (X3)	0.132975	0.066608	1.996378**	1.960

Dependents variables	Independent Variables	Original sample (O)	Standard error (STERR)	T Statistics (O/STERR)	T-Table
No smoking (Y3)	Religious system (X1)	-0.265515	0.104084	<b>2.550970**</b>	1.960
Not consuming alcohol (Y4)	Religious system (X1)	-0.282083	0.079763	<b>3.536536**</b>	1.960
Health checkup (Y5)	Social system/ community organization (X2)	-0.203857	0.075342	<b>2.705737**</b>	1.960
	Technology (X3)	0.317514	0.123703	<b>2.566733**</b>	1.960
Environmental hygiene (Y6)	Religious system (X1)	0.136642	0.058460	<b>2.337372**</b>	1.960
Latrine/Toilet (Y7)	Technology (X3)	0.314211	0.102357	<b>3.069771**</b>	1.960

Table 3 shows the results of the variable significance analysis (dependent variables Y1-Y7 and independent variables X1-X3). The original sample (O), standard error (STERR), T statistics (O/STERR), and T-Table values are also provided. The table indicates that there is a significant relationship between physical activity (Y1) and the system social/community organization (X2), with a T statistic of 3.432318. Similarly, there is a significant relationship between the consumption of vegetables and fruits (Y2) and the religious system (X1), with a T statistic of 2.299515. Both relationships have a T-Table value greater than 1.960, indicating statistical significance. There is also a significant relationship between not smoking (Y3) and the religious system (X1), with a T statistic of 2.550970. The same is true for not consuming alcohol (Y4) and the religious system (X1), with a T statistic of 3.536536. Furthermore, there is a significant relationship between environmental hygiene (Y6) and the religious system (X1), with a T statistic of 2.337372. Regarding the remaining dependent variables, there is a significant relationship between health checkups (Y5) and the social system/community organization (X2), with a T statistic of 2.705737, as well as between health checkups (Y5) and technology (X3), with a T statistic of 2.566733. Finally, there is a significant relationship between latrine/toilet (Y7) and technology (X3), with a T statistic of 3.069771. In all these cases, the T-Table value is greater than 1.960, indicating statistical significance.

The community, primarily engaged in farming, valued social interaction and support during agricultural activities. Physical activity, such as walking, was a significant part of their daily routine, while recreation took precedence over organized sports. Food held importance in social gatherings, and the government implemented health promotion programs targeting smoking, obesity, and physical activity. The community believed in natural and healthy nutrition, work, and stress reduction for longevity and good health. The religious system emphasized health and provided a sense of meaning and community peace, with worshipers consuming more fruits and vegetables. Language and communication played a role in sharing agricultural knowledge, and technological

advancements influenced farmers' attitudes towards knowledge sharing, potentially impacting community health positively.

In the religious system, smoking was discouraged and deemed detrimental to hygiene and health. There was awareness regarding the health consequences associated with smoking, including the development of serious diseases such as cancer, chronic coughing, and respiratory difficulties. Despite this, smoking became a habit among adult men, who saw it as a symbol of confidence and a work ethic. Those who drank alcohol also tended to smoke at the same time. The majority of the population holds the belief that consuming alcohol is prohibited by religion due to its intoxicating nature, illegality, and negative impact on those around them. Having a good understanding of the effects of alcoholic beverages had a positive impact on public health. Knowledge also influenced attitudes and behaviors related to public health literacy and communication.

The social system functioned as a platform to promote and encourage individuals to undergo health checkups by disseminating relevant health-related information. Various social institutions, such as PKK activities, mosques, youth associations, and others, facilitated the dissemination of health-related knowledge and insights, emphasizing the importance of regular health checkups to prevent or promptly treat diseases. Language is the primary tool used for communication and interaction to promote health information. Health tools and technologies, such as midwives, medical equipment, and traditional medicine, were utilized to deliver medical treatment. These tools and facilities instill individuals with confidence to seek healthcare and play a crucial role in increasing the allocation of funds and resources for health purposes. The religious system played a crucial role in promoting cleanliness and maintaining hygiene during worship. This included the requirements of personal cleanliness such as bathing and ablution, as well as keeping the places of worship and surrounding environments clean. Community members actively encouraged one another to engage in activities aimed at maintaining a clean environment. Effective communication played a crucial role in promoting public health, and it was accomplished through various means such as media campaigns and organized events.

Residents in local communities utilized existing equipment and technology to construct latrines or toilets from available materials, such as blocks or wood. They also utilized equipment and technology to promote health, including the use of traditional simple equipment to create latrines. The emergence of information technology resulted in the development of intelligent healthcare, which incorporates a new generation of information technologies to improve health outcomes. The advancement of technology presented opportunities to improve the quality of health services. As the healthcare paradigm shifts from a disease-centered care model to a community-centered care model, stakeholders could leverage technology to support the public health movement. A structured teaching program could significantly improve knowledge and attitudes toward health. The lack of support and the busy schedules of villagers contributed to the unclean village environment. Early healthy living practices in childhood positively impacted health outcomes in school-age children, prompting public policy to focus on early intervention in family healthy living practices to improve children's health.

## 5. Discussion

The study aimed to investigate the impact of socio-cultural and healthy living community movements on health behaviors in a rural community. The study revealed that socio-cultural aspects, including religious systems, social systems, and technology, significantly influenced healthy lifestyle behaviors in the community. The variables 'socio-cultural' and 'healthy living community movement' had high R-Square values of 0.781 and 0.948, respectively, indicating the impact of these factors on promoting healthy behaviors. The analysis further demonstrated significant relationships between various dependent variables (e.g., physical activity, consumption of vegetables and fruits, not smoking, not consuming alcohol, routine health checkups, environmental hygiene, and latrine/toilet use) and independent variables (e.g., religious system, social system/community organization, and technology). The findings highlighted the importance of social support, religious involvement, and technology-equipped systems in influencing health behaviors in Indonesia's community settings, particularly in areas such as physical activity, healthy eating habits, smoking and alcohol consumption, health checkups, environmental hygiene, and technology adoption. These insights can serve as a basis for designing interventions and policies aimed at enhancing healthy lifestyles, improving public health literacy and communication, promoting cleanliness, and leveraging technology for health promotion. These efforts can be implemented not only in communities within Indonesia but also in communities beyond its borders.

