



National Institute for Economic Research

ECONOMY and SOCIOLOGY

THEORETICAL AND SCIENTIFIC JOURNAL
founded in 1953

No. 2

December 2023



ISSN: 2587-4187
E-ISSN: 2587-4195
Category „B+”

Chisinau, 2023

EDITORIAL BOARD:

EDITOR-IN-CHIEF:

Alexandru STRATAN, Correspondent Member of ASM, Habilitation in economics, Professor, National Institute for Economic Research, Republic of Moldova Associate

ASSOCIATE EDITOR-IN-CHIEF:

Olga GAGAUZ, Habilitation in sociology, Associate Professor, National Institute for Economic Research, Republic of Moldova

RESPONSIBLE SECRETARY:

Alina IANIOGLO, PhD in economics, National Institute for Economic Research, Republic of Moldova

MEMBERS:

Grigore Belostecnic, academician of ASM, Academy of Economic Studies, Republic of Moldova

Michael GRINGS, PhD, Professor, Martin-Luther Universitetea Halle-Wittenberg, Germany

Luminita CHIVU, PhD, Professor, National Institute for Economic Research „Costin C. Kiritescu”, Bucharest, Romania

Larisa SAVGA, Habilitation in economics, Professor, Cooperative-Commercial University of Moldova

Vasa LASZLO, PhD, Institute for Foreign Affairs and Trade, Hungary

Thomas RESL, eng., M. Sc., Federal Institute of Agricultural Economics, Austria

Friederike WELTER, PhD, Professor, University Siegen and Institut fur Mittelstandsforschung Bonn, Germany

Stasys RIMANTAS, PhD, Professor, Klaipeda University, Lithuania

Guido MIGLIACCIO, PhD, Associate Professor, University of Sannio, Italy

Elvira MARTINI, Associate Professor of Sociology University “G. Fortunato” - Benevento, Italy

Maria Carmela Serluca, PhD Lecturer in Economics, Contract Professor, the Telematic University Giustino Fortunato of Benevento, the University of Sannio, Italy

Jamila BOPIEVA, PhD, Director, University of Economics, Finance and International Trade, Kazakhstan

Vilayat VALIYEV, PhD, Institute for Scientific Research of Economic Reforms, Azerbaijan

Tomas KUCERA, PhD, Charles University in of Prague, Czech Republic

Gemma MASAHIKO, PhD, Professor, Waseda University in Tokyo, Japan

Apostolos PAPAPHILIPPOU, PhD, Four Assist Development Consulting, Greece

Euphrasia Susy SUHENDRA, PhD, Professor, Gunadarna University Indonesia

Dimitre NIKOLOV, PhD, Professor, Institute of Agricultural Economics, Bulgaria

Sergiy PYROZHKOV, Academician, National Academy of Ukraine

Svetlana BELOUSOVA, PhD, Professor, International University of Business and Law, Ukraine

Dorina ROSCA, PhD, Ecole des Hautes tudes en Sciences Sociales, School of Higher Studies in Social Sciences, Paris, France

Andrzej KOWALSKI, PhD, Professor, Institute of Agricultural and Food Economics, Poland

Emil DINGA, PhD, Professor, Romanian Academy, Center for Financial and Monetary Research „Victor Slavescu”, Romania

Oleksandr DLUHOPOLSKYI, PhD, Professor, Kyiv School of Economics, Ternopil National Economic University, Ukraine

Rodica PERCIUN, PhD, Associate Professor, National Institute for Economic Research, Republic of Moldova

Angela TIMUS, PhD, Associate Professor, National Institute for Economic Research, Republic of Moldova

Ludmila MALCOCI, PhD, Institute of Legal, Political and Sociological Research, Republic of Moldova

Victor MOCANU, PhD, Associate Professor, Institute of Legal, Political and Sociological Research, Republic of Moldova

Diana CHEIANU-ANDREI, PhD, Associate Professor, State University of Moldova, Republic of Moldova

EDITORIAL SERVICE:

English Editor: **Alina IANIOGLO**

Computerized layout and design: **Silvia GORCEAG**

The journal „Economy and Sociology” is recognized as scientific publication in the field, accredited of „B+” category, Decision of the National Agency for Quality Assurance in Education and Research, No. 8 of June 26, 2020.

The journal is indexed in the following international databases: DOAJ, IBN, CROSSREF – Digital Object Identifier (DOI), eLIBRARY, IDEAS, EconPapers, LogEc, SOCIONET, INDEX COPERNICUS, OAJI, RePEc, EZB.

Indexer and bibliographic editing: S. Gorceag, E. Migunova, A. Catana, N. Dalinitchi, O. Chirilov.

CONTENTS

THE ECONOMIC AND FINANCIAL PERFORMANCE OF TOUR OPERATORS IN ITALY, FRANCE AND SPAIN: SOME COMPARATIVE EVIDENCE Guido MIGLIACCIO, Maria CALVANESE	4
SMART CITY POLICY BETWEEN INSTITUTIONS AND CITIZENS: THE PERSPECTIVE OF THE CITY OF MILAN Mariano MELCHIONDA	16
THE 'GOODS' CONUNDRUM: THE QUESTION OF VALUE IN MOLDOVAN TRANSNATIONAL PARCEL-SENDING PRACTICES Sanda CARACENTEVA	24
METHODOLOGICAL PROBLEMS OF ASSESSING THE EFFECTIVENESS OF PUBLIC ADMINISTRATION OF SOCIO-ECONOMIC DEVELOPMENT Tatyana BUKHOVETS	33
DETERMINANTS OF UNMET HEALTHCARE NEEDS IN THE EUROPEAN UNION COUNTRIES Tatiana GUTIU, Elmira GOJAEVA	45
MIGRATION, REMITTANCES, AND LOCAL DEVELOPMENT IN MOLDOVA Vitalie STIRBA, Alexandru STRATAN, Eugenia LUCASENCO	57
EXPERIENCES OF YOUTH IN TRANSITION TO ADULTHOOD: THE MODELS DEVELOPED IN BASE OF GENERATION AND GENDER SURVEY Mariana CRISMARU	65
SUBJECTIVE WELL-BEING OF NEET BASED ON GENDER AND GENERATION SURVEY IN MOLDOVA Maxim SLAV	76
POLICIES AIMED AT ENHANCING FINANCIAL INCLUSION DURING A PANDEMIC: A LITERATURE REVIEW Serghei PETIGHIN	86
FINANCING TRENDS OF TRADE AND LOGISTICS SECTOR IN DEVELOPING COUNTRIES: THE CASE OF AZERBAIJAN Ayaz MUSEYIBOV, Ayhan SATIJI	97

THE ECONOMIC AND FINANCIAL PERFORMANCE OF TOUR OPERATORS IN ITALY, FRANCE AND SPAIN: SOME COMPARATIVE EVIDENCE*

DOI: <https://doi.org/10.36004/nier.es.2023.2-01>

JEL classification: E22, G32, L83, R10, R53, Z33

UDC: 338.486(450:44:460)

Guido MIGLIACCIO

Associate Professor of Business Administration and Accounting, University of Sannio, Department of Law, Economics, Management and Quantitative Methods, Benevento, Italy

<https://orcid.org/0000-0002-8882-7648>

e-mail: guido.migliaccio@unisannio.it

Maria CALVANESE

Doctor in Business Administration, Independent researcher, University of Sannio, Department of Law, Economics, Management and Quantitative Methods, Benevento, Italy

<https://orcid.org/0009-0004-2774-2044>

e-mail: mariacalvanese1999@gmail.com

Received 10 September 2023

Accepted for publication 05 November 2023

* This paper is the result of collaboration between the two authors. It is however possible to attribute the paragraphs "Introduction", "Literature review", "Research methodology" and "Conclusions" to Guido Migliaccio. The other paragraphs are by Maria Calvanese.

SUMMARY

Purpose. This article describes and evaluates the economic and financial dynamics of tour operators over the last decade in Italy, France and Spain, three European countries where tourism is relevant.

Methodology. The balance sheets of a sample of 4,044 tour operators (1,043 Italian, 2,340 French, 661 Spanish) over the period between 2012 and 2021 were examined. The average trend of two indices is illustrated: the Return on Assets (ROA) and the Current Ratio. The data were subjected to extensive statistical processing. To compare differences between countries, Anova and, where necessary, Tukey-Kramer methods were used.

Results. The lowest ROA values characterise Italy. In France and Spain, ROA has higher values with peaks, for Spain, of up to 10%. In 2020, it has negative values everywhere due to the pandemic. In 2021, on the other hand, it has positive values due to the general recovery of tourism. The nations have similar values.

Other evidence is typical of the current report: France, in 2021, has an abnormal peak of 14%, after many stable years. Spain has shown a progressive increase in recent years. Italian values do not show any notable variations. The trends, which are globally similar in the three countries, are difficult to interpret and require further investigation.

Implications. The survey enriches the modest international economic literature on tour operators. It is useful for those in the industry and for public authorities wishing to stimulate tourism.

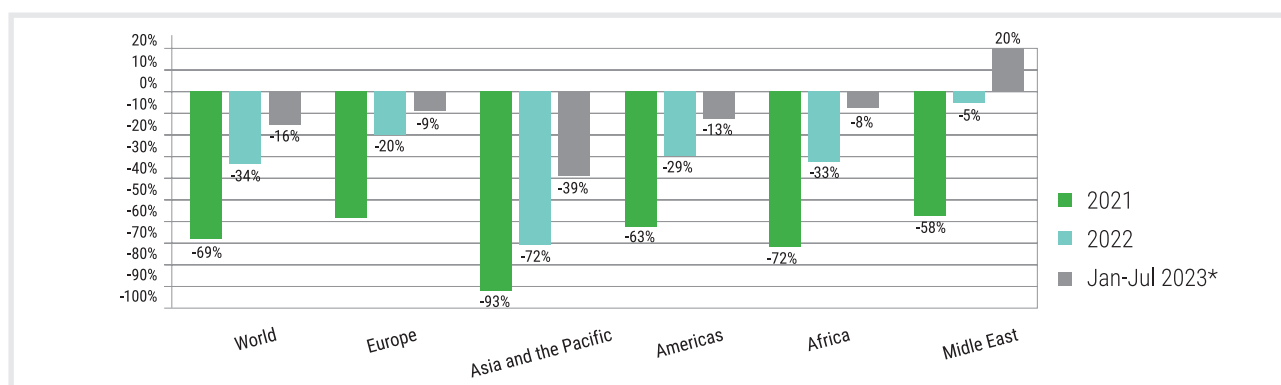
Keywords: Tourism, Tourism companies, Tourist intermediation, Analysis of financial statements, Return on asset, Current ratio, Anova test, Pandemic and tourism

INTRODUCTION

For years, organised tourism has taken on a global significance, fostering cohesion through interculturalism and economic diversification. The relationships that develop between tourists and host communities induce fruitful exchanges of all kinds.

International tourism recovered 84% of pre-pandemic levels in the period January-July 2023 (down 16% from 2019) (UNWTO, 2023). An estimated 700 million tourists travelled the world between January and July 2023, about 43% more than in the same months of 2022, (16% less than in 2019) (Figure 1).

Figure 1.
International Tourist Arrivals, World and Regions



Source: Unwto, 2023.

Europe remains the largest destination region in the world: it has regained 91% of pre-Covid levels, also due to intra-regional tourism.

International tourism may therefore reach pre-Covid levels in the coming years, despite the contemporary economic crisis induced by the wars in Ukraine and Palestine: rising prices induce shorter trips to closer destinations.

The 10 most visited countries in the world by number of annual visits are (Pellegrini, 2023) France (89 million),

Spain (84 million), USA (79 million), China (66 million), Italy (65 million), Turkey (51 million), Mexico (45 million), Germany (40 million), Thailand (40 million), UK (39 million)¹. The spread has always been favoured by tour operators (TOs) who assemble individual tourist services into complex products, organising and managing tourist packages. Their main function is therefore the planning and design of packages, which can be customised, including accommodation, transport, excursions, etc. (Baldarelli, 2000). To this end, they enter into contracts with suppliers of tourist

services (hotels, transport companies, restaurants, etc.) obtaining advantageous prices. Their tasks also include managing bookings and assisting customers during trips, being responsible for customer safety.

These companies were affected by the pandemic, which temporarily reduced and modified tourist demand.

This study proposes some quantitative measurements taken from the balance sheets of a rich sample of tour

operators from Italy, France and Spain in the decade 2012-2021, thus before and during the pandemic, to verify and measure the allegedly devastating effects of the Covid.

The choice of France and Spain is due to their leading position in international rankings. Italy, fifth internationally after the USA and China, is however third on the European continent.

The research question is:

RQ: How has TOs' economic and financial performance evolved over the decade 2012-2021?

After the main bibliographic references, the methodology used to elaborate the financial statements values is outlined. Then, the main results, implications,

limitations of the research, and possible developments of the study with critical considerations and conclusions.

LITERATURE REVIEW

The most authoritative bibliography, both Italian and international, has dealt with the topic of tour operators in detail, focusing mainly on the presentation of their key strategies and the most widespread governance modes (Della Corte, 2004). Several contributions have focused on management aspects, including those of Baldarelli (2000) concerning typical management aspects and those of Baldarelli (1998) and Scannerini (2021) outlining the characteristics of information and accounting systems. Scannerini (1999) dealt with the topic of management control.

The performance analysis focused on specific aspects of international research. For example, Yap et al. (2018) examined the impact of market intelligence practices on the business performance of tour operators in Malaysia, demonstrating a positive correlation between such practices and business performance.

In contrast, Bruni et al. (2017) measured the marketing performance of hotels, travel agents and tour operators through a detailed survey of several companies.

Some more in-depth research has examined specific aspects influencing tour operators' performance, such as that of Cai et al. (2004) who analysed the content distribution performance of US tour operators' websites focused on destinations in China.

Tourism companies, especially tour operators, are sensitive to market threats (Mwesiumo et al., 2021; Abdalla et al., 2022) and have an impact on the economic and financial outcomes of client hotels (Romero et al., 2020). The pressure of tour operators is particularly significant on small and medium-sized hotels in coastal areas, with a negative effect on profitability, but a positive effect on growth.

Empirical studies on the balance sheets and performance of these companies are much less frequent. Iovino & Migliaccio (2018a & b) conducted research on the economic and financial performance of Italian tour operators during the financial crisis between 2007 and 2015. These studies provide an important basis and an ideal continuation for current analyses, especially to the recent health crisis. The use of similar methodology allows for some useful comparisons, despite the different context. Although customary and widespread, the methodology of balance sheet analysis has only been used in a few studies, despite the good informative and interpretative capabilities of the phenomenon under study.

This quantitative study therefore aims to test three research hypotheses:

- (H1) *Tour operators' profitability is generally high, except in pandemic years;*
- (H2) *Positive profitability has favoured self-financing policies that have helped to maintain optimal financial balances;*
- (H3) *Financial performance is similar in several European countries.*

¹ In-depth studies on tourism statistics can be consulted on various sources in addition to those mentioned above. For Italy, see the websites of Istat, the Bank of Italy, the Ministry of Tourism, Federturismo in Confindustria, etc. For France, on the other hand, it is useful to consult the data proposed by the Ministry of Economy, Finance and Industrial and Digital Sovereignty, and the sites geoconfluences.ens-lyon.fr and fr.statista.com. For Spain, finally, one can turn to the web pages of es.statista.com, www.dataes-tur.es, www.bancomundial.org/es, tableros.yvera.tur.ar, and www.epdata.es.

The main objective of this study is therefore to provide an initial analysis of the economic and financial situation of Italian, French and Spanish tour operators

over the 2012-2021 period, with a focus on the temporal evolution of the Return on Assets (ROA) and Current Ratio indices, differentiated by geographic area.

RESEARCH METHODOLOGY

From the Orbis Europe full database of the company Bureau von Dick, a sample of companies with the Nace rev.2 code 79.12, concerning Tour Operator Activities, was taken. Financial statements for 4,440 enterprises for the ten years 2012-2021 were analysed.

Specifically, reference was made to a sample of 1,043 tour operators in Italy, 2,340 in France and 661 in Spain.

The indices analysed were the ROA (Return on Assets) as an income index and the Current Ratio, a financial index expressing the financial structure in the short and medium term.

Space constraints force us to limit ourselves to only two indices, even though the chosen ratios provide basic information on economic and financial performance as demonstrated in studies with a similar approach, albeit relating to other sectors (Migliaccio & De Palma, 2023; Migliaccio & Pavone, 2022; De Blasio et al., 2022).

Some descriptive statistics were calculated to better analyse the situation: the range of variation (Max-

Min), the arithmetic mean, the median, the standard deviation (mean of the absolute deviations from the mean), the variance (mean of the deviations of the mean squared), etc...

The annual average of the two indices made it possible to plot the ten-year trend, which is also graphically represented with the corresponding polynomial interpolating curve of degree 6 that maximises the value of R². The comparisons between the three countries were evaluated with the ANOVA test to identify whether statistically significant differences exist. This statistical test (one-way because two variables are analysed separately) is the optimal way to assess differences in means between groups (Gu, 2013; Solari et al., 2009; Ross & Willson, 2017; Liao & Li, 2018). The independent variable is geographical location. The dependent variables are the indices. Any statistically significant differences should be identified with the Tukey-Kramer test (Tukey, 1949, 1953, 1993; Kramer, 1956) which, however, was not necessary in this study.

ROA

ROA (Return on Assets) measures the profitability of a company to the resources it uses to conduct its business. It is calculated using the following formula:

$$ROA = \text{Profit for the year} / \text{Total assets} \%$$

The evaluation of its average values improves with the temporal comparison over the decade and, where possible, spatially with the comparison between countries.

§ Table 1 first shows the data available for each year in the three countries (1.a) and the average annual value (1.b).

Table 1.

Determination of the ROA trend

Table 1a: Available data				Table 1b: II ROA- annual average values			
Anno	ITALY	FRANCE	SPAIN	Anno	ITALY	FRANCE	SPAIN
2012	214	432	52	2012	-0,61	3,61	0,7
2013	254	475	64	2013	-0,09	3,29	2,21
2014	290	431	79	2014	0,27	4,44	3,62
2015	340	404	94	2015	-0,13	3,25	4,51
2016	347	355	95	2016	2,26	2,41	5,1
2017	400	343	108	2017	1,22	4,14	9,35
2018	433	318	132	2018	2,98	4,53	3,55
2019	514	310	143	2019	1,74	4,28	6,89
2020	513	273	123	2020	-4,15	-5,78	-14,4
2021	522	214	94	2021	7,45	9,29	-0,76

Source: elaboration of Orbis data

The trend of the average ROA data can be further elaborated by calculating some descriptive statistics for each country (Tables 2, 3 and 4).

Table 2.

ROA descriptive statics- ITALY

	Average	Median	Standard deviation	Variance	Minimum	Maximum	Range of variation
2012	-0,61	1,06	18,14	329,07	-98,65	69,52	-29,12
2013	-0,09	0,81	18,4	338,61	-79,34	88,85	9,51
2014	0,27	0,76	17,04	290,37	-99,49	57,66	-41,83
2015	-0,13	1,39	19,78	391,43	-96,75	58,13	-38,62
2016	2,26	1,65	15,79	249,39	-72,76	83,42	10,66
2017	1,22	1,74	19,35	374,55	-97,64	62,57	-35,08
2018	2,98	2,17	18,86	355,88	-95,5	72,1	-23,4
2019	1,74	1,51	21,01	441,34	-99,13	99,39	0,26
2020	-4,15	-0,01	25,41	645,56	-99,86	73,05	-26,81
2021	7,45	4,93	20,93	438,17	-72,83	98,23	25,4

Source: elaboration of Orbis data

Table 3.

ROA descriptive statics- FRANCE

	Average	Median	Standard deviation	Variance	Minimum	Maximum	Range of variation
2012	3,61	2,78	14,72	216,65	-85,47	68,83	-16,64
2013	3,29	3,16	15,14	229,36	-98,77	69,3	-29,47
2014	4,44	3,57	14,04	197,19	-91,96	97,28	5,33
2015	3,25	2,8	13,25	175,61	-84,22	74,21	-10
2016	2,41	2,85	15,22	231,66	-79,12	69,75	-9,38
2017	4,14	3,36	14,51	210,68	-89,32	83,92	-5,41
2018	4,53	3,82	13,7	187,67	-87,75	86,72	-1,03
2019	4,28	3,39	16,13	260,31	-88,43	83,65	-4,78
2020	-5,78	-3,58	20,61	424,83	-91,23	91,48	0,25
2021	9,29	7,58	19,66	386,34	-95,37	68,7	-25,67

Source: elaboration of Orbis data

Table 4.