The findings indicated on the sociocultural aspects are consistent with previous research that has identified the importance of sociocultural factors in shaping health behaviors (Grossoehme et al., 2020). For example, previous studies have shown that religious affiliation is associated with healthier behaviors such as lower rates of smoking and alcohol consumption (McCaffery et al., 2020; Gritz et al., 2020; Sohlberg & Bergmark, 2020). Another study found that social support is positively associated with physical activity (Sarkar et al., 2016). In addition, our findings are consistent with previous studies that have explored the relationship between sociocultural factors and health behaviors (such as Vaida, 2020; Kafadar et al., 2019; Sahinoz and Sahinoz, 2020). Murimi et al. (2016) examined the effect of culture on fruit and vegetable consumption among African Americans. The study found that cultural factors, such as family traditions and ethnic identity, were important determinants of fruit and vegetable consumption among African Americans. Similarly, Clark et al. (2018) investigated the impact of religion on health behaviors among a population of African Americans. The study found that religiosity was positively associated with health-promoting behaviors, such as physical activity and healthy eating.

Moreover, the findings of the current study align with previous research that has explored the influence of social and community systems on health behaviors. Flórez et al. (2018) investigated the impact of social networks on physical activity among African American adults. The study found that social networks positively influenced physical activity levels among participants. Similarly, Carducci et al. (2020) and Hark et al. (2016) explored the impact of community-based interventions on health behaviors among African Americans. The study found that community-based interventions were effective in promoting healthy behaviors, such as physical activity and healthy eating.



Our study also highlighted the importance of technology in supporting health and improving the quality of health services that are consistent with Karampourian et al. (2019), Tian et al. (2019), Slametinarsih et al. (2021), Kim and Chung (2019), and Lin et al. (2020). The use of existing equipment and technology in the community has been reported to help residents make latrines and toilets, which are essential for maintaining good hygiene and preventing the spread of diseases. This finding is supported by previous research that has demonstrated the effectiveness of technology-based interventions in promoting healthy behaviors, such as physical activity and healthy eating (notably Fjeldsoe et al., 2011; Lau et al., 2011). Yarime et al. (2019) emphasized the potential of innovative technologies, such as mobile health (mHealth) applications, in improving healthcare access and delivery in low-income communities. Similarly, Raghavendra et al. (2020) highlighted the effectiveness of using technology-based interventions, such as telemedicine and electronic health records, in improving healthcare outcomes in rural areas. The traditional simple equipment used by residents has also been found to support health and hygiene. However, with the development of information technology, the concept of intelligent healthcare has become prominent. Evidence suggests that innovative healthcare practices leverage the use of emerging information technologies, leading to enhanced quality of health services and the promotion of community-centered care models (Tian et al., 2019; Slametinarsih et al., 2021).

The paradigm shift from disease-centered care to community-centered care has been reported in several studies, and stakeholders can maximize the use of technology to support the public health movement. The use of technology in healthcare has been found to improve access to care, reduce costs, and increase efficiency. For instance, telemedicine has been shown to provide remote care to patients, especially those in rural areas, which has significantly improved their health outcomes (Kim & Chung, 2019). In addition, a structured teaching program is effective in improving knowledge and attitudes toward health. The implementation of such programs can help residents understand the importance of maintaining good health and hygiene practices. Additionally, the importance of education and community-based interventions in promoting healthy behaviors has also been widely documented. De Silva et al. (2019) and Mohammed et al. (2021) found that community-based interventions, such as health education programs, were effective in improving health behaviors and reducing the incidence of non-communicable diseases. Similarly, Kim and Chung (2018) reported that structured education programs were effective in improving health literacy and promoting healthy lifestyles in low-income communities. This is particularly important in villages where the environment is not clean and residents are busy working, and hence, may not prioritize the importance of maintaining good hygiene practices (Mohammed et al., 2021).

Overall, the findings of the present study provided further support for the importance of socio-cultural and community-level factors in promoting healthy behaviors. Policymakers and public health professionals should consider these factors when developing interventions to improve health behaviors and promote health in underserved communities. Furthermore, the findings of the study suggest that technology can play a role in promoting health behaviors.

## 6. Limitations of the Study

The study conducted had several limitations that should be taken into account when interpreting the results. One of the main limitations was that the study was conducted in a single rural community, which could restrict the generalizability of the findings to other settings. Since rural communities often have unique characteristics and socio-cultural factors, the findings may not be representative of urban or suburban areas. Therefore, caution should be exercised when applying the results to different populations or locations. Another limitation of the study was the reliance on self-reported data. Self-reporting is a common method used in research, but it is important to acknowledge that it can be prone to reporting bias. Participants may provide responses that they perceive to be more socially desirable or that align with their own beliefs and values. This could potentially impact the accuracy and reliability of the data collected, leading to skewed or incomplete information.

To address these limitations, future research should consider expanding the study to include a more diverse range of communities and settings. By including different geographical locations, such as urban or suburban areas, researchers can obtain a more comprehensive understanding of the impact of socio-cultural and healthy living community movements on health behaviors across different contexts. This would enhance the generalizability of the findings and provide a broader perspective on the topic. Additionally, future studies should aim to incorporate objective measures of health behaviors. While self-reported data can provide valuable insights, it is often subject to recall bias and social desirability bias. Objective measures, such as wearable devices or observational assessments, can provide more accurate and reliable data on individuals' actual health behaviors. By utilizing these objective measures, researchers can strengthen the validity of their findings and provide a more robust analysis of the impact of healthy living community movements on health behaviors.

## 7. Conclusion

Based on a mixed-method approach, this study aimed to investigate how social literacy, religious involvement, and technology-equipped systems contribute to the promotion of healthy lifestyle behaviors in community settings within Indonesia. The summary findings were as follows:

- Sociocultural factors including religious systems, social systems, and technology, significantly influence healthy lifestyle behaviors in Indonesian communities.
- Socio-cultural aspects account for 78.1% of the variation in healthy behaviors, while physical activity, vegetable and fruit consumption, not smoking, not drinking alcohol, routine health checks, environmental hygiene, and latrine use account for 94.8% of the variation.
- Significant relationships were observed between healthy behaviors and religious systems, social systems/community organizations, and technology.

- The religious system is associated with vegetable and fruit consumption, not smoking, not drinking alcohol, and environmental hygiene.
- The findings emphasize the importance of social support, religious involvement, and technology-equipped systems in promoting healthy behaviors.

The outcomes of this study are anticipated to provide valuable input to policymakers in their efforts to enhance public health. Specifically, this research is expected to be beneficial for health policymakers by drawing attention to the socio-cultural aspects and local wisdom of the Indonesian community. The findings of this paper offer international readers valuable insights into the cultural factors that influence healthy behaviors in Indonesia. They contribute to cross-cultural understanding and offer transferable interventions for promoting healthy lifestyles. Moreover, the study highlights the potential of technology-equipped systems and explores the societal implications of social literacy and religious involvement. These findings can guide the development of culturally sensitive health promotion strategies and interventions in various countries around the world. These policy implications include:

- **Promoting social literacy:** Investing in social education programs can enhance individuals' ability to navigate social situations effectively. These programs can be integrated into various settings, including schools, workplaces, and community centers.
- **Encouraging religious involvement:** Supporting religious institutions and organizations that promote healthy living can foster religious involvement. Providing resources for health education programs, incorporating health messaging into religious teachings, and partnering with religious institutions for health services can encourage healthy behaviors.
- **Investing in technology-equipped systems:** Developing technology-equipped systems that provide access to health information and resources is crucial. This includes mobile health applications, online health resources, and utilizing social media platforms for health dissemination.
- **Addressing health disparities:** Tackling health disparities requires addressing social determinants of health. Initiatives such as community gardens, improved public transportation systems to promote physical activity, and policies promoting affordable housing, education, and employment opportunities can address disparities and promote healthy lifestyles.

## **Authorship**

All authors equally contributed to the paper.

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## Declaration of conflicting interests

Authors declare no potential conflict of interest.

## Consent

Written permission and consent were taken from all respondents. Consent was taken from Universitas Bengkulu to publish this paper.

## Ethical Approval

Institute for Research and Community Service (LPPM) at Universitas Bengkulu, Indonesia.

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# AUTHORITATIVE PARENTING STYLES AS ANTECEDENT OF ENTREPRENEURIAL INTENTIONS FOR VOCATIONAL HIGH SCHOOL STUDENTS

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Maulana Amirul ADHA<sup>1</sup>, Ayatulloh Michael MUSYAFFI<sup>2</sup>  
Nova Syafira ARIYANTI<sup>3</sup>, Rudy ANSAR<sup>4</sup>  
Eka Ary WIBAWA<sup>5</sup>

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**Abstract:** *This research investigates the effect of authoritative parenting styles to early entrepreneurial competence, and students' entrepreneurial intention by including self-efficacy and entrepreneurial personality as mediating variables. Vocational high school students in Jakarta province, Indonesia, are the population of this study and the sample size is 347 students. The software package AMOS 25 was employed to conduct structural equation modeling (SEM) for the purpose of data analysis. The results study indicate that the implementation of authoritative parenting styles has a positive effect on the development of early entrepreneurial competence. This, in turn, can foster the students' entrepreneurial intention. Furthermore, the present research points out the significance of self-efficacy and entrepreneurial personality as mediators. This study makes both theoretical and practical contributions by presenting a tested model that serves as an alternative guide for promoting students' entrepreneurial intentions.*

**Keywords:** *Authoritative parenting styles, Early entrepreneurial competence, Entrepreneurial intention, Entrepreneurial personality, Self-efficacy*

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<sup>1</sup> Faculty of Economics, Universitas Negeri Jakarta, Indonesia, ORCID no: 0000-0001-8707-7518, [maulanaamirul@unj.ac.id](mailto:maulanaamirul@unj.ac.id)

<sup>2</sup> Faculty of Economics, Universitas Negeri Jakarta, Indonesia, ORCID no: 0000-0001-7335-0261, [musyaffi@unj.ac.id](mailto:musyaffi@unj.ac.id)

<sup>3</sup> Faculty of Education, Universitas Negeri Malang, Indonesia, ORCID no: 0000-0002-2949-5495, [novasyafira2@gmail.com](mailto:novasyafira2@gmail.com)

<sup>4</sup> Faculty of Business Economics and Accountancy, Universiti Malaysia Sabah, Malaysia, ORCID no: 0000-0002-2382-8359, [rudyansar@ums.edu.my](mailto:rudyansar@ums.edu.my)

<sup>5</sup> Faculty of Economics and Business, Universitas Negeri Yogyakarta, Indonesia, ORCID no: 0000-0002-1433-1551, [eka\\_arywibawa@uny.ac.id](mailto:eka_arywibawa@uny.ac.id)

## 1. Introduction

Vocational high school is one of the national education subsystems, vocational school has a direct role in the improvement of quality human resources and is prepared to compete immediately in the demanding environment of the workplace. To achieve this goal, vocational schools provide expertise programs, skills competencies, and apprenticeship experiences (Ana et al., 2016; Haasler, 2020; Li & Islam, 2021). Therefore, it is anticipated that vocational schools will be one strategy to both control the current unemployment rate and prevent future unemployment problems in Indonesia. However, it is a reality that not all graduates of vocational schools find it easy to secure employment opportunities. According to data cited from the Central Bureau of Statistics Republic of Indonesia in August 2022, it is noteworthy that graduates of vocational schools, which are aimed to give students the skills they need to work in the industry, exhibit the highest rate of unemployment.

One of the most challenging and complex processes in life is making career decisions (Fabio et al., 2012; Plessis, 2016), especially for vocational school students who are about to graduate. According to Patton and Porfeli's (2007) theory of professional development, vocational students who are in the adolescent stage are in the career exploration stage, which is the stage where they have to find out about themselves and what they want to accomplish with their lives. Students need to investigate a wide range of employment options and become familiar with a variety of professional outcomes, in the process of making career decisions (Adha et al., 2022; Hirschi, 2013). Students need to think about a lot of things during this process so that their choice will lead to a successful career. Various studies suggest entrepreneurship as a career solution to overcome unemployment problems in a country (Costa et al., 2016; Memon et al., 2015).

Studies regarding the role of authoritative parenting style in efforts to increase early entrepreneurial competence in encouraging student intentions in entrepreneurship have been widely studied by researchers around the world (Hassi, 2016; Petrovici, 2013; Schmitt-Rodermund, 2004), including in Indonesia given the importance of parenting in encouraging entrepreneurial intentions and promoting entrepreneurial careers (Bindah, 2017; Kusumawijaya & Astuti, 2021). One of the efforts to create new entrepreneurs among vocational school graduates is to foster interest and awareness of vocational school graduates for entrepreneurship, because according to TPB put forward by Ajzen (1991) that intention in entrepreneurship is the best predictor in influencing entrepreneurial behavior, so that when intention in entrepreneurship low, then entrepreneurial behavior will be low, this means that entrepreneurship and new jobs will not be created. Research by Botha and Taljaard (2021) proposes a model in developing individual competencies that have an impact on entrepreneurial intentions, where one of the factors that also influences these two factors is self-efficacy. Furthermore, research by Jiang et al. (2017) emphasizes that authoritative parenting styles can foster early entrepreneurial competence and students' entrepreneurial intentions. Nunfam et al. (2022) in research conducted in developing countries also explains that a strong entrepreneurial personality can influence early entrepreneurial competence and entrepreneurial intentions.