ROA descriptive statics- SPAIN

	Average	Median	Standard deviation	Variance	Minimum	Maximum	Range of variation
2012	0,7	0,54	22,64	512,74	-61,28	83,02	21,74
2013	2,21	0,84	18,55	344,21	-55,08	50,98	-4,1
2014	3,62	1,67	16,73	279,86	-40,44	49,76	9,32
2015	4,51	1,96	25,28	639,1	-74,29	76,68	2,39
2016	5,1	3,2	22,14	490,04	-82,47	65,23	-17,24
2017	9,35	2,69	26,74	715,05	-61,33	95,63	34,3
2018	3,55	2,02	22,8	519,94	-78,36	92,35	14
2019	6,89	3,77	26,92	724,5	-96,58	98,79	2,2
2020	-14,4	-7,45	23,8	566,23	-98,52	36,33	-62,19
2021	-0,76	2,85	19,36	374,68	-66,21	32,82	-33,39

Source: elaboration of Orbis data

The statistics show that the median deviates little from the average. The distribution of the data is therefore asymmetrical: most of them have values below the mean.

For the trend graph of the annual average values, we first determine the interpolating equation that maximises the value of R² (Table 5).

The variance has very high values. It can therefore be said that the Return on Assets has considerable variability.

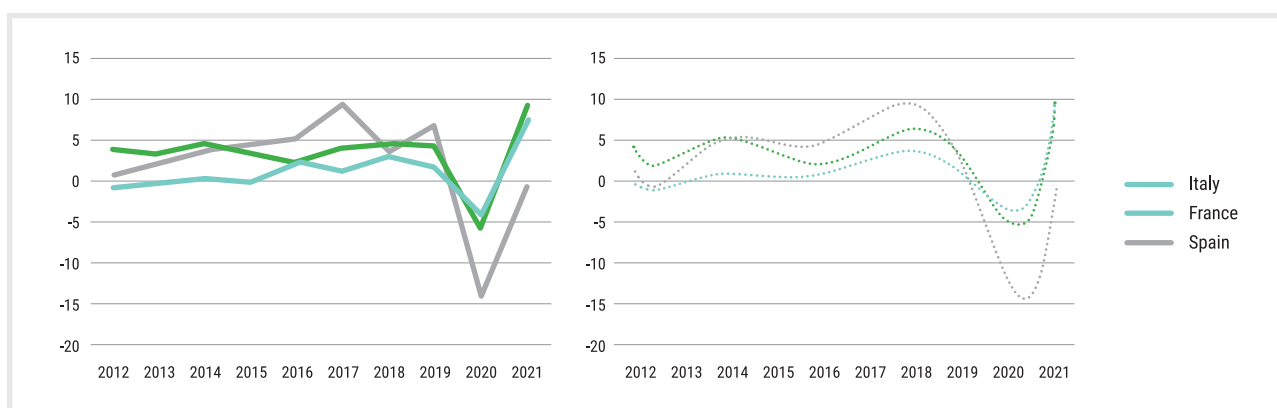
Table 5.
Equations of ROA interpolating curves

ITALY	$y=0,0053x^6-0,1581x^5+1,8111x^4-10,094x^3+28,424x^2-37,11x+16,588$	$R^2=0,9251$
FRANCE	$y=0,0102x^6-0,3144x^5+3,724x^4-21,471x^3+62,312x^2-84,143x+43,564$	$R^2=0,9493$
SPAIN	$y=0,0119x^6-0,3626x^5+4,249x^4-24,274x^3+70,006x^2-92,887x+44,143$	$R^2=0,8231$

Source: elaboration of Orbis data

This produces the graph showing the index trend with a broken line and the corresponding interpolating curve (Figure 2).

Figure 2.
Equations of ROA interpolating curves



Source: elaboration of Orbis data

The lowest values characterise Italy. In France and Spain, ROA has higher values with peaks for Spain of up to 10%. In 2020 it takes a negative value for all countries, as was to be expected. In 2021, on the other hand, it takes on a positive value because of the generalised recovery of the sector, with obvious beneficial effects on profitability.

An initial observation of the graphs and a careful evaluation of the descriptive statistics do not show any particular differences between nations. However, it is necessary to subject the annual average ROA data to the Anova test, which provides a rigorous assessment of any differences (Table 6).

Table 6.
ANOVA tests on ROA

SUMMARY						
Groups	Counting	Sum	Average	Variance		
Italy	10	10,94	1,094	8,85896		
France	10	33,46	3,346	13,74163		
Spain	10	20,77	2,077	41,90267		
VARIANCE ANALYSIS						
Origin of the variation	SQ	dof	MQ	F	Significance value	F crit
Between groups	25,49384667	2	12,74692	0,59285	0,559785412	3,354131
In groups	580,52929	27	21,50108			
Total	606,0231367	29				

Source: elaboration of Orbis data

The analysis of variance did not reveal any statistically significant differences between the groups, because $F < F_{crit}$: ROA shows greater differences within groups than

between groups. The Tuket-Kramer post-Anova test is therefore not necessary.

CURRENT RATIO

The current ratio is an index indicating the ability to meet short-term commitments with available cash and future income from the realisation of deferred cash and

cash equivalents. It is obtained by applying the following formula:

$$\text{Current ratio} = \text{current assets} / \text{current liabilities}$$

A more accurate analysis requires subjecting the sample data to the calculation of key descriptive statistics (Tables 7, 8 and 9).

Table 7.

Quick ratio descriptive statics-ITALY

	Average	Median	Standard deviation	Variance	Minimum	Maximum	Range of variation
2012	1,03	1,04	0,51	0,26	0,10	2,67	2,57
2013	1,20	1,06	0,63	0,40	0,09	3,28	3,19
2014	1,29	1,13	0,76	0,57	0,31	3,96	3,65
2015	1,50	1,21	1,01	1,03	0,31	4,40	4,09
2016	2,75	1,14	8,59	73,73	0,24	57,22	56,98
2017	1,51	1,19	1,71	2,91	0,00	11,55	11,55
2018	1,40	1,11	1,10	1,21	0,25	6,82	6,57
2019	1,44	1,12	1,33	1,78	0,20	8,42	8,22
2020	2,04	1,52	2,53	6,40	0,36	16,92	16,56
2021	2,39	1,51	3,83	14,65	0,25	23,79	23,54

Source: elaboration of Orbis data

Table 8.

Quick-ratio descriptive statics- FRANCE

	Average	Median	Standard deviation	Variance	Minimum	Maximum	Range of variation
2012	1,21	1,07	0,65	0,42	0,09	3,69	3,60
2013	1,17	1,09	0,55	0,30	0,03	3,44	3,42
2014	1,32	1,09	0,90	0,80	0,40	5,99	5,59
2015	1,26	1,09	0,58	0,34	0,39	3,52	3,13
2016	1,32	1,08	1,11	1,23	0,34	7,56	7,23
2017	1,17	1,09	0,41	0,17	0,43	2,34	1,91
2018	1,15	1,10	0,39	0,15	0,46	2,32	1,86
2019	1,18	1,09	0,37	0,13	0,50	2,36	1,86
2020	1,16	1,09	0,59	0,35	0,00	3,01	3,01
2021	14,39	1,17	63,19	3993,13	0,46	304,26	303,80

Source: elaboration of Orbis data

Table 9.
Quick-ratio descriptive statics- SPAIN

	Average	Median	Standard deviation	Variance	Minimum	Maximum	Range of variation
2012	3,10	2,22	3,00	8,99	0,16	11,40	11,24
2013	3,11	1,27	4,49	20,18	0,20	16,97	16,77
2014	2,26	1,10	3,80	14,45	0,00	19,92	19,92
2015	1,65	1,36	1,08	1,17	0,33	5,00	4,67
2016	2,21	1,29	2,58	6,65	0,24	13,73	13,49
2017	2,66	1,38	3,40	11,58	0,00	15,79	15,79
2018	2,40	1,50	2,51	6,28	0,20	11,56	11,36
2019	3,57	1,45	4,85	23,56	0,03	25,24	25,21
2020	7,89	1,91	14,47	209,45	0,09	69,79	69,70
2021	8,45	2,07	28,73	825,31	0,15	169,21	169,06

Source: elaboration of Orbis data

The median differs little from the mean: the distribution of the data is therefore asymmetrical. All values are below the mean. The standard deviation and the variance have values that are not too high. The variance has high values in France and Spain in 2021.

To plot the trend graph of the annual average values, the interpolating equation that maximises the R2 value is determined (Table 10).

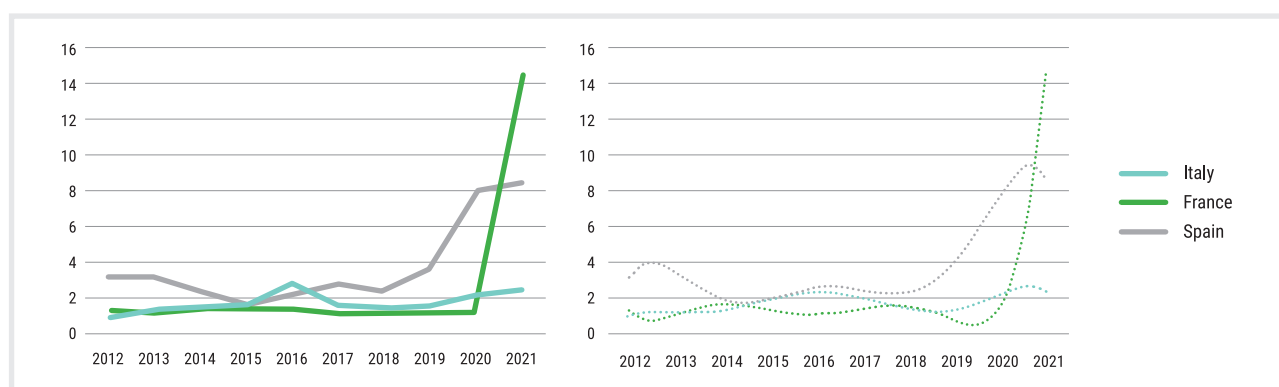
Table 10.
Equation of Quick-ratio interpolating curves

ITALY	$y = -0,001x^6 + 12,4x^5 - 62503x^4 + 2E+08x^3 - 3E+11x^2 + 2E+14x - 7E+16$	R ² =0,7689
FRANCE	$y = 0,0028x^6 - 34,195x^5 + 172336x^4 - 5E+08x^3 + 7E+11x^2 - 6E+14x + 2E+17$	R ² =0,9962
SPAIN	$y = -0,003x^6 + 35,882x^5 - 180878x^4 + 5E+08x^3 - 7E+11x^2 + 6E+14x - 2E+17$	R ² =0,9902

Source: elaboration of Orbis data

Figure 3 shows the index trend from the year 2012 to 2021.

Figure 3.
Current ratio – Trend 2012-2021



Source: elaboration of Orbis data

The nations have similar values, at least tendentially. France, in 2021, shows an abnormal peak of 14%, after many stable years. Spain has shown a progressive increase in recent years. Italian values do not show any notable variations.

The annual average data were subjected to the ANOVA test (Table 11).

Table 11.
ANOVA tests on ROA

SUMMARY						
Groups	Counting	Sum	Average	Variance		
Italy	10	16,55	1,655	0,30829444		
France	10	25,33	2,533	17,3606678		
Spain	10	37,3	3,73	5,78915556		
VARIANCE ANALYSIS						
Origin of the variation	SQ	dof	MQ	F	Significance value	F crit
Between groups	21,6977267	2	10,8488633	1,38743399	0,266954911	3,354131
In groups	211,12306	27	7,81937259			
Total	232,820787	29				

Source: elaboration of Orbis data

The analysis of variance confirms that no statistically significant differences emerge between the groups as $F <$

of critical F. Since the null hypothesis is accepted, the post-ANOVA test is not necessary in this case either.

DISCUSSION AND CONCLUSIONS

The impacts of the pandemic on the financial stability of companies motivated the analysis of typical companies in the tourism sector, crucial for the economy of several countries, focusing on tour operators.

By examining the financial statements of the last decade of more than 4,000 companies identified by the Nace Rev2 code: 79.12 - Tour operating activities, the trends of two indicators, expressive of profitability and capital structure, were tracked.

The analysis was supported by careful statistical processing.

The first hypothesis (H1) can be considered verified, as profitability remained consistently positive, albeit not high, except in 2020, the most critical year of the pandemic, in which a significant drop was recorded. Note, however, the timely recovery from the following year.

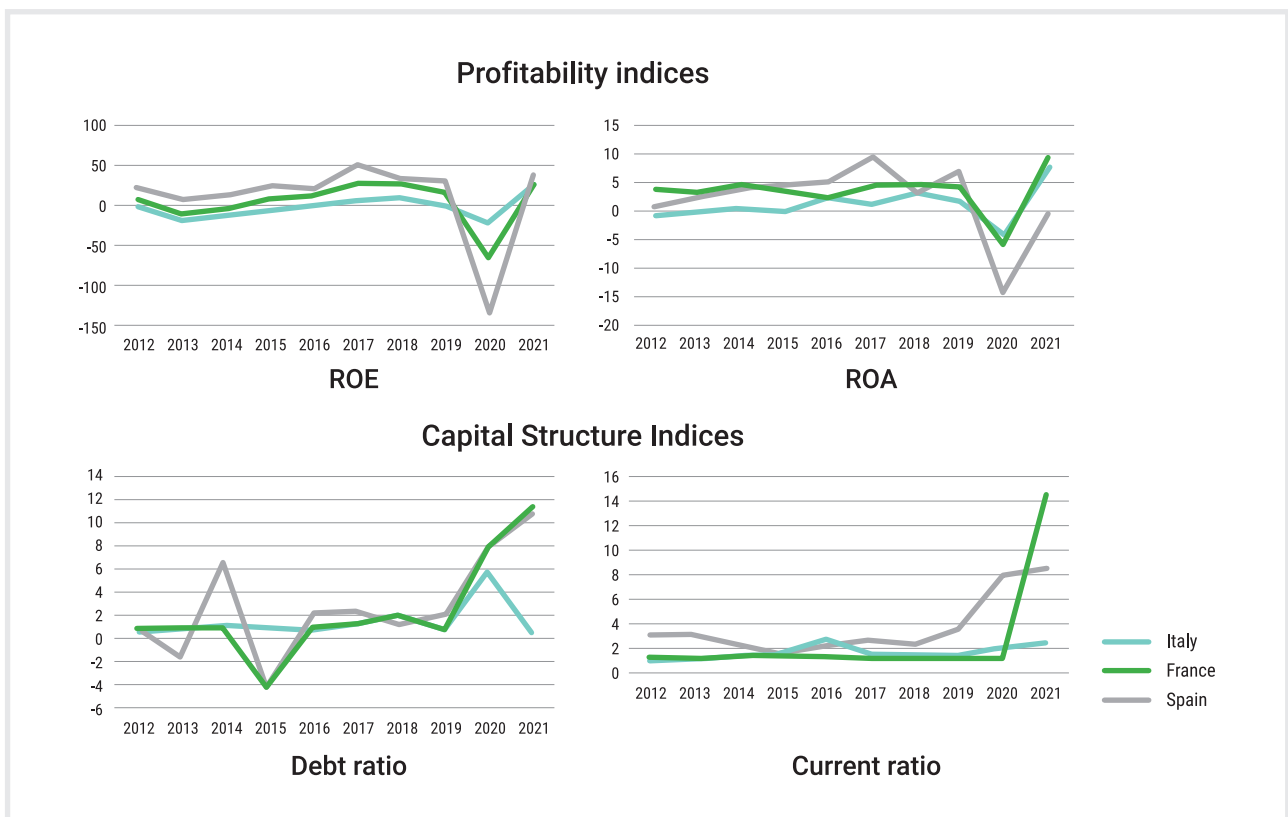
In contrast, the second hypothesis (H2) is not confirmed, as the second indicator shows a peculiar trend, signalling

an abnormal situation, especially at the end of the period. The French peak and the growing Spanish trend in recent years are highlighted, results that are difficult to interpret and require further analysis.

Despite the considerable socio-economic differences between the three countries, there were few differences between their indicators, as attested by the ANOVA test, despite the anomalies found in the Current Report. Consequently, the third hypothesis (H3) can be confirmed.

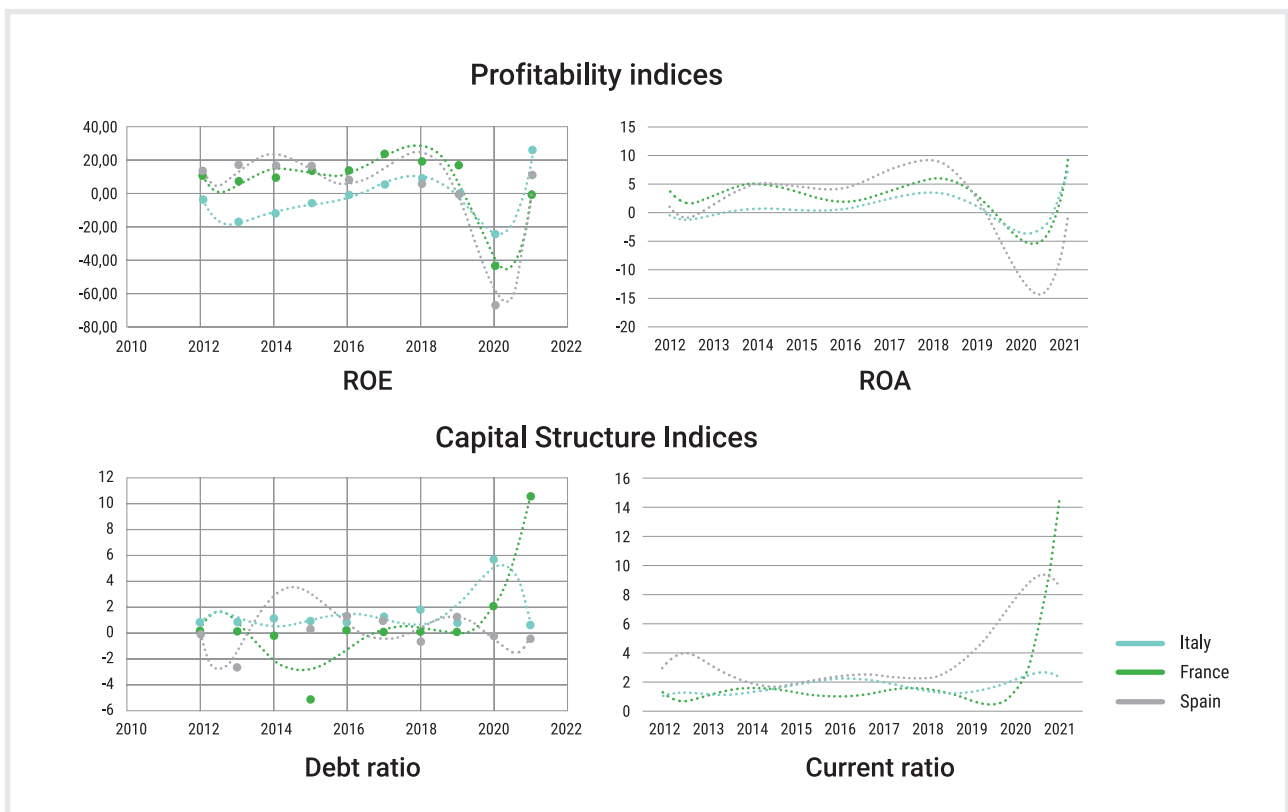
The relevant literature has not recently addressed this issue with similar approaches, except for a previous study published by the same authors of this research (Migliaccio & Calvanese, 2023), which dealt with two different indicators: Return on Equity (Roe) and Debt ratio. By comparing the results of both studies, it is possible to obtain a synoptic comparison of trends, with broken straight lines (Figure 4) and interpolating curves (Figure 5).

Figure 4.
Graphical comparison of trends of different indices - Broken lines



Source: elaboration of Orbis data

Figure 5.
Graphical comparison of trends of different indices - Interpolating curves



Source: elaboration of Orbis data

Very similar trends emerge for profitability indicators but are heterogeneous for financial ones.

These are the conclusions of an exclusively quantitative study, which does not consider other qualitative aspects that could justify the trends observed. The economic-financial performance of tour operators can be influenced by other factors that impact directly or indirectly on management balances. Among others: economic conditions at a global and regional level that influence the demand for travel and tourism; currency fluctuations that also affect service and transport costs; consumer preferences often conditioned by changes in legislation and different taxation; competition among competitors; geopolitical instability; sudden technological innovation, etc.