Although there have been many studies examining models that can be used to foster early entrepreneurial competence and students' entrepreneurial intentions, not much has

examined the role of authoritative parenting style in efforts to increase early entrepreneurial competence and students' entrepreneurial intentions in encouraging career choices as entrepreneurs, especially in the context of vocational schools. This study tries to fill the gap in previous studies, namely examining the contribution of authoritative parenting style (APS) to early entrepreneurial competence (EEC) and student entrepreneurial intentions (EI) by including self-efficacy (SE) and entrepreneurial personality (EP) as mediating variables. This study offers insights into a minimum of three aspects, from a theoretical aspect to complement the research that has been conducted (Botha & Taljaard, 2021; Gorgievski et al., 2018; Obschonka et al., 2010), by including the variable early entrepreneurial competence as a mediating variable for entrepreneurial intentions, which a number of previous researchers have not investigated. The second aspect is to provide practical insight to related parties, ways to boost entrepreneurial intentions by using predictor factors, with the hope that entrepreneurship becomes an alternative career choice for students. The third aspect is the first step regarding a similar theme, in a different context.

## **2. Literature Review**

In today's world, it is becoming more widely acknowledged that entrepreneurship is an essential component of the economic and social development of a nation (Mensah et al., 2021; Vodă & Florea, 2019). Through intentional and planned behavior entrepreneurship is formed (Hou et al., 2019; Nabi et al., 2017). One of the strongest factors of entrepreneurship, according to Hisrich et al. (2016), is the entrepreneurial intention. Research by Obschonka et al. (2011) reveals that entrepreneurial intentions are formed by early entrepreneurial competence. Therefore, early entrepreneurial competence is important for sustainable entrepreneurial development activities.

Early entrepreneurial competence should ideally be developed in adolescence through education at school (Ferrerás-García et al., 2021; Hassi, 2016). Young people who start their own businesses at an early age are better able to think ahead and plan for their future careers as business owners. Adolescence is a time when a person experiences many transitions. At least this transition is marked by experiencing puberty (biological aspect), entering secondary education (social aspect), and experiencing increased cognitive abilities, thus allowing adolescents to think idealistically, logically, and abstractly (cognitive aspect) (Eccles & Roeser, 2011). Adolescents are in an identity crisis phase, where self-exploration helps them find identity (Owusu-Agyeman, 2021; Qiao & Hua, 2019). During that period, parents have an opportunity to play a role by proactively establishing chances for their children, allowing adolescents to gain exposure to a variety of roles, which can subsequently be converted into capital as the children get older (García et al., 2015; Schmitt-Rodermund et al., 2019). As a result, the role of parents, manifested as parenting, is critical for adolescents in forming their identity (Alexander & Harris, 2022), self-efficacy, self-esteem (Pinquart & Gerke, 2019), hopes, beliefs, and career plans (Boz & Ergeneli, 2014).

Authoritative parenting style is characterized by parents who promote their children's autonomy while at the same time imposing constraints and regulations on their behavior (Nie et al., 2022). It is not always necessary for parents to exert control over their children;

instead, they should provide more open possibilities for their children to explore in order to teach them how to make their own choices based on the factors that are most essential to them (Bartholomeu et al., 2016; Seroussi & Yaffe, 2020). Authoritative parenting is also linked to positive adolescent development, for instance psychosocial competencies for example, independence, resilience, self-esteem, optimism, social competence, maturity and children achievement (Kuppens & Ceulemans, 2019). The development of entrepreneurial skills in teenagers is facilitated by an authoritative parenting style, which encourages the growth of autonomy, independence, self-confidence, leadership, and perseverance (Schmitt-Rodermund, 2004). Parenting styles of students' parents can have a significant impact on the future of their children (Alexander & Harris, 2022; Situmorang & Salim, 2021; Sovet & Metz, 2014). Shanine et al. (2022) confirms that parents can be an example or role model and significantly influence intentions in entrepreneurship. For this reason, parenting style influences students' intentions to engage in entrepreneurial activities (Alexander & Harris, 2022; Bartholomeu et al., 2016; Jiang et al., 2017).

The ability to believe in one's own abilities and the success of these abilities is what we call self-efficacy (Bandura, 1977, 2001, 2006). Someone with a low level of self-efficacy will always be hesitant in doing their job, whereas someone with a high level of efficacy will always be confident in their ability to do anything about their work (Godwin et al., 2016; Shinnar et al., 2014). A person's level of efficacy has a affect on their ability to realize their full potential, work towards achieving what they most desire, and maintain a confident attitude when interacting with others and participating in community activities (Alhaji, 2015; Hou et al., 2019). If people believe in their potential, they will continue to improve the quality of their work. When determining whether someone will pursue entrepreneurship or not, self-efficacy is an important factor (Qiao & Hua, 2019; Shinnar et al., 2014). Entrepreneurial intentions can also be influenced by self-efficacy, which can be described as a person's belief in his ability to launch and manage a business (Hsu et al., 2019; Jianchao et al., 2022; Shinnar et al., 2014). Specifically, Igwe et al. (2020) states that self-efficacy can be a mediating variable in increasing entrepreneurial intentions.

The personality traits associated with entrepreneurship have the potential to cultivate a desire to pursue entrepreneurial endeavors, thereby impacting individual career decisions in the context of the Industry 4.0 era (Fabio et al., 2012; Nunfam et al., 2022). Individuals possessing an entrepreneurial personality trait are likely to exhibit a greater degree of self-reliance, be able to face life's difficulties and be able to manage job opportunities for himself and others, with these personality characteristics that can influence their early entrepreneurial competence (Botha & Taljaard, 2021; Ismail, 2022). The more mature the individual's personality, the individual has the provision to face all problems and uncertainties in entrepreneurship.

The relationship between authoritative parenting style is believed to affect early entrepreneurial competence and students' intentions in entrepreneurship, but this depends on self-efficacy and entrepreneurial personality as the most important determinants of intention (Botha & Taljaard, 2021; Igwe et al., 2020; Jiang et al., 2017; Kusumawijaya & Astuti, 2021). Several studies conceptualize entrepreneurial personality and self-efficacy have been identified as mediating factors in various studies due to their position within an individual's internal factors. For example, studies by (Alexander & Harris, 2022; Fabio et al., 2012; Igwe et al., 2020; Situmorang & Salim, 2021) show that

parenting style can affect early entrepreneurial competence and entrepreneurial intentions, through self-efficacy and entrepreneurial personality. Seeing the unemployment rate and the lack of desire of students to do entrepreneurship as a career choice is a problem that needs attention.