Further investigations into other indicators will therefore be necessary to make more analytical assessments, although the fundamental trends seem to have been well identified.

Parallelism with the effects of the previous financial crisis of 2008, as outlined in Iovino & Migliaccio (2018a & 2018b) may also be useful. However, this research also demonstrates the usefulness of financial statement analysis as a fundamental aid for interpreting complex phenomena, even in the tourism sector. It is therefore surprising that this methodology is rarely used in the bibliography to evaluate the performance of tour operators.

Studies of this kind allow the management of tourism operators to compare their situation with the industry average, taking appropriate corrective actions in case of inefficiencies.

The analysis of multi-year trends also facilitates useful support by public authorities to the tourism sector relevant to the balance of payments of different nations.

REFERENCES

- Abdalla, M.J., Mwesummo, D., Öztüren, A. & Kılıç, H. (2022). Perceived threat of informal players: Enhancing the operational performance of inbound tour operators through cooperation. *International Journal of Tourism Research*, 24(6), 775-785. <https://doi.org/10.1002/jtr.2544>
- Baldarelli, M.G. (1998). *Le agenzie di viaggi ed i tour operator italiani: evoluzione dei ruoli e sistema informativo*. Clueb, Bologna. 44 p. ISBN. 978-8849-1114-1-5.
- Baldarelli, M.G. (2000). *I tour operator e le agenzie di viaggi: circuiti operativi, schemi gestionali e bilancio d'esercizio*. Clueb, Bologna. 156 p. ISBN. 978-8849-1148-9-8.
- Bruni, A., Cassia, F. & Magno, F. (2017). Marketing performance measurement in hotels, travel agencies and tour operators: a study of current practices. *Current Issues in Tourism*, 20(4), 339-345. <https://doi.org/10.1080/13683500.2014.982521>
- Cai, L., Card, J.A. & Cole, S.T. (2004). Content delivery performance of world wide web sites of US tour operators focusing on destinations in China. *Tourism Management*, 25(2), 219-227. [https://doi.org/10.1016/S0261-5177\(03\)00095-5](https://doi.org/10.1016/S0261-5177(03)00095-5)
- De Blasio, V., Pavone, P. & Migliaccio, G. (2022). Cosmetics companies: income developments in time of crisis. *Journal of Small Business and Enterprise Development*, 29(7), 1017-1048. <https://doi.org/10.1108/JSBED-11-2019-0369>
- Della Corte, V. (2004). *La gestione strategica e le scelte di governo di un'impresa tour operator*. Cedam, Padova. 330 p. ISBN. 978-8813-2544-6-9.
- Gu, C. (2013). *Smoothing Spline ANOVA Models*. 2nd ed. Springer, New York. <https://link.springer.com/book/10.1007/978-1-4614-5369-7>
- Iovino, F. & Migliaccio, G. (2018a). Profitability dynamics of tourism companies during the crisis period 2007-2015. In: Vrontis D., Weber Y., Tsoukatos E. (Eds), Conference readings book proceedings, 11th Annual Conference of the EuroMed Academy of Business: *Research Advancements in National and Global Business. Theory and Practice*, Valletta, Malta, September 12th-14th, EuroMed Press: Cyprus, 663-677.
- Iovino, F. & Migliaccio, G. (2018b). Financial dynamics of tourism companies, travel agencies and tour operators, during the crisis period. In: Conference Proceedings: 2nd International Scientific Conference on Economics and Management - EMAN 2018: *Economics & Management: How to Cope With Disrupted Times*, Ljubljana, Slovenia, March 22, 693-702. <https://doi.org/10.31410/EMAN.2018.693>
- Kramer, C.Y. (1956). Extension of multiple range tests to group means with unequal numbers of replications. *Biometrics*, 12(3), 307-310.

- Liao, Q. & Li, J. (2018). An Adaptive Reduced Basis ANOVA method for High-dimensional Bayesian Inverse Problems. ArXiv: 1811.05151 [math.NA]. <https://arxiv.org/pdf/1811.05151.pdf>
- Migliaccio, G. & Calvanese, M. (2023). Profitability and financial structure of tour operators: an initial international comparison. In: Gagauz O. (Eds), Conference proceedings of International Scientific-Practical Conference “Economic growth in the conditions of globalization”, 17th edition, October 12-13, Volume I, Academy of Economic Studies of Moldova, National Institute for Economic Research (NIER), 38-44. <https://doi.org/10.36004/nier.cecg.I.2023.17.1>
- Migliaccio, G. & De Palma, A. (2023). Profitability and financial performance of Italian real estate companies: quantitative profiles. *International Journal of Productivity and Performance Management*. 73(11), pp. 122-160. <https://doi.org/10.1108/IJPPM-02-2023-0075>
- Migliaccio, G. & Pavone, P. (2022). Primary sector in Italy: profitability dynamics and relationship with the international economic crisis. *International Journal of Productivity and Performance Management*, 71(7), 2893-2912. <https://doi.org/10.1108/IJPPM-05-2020-0229>
- Mwesiumo, D., Juma Abdalla, M., Öztüren, A. & Kılıç, H. (2021). Effect of a perceived threat of informal actors on the business performance of formal actors: inbound tour operators’ perspective. *Journal of Travel and Tourism Marketing*, 38(5), 527-540. <https://doi.org/10.1080/10548408.2021.1952146>
- Pellegrini, L. (2023). *Quali sono i Paesi più visitati al mondo e dove si trova l'Italia? Ecco la classifica 2023*. From the site <https://www.trend-online.com/viaggi/paesi-piu-visitati-al-mondo/>
- Romero, I., Fernández-Serrano, J. & Cáceres-Carrasco, F.R. (2020). Tour operators and performance of SME hotels: Differences between hotels in coastal and inland areas. *International Journal of Hospitality Management*, 85, art. no. 102348. <https://doi.org/10.1016/j.ijhm.2019.102348>
- Ross, A. & Willson, V.L. (2017). One-way ANOVA. In: Ross, A., Willson V.L. (Eds.): *Basic and Advanced Statistical Tests*. Sense Publishers, Rotterdam.
- Scannerini, A.L. (1999). *Tour operator: il controllo di gestione*. Cedam, Padova.
- Scannerini, A.L. (2021). *Rilevazioni contabili per imprese turistiche: alberghi, agenzie di viaggio e tour operator, organizzatori di eventi*. Angeli, Milano.
- Solari, A., Salmaso, L., Pesarin, F. & Basso, D. (2009). *Permutation Tests for Stochastic Ordering and ANOVA. Theory and Applications with R*. Vol. 194. Springer-Verlag, New York. ISBN: 978-0-387-85955-2.
- Tukey, J.W. (1949). Comparing individual means in the analysis of variance. *Biometrics*, 5(2), 99-114. <https://doi.org/10.2307/3001913>
- Tukey, J.W. (1953). The problem of multiple comparisons. unpublished manuscript. In *The Collected Works of John W Tukey VIII. Multiple Comparisons: 1948-1983*. Chapman and Hall, New York.
- Tukey, J.W. (1993). Where should multiple comparisons go next? In: Hoppe, F.M. (Ed.), *Multiple Comparisons, Selection, and Applications in Biometry*. Dekker, New York, 187-207.
- UNWTO (2023), World Tourism Organization. *Unwto World Tourism Barometer*. From the site <https://www.unwto.org/unwto-world-tourism-barometer-data>
- Yap, C.S., Cheng, B.L., Mohamad Hussain, N. & Ahmad, R. (2018). Innovativeness, market intelligence practices, and firm performance of small- and medium-sized tour operators. *Tourism and Hospitality Research*, 18(2), 143-151. <https://doi.org/10.1177/1467358416636931>

SMART CITY POLICY BETWEEN INSTITUTIONS AND CITIZENS: THE PERSPECTIVE OF THE CITY OF MILAN

DOI: <https://doi.org/10.36004/nier.es.2023.2-02>

JEL classification: L91, L98, O18, O38, R42

UDC: 352:004+338](450.251)

Mariano MELCHIONDA

PhD in Economics, Business Administration, master degree in Business and Management Consultancy,
Chartered Accountant and Administrative Officer of the National Institute for Social Security

<https://orcid.org/0000-0002-8430-1251>

e-mail: mariano.melchionda15@gmail.com

Received 05 July 2023

Accepted for publication 17 October 2023

SUMMARY

In the environmental and climate issue, a decisive role is played by mobility. In recent years we are witnessing a kind of transportation revolution, especially urban transportation, with a sustainable mobility. It is today one of the many aspects in which cities need to renew themselves, thus facilitating their transition to the smart city dimension. The smart city represents the latest trend in urban planning aimed at improving the quality of life. It is now widely talked about: in politics, for example, the concept is used to illustrate new urban development strategies aimed at improving the architecture, mobility and infrastructure of metropolises. However, although the idea of a smart city is based on the use of modern technologies, it is considered “smart” when it innovatively manages its economic and environmental resources, housing and transportation policies, relations and methods of administration. Smart cities focus on environmentally and sustainable urban development, using technology to reduce pollution or generate alternative energy. The study therefore aims to analyze how a smart city develops and what are the main actors and elements that play a key role in the analysis of the topic: institutions and citizens. By harnessing information communication technology and improving local infrastructures and transports, the institutions of the city of Milan proactively monitored city dynamics, drove positive changes, and enhanced residents’ quality of life. This enabled direct engagement with both residents and infrastructure, making Milan one of the most cutting-edge cities not only in Italy, but also in the international context.

Keywords: infrastructures, mobility, smart city, technologies, transportations

INTRODUCTION

Based on expert opinions, a “smart city” can be defined as a technologically driven community that emphasizes the importance of monitoring and integrating services with IT intelligence. This approach aims to optimize access to information and public services while educating citizens about its significance (Penaska & Velas, 2019)

As a result of the demands of smart city, different ideas evolve in time (or new ones are developed). Large urban areas require majority of the attention while creating smart city, because of their intricate networks and systems (Picon, 2019).

The goal is to develop an analysis that can predict the problem, as well as assessing the level of preparedness by providing actionable steps that can be swiftly implemented.

The study therefore aims to analyze how a smart city develops, and what are the main actors and elements that play a key role in the analysis of the topic.

The growth of the city is largely dependent on its infrastructure, which is essential to both the operation of commercial organizations and the general well-being of the populace.

In urban management, infrastructure is classified into two groups, namely soft (social) and hard (technical). Soft (social), is in the form of social, cultural, and other facilities, while hard (technical) infrastructure, is presented as transportation, telecommunications, water, and energy networks. Smart city is the result of harmonizing urban environments with the transformative power of digital technologies, driven by the needs and opportunities presented by the Internet (Sodhro et.al., 2019). Technologically, its policy aims to build integrated city information and management (Neirotti, 2014) combining perception, network, and applications in achieving a measurable and connected future city according to the needs of the community.

Its conceptual framework can be classified into 3 factors, namely technology, people and institutions. (Nam, 2011). This development is able to drive social capital and information technology infrastructure toward a sustainable growth.

The policy of a smart city highlights that it is not merely using modern technology, but also a complex ecosystem made up of many stakeholders, including residents, municipal authorities, local and industrial businesses, community, and organizations (Myeong et.al., 2018).

LITERATURE REVIEW

Smart city policy serves as a framework or guide in planning and implementing smart city initiatives. This policy covers strategic decision-making related to ICT infrastructure, data use, cybersecurity, community participation, and other aspects related to smart city applications.

According to authors D. Van Den Buuse and A. Kolk (2019), globalization has caused significant changes, prominently marked by the widespread availability of the Internet. Education, religion, sports, business, commerce, politics, government all spread information online and digitally (Amini et. al., 2018). The use of internet technology gave rise to the policy of e-learning, e-books, e-commerce, e-government, and smart city policy. Smart city development needs to be supported by social, economic, environmental conditions, and with participatory government.

Several cities in the world have planned to develop well-established infrastructure and implemented smart city initiatives that are priorities for sustainable development.

Acceptance/usage of ICT-based smart city service describes several indicators in the acceptance of IT-based

smart city technology, including quality of life, innovation policy, personal innovations, city engagement, service quality, perceived privacy, and trust.

Smart city policy should be supported by the role of ICT infrastructure, although many research also showed the importance of human capital, education, social capital, and environmental interests as drivers of urban growth.

According to C. Harrison (2010), Smart city can respond intelligently to a variety of demands, such as necessities of life, environmental protection, energy security, public safety, municipal services, business, and industrial operations. He considers to integrate physical, IT, social, and commercial infrastructure to harness the collective intelligence of its residents and resources.

Author A. Picon, in "Urban infrastructure, imagination and politics" (2019) considers a smart city serves as a source of inspiration, motivating its citizens to develop and flourish in their personal lives, fostering a culture of sharing information, knowledge, and experiences that enriches life and imparts positively.

DATA SOURCES AND USED METHODS

The development of adequate urban mobility, like the case of the city of Milan, is one of the priorities that many cities have pushed to improve: mobility, in fact, is the basis of human beings, communities, and countries; human beings feel the need to move, to travel, whether for exploring or for work purposes.

It is therefore natural to think that high quality transportation (of both goods and people) is necessary for the success of other sectors and as an attractive factor

for the citizens of Milan, tourists or those visiting the city for work purposes (ARUP, 2019). In Italy, ANCI¹ wanted to give its definition of Smart Mobility.

It is possible to identify what the National Association of Italian Municipalities believes smart mobility should achieve; since smart mobility should solve the problem of moving goods and people without creating traffic congestion or logistical problems, it must be divided into two fields:

- *city logistic: "is to be understood as the process that can optimize last-mile logistics and transport activities proper to private companies in urban areas."*
- *people's mobility: "concerns [...] the development of new environmentally friendly and sustainable mobility systems (pedestrian mobility, bicycle mobility, shared mobility and new solutions for local public transport)".*

In both fields, at a transversal level, it is possible to identify "pricing and tolling policies and parking systems, research and effective integration of new alternative energy sources to oil in the specific area of mobility and transport."

To support these activities, technology would be able to ensure the collection of information regarding travel management, transportation tools and modes, and

mobility needs and requirements, through which the smart mobility vision can be improved.

The infrastructures that manage urban and intercity transportation were less and less able to handle the continuous demand for improved service, so for that reason the municipality of Milan has decided to increase the investments on transports and infrastructures

¹ ANCI: National Association of Italian Municipalities

to better respond this augmentation of movement of vehicles and people (ARUP, 2019).

In fact, the use of the private car remains the most frequently used mode of transportation, representing the preferred transportation choice at the European level in 2011 (84 percent), followed by buses and coaches with 9 percent and rail transportation with 7 percent

- *greenhouse gases (human health, agriculture, climate change, water availability);*
- *air pollutants (human health, damage to buildings, land, water);*
- *noise pollution (human health, building interventions, vibration);*
- *congestion (time loss, health, production system inefficiency);*
- *safety (quality of life, health, accidents).*

In a mobility model in which infrastructural and technological factors are increasingly linked, it is necessary to create citizen-friendly urbanization plans with the aim of eliminating the negative environmental and health consequences that mobility could bring. “European cities are different from each other, but they

(Bosetti, 2014). This choice by the population causes many inconveniences, often related to the environment and quality of life. In addition to the internal costs that everyone has to bear in order to ensure their autonomy and mobility, it is possible to see how the external costs of sustainable mobility, which burden to the city of Milan and the entire community, are often due to (Cassa Depositi e Prestiti, 2013)

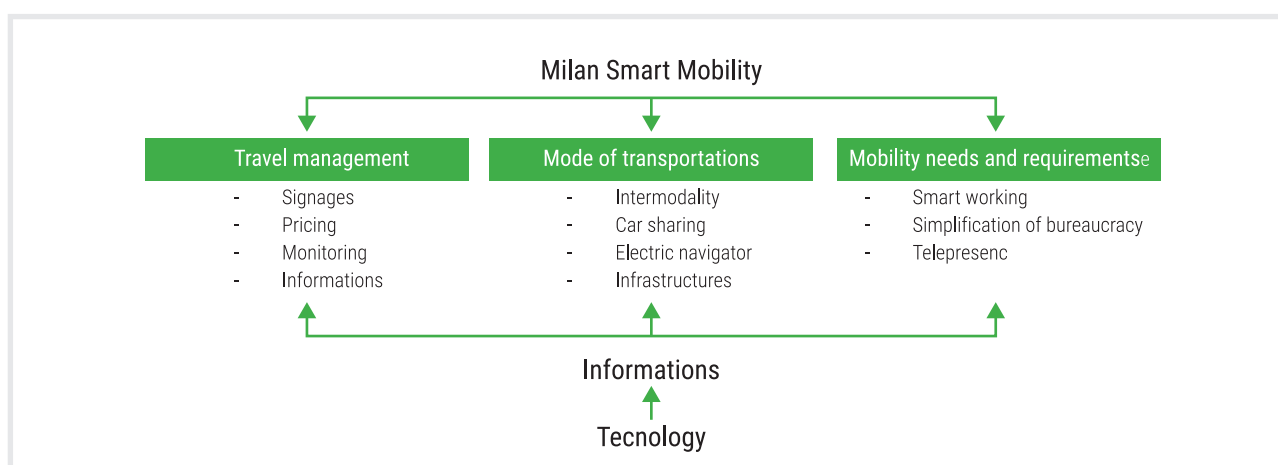
face the same challenges and are looking for shared solutions [...] for urban mobility that matches citizens’ expectations,” inventing a “new culture of urban mobility” (European Commission): therefore, long-term strategies should be designed to achieve common goals (ARUP, 2019):

- *reduce consumption of fossil fuels used for infrastructure and vehicles for the benefit of green transport with low greenhouse gas emissions and improved air quality;*
- *reduce road congestion;*
- *create a simple, efficient and economically sustainable long-term system that is convenient for both businesses and travelers by reducing the demand for infrastructure construction in urban areas.*

For this reason, we can consider the city of Milan as a city that aims today: “The Smart City 4.0”: that is a city that manages resources intelligently, aims to become economically sustainable and energy self-sufficient, and is attentive to the quality of life of its citizens.

The figure below shows 3 indicators that the institutions of Milan have identified:

Figure 1.
Milan Smart Mobility Structure

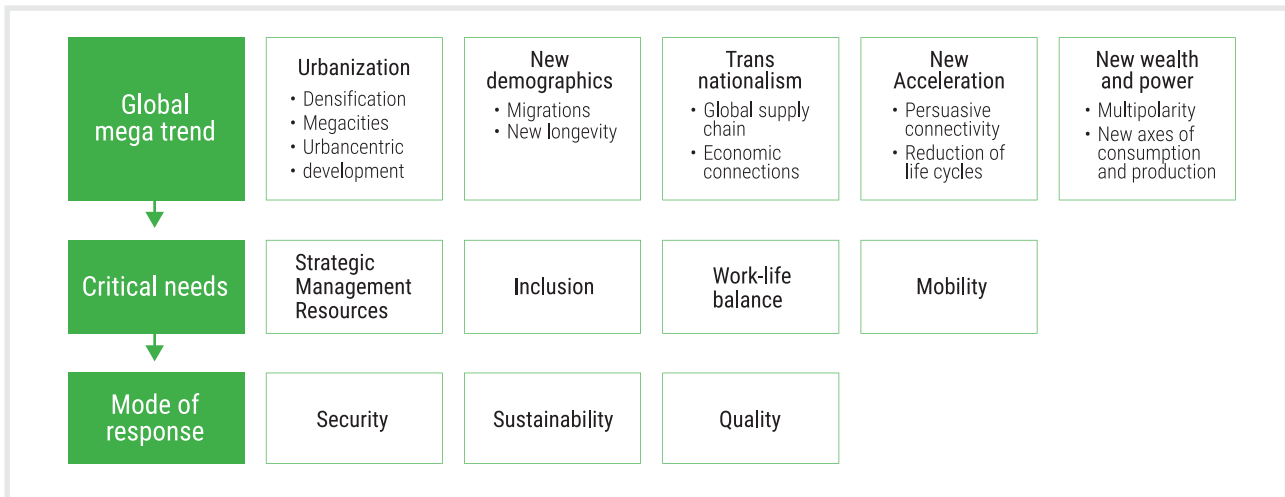


Source: The European House – Ambrosetti (2012), Smart Mobility. Muoversi meglio per vivere meglio.

The continuous increase in demand for mobility and the need therefore to move toward “smart mobility” has been linked to the mega-trends that characterize our age: urbanization, new demographics, trans-

nationalism, acceleration, have triggered critical needs that also include the need for the development of safe, sustainable, and quality mobility for goods, people, and ideas:

Figure 2.
Global mega trend



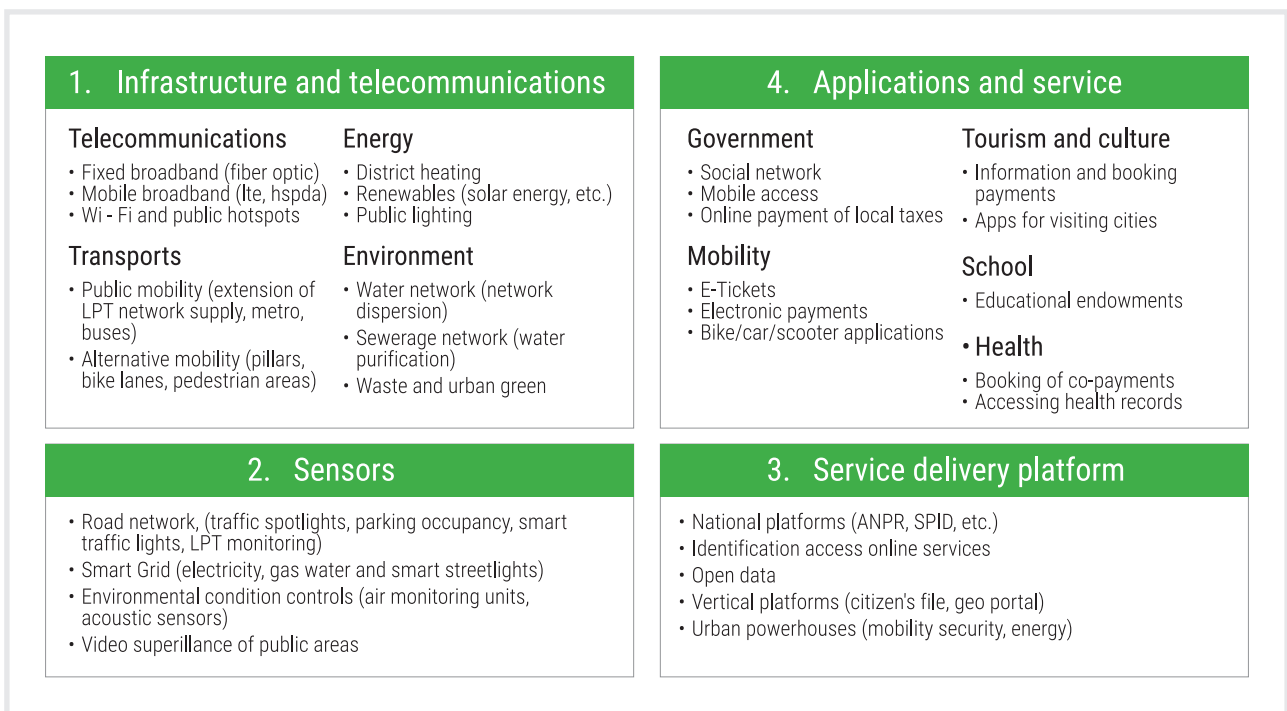
Source: The European House – Ambrosetti (2012), Smart Mobility. Muoversi meglio per vivere meglio.

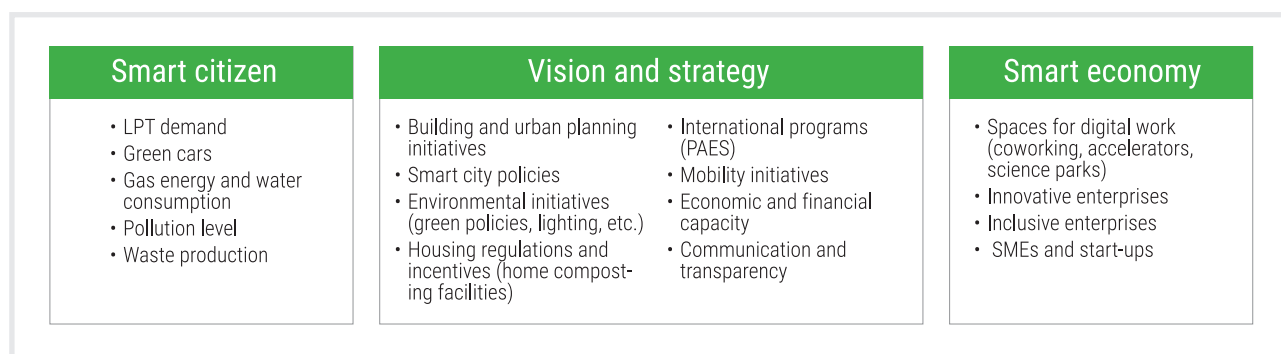
Moreover, the development of sustainable mobility is to be linked to areas that indirectly influence it in many ways. They can be mentioned (The European House - Ambrosetti, 2012):

- *strategic policy (governance, security, regulation, etc.);*
- *demography and society (population trends, urbanization, ways of organizing work)*
- *economics (growth, trade, economic integration, transportation costs, etc.);*
- *ICT (information communication and technologies)*
- *energy and environment (availability of energy sources, alternative fuels, climate change, etc.);*
- *behavior/approach (civic education, safety, etc.).*

This list represents just a few areas that can be improved through the development of good urban mobility service. The table below instead shows in details the most affected areas of a sustainable mobility: infrastructure and telecommunications, sensors, service delivery platform, applications and services with its vision and strategy.

Figure 3.
The “smartness” of a city, below the “smartness” of a city.





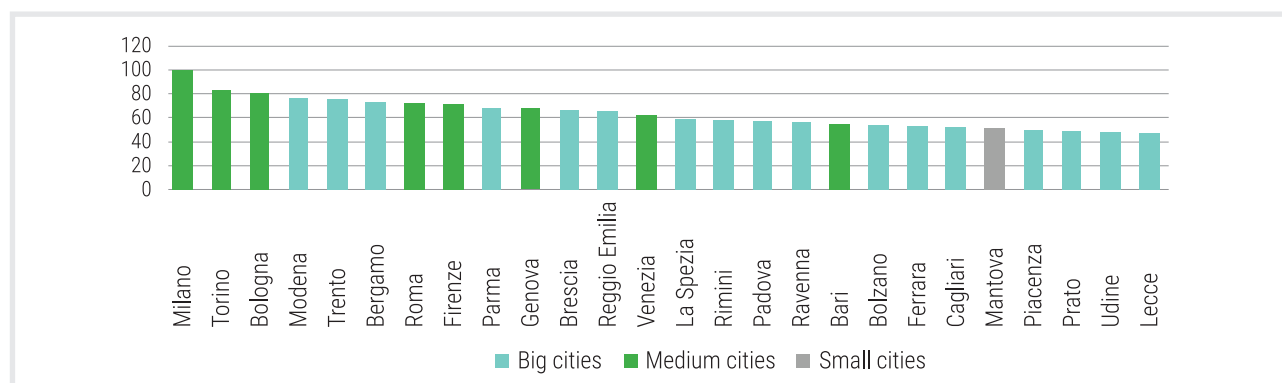
Source: Smart cities: l'eccellenza di Milano nel confronto europeo, (2018) Confindustria.

THE RESULT OF RESEARCH AND DISCUSSIONS

Passing to analyze the numbers, The city of Milan has been confirmed as Italy's top Smart City for the past five years, which shows Florence and Bologna in second and third place as a city's level of "smartness.". (FPA's ICity Rate, 2018). The two accolades are linked: smart cities are more attractive and competitive than the average of other cities and are an important driver for

a country's economy, as well as fostering the well-being of its citizens. The report below analyzes the Smart City Index by Italy's 117 capital cities, also lists Milan as the smartest city in Italy, followed by Turin, in second place, and Bologna, in third. Below is the national ranking compiled by EY of the top 30 Italian cities (SmartforCity, 2016).

Figure 4. Top 30 Italian cities.



Source: Smart City Index by Italy's 117 capital cities, Ernst & Young

Business models inspired by the sharing economy and digital technologies are helping to create innovative ways of moving from one place to another: think of ride sharing and on-demand services such as Uber or Lyft or car sharing or bike sharing programs, there are many different technological solutions that pertain to smart mobility. The ultimate goal is to make movements and flows more efficient and less polluting. At the same time, the generation of an immense amount of data is initiated, which, if well managed, can enable a rationalization of mobility itself but also the enabling of new model of businesses.

The following are a series of guidelines (Comune di Milano, 2023) launched by the municipality of Milan to show the commitment of a variety of actors working together to achieve sustainable mobility goals.

The micro mobility service was introduced in February 2020 at the conclusion of a regulatory process that defined the areas of experimentation and led to the liberalization of electric micro mobility by equalizing the rules of use with those of bicycles.

This is the first step on a path that will revolutionize transportation in population centers, especially in large cities. The use of electric scooters is managed by a smartphone application called Helbiz, (Helbiz monopattini Milano, 2019), which is used both to geolocate the vehicles being searched and to unlock them. This makes it possible to carry out an 'accurate LCA (Life Cycle Assessment) analysis of the product, that is, to indicate the set of activities aimed at identifying the associated environmental loads generally associated with a product starting from the extraction

of raw materials, production and distribution, until its disposal and/or reuse, recycling etc., following all phases of its life in accordance with ISO14040 Environmental Management - Life Cycle Assessment and ISO 14044 with requirements and guidelines.

Turning instead to carsharing, where services are readily available, there is great demand: 1 in 2 Milanese have tried at least one carsharing service, and 16 percent of carsharing users aim for complete replacement of the private car. In fact, to date carsharing in Italy has exceeded 1 million members, with 7,679 vehicles and 35 cities involved. ([Sharing Mobility Observatory, 2019](#)).

Moving to bicycles there is BikeMi, with 3,650 traditional bikes (yellow) and 1,150 pedal-assisted bikes (red), that is the world's first example of an integrated bike sharing system, unique in size, complexity and innovation ([Milano Bike City, 2019](#)).

A recent study by Juniper has drawn up a ranking of the main Smart Cities currently present. At the top of the smart city classification Singapore is one of the most technologically advanced areas on the planet. Also showing off in the ranking are San Francisco and, on our continent, London and Barcelona.

CONCLUSIONS

People's need for ICT is becoming an important factor in smart city applications. ICT can improve people's quality of life in various aspects, such as efficiency, comfort, safety, and public participation ([Albino, et.al., 2015](#)).

Within the framework of smart city, ICT is used to connect Milan's infrastructure, services, and resources to provide better benefits to society. Therefore, understanding the needs of the city of Milan related to technology and the ability to utilize it is a crucial factor in designing appropriate smart city solutions and applications. Building pioneering infrastructure and executing smart city programs are top priorities for municipalities in the globe when formulating economic development strategies ([Yahia et. al., 2021](#)).

Milan's services have not only made more constructive environment, but they have also significantly enhanced the quality of services provided to citizens.

Smart city creates a foundation for the citizens of Milan socio-economic well-being and quality of life, for instance, ICT applications for the management of

Milan at the moment seems to be the only one capable of launching itself on every aspect, from city governance to opportunities for the digital economy up to projects of a social nature and those linked to respect of the environment ([Nicma Informatica, 2023](#)).

The result is that the gap between Milan and other Italian cities is increasing. An opportunity for the city, but at the same time a possible risk factor. Faced with a future gap between Milan and the rest of the country at the Smart City level, one possible scenario is that investments increasingly gravitate towards the city. But a technologically advanced oasis surrounded by desert will hardly be able to obtain optimal results in the long term. In Italy, excluding Milan and some other cities, is essentially at a standstill in terms of investments as well as lacking a political control room in defining the possible areas of public investment and private.

In fact, it should be remembered, returning to the initial definition, that a Smart City is not a space filled with advanced technology without any criteria but an intelligent ecosystem, which lives thanks to the technological value present within it.

intelligent transportation systems, natural resources, energy, water monitoring, buildings, as well as online education and ICT applications for urban health and safety care, electronic service delivery, electronic democracy, and participation in the public sector.

Based on the results, it is observed that policy implementation plays an important role in smart city development of Milan. Therefore, local governments can formulate the necessary regulations and demonstrate leadership capabilities in the context of implementing smart city. In an effort to reduce digital divide as an inevitable factor influencing the implementation of smart city, there is need for breakthroughs in terms of providing digital infrastructure, as well as building efforts that can encourage and also involve various stakeholders.

When policy implementation of smart city is supported by proper guidance and by efficient management of infrastructures and transports, the city of Milan will be one of the most cutting-edge cities not only in Italy, but also in the international context.

REFERENCES

- Albino, V., Berardi, U., & Dangelico, R. M. (2015). Smart cities: definitions, dimensions, performance, and initiatives. *Journal of Urban Technology*, 22 (1), 3–21. <https://doi.org/10.1080/10630732.2014.942092>
- Amini, M.H., Boroojeni, K.G., Iyengar, S.S., Blaabjerg, F., Pardalos, P.M, Madni, A.M. (2018). A Panorama of future interdependent networks: from intelligent infrastructures to smart cities. In: *Studies in Systems, Decision and Control 145*, (pp. 1-10), https://doi.org/10.1007/978-3-319-74412-4_1
- ARUP (2014). *Urban Mobility in the Smart City Age*. http://publications.arup.com/publications/u/urban_mobility_in_the_smart_city.it
- Cassa Depositi e Prestiti (2013). *Smart City. Progetti di sviluppo e strumenti di finanziamento*. <https://www.cdp.it/resources/cms/documents/41b7739ecb2ab7795e4815c9656d2091.pdf>
- Bosetti, Simone. (2014). *Policy recommendations: for EU sustainable mobility concepts based on CIVITAS experience*. ISBN 978-80-86502-77-9
- Comune di Milano, (2023). *Linee guida, Milano Smart City*. <https://economiaelavoro.comune.milano.it/sites/default/files/201902/milano%20smart%20city%20-%20linee%20guida.pdf>
- Confindustria, (2018). *Smart cities: l'eccellenza di Milano nel confronto europeo*. <https://ilclubdellestepensanti.it/wp/wp-content/uploads/2018/10/pres-assolombarda.pdf>
- Harrison, C., Eckman, B., Hamilton, R., Hartswick, P., Kalagnanam, J., Paraszczak, J., Williams, P. (2010). Foundations for smarter cities. *IBM Journal of Research and Development* 54(4), 1-16. <https://doi.org/10.1147/JRD.2010.2048257>
- Helbiz *monopattini Milano*. (2019). <https://www.moto.it/news/6-mila-monopattini-e-oltre-15-mila-bici-ecco-come-cambia-la-flotta-in-sharing-a-milano.html>
- Milano Bike City. (2019). *Ciclica, Milano bicycle Coalition, Kindi Associazione*. <https://www.milanobikecity.it/il-progetto/it>
- Myeong, S., Jung, Y., & Lee, E. (2018). A study on determinant factors in smart city development: an analytic hierarchy process analysis. *Sustainability*, 10(8), 1-17. <https://doi.org/10.3390/su10082606>
- Nam, T. & Pardo, T.A. (2011). Conceptualizing smart city with dimensions of technology, people, and institutions. In: *The Proceedings of the 12th Annual International Conference on Digital Government Research*. pp. 282–291. https://www.ctg.albany.edu/media/pubs/pdfs/dgo_2011_smartcity.pdf
- Neirotti, P., De Marco, A., Cagliano, A., C., Mangano, G., Scorrano, F. (2014). Current trends in Smart City initiatives: some stylised facts. In: *Cities*, 38, pp. 25-36. ISSN 0264-2751. <https://doi.org/10.1016/j.cities.2013.12.010>
- Nicma Informatica. (2023). *Smart City: Milano è pronta, e il resto del paese?* <https://nicma.com/smart-city-milano.it>
- Penaska M., Veas A. (2019). Possibilities of tracking city indicators in the sense of the Smart city concept, *Transportation Research Procedia* 40 (2019) 1525–1532, <https://doi.org/10.1016/j.trpro.2019.07.211>
- Picon, A. (2019). Urban infrastructure, imagination and politics: from the networked metropolis to the smart city. *International Journal of urban and Regional Research*. 42(2) 263–275, <https://doi.org/10.1111/1468-2427.12527>
- Redazione FPA, ICity Rate (2018). *Milano si conferma città più “smart” d’Italia: la seguono Firenze e Bologna*. <https://www.forumpa.it/citta-territori/icity-rate-2018-milano-si-conferma-citta-piu-smart-ditalia-la-seguono-firenze-e-bologna/>
- SmartforCity (2016), *Publicato il nuovo report Smart City Index*. <http://smartforcity.it/le-citta-smart/item/584-pubblicato-il-nuovo-report-smartcity-index-2016>
- Sharing Mobility Observatory, (2019). *Rapporto nazionale sullo sharing mobility*. <https://osservatoriosharingmobility.it/>
- Sodhro, A.H., Pirbhulal, S., Luo, Z., Hugo .C. de Albuquerque, V. (2019), Towards an optimal resource management for IoT based Green and sustainable smart cities. *Journal of Cleaner Production* 220, 1167–1179, <https://doi.org/10.1016/j.jclepro.2019.01.188>
- The European House-Ambrosetti per Finmeccanica, (2012). *Smart Mobility. Muoversi meglio per vivere meglio*. https://st.ilsole24ore.com/pdf2010/SoleOnline5/_Oggetti_Correlati/Documenti/Notizie/2012/09/smartmobility%20.pdf?uuid=712c3e1c-f98f-11e1-be2d-a33690674bee
- Van Den Buuse, D., & Kolk, A. (2019). An exploration of smart city approaches by international ICT firms. *Technological Forecasting & Social Change*, 142, 220-234, <https://doi.org/10.1016/j.techfore.2018.07.029>
- Yahia, N. Ben, Eljaoued, W., Bellamine Ben Saoud, N., Colomo-Palacios, R. (2021). Towards sustainable collaborative networks for smart cities co-governance. *International Journal of Information Management* 56, 102037. <https://doi.org/10.1016/j.ijinfomgt.2019.11.005>

THE 'GOODS' CONUNDRUM: THE QUESTION OF VALUE IN MOLDOVAN TRANSNATIONAL PARCEL-SENDING PRACTICES

DOI: <https://doi.org/10.36004/nier.es.2023.2-03>

JEL classification: Z13, D46, F24, J15

UDC: 314.15(478)

Sanda CARACENTEV

Doctor in Anthropology, Visiting Fellow in Anthropology, London School of Economics and Political Science

<https://orcid.org/0000-0002-6510-5327>

e-mail: s.caracentev@lse.ac.uk

Received 20 July 2023

Accepted for publication 15 November 2023

SUMMARY

Informal transnational exchanges continue to attract the interest of migration scholars. This article focuses on the Moldovan practice of parcel-sending via private parcel van companies which continues to be an important way of keeping in touch in transnational families, and the role of informal parcel-sending in supporting Ukrainian refugees in Moldova. As Moldovans abroad sent high volumes of parcels with aid in the first weeks after the war in Ukraine started, these strong responses warrant more discussions around the value of such exchanges, particularly in relation to informal provisions of aid. Building on the notion of ‘social remittances’ and theoretical perspectives on value and sociality, the article shows that parcel-sending should be addressed in its socio-economic complexity beyond the financial and legislative implications of transporting ‘goods’. Making a case for a more nuanced understanding of the interplay between sending costs, the singularity of sent items like homegrown produce, and the labour involved in collecting and sending parcels, the author discusses the socio-economic implications of parcel-sending in two ethnographic contexts: Moldovan transnational families’ everyday life, and the Ukrainian refugee crisis in Moldova. This discussion includes ethnographic examples of Moldovan parcel-sending participants’ practices of sending personal parcels and aid for Ukrainian refugees from two fieldworks, based on semi-structured interviews and participant observation. Based on these examples, the article shows that participants in parcel-sending negotiate the ‘value’ of this transnational practice in relation to individual and collective experiences in both mundane and exceptional social contexts.