The hypotheses are:

H1: Directly APS has a effect on EI

H2: Indirectly APS has a effect on EI through SE

H3: Indirectly APS has a effect on EI through SE and EEC

H4: Indirectly APS has a effect on EI through EP

H5: Indirectly APS has a effect on ECC through EP and EEC

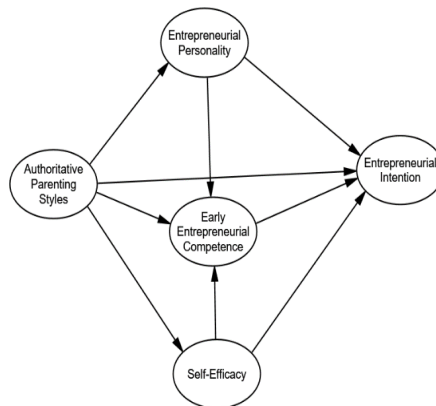
H6: Indirectly APS has a effect on EI through EEC

### 3. Methodology

#### Design

Quantitative approach with structural equation modeling was utilized in order to acquire an all-encompassing comprehension of the relations that exist between the variables. In this study, we use quantitative data that was gathered about student perceptions related to the variables that were studied through survey techniques. As can be seen in Figure 1, this study takes into account a total of five variables: authoritative parenting styles (APS), entrepreneurial personality (EP), early entrepreneurial competence (EEC), self-efficacy (SE), and entrepreneurial intention (EI).

*Figure 1: Proposed Model*



*Source: Author's design*

### Samples and Instrument

Vocational high school students in Jakarta, Indonesia is the population of this research, with a total population of 194,591 students. The minimum sample size with 95% confidence level is 347 students based on Isaac and Michael (1995). There are five cities (East Jakarta, West Jakarta, North Jakarta, South Jakarta, Central Jakarta) in Jakarta Province, Indonesia, the sampling method used was proportional random sampling. As illustrated in Table 1, the percentage of female respondents is higher than that of male students. It can be seen from the profession of parents that most parents of students work as general employees with a percentage of 27%, followed by civil servants with a percentage of 21%, teacher/lecturer 19%, while parents of students who are entrepreneurs as much as 15%, further profession as military/police and others, respectively by 11% and 7%.

**Table 1: Sample Characteristics**

Characteristics		Total	Percentage (%)
<b>Area</b>			
	West Jakarta	77	22%
	East Jakarta	103	30%
	Central Jakarta	41	12%
	North Jakarta	49	14%
	South Jakarta	77	22%
<b>Gender</b>			
	Male	136	39%
	Female	211	61%
<b>Grade</b>			
	10th	84	24%
	11th	139	40%
	12th	124	36%
<b>Parents profession</b>			
	General Employee	94	27%
	Teacher/Lecture	67	19%
	Civil Servant	73	21%
	Military/Police	39	11%
	Entrepreneur	51	15%
	Others	23	7%
N= 347			

Schmitt-Rodermund (2004) identified four indications of authoritative parenting styles, including monitoring, family decision-making, warmth, and authority. These four indicators guided the development of the assessment scale for APS, which consists of four items. The EP measurement scale (5 items) was developed based on the indicators used by Vega-gómez et al. (2020) in their research, namely conscientiousness, openness, agreeableness, neuroticism, and extraversion. The SE measurement scale (3 items) was adapted from indicators developed by Bandura (1977, 2006) including magnitude (level of task difficulty), strength (degree of confidence), and generality (broad area of behavior).

The measurement scale for EEC (3 items) was adapted from indicators developed by Schmitt-Rodermund, (2004) which is also used by Obschonka et al. (2010) in their research, namely early commercial activities, leadership, and early inventions. The EI measurement scale (3 items) was adapted based on indicators developed by Liñán and Chen (2009) and also adapted by Adha et al. (2022) including desire, interest, and belief.

In order to collect information from respondents between the months of January - March 2023, an online questionnaire was used. To assure research ethics, respondents provide their information voluntarily, and their identities are kept private. Cronbach's alpha and Aiken's V were applied to investigate the reliability and validity of the five-point scale used in this research. In more detail, the range of Aiken's V and Cronbach's alpha coefficient values for each variable is as follows, APS: 0.835-0.920 ( $\alpha$ : 0.918), EP: 0.811-0.893 ( $\alpha$ : .852), SE: 0.823-0.905 ( $\alpha$ : 0.886), ECC: 0.829-0.913 ( $\alpha$ : 0.871), and EI: 0.841-0.918 ( $\alpha$ : 0.904). The instrument can be declared reliable, because the acceptable Cronbach's alpha is  $>0.60$  as suggested by Hair et al. (2010), while the validity of the instrument is determined based on Aiken (1985) recommendation, namely the acceptable threshold value of Aiken's V is 0.80, for five raters.

#### **4. Data Analysis**

To examine the relationships between the variables, data analysis were carried out utilizing the SPSS 25 and AMOS 24 programs. Within the context of this investigation, three stages were required for the completion of the SEM analysis: First, exploratory factor analysis (EFA) with the help of SPSS 25 software was carried out to extract different factors using VARIMAX rotation. Second, the model's validity and reliability were evaluated using a confirmatory factor analysis (CFA) performed in AMOS 24. When the loading factor  $>0.70$  (Byrne, 2016), the average variance extracted (AVE)  $>0.50$  (Bagozzi & Yi, 1988), and the composite reliability (CR)  $>0.70$  (Hair et al., 2010), the criteria for convergent validity have been met. Discriminant validity is confirmed as recommended Fornell and Larcker (1981) through comparison of the AVE's square root value, which must be higher than the correlation between the constructs.

Appropriateness of the empirical framework utilized in this study was assessed through the application of criteria suggested by Hu and Bentler (1999); Kline (2015); Byrne (2016), namely the value goodness of fit index (GFI), tucker-lewis index (TLI), and comparative fit index (CFI), must be  $>0.90$ ; the index value root mean squared error of approximation (RMSEA), and root mean square residual (RMR) must be  $<0.08$ ; while the p-value should be  $>0.05$ , and the value CMIN/df should be  $<3.00$ . Third, with a 5% significance rate, structural equation modeling (SEM) was utilized to examine hypothesized correlations.