Keywords: value, social remittances, exchanges, transnational practices, migrants, Moldova

INTRODUCTION

In the first three weeks following the start of the war in Ukraine in February 2022, Moldova, a small country in Eastern Europe, received 336,377 Ukrainian refugees (World Food Programme, 2022)¹. In response, Moldovans abroad collected and sent tonnes of parcels filled with aid via private parcel van companies regularly used by Moldovan migrants and their families as an important connection to the homeland. The Moldovan Customs Service and Border Police faced the challenging task of processing the passage of refugees and assessing incoming cargo classified as humanitarian aid, and parcels sent by Moldovans for the refugees were caught up in the resulting queues for transporters of goods (Caracentev, 2023). The importance of making the distinction between parcels and ‘goods’ has already emerged during my earlier research (Caracentev, 2020) which highlighted the tensions around the regularisation of private parcel van companies. While these companies, adherent to rigorous standards of packing, offer a faster, cheaper alternative to the traditional Moldovan post, an intimate knowledge of regular clients’ life histories, and a personalised approach to delivery, parcel contents continue to be classified as ‘goods’². Considering the strong diaspora responses to the Ukrainian refugee crisis, and the active role of parcel van companies in mediating this provision of aid, it is important to further investigate the value

attributed to parcel-sending by participants in these transnational exchanges. Moreover, since parcel van companies are part of complex transnational networks based on familiarity and trust, it becomes evident that such a classification is reductive of the sociality – the nexus of social relations and practices - associated with transporting personal parcels.

This article makes a case for private parcels not to be considered ‘goods’ in the economic sense. Building on the notion of ‘social remittances’ (Levitt, 1998) and insights from the anthropology of value, the article tests two hypotheses: 1) that parcel-sending becomes subject to negotiations of ‘value’ imbued in senders and receivers’ relations; and 2) that in different ethnographic contexts, socio-cultural factors beyond price and costs determine the value of parcels. These are explored in five further sections, starting with the analysis of the main scholarship and debates around the question of value in relation to parcel exchanges and social remittances. The discussion moves on to methods, followed by an analysis of the findings in two ethnographic sections: one on what parcels’ ‘value’ represents to Moldovan migrants and their families, and another on the sociality of transnational aid. The summary of the main findings and further research implications are then rounded up in the conclusion.

¹ The figures represent the number of Ukrainian refugees who arrived in Moldova by March 14, 2022; of these, by the third week of March 2022, around 100,000 remained in Moldova.

² Government Act 92 from 28-02-2023 on the application of Customs Code 95/2021.

PARCEL EXCHANGES, SOCIAL REMITTANCES, AND THE QUESTION OF VALUE

Moldovans love to send parcels. The country, with a population of over 2.5 million, has an estimated diaspora of 1.11-1.25 million, with 47% living in the EU (Ministry of Foreign Affairs and European Integration, 2021)³. It is estimated that 64% of Moldovans send at least one parcel per year via private parcel van companies, in exchanges where foodstuffs constitute the main transported items (Cuza & Rusnac, 2015). In the Moldovan case, parcels started to be exchanged via private parcel van companies, mainly in the early 2000s, primarily among female Moldovan care workers in Italy and their families left behind in Moldova, to whom the service was often the only connection to home (Buza, 2021).

Parcel-sending is not specific to Moldova, nor is it a new phenomenon. Services similar in scope and operation have been widely explored in migration literature on transnational exchanges in Europe (Burrell, 2008; Mata-Codesal & Abranches, 2018; Khrenova & Burrell, 2021), care packages among Filipino migrants (Fresnoza-Flot, 2009; McCallum, 2022), and other informal courier services across Africa, Central America, and Asia (Nyoni, 2012; Garni, 2014; Turaeva, 2020). The complexity of such networks and brokerage services underpinning transnational exchanges all over the world is telling, with some networks stretching across multiple continents and behaving 'like well-established business firms,' while remaining 'informal [...] in their transactions' (Ngo, 2019:29). The circulation of things facilitated by such services infers two-way flows of transactions in which participants are connected through their interactions and relations with each other, with economic activity intertwined with sociality (Carrier, 2018). This interconnection of economic activity and transborder practices has been acknowledged by Zelizer (2010) as a multifaceted global phenomenon facilitating the circulation of remittances, where far-reaching informal remittance networks expand beyond migrants' family members to local communities.

The link between informal exchanges and remittances is particularly relevant in Moldovan context, since remittances are often seen as development tools for underdeveloped countries (Sharma et al., 2011). In the two decades following Moldova's post-Soviet economic transformation, economic remittances' impact on migration patterns have been at the forefront of scholarship on Moldova (Cuc et al., 2006; Pinger, 2010). Lately, more explorations of the social implications of remittance-sending and their non-monetary forms have started to emerge (Cingolani & Vietti, 2020). However, only one recent account points to the complex and reciprocal migrant networks involved in Moldovan parcel exchanges while focusing on the socio-emotional

'worth' of sending parcels (Rosca, 2023). To flesh out this sociality of remittance networks and reflect on the non-monetary forms of remittance-sending in Moldovan context, this article proposes looking at parcel-sending as akin to, but not synonymous with social remittances. Coined by Levitt (1998:927) as the "combination of migrants' social capital, norms and behaviours," the concept moves away from the focus on monetary remittances. In applying this term, the article follows Levitt's suggestion that social remittances have an important social embeddedness in transnational life beyond the financial value of 'goods' – in this case, items sent via parcels. Later, Levitt & Lamba-Nieves (2011) make a distinction between individual and collective social remittances and acknowledge the dual flow of social remittances between the country of origin and the country of destination. In turn, looking at specific Moldovan remittance-sending practices, Bailey et al. (2021) differentiate between individual material remittances sent to maintain connections to family and 'civic remittances' that incorporate the ideologies and ideas acquired by migrants in their country of residence.

These insights are particularly useful in addressing the connection between established parcel-sending practices in Moldovan transnational families and the provision of aid sent via these parcels to Ukrainian refugees in Moldova. There is evidence that migrants engaged in regular social remittance-sending are also likely to provide some forms of aid to disadvantaged groups in the homeland, including refugees. The emotional and cultural identification with the receivers of remittances (Lindley, 2009) surpasses the costs involved in sending and the economic value of remittances. Moreover, social networks extending beyond familial links facilitate reaching out to individuals and families who may be isolated in the homeland, or have no relatives abroad, thus being excluded from receiving remittances. In many such cases, migrant networks harness the collective power of coming together to provide support for those in need, who are connected to these networks in socio-cultural ways (Vargas-Silva, 2017). These indications, and the Moldovan responses during the first weeks of the Ukrainian refugee crisis, warrant a closer look at the interconnection of remittance networks and specific contexts in which items sent to refugees acquire a high value to both distributors and refugee recipients. Considering the academic interest in transnational informal exchanges discussed earlier, the link between remittance-sending and transnational aid, and the ongoing legal challenge of formalising Moldovan private parcel transportation, it becomes important to address the conundrum of treating transnational

³ AMinistry of Foreign Affairs, as of 2024.

parcels as ‘goods,’ or understanding them as a form of social remittances embodying transnational sociality.

While the elusive question of value in various social contexts has long been debated, the focus in this article is on the consensus around the essential role of sociality and individual, collective, and culturally informed value attribution, as applied to migrants’ transnational exchanges. Adopting the point Souleles et al. (2023) make on the attribution of value as a pan-human action requiring context-specific understanding of social life, the article builds on the argument that the concept of ‘value’ is applied by those engaged in transnational exchanges as a wider form of sociality rather than an evaluation of its material or financial equivalence (Graeber, 2001). Without dismissing the monetary value of items sent via parcels, the article argues that the attribution of value should be understood in relation to the sourcing and ‘biography’ of exchanged items, within the transnational social fields in which exchanges take place.

When parcels are seen as commodities, which Kopytoff (1986) defines as items that can only be exchanged for a similar value, a discrepancy between registers of value attribution emerges. For instance, thinking of some items as gifts, it is useful to look at the complexities of assigning an exchange value in specific social contexts in which exchanges are part of complex interconnections of obligations and reciprocity (Mauss, 2000 [1925]). This value is thus difficult to estimate because of socio-cultural meanings of items for exchange participants. In contrast to the notion of ‘commodity,’ Kopytoff (1986) points to items that are unique in their significance to their owners, and which become ‘singular’ in their value attribution. His idea of ‘informal singularisation’ as a process of value attribution in which the price – and, implicitly, pricelessness – of an item is negotiated differently in different exchange spheres is further discussed in the following sections which show that the discrepancies in the process of value attribution may fuel the continuing consideration of parcels as ‘goods.’

METHODOLOGY

This article is based on my long-term research with Moldovan transnational families, based on two research projects that used semi-structured interviews and participant observation. During my 2016–2018 doctoral fieldwork on Moldovan transnational parcel-sending practices and private parcel van companies mediating these practices, I conducted a total of 51 semi-structured interviews in UK and Moldova. Of these, 12 informants were interviewed multiple times over the course of 18 months, allowing me to follow their sending practices in connection to their migration histories and biographies. I also gained an insider’s view on running such a company while observing one parcel van company in Chisinau, the capital of Moldova, and joining two of their drivers on a trip to transport parcels from Chisinau to London. Then, during my 2023 postdoctoral fieldwork, I conducted 12 semi-structured interviews with Moldovans in UK, EU and Switzerland who sent aid via private parcels for Ukrainian refugees in Moldova, and Moldovan volunteers who distributed these parcels. Some of the 2023 UK informants already participated in my earlier research, offering a renewed perspective of their sending

practices over the past five years. As part of this project, I also visited an aid distribution centre for Ukrainian refugees in Chisinau to talk to volunteers and discussed parcel-sending at a roundtable with government officials from the Bureau for Diaspora Relations and the Customs Service who offered insiders’ views on refugee relief efforts in Moldova.

The informants are aged between 22 and 78, of both genders, and are either: legal Moldovan migrants, mostly in their thirties, most settled in the UK and some settled in France, Switzerland, and Italy; their family members in Moldova; or Moldovan volunteers who distributed aid sent by Moldovan migrants abroad via private parcels to Ukrainian refugees following the outbreak of the war in Ukraine. A parcel van service user myself, I already had an intimate knowledge of these exchanges, while being mindful my position as a researcher of Moldovan origin. To ensure anonymity, all informants’ names used in this article have been changed to bear no resemblance to their real names, and their exact ages and occupations have not been disclosed.

PARCEL-SENDING AS A VALUED TRANSNATIONAL PRACTICE

Addressing the complexities of parcel-sending as relational transnational exchanges, rather than exports and imports of goods, requires a better understanding of what ‘value’ entails. This section discusses the interconnection of costs and non-monetary value of parcels, as evaluated by Moldovan migrants and their families engaged in regular parcel-sending practices. The intention here is twofold: to see the exchanges in

the socio-cultural context of parcel-sending within transnational social fields; and to uncover the process of attributing value to items and the parcel-sending service itself. Following Carrier (2018:31) in approaching transnational exchanges as ‘economic activities carried out by people who have values and aspirations and who live and act in a meaningful world,’ this section makes a case for the important role of sociality in such

exchanges, moving away from the focus on the economic value of parcel contents. Speaking of parcel van services, informants often mention that the opportunity to send is 'priceless' ('de neprețuit') and the service is, thus, 'valuable' ('prețios', 'de preț'). To them, the opportunity to access the service becomes valuable through its availability to mediate the desired transnational connectedness. The practice takes place in close relation to the transnational family's background, experiences, and social environment, where senders and receivers evidence the social benefits of parcel-sending without seeing parcels as economic remittances. The following accounts, from informants who have been assigned code names to protect their identities, show useful insights on their sending practices.

'My pension is very small, [in 2017] only 1000 lei, my husband's – only 800 lei. I only buy medicines and bread.' (Rita, female in her seventies, retired Moldovan villager.)

Both sides of the family are aware of the sending costs and the couple's children always pay for all parcels, sent and received, to alleviate the financial burden on their parents. Despite their difficult financial situation, Rita and Denis do not see the parcels sent by their children, mostly containing chocolates, cheese, and occasional clothing, as subsistence remittances, and never rely on them in their everyday life. Moreover, the couple send back large parcels filled with homemade produce – vegetables, meat, preserves, and pickles. Rita and Denis value the service for the opportunity to send their children the 'taste of home' from the times when they were still young, something they cannot buy abroad. This becomes evident in other Moldovan senders' practices, as seen in the case of Moldovans in France attributing a higher 'value' to homegrown produce, making foodstuffs sent via parcels special and important to receivers (Rosca, 2023). This value is intrinsically higher because the producers of homegrown foodstuffs go on a personal

journey of growing and caring for plants and animals that cannot be replicated elsewhere. As value represents 'the way in which actions become meaningful' (Graeber, 2001:XII), the process of harvesting, processing, preparing, storing, and re-packing homegrown produce and sharing it with family members via parcel exchanges gains significant meaning to both senders and receivers.

Depending on the migrant's personal journey, this process evolves throughout the transnational family's life stages. Lia, in her early thirties, moved to Paris about eleven years earlier from an area far from the Moldovan capital. She is an active professional who used to send and receive quite often but has reduced her sending to a selection of 'essentials' because of difficulties collecting in such a vast city. In the beginning, both Lia and her mother used to send homemade food, but their sending later evolved into an embodiment of familial connection, facilitating intergenerational bonds.

'[...] the contents [of parcels] changed a lot [...]. Sometimes, I receive mint, flowers, chamomile from mum's garden picked by mum and dad. Of course, you can find these in stores, but they think that it's better from home. It's possible that now there are more toys and children's clothes. They say: "We don't see our grandson, at least we can compensate through parcels".' (Lia, female in her thirties, Moldovan migrant in France.)

The use of the term 'to compensate' is particularly striking here. While costs involved are an important factor in reducing the variety and volumes of sending, the continuity of sending has the ultimate value for the family, as there is no monetary replacement for the tangible link between Lia's son and his grandparents. In this case, the sending itself acquires a singular, irreplaceable, future-oriented value which becomes an investment in the continuity of family relations.

There is also a broader impact of migrants' parcel-sending on the receivers' social standing in their local community. Iulia, in her mid-fifties, has a son and a daughter in the UK, and lives in the same village as Denis

and Rita, related to them through her son's marriage to their daughter. Iulia often sends produce from her land: mostly meat, vegetables, eggs, and pickles, while Iulia's daughter sends her weekly parcels filled with foodstuffs made in the UK. Iulia acknowledges that, through the van services, she can position herself in the village as one of the 'well-off' people who have migrant relatives and who can, therefore, access the perceived higher quality items produced abroad. This access places her at the heart of social exchanges in the village, where she can support other neighbours without migrant links and gain a certain 'privilege' of being able to show others the difference in taste. Thus, she can enjoy a quality of life which comes close to her children's experience

in the UK. *'There, they can afford to get "expensive" stuff, unlike here in Moldova,'* she says, assigning the 'expensive' label to non-luxury items that are perceived as having better quality than in Moldova.

'When they send, I don't buy anything here. As I'm on my own, I don't need to buy anything here – except for sugar, rice, buckwheat – but their pasta, it's very good. It doesn't crumble. It's not muddying the water like here.' (Iulia, female in her fifties, retired Moldovan villager.)

If she did not receive parcels, Iulia could afford to buy similar produce in Moldova. Like in Denis and Rita's case, the parcels she receives are not subsistence, but a slice of life in the UK. This experience is, in turn, perceived by other villagers, who do not receive parcels from abroad, as an expression of a higher level of wealth that incorporates 'knowing' what life abroad is like. As Mura (2023) shows, the consumption of foodstuffs received from migrant relatives embodies the experience of a better life abroad. Considering that this logic is informed by specific contexts – rural, often impoverished areas of Moldova with high levels of emigration –, it becomes evident that 'wealth' can be

understood as a broader concept beyond the economic value of commodities (Kusimba, 2020) received via parcels. Seeing parcel contents as commodities that are 'socially endowed' with a higher 'power' which has low correlation to its monetary value (Kopytoff, 1986:83), this informal singularity of items that cannot be purchased in Moldova is valued through the cultural and biographical lens of migrants' and their families' experiences. This singularity and its social value reflected in personalised aid sent to Ukrainian refugees via private parcel van companies is unpacked in the following section.

THE VALUE OF AID

As seen above, parcel-sending is an established and highly valued practice in Moldovan transnational life, with sent items imbued with personal experiences that often allow recipients to get a glimpse of life migrants lead abroad. This section will discuss the question of value in relation to aid parcels Moldovans abroad sent in the first weeks of the Ukrainian war to contribute to the refugee relief effort in Moldova. Considering that the refugee crisis is unprecedented for the country, this is also an important opportunity to investigate how smaller-scale informal efforts valorise mass-produced, off-the-shelf items that gain value through the process of choosing, packing, delivering, and matching distributed items to individual beneficiaries. Some academic perspectives on humanitarian aid, addressing large-scale organised efforts, see beneficiaries become commodities through targeted selection for funding aid projects in which they have no voice (Krause, 2014). However, in the context of the Ukrainian refugee crisis in Moldova, numerous accounts of considerable efforts among Moldovan migrants to send items specifically required by refugees, using established parcel-sending routes, show that informal support is managed by social networks involved in previous charitable actions. In the first weeks after the war in Ukraine broke out, Moldovans abroad sent tonnes of items for refugees via private

parcel vans. The existence of these established sending infrastructures facilitated the relief effort proved essential at a time when international organisations faced temporary logistical issues delaying aid delivery. Informal migrant networks in most European countries came together to collect and send aid for Ukrainians in Moldova, shouldering an essential form of support which put strain on senders' already stretched resources. These in-kind contributions have been less visible in comparison with large-scale relief efforts. At the same time, Moldovan migrants' indispensable support for refugees required careful management on two sides: the collectors and senders of aid abroad, and the volunteer distributors in Moldova, with parcel van companies mediating these efforts.

On the one hand, Moldovans abroad took on the role of purchasing, packing, collecting, and loading aid parcels, while managing the logistics of sending, often in challenging urban infrastructures. Lia, the Parisian resident whose sending practices have been discussed in the previous section, organised a big collection to send aid via private parcel vans, using her experience of being involved in some charity initiatives to help disadvantaged Moldovans. The item selection was informed by social media posts by volunteer distributors in Moldova.

'What we did internally for the Ukrainian campaign was setting an affordable budget for each of us, let's say, 100 euros, we went to stores, agreed on who gets what so that we didn't all turn up with nappies or hygiene items, and then there were about five cars, even six.' (Lia, female in her thirties, Moldovan migrant in France.)

Her words echo other informants' experiences of matching the requirements for specific items needed at specific times. For example, many parcels with

children's winter clothing were pre-sorted according to gender and age, even topped with personalised messages of support for their families. In these circumstances,

the participants in relief efforts attributed a particular significance and value to items in a particular social context (Kopytoff, 1986): personalised aid parcel contents, sent during an unprecedented refugee crisis. Through recognising the labour involved and the care put into selecting items to match refugee needs, this significance, attributed to aid parcels, is thus tangent to the value attributed to personal parcels by Rita, Denis, and Iulia, discussed in the previous section.

On the other hand, volunteer distributors in Moldova had to manage the process of unpacking, matching items to specific individuals and families, and ensuring that refugee needs are met on time. Two factors determined the value of aid to distributors: the availability of a clear

legislative framework to process aid, and the timing of aid delivery. Emilia, a professional in her thirties, had been working in social care in Chisinau when the Ukrainian war broke out. As a care sector employee working closely with the Moldovan government, Emilia oversaw providing Ukrainian refugees with accommodation and food at her designated refugee centre. In the first week of the war, there was limited governmental guidance on aid provision procedures to follow, and limited supplies of aid. She recalls receiving private parcels filled with aid items sent by Moldovans from the diaspora, of which she was only informed at the last minute because the line of communication with border officials had not yet been established.

'When they came in from customs, I did not know what was in them. So, if I don't know what's in these parcels, I don't know who to distribute them to. [...] It's as if I told you now that I have 20 kgs of sweets, what can I do with it? I only need two for a cup of tea, it was something like that, you know?' (Emilia, female in her thirties, Moldovan refugee centre administrator.)

Although familiar with transnational parcel-sending through her own sending practices with relatives abroad, Emilia had not been expecting this informal support. As she had not been informed of informal aid being brought in, the contents of aid parcels could not be immediately established and evaluated, and the decision on the distribution process fell entirely on her. This, in her view, diminished the senders' efforts to match refugee needs, and wasted valuable time in meeting these needs at her refugee centre.

The timing of receiving the aid thus proved critical. Although she faced some logistical difficulties, Emilia acknowledges that parcels constituted a highly valuable contribution to the Ukrainian refugee relief effort in Moldova. For instance, in the first week of the war, the parcels sent by Moldovans abroad were the only aid she received when it was most needed. Like other informants who distributed similar parcels in Moldova, Emilia

praised the efforts of sending aid, saying that she was impressed with Moldovan migrants' mobilisation. In her own words, *'a parcel equals help'*, pointing to the value of support received on time. Other volunteer distributors in Moldova confirmed that they were also able to meet very specific needs of the beneficiaries they had at that moment, mostly mothers with small or disabled children, after receiving informal aid parcels collected and sent by Moldovans from many European countries.

At the same time, parcel van companies' contribution as mediators of these exchanges proved just as valuable. Van drivers took an active part in collection efforts, taking on larger volumes of parcels and offering discounts of up to 100% for transporting aid. Lia, like many fellow Moldovan migrant acquaintances and many other informants, confirmed this sizeable contribution and their own awareness of the parcel van companies' running costs and expenses.

'They said: "pay what you can, we also want to help." So, we raised a bit of money ... the boxes weren't very heavy, but they were bulky. This was a nice gesture from the private van people. But I don't think they do this every day; they need to eat too.' (Lia, in her thirties, Moldovan migrant in France.)

Such accounts recognise that, while Moldovan private van companies are businesses, their activity should not be evaluated in the same sphere as exchanges of 'goods.' As evidenced by volunteer distributors in Moldova, to their refugee clients, the value of aid parcels sent via private parcel van companies and the personal touches of putting together these parcels often overshadowed the

'impersonal' financial contributions or bulk truckloads of aid sent by international organisations. Once again, the 'good,' rather than the 'goods' sent to refugees via private parcels reaffirmed the sociality of transnational aid and the value of human connection in the direst of circumstances.

CONCLUSIONS

There is a continuous need to re-evaluate the relationship between migrant sociality, transnational exchanges, and their implications for understanding the responses in different social contexts like the Ukrainian refugee crisis in Europe. Approaching informal Moldovan parcel exchanges as a form of social, rather than economic remittances, the discussion focused on the important role that social remittances play in transnational life (Levitt, 1998) and the theorisation of value production in transnational exchanges as informed by participants' experiences and social relations (Kopytoff, 1986; Graeber, 2001, Carrier, 2018), leading to three main outcomes.

First, as mediators of connection with the homeland, Moldovan private van companies represent an 'invaluable' service for their customers, beyond mere commercial transactions. Second, the economic costs of transnational exchanges facilitated by such companies appear to be surpassed by the 'value' these exchanges represent to the participants. This complex notion incorporates experiences like the growing of own produce by rural informants to offer the taste of 'home' that cannot be bought by Moldovans abroad or the acquired 'higher' value of mass-produced items from abroad, enjoyed by senders' family members in Moldova. Third, these transnational exchanges become a valuable tool in exceptional circumstances which constitute specific social contexts. The sociality of informal transnational exchanges, encompassing migrant networks and mediators like parcel van

companies, plays an important role in providing targeted and timely responses to refugee needs. Specifically, indications are that the socio-economic value of this transnational support was particularly high in the first weeks of the war, when the support from other governmental and non-governmental sources was not yet fully established.

This article argued that parcels sent via private parcel van companies should not be considered 'goods' in an economic sense. As the social 'value' of parcel-sending is negotiated in relation to individual and familial experiences, and in response to external events like the Ukrainian war, acknowledging the continuing role of such practices is an important contribution to better-targeted diaspora engagement policies and legislation regulating small transportation businesses. It is also important to recognise the limitations of this research, as it does not further engage with parcel-sending in other European countries or consider the role of the state in mediating transnational practices in more detail. More is needed to better understand both intrafamilial and institutional transborder power relations, as well as the financial implications of mediating transnational exchanges in more remote locations, and the impact of distance and costs on maintaining transnational ties.

This research was partially funded by the UK Economic and Social Research Council, grant number ES/X005410/1. The author has no conflicts of interest to declare.

REFERENCES

- Bailey, A. J., Drbohlav, D. & Džúrová, D. (2021). Migrant remitting as transnational practice: Moldovans in Italy and Czechia. *SAGE Open*, 11(2), 1-13. <https://doi.org/10.1177/21582440211016457>
- Burrell, K. (2008). Materialising the border: Spaces of mobility and material culture in migration from post-socialist Poland. *Mobilities*, 3(3), 353-373. <https://doi.org/10.1080/17450100802376779>
- Buza, C. (2021). Filling in the empty spaces: Understanding Moldovan transnational family lives by unpacking the meanings and the makings of a popular sending practice. MA Thesis, IISS. <https://thesis.eur.nl/pub/61053/Cristina-Buza-FILING-IN-THE-EMPTY-SPACES.-UNDERSTANDING-MOLDOVAN-TRANSNATIONAL-FAMILY-LIVES-BY-UNPACKING-THE-MEANINGS-AND-THE-MAKINGS-OF-A-POPULAR-SENDING-PRACTICE.pdf>
- Caracentev, S. (2020). Parcel vans and the materiality of staying connected in Moldovan transnational families. Doctoral thesis, UCL. <https://discovery.ucl.ac.uk/id/eprint/10094687/>
- Caracentev, S. (2023, July 3-6). Parcelled aid: Transnational responses to the Ukrainian refugee crisis in Moldova [Paper presentation]. 20th IMISCOE Annual Conference 2023: Migration and Inequalities – In search of answers and solutions. Warsaw, Poland.
- Carrier, J. (2018). Moral economy: What's in a name. *Anthropological Theory*, 18(1), 18-35. <https://doi.org/10.1177/146349961773525>
- Cingolani, P. & Vietti, F. (2020). 'My parents fell behind': Social remittances, integration and generational change among Moldovan immigrants. *Journal of International Migration and Integration*, 21(4), 1097-1113. <https://doi.org/10.1007/s12134-019-00701-z>
- Cuc, M., Lundbäck, E. J., & Ruggiero, E. (2006). Migration and remittances in Moldova. IMF. <https://www.imf.org/external/pubs/nft/2006/moldova/eng/mrm.pdf>

- Cuza, I. & Rusnac, A. (2015). Research and elaboration of a legal framework for international transportation of passengers and goods sent by/to migrants via land transport. Nexus/IASCI/SDC.
- Fresnoza-Flot, A. (2009). Migration status and transnational mothering: The case of Filipino migrants in France. *Global Networks*, 9(2), 252-270. <https://doi.org/10.1111/j.1471-0374.2009.00253.x>
- Garni, A. (2014). Transnational traders: El Salvador's women couriers in historical perspective. *Sociological Forum*, 29(1), 165-188. <http://www.jstor.org/stable/43653937>
- Graeber, D. (2001). *Toward an anthropological theory of value: The false coin of our own dreams*. New York: Palgrave Macmillan. <https://doi.org/10.1057/9780312299064>
- Khrenova, L., & Burrell, K. (2021). Materialising care across borders: Sent things and family ties between Sweden and Ukraine. *Nordic Journal of Migration Research*, 11(3), 250-264. <https://doi.org/10.33134/njmr.399>
- Kopytoff, I. (1986). The cultural biography of things: Commoditization as process. In: Appadurai, A. (ed.). *The social life of things: Commodities in cultural perspective*, 64-91. Cambridge University Press. <https://doubleoperative.files.wordpress.com/2009/12/kopytoff-1986-the-cultural-biography-of-things-commoditization-as-process-1-1.pdf>
- Krause, M. (2014). The good project: Humanitarian relief NGOs and the fragmentation of reason. *Chicago Scholarship Online*. <https://doi.org/10.7208/chicago/9780226131535.003.0003>
- Kusimba, S. (2020). Embodied value: Wealth-in-people. *Economic Anthropology*, 7(2), 166-175. <https://doi.org/10.1002/sea2.12182>
- Levitt, P. (1998). Social remittances: Migration driven local-level forms of cultural diffusion. *International Migration Review*, 32(4), 926-948. <https://doi.org/10.1177/019791839803200404>
- Levitt, P. & Lamba-Nieves, D. (2011). Social remittances revisited. *Journal of Ethnic and Migration Studies*, 37(1), 1-22. <https://doi.org/10.1080/1369183X.2011.521361>
- Lindley, A. (2009). The early-morning phonecall: Remittances from a refugee diaspora perspective. *Journal of Ethnic and Migration Studies*, 35(8), 1315-1334. <https://doi.org/10.1080/13691830903123112>
- Mata-Codesal, D. & Abranches, M. (2018). *Food parcels in international migration: Intimate connections*. Basingstoke: Palgrave Macmillan. <https://doi.org/10.1007/978-3-319-40373-1>
- Mauss, M. (2000). *The Gift: The form and reason for exchange in archaic societies*. New York: W.W. Norton. [originally published in 1925].
- McCallum, D. G. (2022). Affectionate remittances: Materialism and care in Filipino transnational families in Japan. *Current Sociology*, 70(6), 843-859. <https://doi.org/10.1177/00113921211034895>
- Ministry of Foreign Affairs and European Integration. (2021). Data on the size of the Moldovan diaspora. https://mfa.gov.md/sites/default/files/propunerile_maeie_privind_constituirea_celor_191_de_sectii_de_votare. [Inactive as of February 2024].
- Mura, G. (2023). The afterlife of migrant gifts. In: Meyer, S., Ströhle, C. (eds). *Remittances as social practices and agents of change*, 253-274. London: Palgrave Macmillan. https://doi.org/10.1007/978-3-030-81504-2_11
- Ngo, T-W. (2019). Informal connectivity in transnational shadow exchanges. *International Institute for Asian Studies. The Newsletter*, 83, 29-38.
- Nyoni, P. (2012). New insights on trust, honour and networking in informal entrepreneurship: Zimbabwean malayishas as informal remittance couriers. *Anthropology Southern Africa*, 35(1-2), 1-11. <https://doi.org/10.1080/23323256.2012.11500018>
- Pinger, P. (2010). Come back or stay? Spend here or there? Return and remittances: The case of Moldova. *International Migration*, 48(5), 142-173. <https://doi.org/10.1111/j.1468-2435.2009.00562.x>
- Rosca, D. (2023). A transnational exchange mechanism among Moldovan migrants in the Parisian region: Exploring the "Post Office of Moldova. *Economy and Sociology*, 1. <https://doi.org/10.36004/nier.es.2023.1-01>
- Sharma, K., Kashyap, A., Montes, M. & Ladd, P. (2011). *Realizing the development potential of diasporas*. UN University Press. ISBN 978-92-808-1195-7.
- Souleles, D. S., Archer, M., & Thaning, M. S. (2023). Introduction to special issue: Value, values, and anthropology. *Economic Anthropology*, 10(2), 162-168. <https://doi.org/10.1002/sea2.12285>
- Turaeva, R. (2020). Muslim orders in Russia: Trade networks and Hijama healing. *Nationalities papers*, 48(4), 661-674. <https://doi.org/10.1017/nps.2019.90>
- Vargas-Silva, C. (2017). Remittances sent to and from the forcibly displaced. *Journal of Development Studies*, 53(11), 1835-1848. <https://doi.org/10.1080/00220388.2016.1234040>
- World Food Programme. (2022). *Moldova Factsheet, March 2022*. Available at <https://data.unhcr.org/en/documents/details/91637>. [Accessed on 25.11.2023].
- Zelizer, V. (2010). *Economic lives: How culture shapes the economy*. New Jersey: Princeton University Press. 496 p. ISBN 978-06-911-3936-4.

METHODOLOGICAL PROBLEMS OF ASSESSING THE EFFECTIVENESS OF PUBLIC ADMINISTRATION OF SOCIO-ECONOMIC DEVELOPMENT

DOI: <https://doi.org/10.36004/nier.es.2023.2-04>

JEL classification: A11, E61, H11, O11, P21, P25, P27, P30, P35, R11, R58

UDC: 338.242.4

Tatyana BUKHOVETS

PHD in Economics, Assistant Professor, Belarusian State Economic University, Associate Professor at the Department of National Economy and Public Administration

<https://orcid.org/0000-0001-6200-9439>

e-mail: tvbuhovets@mail.ru

Received 20 Juny 2023

Accepted for publication 07 November 2023

SUMMARY

The need for theoretical, methodological and scientific substantiation of new ways to improve the effectiveness of public administration as well as for the development of a single comprehensive methodological approach to its assessment increases every year in the context of increasing demands of society to the quantity and quality of services provided by the state and the effectiveness of decisions taken by state bodies at the national and local levels. The purpose of the study is to identify the main problems and justify the methodological provisions for assessing the effectiveness of public administration. The study is based on the application of general scientific and special methods, as well as interdisciplinary approach, taking into account the provisions of the history and theory of public administration, economic science, political science, sociology, statistical theory, theory of regional studies, etc. The author develops the comprehensive methodological approach to assess the effectiveness of public administration, taking into account its multifaceted nature and complexity. The approach presents a toolkit and a step-by-step algorithm for assessing the effectiveness of public administration. It formulates the fundamental principles of assessment, substantiates the need to determine the object of assessment and type of effectiveness, which determine the specific purpose and objectives of assessment, as well as the relevant criteria, indicators and methods. At the last stages of the assessment, emphasis is placed on the importance of correct and accurate interpretation of the results obtained and the development of recommendations to eliminate identified bottlenecks and improve the effectiveness of public administration.

Keywords: effectiveness, Government, local authorities, methodological problems, national and local levels, public administration

INTRODUCTION

Many scientists are involved in the study of various methodological issues and aspects of assessing the effectiveness of public administration, as well as in the search for new ways to improve it and build an optimal model of public administration, taking into account current trends in the development of the world community, as well as key challenges and threats faced by individual states, their national characteristics. At the same time, assessing the effectiveness of public administration is a very complex task that requires the development of a comprehensive methodology taking into account various aspects and activities of public authorities, the complexity and social significance of the tasks being solved, the need to reconcile the conflicting interests of different social groups, the search for

rational ways to use available resources, compliance with the principles of efficiency and cost-effectiveness of its activities while ensuring the maximum degree of achievement of its goals and solving the tasks facing the state and society.

Thus, the purpose of this study is to identify the main problems and justify the methodological provisions for assessing the effectiveness of public administration. The main result of the study is the development of a comprehensive methodological approach for assessing the effectiveness of public administration, which was achieved by addressing the following key research objectives:

- *disclosure of the essence of “effectiveness of public administration”, taking into account the complexity and multifaceted nature of public administration, covering various aspects of society and aimed at solving a large number of multidirectional tasks at different levels of governance hierarchy;*
- *identification of the main problems and justification on this basis of the key principles for assessing the effectiveness of public administration;*
- *substantiation of the need to apply an comprehensive methodological approach to assess the effectiveness of public administration, taking into account the highlighted problems and principles;*
- *determination of criteria for classification and differentiation of various types of public administration efficiency, as well as the identification of these types according to established criteria, which underlies the identification of the assessed object;*
- *construction of the algorithm for applying the comprehensive methodological approach to assess the effectiveness of public administration and presenting it in the form of a structural and methodological flowchart.*

Thus, the key scientific hypothesis of this study is that the use of the comprehensive methodological approach to assessing the effectiveness of public administration allows us to take into account the complexity and multifaceted nature of the phenomenon under study, to

level out the main problems arising in the assessment and to obtain objective reliable results for the development of effective recommendations to improve the effectiveness of decisions taken by public authorities.

LITERATURE REVIEW

Such scientists as Abakumov I. (2014), Alizhanova Z. (2010), Borshevsky G. (2012), Hurmuz N. (2018), Ilyin V. & Shabunova A. (2014), Kjurchiski N. (May 2014), Klishch N. (2007), Longley R. (2022), Vasilieva E., Zerchaninova, T. & Ruchkin A. (2016), Vetitnev A. & Voloshchuk P. (2016), Ziebicki B. (2013), Znamensky D. & Gusarov A. (2020) and others are engaged in the study of the theoretical and methodological foundations of assessment, as well as the search for possible ways and directions to improve the efficiency of public administration and public service. The study of the role of state regulation of global market failures in achieving optimal long-term social economic growth is presented in the works of the 2018 Nobel Prize laureates in Macroeconomic Research Paul Romer and William Nordhaus (Vorobyev, V., & Maiboroda, T. (2018); Nordhaus, 1996, 2006, 2018; Romer, 1986, 1987, 1990, 1993, 2015).

Before talking about methodological aspects and problems of assessing the effectiveness of public administration, it is necessary to reveal the essence of the concepts of “public administration” and “effectiveness of public administration”.

When developing a methodology for assessing the effectiveness of public administration, it is important to understand what kind of public administration we are going to assess: in its broad or narrow sense. In modern scientific literature these concepts are distinguished, and the history of this distinction begins at the turn of the XIX-XX centuries, when the future 28th President of the United States Woodrow Wilson in his scientific works advocated the separation of administrative management from the sphere of politics. Following Wilson, this idea was supported by his American follower, political scientist and teacher Goodnough F., as well as by German political scientist and sociologist Weber M.

This concept was positively received by the scientific community, political leaders and statesmen, and today it is also reflected in modern scientific and educational literature (Atamanchuk & Vasilevich, 2013; Orlov, 2013).

- “policy”, which is understood as managerial decision-making, and which is implemented in the institutional sense by the executive branch;
- and “politics” as a sphere of interaction of political actors about power, which is connected with the exercise of legislative power.

Thus, in a broad sense, public administration is understood as the activity of all branches of government, including legislative, executive and judicial. Or, in other words, it is “the realization of state power in all forms” (Orlov, 2013).

Longley R. defines public administration as “a field of governance in which leaders serve communities to advance the common good and effect positive change” (Longley, 2022). According to Longley R. public administration is performed by local, state, and federal government as well as nonprofit organizations, which are responsible for determining the policies and programs of governments (Longley, 2022).

Public administration in a **narrow sense** is understood as an activity of executive-administrative nature, aimed primarily at implementing the decisions of political leaders, reflected in the legislative acts of the state. In other words, it is “the activity of the executive-administrative body to influence the object of management for its transfer to the state necessary to achieve the goal of the relevant territorial entity, through the adoption of legal acts, organization and control of the execution of these acts and acts of legislative (representative) authorities” (Radchenko, 2007). Vasilenko I. interprets public administration as “a system of political and administrative decision-making, which are carried out with the help of the administrative-state apparatus” (Vasilenko, 2015).

In the narrow sense the term public administration is used in the research report “Rule of Law in Public Administration: Problems and Ways Ahead in Peace Building and Development”, published by the Folke Bernadotte Academy (Per Berling et. al., 2008). In the report “the term public administration is used to describe the laws, norms, agencies and actions of the executive branch of the state, for example municipalities and tax authorities” (Per Berling et. al., 2008).

Professor Orlov I. (2013) draws attention to the consolidation of two different terms in the English language:

At the same time, in the Russian language, the concept of “politics” is inseparable (Orlov, 2013).

In this study, when developing methodological foundations and provisions for assessing the effectiveness of public administration, first of all, this category will be understood in the narrow sense, bearing in mind that the actions of the executive branch are limited by the decisions of political leaders and are largely determined by them. That is, when assessing the effectiveness of the executive and administrative bodies, it is necessary to remember about the impact on it of the functioning of the entire political system in the country, as well as the quality of the institutional and legal environment, which is formed directly by the legislature.

It should be noted that the concept of efficiency in relation to the activities of public administration, whether national, regional or local level, is quite complex and multifaceted. It is impossible to identify one or several fundamental specific criteria and indicators of effectiveness, as it can be done for a commercial organization or enterprise. In the case of assessing the effectiveness of public administration, a comprehensive approach is necessary, due to the complexity and multidimensionality of the managed object and taking into account the various spheres and areas of management impact, as well as clearly defined goals and tasks facing public authorities in a particular period of time, sometimes controversial and contradictory, but always having state importance and/or social and public significance (Bukhovets, 2022).

DATA AND METHODS

General scientific and special research methods were used in the study, including induction and deduction, analysis and synthesis, generalization, a systematic approach, comparison, etc.

The research is also based on an interdisciplinary approach, relying on the provisions of the history and theory of public administration, economic science, political science, sociology, statistical theory, theory of regional studies, etc.

Thus, the disclosure of the essence of the effectiveness of public administration, local government and self-government, as well as the proposal of various classification criteria for identifying types of public administration effectiveness is based on the study of the history and theory of public administration and political science, including the study of different scientists' views on the categories of “efficiency”, “efficiency of public administration”, “efficiency of public service”, “quality of public administration”, etc.

Moreover, it must be remembered that the main purpose of the functioning of the public administration system is not to extract profit or other financial result. Public administration is focused primarily on achieving a social effect, which is also mentioned by Okhotsky E. (2014) in his research, arguing that “public administration is not a business, it contains a powerful moral and conscious principle based on legitimate state power, for which the only criterion of effectiveness is law and social effect”.