This study also included data normality and outlier checks using AMOS 24. Before beginning the SEM analysis, it is recommended by (uharyanto et al. (2023) to first check the normality of the data and look for any outliers. The critical ratio (c.r) value for each indicator's skewness and kurtosis, according to the findings of the normality test, is not larger than +2.58. Meanwhile, the multivariate kurtosis line has a value of c.r equal to 2.417. As suggested by Byrne (2016), this indicates that there is no issue with the normality of the data at either the univariate or multivariate levels. Blunch (2013) advised that a

mahalanobis distance (MD) value less than chi square indicated no multivariate outlier problem, hence the outlier test was done. The results of the analysis showed that the chi-squared value was 302.960, while the most significant MD value was 275.178.

## 5. Results

### Exploratory Factors Analysis

The utilization of SPSS 25 software was implemented to conduct an EFA for the purpose of extracting distinct factors. Based on the EFA results using VARIMAX rotation, it generates five distinct factors. First factor is called authoritative parenting styles (APS). Second factor is called entrepreneurial personality (EP). Third factor is called early entrepreneurial competence (EEC). Fourth factor is called self-efficacy (SE). Fifth factor is called entrepreneurial intention (EI). Can be seen in Table 2 these five factors explain 68.27% of the total variance. CFA was carried out with the AMOS 24 program in order to validate the components that were identified through EFA and to assess the hypothesized through SEM.

**Table 2: Factor Analysis Results**

Factor	Item Code	Loading	Eigen Value	Explained Variance (%)	AVE	CR
Authoritative Parenting Styles (APS)	APS1	0.71	12.17	20.62	0.67	0.89
	APS2	0.78				
	APS3	0.92				
	APS4	0.84				
Entrepreneurial Personality (EP)	EP1	0.82	10.06	18.75	0.64	0.90
	EP2	0.75				
	EP3	0.86				
	EP4	0.80				
	EP5	0.77				
Early Entrepreneurial Competence (EEC)	EEC1	0.91	6.49	13.26	0.76	0.91
	EEC2	0.83				
	EEC3	0.88				
Self-Efficacy (SE)	SE1	0.85	4.64	9.13	0.62	0.83
	SE2	0.72				
	SE3	0.79				
Entrepreneurial Intention (EI)	EI1	0.80	2.72	6.51	0.64	0.84
	EI2	0.73				
	EI3	0.87				

*Source: own representation*

### Measurement Model Evaluation

Table 2 summarizes the results of factor analysis (EFA and CFA). As previously explained, five different factors generated through EFA. The measurement model has



good convergent validity, as shown in Table 2, because the value of loading factors range between 0.71-0.92 (>0.70). While, the CR value for each construct ranges between 0.83-0.91 (>0.70), and AVE value for each construct ranges between 0.62–0.76 (>0.50).

**Table 3: Discriminant Validity Examination**

Construct	1	2	3	4	5
1. Authoritative Parenting Styles (APS)	0.82				
2. Entrepreneurial Personality (EP)	0.35	0.80			
3. Early Entrepreneurial Competence (EEC)	0.21	0.44	0.87		
4. Self-Efficacy (SE)	0.27	0.19	0.28	0.79	
5. Entrepreneurial Intention (EI)	0.43	0.20	0.09	0.18	0.80

*Source: own representation*

Table 3 displays the results of the discriminant validity analysis, which show that the results are satisfactory in accordance with the recommendation of Fornell and Larcker (1981). It can be seen that the AVE square root value of each construct is greater than the correlation value between constructs. Furthermore, an analysis of the model fit index was carried out. The values of all of the indices, such as the CFI, GFI, TLI, RMSEA, RMR, CMIN/DF, and p, were satisfactory, as recommendations provided by Byrne (2016); Hair et al. (2010). Table 4 contains details about the model fit index.

**Table 4: Measures of Model Fit**

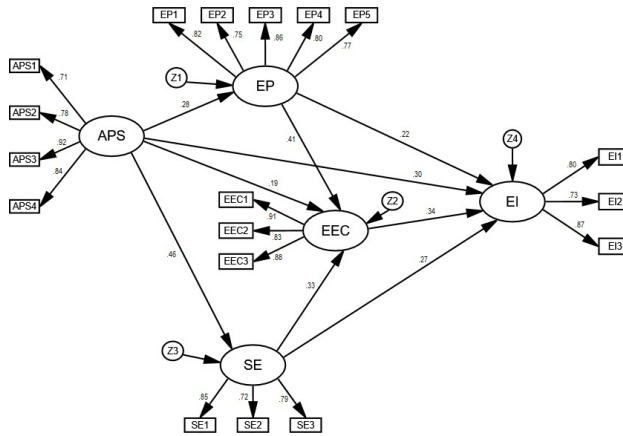
Criteria	Cut-Off Value	Model Fit Value
CFI	> 0.90	0.93
GFI	> 0.90	0.91
TLI	> 0.90	0.93
RMSEA	< 0.08	0.6
RMR	< 0.08	0.4
CMIN/DF	< 3.00	2.61
p	> 0.05	0.09

*Source: own representation*

### Evaluation and Interpretation of Structural Model

The structural model was analyzed and interpreted so that the hypothesized relationship between the research variables could be studied. This is necessary to ensure that the hypothesis can be proven. The findings of the SEM tests that were carried out with the assistance of the AMOS 24 program are displayed in Figure 2. The Sobel test is utilized for the purpose of investigating the effect of mediator variables (Sobel, 1982), specifically entrepreneurial personality, early entrepreneurial competence, and self-efficacy, in mediating the influence of authoritative parenting styles on entrepreneurial intention among vocational high school students. Table 5 shows a summary of the total effects of authoritative parenting styles on entrepreneurial intention and indirect effects through entrepreneurial personality, early entrepreneurial competence, and self-efficacy.

Figure 2: SEM Results



Source: Author's design

Results of the authoritative parenting styles' total effect on entrepreneurial intention were considerable. The effect was also significant when entrepreneurial personality, early entrepreneurial competence, and self-efficacy were added to the model as mediators. Total indirect effect of authoritative parenting styles on the entrepreneurial intention is 0.33; when combined with direct effect, the total effect of authoritative parenting styles on the entrepreneurial intention is 0.63. In short, the effects of mediation accounted for 52.38% of the total effects, meaning that authoritative parenting styles can significantly improve entrepreneurial intention through mediator variables.