In her research, Alizhanova Z. (2010) also points out the impossibility of applying a purely economic approach to assessing the effectiveness of public administration based on a comparison of the costs incurred and the result obtained, arguing that in the field of public administration, efficiency assessment should primarily reflect the social role of the state and its representatives. In addition, the result of public administration can be not only economic, but also social, political, socio-psychological, etc., as well as direct (issuing a passport, preparing reports or conducting inspections, etc.) and indirect, which in turn can be external (improving the level and quality of life of citizens, influencing the managed object, etc.) and internal (professional development, retraining, equipment repair, etc.) (Alizhanova, 2010).

It is also necessary to distinguish between the concepts of “quality of public administration” and “efficiency of public administration”. Thus, Orlov I. (2013) considers efficiency as one of the criteria for the quality of public administration along with innovation, productivity, responsiveness, complexity and public confidence in the government.

The study of the key provisions of political and economic science, as well as regional economics and management has determined the author's vision and understanding of the fundamental methodological principles to be followed in the assessment of public administration effectiveness.

The proposed methods for assessing the effectiveness of public administration are formulated based on the study of various research methods offered by economic science, statistical theory, econometrics (including the basics of economic and mathematical modeling and regression analysis), regional economics and others. Thus, this study proposes a consistent combination of various research methods, including statistical, economic-mathematical, index methods, methods of correlation and regression analysis, program-target method and methods of factor analysis to assess the effectiveness of public administration.

The study substantiates the need to select appropriate criteria and indicators for assessing the effectiveness

of public administration and possible methods of conducting such an assessment depending on the assessed sphere of state impact (the object of assessment).

The considered aspects formed the basis of the comprehensive methodological approach proposed in the study to assess the effectiveness of public administration at various levels of the governance hierarchy, which is a step-by-step process of identifying key evaluation

principles, determining the object of evaluation and the type of effectiveness, establishing a specific goal and objectives of evaluation, substantiating relevant criteria and indicators, selecting appropriate methods for evaluation, direct implementation of the evaluation, correct and proper interpretation of the results obtained and the development of recommendations to eliminate the identified bottlenecks and improve the efficiency of public administration.

MAIN RESULTS AND DISCUSSION

For the purposes of this study, we propose to understand the **effectiveness of public administration** as a set of indicators that characterize the degree of achievement of key objectives and solution of the main tasks of socio-economic development, facing the state in a given period of time and contributing to improving the welfare of the nation and the quality of life of citizens.

The **effectiveness of local government** and self-government should be understood as a set of indicators characterizing the degree to which local authorities achieve the goals of ensuring the necessary level of socio-economic development of administrative-territorial units, organizing solutions to issues of local importance, meeting the needs of citizens in basic consumer goods and services, improving their standard of living and well-being.

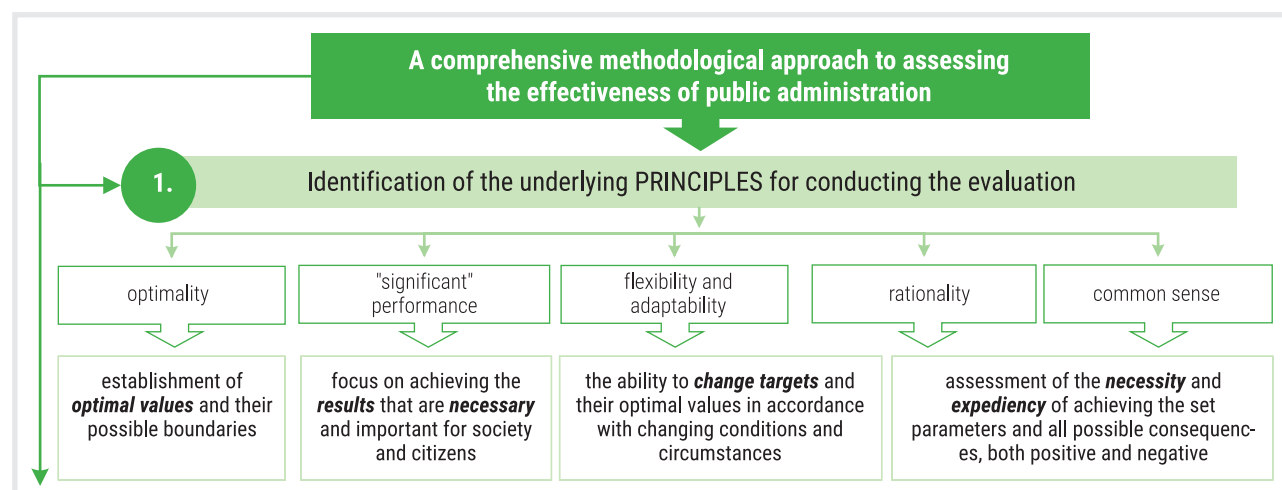
Based on the proposed definitions, the general goal of public administration both at the national and local levels is to ensure the welfare of citizens and to improve their living standards. All other goals and specific tasks should be subordinated to this general goal, derive from it and contribute to its ultimate achievement.

Thus, given the specific features of the functioning of public administration system, including the complexity and multifaceted nature of the managed object, as well as the public and social significance of the goals and objectives facing the state, the methodology for assessing the effectiveness of public administration should be based on the application of a **comprehensive approach** (Bukhovets, 2022) (figures 1-3).

In addition, when developing methodological provisions and methodological tools for assessing the effectiveness of public administration, it is important to understand that the purpose of such an assessment is not to obtain any unambiguous categorical judgment about whether public administration is effective or ineffective in this particular period of time. What is important is not just a comprehensive approach to assessment, but the correct interpretation of its results depending on the assessed sphere or area of influence of the governing subject, as well as the methods and indicators used.

Figure 1.

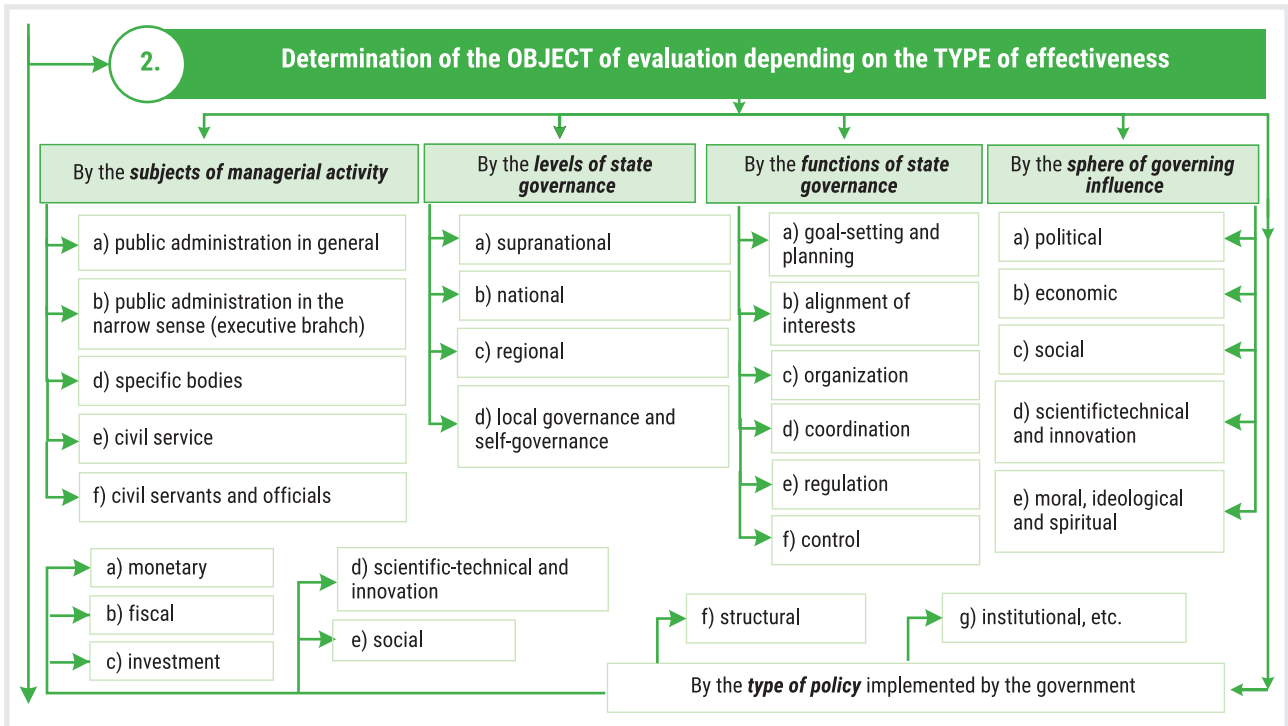
Structural and methodological flowchart of the comprehensive approach to assessing the effectiveness of public administration: step 1 "principles identification"



Source: author's development.

Figure 2.

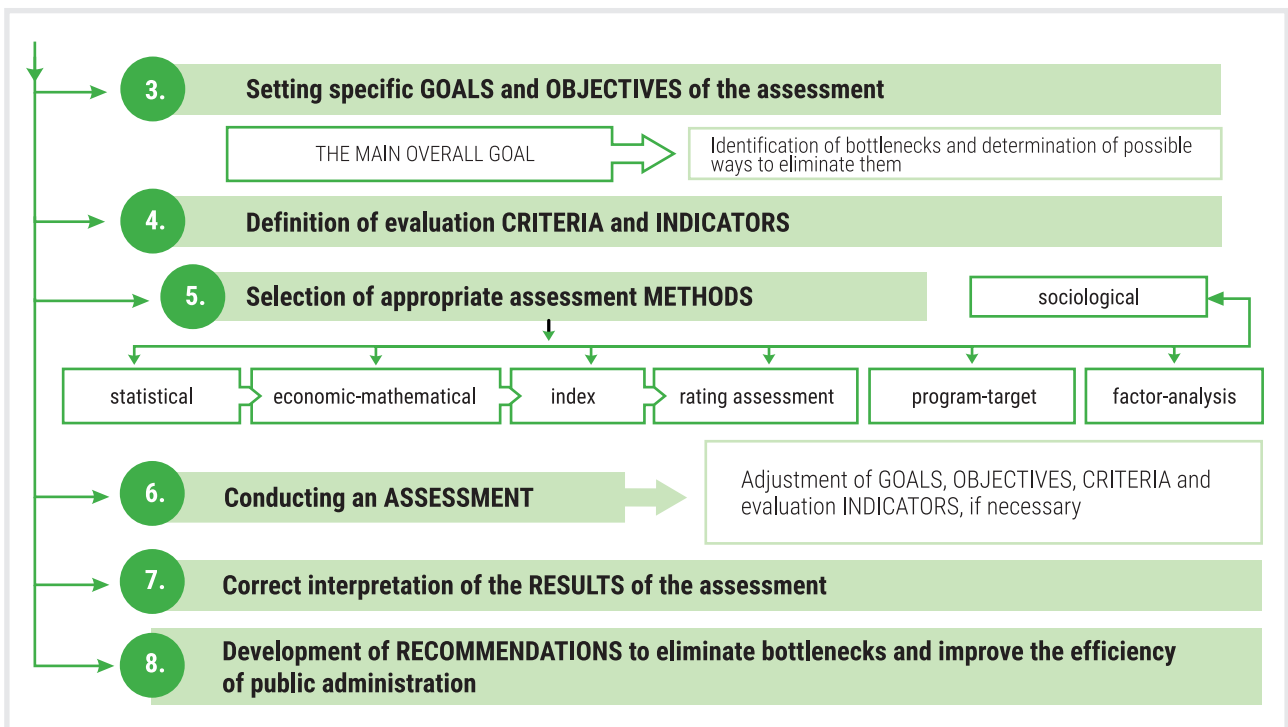
Structural and methodological flowchart of the comprehensive approach to assessing the effectiveness of public administration: step 2 "determination of the object of the assessment on the basis of the type of effectiveness"



Source: author's development.

Figure 3.

Structural and methodological flowchart of the comprehensive approach to assessing the effectiveness of public administration: steps 3-8 from setting specific goals and objectives of the assessment to the development of recommendations



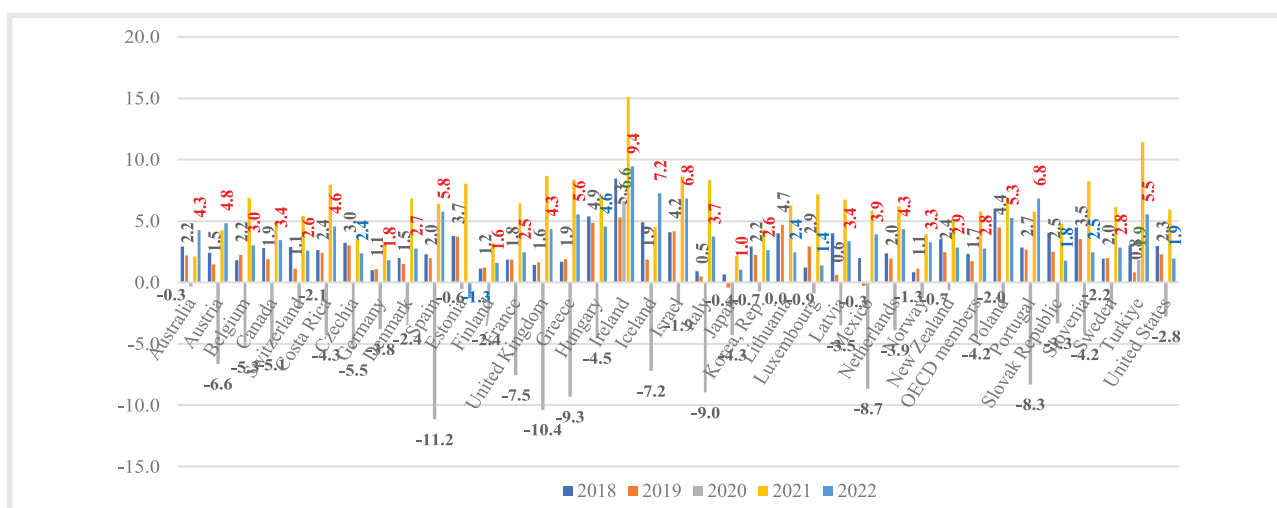
Source: author's development.

In turn, the methods and indicators will depend on the tasks to be solved in the course of assessment, and the criteria used in the assessment should be formed based on the purpose of functioning of the assessed sphere. Thus, if the main goal of the economy is economic growth and increase in production, then GDP growth rates, as well as increase in production will be among the main criteria for assessing the effectiveness of public administration in the economic sphere. The main criterion of the effectiveness of public administration of the social sphere will be the standard of living of citizens, thus methods and indicators characterizing it will be used for evaluation.

For example, assessing the rates of GDP growth in various countries in the post-Covid period, and comparing them with data from the previous period, we can talk about the effectiveness of measures taken by governments to restore national economies. So, based on the data in Figures

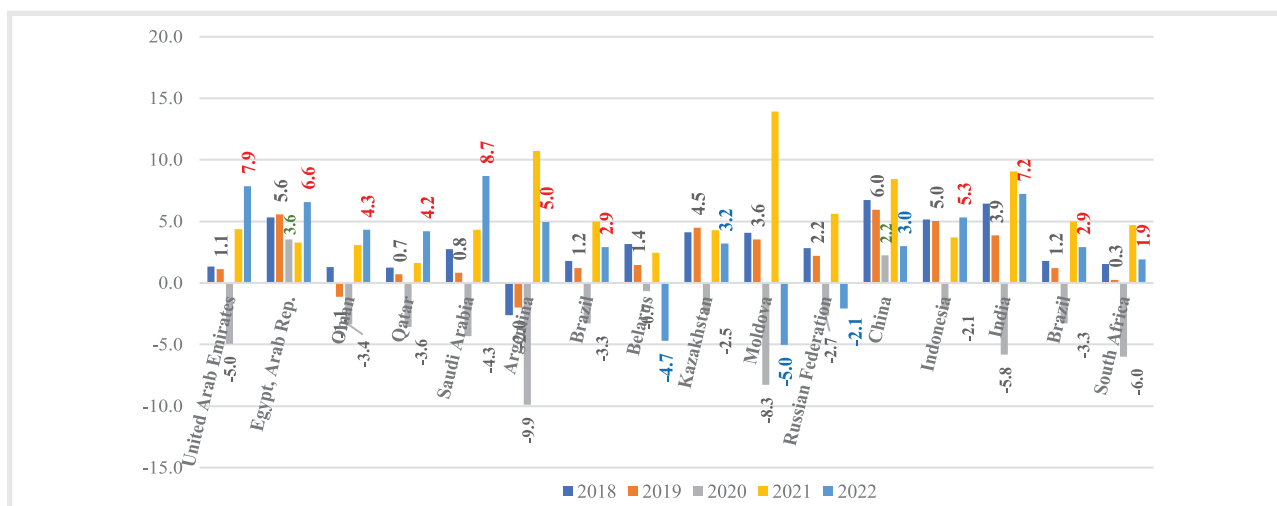
4-6, we can talk that almost all countries of the world have demonstrated economic recovery in 2021. In 2022, GDP growth slowed in all countries, but most countries managed to reach or even exceed the level of GDP growth before the covid crisis (2019), which indicates the effectiveness of their economic policies. The acceleration of GDP growth in 2022 compared to the pre-crisis period was demonstrated by Arab countries (Qatar, Oman, Saudi Arabia, Egypt, the United Arab Emirates) and most OECD member countries (except the Czech Republic, Estonia, Hungary, Lithuania, Luxembourg, Slovakia, Slovenia, the United States). The most accelerated growth was typical for Austria (4.8% in 2022 vs. 1.5% in 2019), Spain (5.8% vs. 2.0%), Great Britain (4.3% vs. 1.6%), Greece (5.6% vs. 1.9%), Ireland (9.4% vs. 5.3%), Iceland (7.2% vs. 1.9%), Italy (3.7% vs. 0.5%), Latvia (3.4% vs. 0.6%), Mexico (3.9% vs. -0.3%), Portugal (6.8% vs. 2.7%), Turkey (5.5% vs. 0.8%).

Figure 4.
GDP growth (annual %) in OECD member countries in 2018-2022.



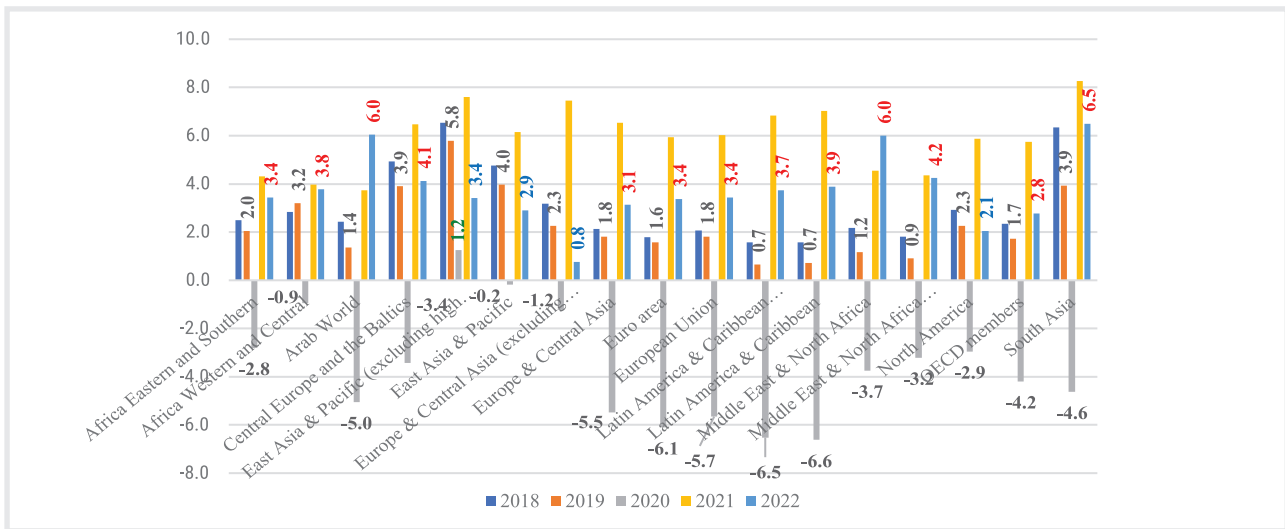
Source: elaboration on World Bank data

Figure 5.
GDP growth (annual %) in some other countries in 2018-2022.



Source: elaboration on World Bank data

Figure 6.
GDP growth (annual %) by regions in 2018-2022.



Source: elaboration on World Bank data

At the same time, it should be noted that a number of countries withstood the year of the pandemic, showing not a decline in GDP, but only a slowdown in its growth rate compared to 2019 (China (2.2% vs. 6.0%) and Egypt (3.6% vs. 5.6%). In Ireland and Turkey, GDP growth rates in 2020 even accelerated compared to 2019 (6.6% vs. 5.5% and 1.9% vs. 0.8%, respectively).