Table 5: Size of Effect and Hypothesis Testing Results

Hypothesis	$\beta$	p	Cut of Value	Decision
APS → EI	0.30	0.00	0.05	H1 Approved
APS → EP → EI	0.06	0.00	0.05	H2 Approved
APS → EP → EEC → EI	0.04	0.03	0.05	H3 Approved
APS → SE → EI	0.12	0.00	0.05	H4 Approved
APS → SE → EEC → EI	0.05	0.01	0.05	H5 Approved
APS → EEC → EI	0.06	0.00	0.05	H6 Approved

\* Total indirect effect APS → EI,  $\beta=0.33$   
 \* Total effect of APS → EI  $\beta=0.63$

Source: own representation

## 6. Discussion

The current uncertain economic situation caused by the presence of a pandemic over the past few years, where it is difficult for graduates of educational institutions to get decent jobs, entrepreneurship has been introduced in educational institutions around the world as an effort to grow professional entrepreneurial careers (Adha et al., 2022; Ratten, 2020).

It becomes important to understand the role of parenting style and to determine how it influences students' entrepreneurial intentions (Aldrich et al., 2021; Alexander & Harris, 2022), culminating in students' entrepreneurial career choices. Research on entrepreneurial competence and entrepreneurial intentions is still largely focused on the context of adults (Maritz et al., 2021), and businesses, for example family businesses (Adha et al., 2023; Shanine et al., 2022), small and medium enterprises (Ismail, 2022), and low-income households (Kimmitt et al., 2020). Unfortunately, there is still not much studies on entrepreneurial competence and entrepreneurial intentions in the context of youth and vocational schools.

As the findings of the study show that authoritative parenting style has a significant influence on students' early entrepreneurial competence and entrepreneurial intentions, the results are also significant when the variables self-efficacy and entrepreneurial personality are added as mediating variables. During the period of adolescence, there exists a positive correlation between high levels of expected entrepreneurial competence and the inclination towards entrepreneurship. This inclination, in turn, is associated with the potential for success in an entrepreneurial career (Obschonka et al., 2010; Shanine et al., 2022). Entrepreneurial competence expectations serve as crucial factors in shaping entrepreneurial intention and decisions. Therefore, personal traits and self-efficacy assume significant roles.

One of the main determinants of self-efficacy for adolescents is the assessment of the parenting style they receive from their parents (Jiang et al., 2017; Preston & Salim, 2019). The impact of parenting practices can be explained through the perspective of students' encounters with social persuasion, vicarious, and mastery. The act of parenting exerts a substantial impact on an individual's development across various life stages, ranging from early childhood education to higher education (Alexander & Harris, 2022; Sahithya et al., 2019). Rivers et al. (2012) explained that parents have an impact on the development of self-efficacy by providing an observational model that can guide shifts in adolescent self-perceptions. So that the influence of authoritative parenting style on students' competence and intentions in entrepreneurship, is also strengthened by the presence of strong student self-efficacy.

A situational factor that influences student achievement and competence is parenting style (Rivers et al., 2012; Situmorang & Salim, 2021). One of the factors that influence intentions in entrepreneurship, which in turn can influence students' choices in entrepreneurship, is parenting style (Schmitt-Rodermund, 2004; Schmitt-Rodermund et al., 2019; Shanine et al., 2022). Authoritative parenting styles are also prevalent in Indonesian society, these findings support previous research, especially for school children (Hans et al., 2019; Preston & Salim, 2019; Situmorang & Salim, 2021). Indonesian parents exhibit a tendency to establish guidelines, boundaries, and norms upon their offspring while simultaneously maintaining a receptive disposition towards engaging in dialogue with them. The authoritative parenting is characterized by a blend of parental involvement and warmth, alongside the implementation of clear rules and consistent consequences (Martínez & García, 2007). Authoritative parenting approach pertains to the extent of parental involvement in their child's life, the practice of open communication, the establishment of trust, acceptance, and support for the child's

psychological autonomy, and the monitoring of the child's whereabouts (Nie et al., 2022). Furthermore, based on the results of a literature review by Sahithya et al. (2019), states that student raised in authoritative parenting have a high level of self-efficacy, which in turn has an impact on students' competence and entrepreneurial intentions (Alves & Yang, 2022; Obschonka et al., 2011).

Research conducted by Schmitt-Rodermund (2004) which examined entrepreneurial personality, interests, and parenting styles of adolescents supports the results of this study, they found that authoritative parenting style influences children's entrepreneurial personality and the development of entrepreneurial interests. The impact of parenting style on the vocational exploration of student indicates that parents with an authoritative approach tend to foster a greater inclination towards exploring a wider range of career options, as well as cultivating a greater sense of autonomy in career decision-making (Schröder et al., 2011; Sovet & Metz, 2014).

The fundamental principle of authoritative parenting is centered on the notion that parents facilitate their child's autonomy in both thinking and acting (Jiang et al., 2017; Schmitt-Rodermund et al., 2019). It is crucial for parents to consistently articulate the rationale behind their expectations for children, even as they maintain hopes for their children's future. In the context of adolescent development, those who are raised with authoritative parenting tend to exhibit an internal locus of control (Nie et al., 2022; Sovet & Metz, 2014). This refers to the tendency for their behavior to be guided by their own initiative rather than external factors such as peer influence. When provided with the chance to satiate their inquisitiveness, adolescents typically derive pleasure from this feeling and endeavor to fulfill it, as evidenced by their proactive and inventive conduct (Jiang et al., 2017; Lyu et al., 2023). Parents who adopt an authoritative parenting style consistently provide support to their children in attaining mutually agreed-upon goals, which has a positive impact on their success (Kuppens & Ceulemans, 2019). A desire for accomplishment is the driving force behind an individual's competitiveness, which is a facet of the entrepreneurial personality (Adha et al., 2023; Sun et al., 2020).

## **7. Conclusion**

The act of parenting exerts a substantial impact on an individual's entire lifespan, spanning from early childhood education to higher education. The effects of parental approaches can be elucidated through the perspective of students' encounters with social persuasion, vicarious, and mastery. This study shows that authoritative parenting has an impact on early entrepreneurial competence and students' intentions in entrepreneurship, which in turn encourages students to choose entrepreneurial careers. This study also highlights self-efficacy and entrepreneurial personality as factors that mediate the effect of authoritative parenting style on students' entrepreneurial intentions. The model that has been tested in this study can be a useful guide to encourage students' entrepreneurial intentions, especially in the context of vocational students.

Several limitations are also inherent to this research, for example the research instrument was completed by students directly so that it may not reflect the actual parenting style and conditions, the population of this study is also only students who come from urban areas, the other limitation is that this study only examines one style parenting, while there are

other parenting styles that can be examined by future researchers, the results may be different. Practically this research can be used as a reference for school leaders in establishing communication with parents of students about their parenting style, so that there is synergy between schools and parents related to efforts to encourage students to have entrepreneurial competence and entrepreneurial intentions. Based on the limitations, this research can be used as a milestone for research with similar topics, for example by taking student populations in remote areas, and complementing the results of this study using a qualitative approach, to describe appropriate parenting styles in seeking career choices as entrepreneurs.

## **Authorship**

Equal contribution from all authors.

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# THE WAPOR 76TH ANNUAL CONFERENCE. CONFERENCE REVIEW

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Elena SPIRIDON<sup>1</sup>

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The World Association for Public Opinion Research (WAPOR) 76th Annual Conference took place on September 19-22, 2023 in Salzburg, Austria, at the Paris Lodron University, the largest educational institution in Salzburg, founded by Prince Archbishop Paris Lodron in 1622 and re-established in 1962.

This year conference theme, “Public Opinion Research in a Technology-Driven World”, addressed the potential and limits of big data analytics, fostering a rich exchange of ideas and knowledge about what we can learn from public opinion and elite opinion over time, but also about the latest developments in this field.

During the first conference day, the organizers provided a great mixture of interactive workshops and methods training focusing on cross-cultural survey methodology, factorial survey experiments for the study of opinions and intentions, measurement invariance in comparative social research, assessment of survey data quality, and fundamentals and best practices of administrative records for survey methodology.

The keynote speakers, distinguished university professors, delivered compelling presentations that set the tone for the entire event.

Various parallel sessions and panels offered a platform for engaging discussions on the International Social Survey Programme (ISSP), public opinion research in times of crisis, the European Values Study on its way to the sixth wave, democracy, fake news and disinformation, elections, gender and public opinion research, anti-gender backlash in times of crisis, studies of social phenomena and society, survey methodology and software, polarization, migrants and refugees, development of public opinion research, and case studies. The diversity of perspectives presented during these discussions provided a holistic view of the challenges and innovations in the field.

Several WAPOR awards and prizes are awarded annually to recognize significant accomplishments in the Public Opinion field. This year, Naomi Turner Prize, that honors the best paper written and presented at the annual conference by a student, was received by Daniel Casey for his paper “Democratic responsiveness to different forms of public opinion”; Elizabeth H. Nelson Prize, for best conference paper from a society in

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<sup>1</sup> Scientific Researcher at the Research Institute for Quality of Life, Romanian Academy, Bucharest, E-mail: [elenaspiridon@yahoo.com](mailto:elenaspiridon@yahoo.com)

transition, was received by Nataliya Reshetova the paper “Support for Democracy in Ukraine: The Reinforcing Effect of Critical Junctures”, co-authored by Malina Voicu;

Alexis de Tocqueville Award, for the best conference paper concerned with democracy and public opinion, whether in a consolidated or in an emerging democracy, was offered to Bernardo Mackenna, Ricardo Gonzalez, Adolfo Fuentes, and Esteban Munoz for their paper “Breaking The Populist Spell: A Comparative Study of The Association Between Interpersonal Ties and Populist Preferences”; Robert M. Worcester Award, for an outstanding paper published in the *International Journal of Public Opinion Research*, was received by Matthew DeBell of Stanford University for his paper “Measuring Political Knowledge and Not Search Proficiency in Online Surveys”.

Also, to encourage students’ participation at the WAPOR annual conference, the organizers distribute a limited number of student travel grants. This year, the WAPOR Conference Committee offered 7 student travel grants out of 24 applications.

All the participants in the annual conference and WAPOR members will soon have the possibility to share conference presentations and topical international poll findings, as an Archive is expected to be launched before 2024, accessible via WAPOR website.

The next edition of WAPOR conference, with the theme “The Soul of Public Opinion Research: Liberty, Quality and Humanity”, will take place on July 28-31, 2024, in Seoul, South Korea.

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## **BOOK REVIEW**

**Catrinel Popescu (2020).**

**THE DEMOGRAPHIC**

**OUTLOOK OF ROMANIA AT**

**REGIONAL LEVEL IN 2019.**

**THE POTENTIAL IMPACT ON**

**NATIONAL SECURITY.**

**Alba Iulia “Carol I”**

**National Defense University Press.**

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Irina Iustina VOICU<sup>1</sup>

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The volume approaches the nexus between the demographic trends in Romania in the past 5 years and the security risks, looking at the population dynamics from the perspective of challenges faced by Romania from political, social, economic, and national security perspective. Population and its demographic characteristics are at the core of national security, being one of the main elements defining a state, its social, political, and territorial boundaries. According to the author, the population connects all other layers of the state power, being essential for the national security policy, as it is located at the crossroad between hard and soft power.

In approaching this topic, the study looks at the regional differences existing at the macro-regional level with respect to the main demographic indicators, such as age and gender structure, territorial density, natality, nuptiality, mortality, and migration. The work, organized into two volumes, provides an encompassing overview on the demographic statistics, the first volume presenting the current features of population living within the Romanian borders, while the second focuses on the dynamic aspect, by analyzing the trends of the main demographic indicators. The second volume looks at the nexus between the demographic trends and statistics and the risks of security, analyzing how the current demographic outlook impacts on the national security and how the demographic risks can be mitigated.

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<sup>1</sup> Student at Faculty of Political Science, University of Bucharest, E-mail: [irina-iustina.voicu@s.unibuc.ro](mailto:irina-iustina.voicu@s.unibuc.ro)

The regional analyses carried out on data retrieved from the National Institute of Statistics, covering the time span 2014 to 2019, points out to several distinctive statistics and trends, all of them being highly relevant for national security. Based on the official statistics, the author points out that the Romanian population faces the challenges occurring at the intersection of population ageing, decreasing fertility, and significant external migration mainly among the active age groups. As outcome, Romanian population shrinks and will continue to do so, the pessimist scenario leading to less than 14 million inhabitants in 2100. Moreover, as population aging evolves at high speed, the dependance ratio grows high, rising sever risks from economic, political, and national defense perspective. The in-depth analysis conducted at regional level points out to the high territorial heterogeneity, some regions being more affected by the drop-in fertility rate and by the external migration, such as North-East, while other are still attractive for young adults and work force, like Bucharest-Ilfov.

By overlapping the map of demographic trends with the one of national security risks, the volume indicates the main vulnerabilities confronted by Romania from the perspective of security threats and propose several public policies direction meant to overcomes the vulnerabilities and to address the issues raised by population ageing and by the other demographic trends. The book is well documented, introduces the main concepts and theories, presents the data analysis in a comprehensible way, and draws several original and highly relevant conclusions for this research topic. It is a good read for specialized audience, as well as for the general public.





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