Some countries failed to reach the level of 2019 in terms of GDP growth, including countries such as the Czech Republic (2.4% in 2022 vs. 3.0% in 2019), Hungary (4.6% vs. 4.9%), Lithuania (2.4% vs. 4.7%), Luxembourg (1.4% vs. 2.9%), Slovakia (1.8% vs. 2.5%), Slovenia (2.5% vs. 3.5%), USA (1.9% vs. 2.3%), Kazakhstan (3.2% vs. 4.5%), China (3.0% vs. 6.0%). In a number of countries, after recovering growth in 2021, GDP declined again in 2022: Estonia (-1.3%), Belarus (-4.7%), Moldova (-5%), the Russian Federation (-2.1%).

By regions, pre-crisis GDP growth rates were not achieved in North America, East Asia and Pacific, Europe and Central Asia (excluding high-income countries) (Figure 6). In other regions, GDP growth rates at the level of 2019 were not only restored in 2022, but also accelerated. The fastest growth was typical for the countries of the Arab region (6.0% in 2022 vs. 1.4% in 2019), Middle East and North Africa (6.0% vs. 1.2%), South Asia (6.5% vs. 3.9%).

It should also be noted that when interpreting the evaluation results, it is important to understand and take into account that the purpose of assessment activities to determine the degree of effectiveness of public administration in a particular area is not to obtain an unambiguous judgment, but to identify bottlenecks, which, above all, should be paid attention to and apply measures to eliminate them in order to achieve a high level of efficiency and ensure the achievement of goals and specific objectives facing the state at a given time. Moreover, as a result of the assessment, it is possible to revise priorities and adjust the goals and objectives of the state for the near future. The assessment of public administration efficiency should be carried out not to identify and punish the guilty, but to identify problem areas, strengths and weaknesses of public policy and to develop a single coordinated strategy to solve existing problems and adjust actions to achieve the set goals.

In methodological terms, it is important to distinguish between different types of public administration effectiveness, each of which implies its own methodological approaches to evaluation, including the establishment of specific evaluation criteria and indicators, as well as the selection of the most appropriate methods.

By the subjects of managerial activity should be assessed separately:

- efficiency of public administration in general as a system of interaction of legislative, executive and judicial power, as well as bodies of special competence;
- efficiency of public administration in the narrow sense, i.e. the activity of executive-administrative nature or bodies of executive-administrative vertical;
- efficiency of specific bodies of public administration at the national, republican, regional and local levels;
- efficiency of the civil service and administrative apparatus;
- efficiency of individual civil servants and officials (figure 2).

According to the levels of state governance can be distinguished:

- *supranational level – efficiency of foreign economic and foreign policy interaction, as well as participation of the state in integration associations;*
- *national level – efficiency of state governance as a whole;*
- *regional level – efficiency of regional development governance in terms of ensuring equal, comprehensive and balanced development of regions as intermediate administrative-territorial units and the main connecting elements between the national and lower levels of the governance hierarchy;*
- *level of local governance and self-governance – efficiency of local governance and self-governance bodies in addressing issues of local significance, ensuring the livelihood of citizens of specific administrative-territorial units, organizing and regulating production and economic activities and the development of small and medium-sized businesses locally, meeting the needs of the local population and improving their welfare (figure 2).*

Depending on the functions performed by the state and public administration bodies, it is possible to distinguish the effectiveness of:

- *goal setting and planning;*
- *implementation of the function of alignment of interests;*
- *organization of administrative activity;*
- *performing a coordinating function;*
- *regulation of socio-economic processes;*
- *control activities;*
- *etc. (figure 2).*

Depending on the sphere of governing influence, the effectiveness of governance should be assessed separately in:

- *political sphere in terms of ensuring political stability and legitimacy of the authorities, achievement of constructive dialog and high level of trust between the state and society, development of civil society;*
- *economic sphere, within which we can separately assess the efficiency of:*
 - 1) *achieving the goals of production and financial activities;*
 - 2) *governance of investment activity of both the state as a whole and individual regions, industries and types of economic activity, enterprises and organizations;*
 - 3) *governance of foreign economic activity;*
 - 4) *development of entrepreneurial activity;*
 - 5) *etc.;*
- *social sphere in terms of improving the standard of living and quality of life of citizens;*
- *scientific-technical and innovation sphere;*
- *moral, ideological and spiritual sphere (figure 2).*

Depending on the type of policy implemented by the government, the effectiveness of the following types of policies can be evaluated:

- *monetary;*
- *fiscal;*
- *investment;*
- *scientific-technical and innovation;*
- *social;*
- *structural;*
- *institutional;*
- *etc. (figure 2).*

Whatever type of public administration efficiency is subject to evaluation, specific criteria and indicators of evaluation will be established depending on the goals and objectives set.

The program-target method has been widely used in the practice of building an effective model of public administration (Alizhanova, 2010), which at the same time is also a method of evaluating the effectiveness of

public administration based on comparing the results achieved with the planned parameters.

Taking into account the different aspects of the activities of public administration bodies, multidirectionality of the issues addressed in various spheres of public life, it is necessary to separately consider and assess the effectiveness in the economic, social, budgetary, administrative, environmental, scientific, technical and innovation and other spheres of activity (management impact). In the economic sphere, it is possible to separately assess the effectiveness of public authorities in ensuring the appropriate level of functioning of production and financial, investment, foreign economic activities, as well as the effectiveness in the field of integration cooperation and the effectiveness of measures taken to develop small and medium-sized businesses in the country.

- **optimality** (*establishment of optimal values and their possible boundaries*);
- **“significant” performance** (*focus on achieving the results that are necessary and important for society and citizens*);
- **flexibility and adaptability** (*assessment of the necessity and expediency of achieving the set parameters and all possible consequences, both positive and negative*);
- **rationality and common sense** (*assessment of the need to achieve the set parameters and all possible consequences, both positive and negative*).

As for the possible **methods** of assessing the effectiveness of public administration, *statistical* and *economic-mathematical* methods are the most understandable and easy to use. At the same time, they only allow us to judge separately the results of the activities of public administration bodies in various areas and do not give a general comprehensive view of the overall effectiveness of public administration. A comprehensive assessment is possible through the use of *index* methods, which make it possible to combine the results obtained at the previous stages of the study (using statistical and economic methods) into a single consolidated aggregated index and on the basis of it to draw generalized conclusions on the whole about the effectiveness of public administration.

The effectiveness of the activities of public authorities in various areas and spheres can be assessed by applying the method of *rating* assessment based on comparing

In modern conditions of society and state development, it is possible to offer for evaluation the efficiency of public administration bodies in terms of digital development and digital transformation, as well as efficiency in the development of a green economy, which reflects the degree of so-called “greening” of economic activity and characterizes at the same time the efficiency in the economic, environmental, social and innovative spheres in terms of the introduction of modern innovative technologies and the development of innovative activities to “green” economic development by reducing the harmful impact of economic activity on the environment, as well as solving a number of social problems, including the problems of inclusive development.

The following should be defined as the key principles for evaluating the effectiveness of public administration bodies:

countries with each other and tracking the country’s position in various international ratings and indicators.

The main tasks and priority areas of activity, as well as key targets for the activities of public administration bodies at all levels are laid down in planning, program and forecast documents, which implies the possibility of using a *program-target* method for assessing the effectiveness of public administration, the essence of which is to compare the actually achieved values of the parameters being laid with the planned ones. In recent years, more complex evaluation methods have been proposed in state programs, offering a number of stages and indicators, the essence of which in any case boils down to comparing the actual and planned values of planned indicators, bringing them to summary aggregate indicators (indices), as well as evaluating the results of program financing.

The main disadvantages of this method are:

- *the reliability, adequacy and validity of the evaluation results depend not only on the results achieved in the implementation of programs, but also on the quality of planning. Errors in defining targets and setting planning values that are not quite correct, insufficiently justified and not properly calculated lead to distorted evaluation results;*
- *the evaluation methods proposed in the programs do not allow taking into account changing conditions and circumstances, as well as the effect of various internal and external factors on achieving the established indicators, which may lead to the impossibility of fulfilling certain parameters and, as a result, reducing the feasibility of conducting an assessment. To offset this shortcoming, either a regular revision of the targets is necessary, taking into account changing circumstances and factors, or an expert approach to the application of the methodology with the adjustment of possible indicators, or their exclusion from the assessment;*

- *the program-targeted approach itself directs public authorities to achieve quantitative indicators without linking them to the qualitative results of activity, which can, on the contrary, lead to their deterioration in the case of excessive striving to meet the established targets.*

These shortcomings make the program-target method of assessing the effectiveness of public administration rather limited, allowing to draw conclusions only about the degree of fulfillment of the established planned values of selected indicators and not contributing to the formation of a holistic comprehensive view of the effectiveness of public administration, which is achieved through the use of other methods of assessment. This circumstance requires the mandatory application of the program-target method together with other evaluation methods, rather than as an independent method of research.

Factor methods and models, including the use of correlation and regression analysis, can be used to determine the influence of factors on the main results of the activities of public administration bodies.

One of the main indicators of the quality and effectiveness of public administration is undoubtedly the degree of satisfaction of the population with the achieved results, therefore, to assess various aspects of the activities of public authorities can be used *sociological* methods of research by conducting surveys of citizens in order to identify their views on certain problems and results of the functioning of public administration and society as a whole.

CONCLUSIONS

Thus, the assessment of the effectiveness of public administration at all levels of the administrative hierarchy should be based on the application of an **comprehensive (integrated, complex) approach**, developed and proposed by the author in this study, due to the complexity and multidimensional nature of the managed object and involving the assessment of various types of efficiency using a set of methods and indicators.

The key principles that should be followed when evaluating the effectiveness of public administration were proposed. When developing specific indicators to assess the effectiveness of public administration bodies, one cannot limit oneself only to the quantitative values of individual indicators, just as it would be wrong to set the tasks of increasing individual indicators as directive and mandatory to achieve. Such actions may lead to the desire of the heads of state authorities to distort the final values of the achieved indicators in order to avoid accusations of inefficiency of their activities, or, which has even more detrimental consequences for citizens, to strive with all their might to achieve the set quantitative parameters to the detriment of the qualitative results of their activities and neglecting the **principles** of *common sense and rationality*. The latter should necessarily be the basis for the activities of any public administration bodies at all levels, as well as the principles of *flexibility, optimality and focus on the necessary and significant*, primarily for citizens and society, result. Thus, when setting quantitative values of certain indicators as target benchmarks, one should be guided primarily by the principles of optimality and “meaningful” performance, defining the result to be achieved in terms of its importance for society and calculating the optimal values to which one should aspire, as well as the boundaries to be adhered to in the course of subsequent activities. At the same time, the

established performance parameters should be subject to regular review and adjustment in accordance with the evolving conditions and circumstances subject to change, i.e. the entire evaluation system should be sufficiently *flexible* and *adaptive*.

To determine the **object** of evaluating the effectiveness of public administration, on which the choice of applied **indicators** and assessment **methods** depends, the classification of various **types** of public administration **effectiveness** according to different criteria was proposed in the paper.

In addition, the author proposed a **step-by-step** algorithm for applying the comprehensive methodological approach to assess the effectiveness of public administration, starting from the formulation of principles and determining the object of evaluation (depending on the type of effectiveness being evaluated), the formulation of the main and specific goals and objectives of the assessment, the selection of appropriate methods and indicators, and ending with the development of effective recommendations to improve the effectiveness of decisions taken by public authorities to ensure the solution of key tasks of public policy to improve the well-being of citizens.

The application of the comprehensive methodological approach to assessing the effectiveness of public administration, taking into account various aspects of the activities of public authorities (types of efficiency) and the use of a set of methods and indicators, as well as compliance with key evaluation principles, will allow to obtain a holistic systematic view of achieving the main goals and solving key tasks of public administration, to identify factors that favor and hinder the effective work of public authorities, identify possible vectors of further activity.

REFERENCES

- Abakumov, I. (2014). Methods of assessing the effectiveness of civil servants. *Socio-economic phenomena and processes*, 7, 5-10. (In Russ.).
- Alizhanova, Z. (2010). Evaluation of management efficiency in the public service system. *Sociology of Power*, 2, 195-202. (In Russ.). <https://cyberleninka.ru/article/n/otsenka-effektivnosti-upravleniya-v-sisteme-gosudarstvennoy-sluzhby/viewer>
- Atamanchuk, G. & Vasilevich, G. (2013). Theory of public administration: textbook, 3rd ed., revised. M. Omega-L Publishing House, 525 p. (In Russ.).
- Borshevskiy, G. (2012). Evaluation of the efficiency of state civil servants. *Management Sciences*, 2(3), 8-15. (In Russ.). <https://cyberleninka.ru/article/n/otsenka-effektivnosti-raboty-gosudarstvennyh-grazhdanskih-sluzhaschih/viewer>
- Bukhovets, T. (2022). Some aspects of assessing the effectiveness of local governance and self-governance. *Geographical and economic research in the context of sustainable development of the state and region: Proceedings of the IV International Scientific and Practical Conference in 2 volumes (Donetsk, November 10-11, 2022) / edited by E. G. Kosheleva, Donetsk: Izd-vo DONNU, (2)*, 82-84. (In Russ.). <https://istina.msu.ru/collections/546633182/>
- Hurmuz, N.D. (2018). Evaluation of the Effectiveness of the Modern System of Public Administration in Syria and the Possibility of Introducing Change Management. *Public Administration Issue, Special Issue II (electronic edition)*, pp. 107–118. DOI: 10.17323/1999-5431-2018-0-6-107-118
- Ilyin, V., & Shabunova, A. (2014). Sociological assessment of public administration efficiency. *Economic and social changes: facts, trends, forecast. 2* (32). 14-27. https://www.researchgate.net/publication/280779205_Sociological_assessment_of_public_administration_efficiency
- Kjurchiski, Nikola, Public Administration Efficiency in Resource Economies (May 2014). Available at SSRN: <https://ssrn.com/abstract=2440725> or <http://dx.doi.org/10.2139/ssrn.2440725>
- Klishch, N. (2007). Indicators of efficiency and effectiveness of professional service activity of state civil servants. *Modernization of the economy and the state, ed. by Yasin E., Book 1. - Moscow: Izd. Dom GU-HSE*, 316-324. (In Russ.).
- Longley, Robert (2022). What Is Public Administration? ThoughtCo. <https://www.thoughtco.com/public-administration-6822941>
- Nordhaus, W. D., & Yang, Z. (1996). A Regional Dynamic General-Equilibrium Model of Alternative Climate-Change Strategies. *The American Economic Review*, 86(4), 741–765. <http://www.jstor.org/stable/2118303>
- Nordhaus W. (2006). Geography and Macroeconomics: New Data and New Findings. *PNAS*, 103(10), 3510-3517. <https://doi.org/10.1073/pnas.0509842103>
- Nordhaus W. (2018). Evolution of Modeling of the Economics of Global Warming: Changes in the DICE Model, 1992-2017. *Climate Change*, 148(4), 623-640. DOI: 10.1007/s10584-018-2218-y
- Ohotskii E.V. (2014). Public administration: modernizing the current model of state management. *MGIMO Review of International Relations*, 3(36), 115-127. (In Russ.). <https://doi.org/10.24833/2071-8160-2014-3-36-115-127>
- Orlov, I. (2013). Modern theoretical and methodological doctrines (models) of state policy and management. *Problem analysis and state management design*, 4, 95-104. (In Russ.). <https://publications.hse.ru/pubs/share/folder/ij3s2np4tu/101932441.pdf>
- Per Bergling, Lars Bejstam, Jenny Ederlöv, Erik Wennerström, and Richard Zajac Sannerholm (2008). Rule of Law in Public Administration: Problems and Ways Ahead in Peace Building and Development: RESEARCH REPORT. Published by the Folke Bernadotte Academy, 116 p. https://fba.se/globalassets/rule_of_law_in_public_administration.pdf
- Radchenko, A. (2007). Fundamentals of state and municipal management: system approach: a textbook for students of higher educational institutions, studying in the specialty "State and municipal management", Ed. 3rd, rev. and supplement, Moscow, Rostov-on-Don, 605 p. ISBN 978-5-241-00817-6. (In Russ.).
- Romer P. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy*. 94(5), 1002-1037. <http://www.jstor.org/stable/1833190>
- Romer P. (1987). Crazy Explanations for the Productivity Slowdown. In: Stanley Fischer, editor. *NBER Macroeconomics Annual*, 2, 163-210. <http://www.nber.org/chapters/c11101.pdf>
- Romer, P. M. (1990). Endogenous Technological Change. *Journal of Political Economy*, 98(5), S71-S102. <http://www.jstor.org/stable/2937632>
- Romer P. (1993). Two Strategies for Economic Development: Using Ideas and Producing Ideas. *Proceedings of the World Bank Annual Conference of Development Economics 1992*. Washington, DC: World Bank, 63-91. https://docenti-deps.unisi.it/wp-content/uploads/sites/11/2018/09/Romer_1992.pdf
- Romer P. (2015). Matchiness in the Theory of Economic Growth. *American Economic Review*, 105(5), 89-93. <http://dx.doi.org/10.1257/aer.p20151066>
- Vasilenko, I. (2015). State and municipal management : textbook for academic bachelor degree, 6th ed., rev. and add. Moscow: Yurait Publishing House, 494 c. (In Russ.). <https://urait.ru/bcode/403625>
- Vasilyeva, E., Zerchaninova, T., & Ruchkin, A. (2016). Evaluation of the effectiveness of civil servants. *Management Consulting*, 4(88), 4-26. (In Russ.). <https://www.acjournal.ru/jour/article/view/296/297>
- Vetitnev, A., & Voloshchuk, P. (2016). The system for assessing the effectiveness of public civil servants: an analysis of Russian and foreign practice. *Vestnik PAPS*, 6 (57). 103-110. (In Russ.). <https://cyberleninka.ru/article/n/sistema-otsenki-effektivnosti-gosudarstvennyh-grazhdanskih-sluzhaschih-analiz-rossiyskoy-i-zarubezhnoy-praktiki.pdf>
- Vorobyev, V., & Maiboroda, T. (2018). Long-term economic growth: good, bad, optimal. *Belarusian Economic Journal*, 4, 15-34. (In Russ.). <http://edoc.bseu.by:8080/handle/edoc/76730>
- Ziebicki, B. (2013). Relations between organizational effectiveness and efficiency in public sector units. *Problems of management in the 21 century*, 8, 102-110. https://www.scientiasocialis.lt/pmc/files/pdf/102-110.Ziebicki_Vol.8.pdf
- Znamenskiy D.Yu., Gusarov A.V. (2020). Assessment of the effectiveness of public civil servants of the Russian Federation (theoretical and methodological foundations). *Vestnik Universiteta*, 2, 12-18. (In Russ.) <https://doi.org/10.26425/1816-4277-2020-2-12-18>

DETERMINANTS OF UNMET HEALTHCARE NEEDS IN THE EUROPEAN UNION COUNTRIES

DOI: <https://doi.org/10.36004/nier.es.2023.2-05>

JEL classification: I11, I12, I19

UDC: 614.2(4)

Tatiana GUTIUM

Doctor of Economic Sciences, Associate Professor,
National Institute for Economic Research, Academy of Economic Studies of Moldova

<https://orcid.org/0000-0002-8884-3269>

e-mail: gutium.tatiana1@gmail.com

Elmira GOJAEVA

Doctor of Philosophy in Economic Sciences, Azerbaijan State University of Economics

<https://orcid.org/0009-0008-1064-3209>

e-mail: elmira_qocayeva@unec.edu.az

Received 08 September 2023

Accepted for publication 27 november 2023

ACKNOWLEDGMENTS

The article was developed within the framework of Subprogram 030101, “Strengthening the resilience, competitiveness, and sustainability of the economy of the Republic of Moldova in the context of the accession process to the European Union,” institutional funding.

SUMMARY

The population's access to quality medical services is one of the indicators that reflects the country's level of development from a social perspective. The quality of life of citizens largely depends on their health status. No matter how wealthy a person may be, if they are ill, they cannot fully enjoy life. The rate of population aging in EU countries is high; with age, chronic diseases emerge, and the need for medical care increases. Therefore, the object of study, "unmet need for medical examination and care," remains relevant. The main objective of the study is to verify the hypothesis that the number of practicing doctors, dentists, and hospital beds influences the "unmet need for medical examination and care." By applying software EViews 9.5, the type of correlation between the endogenous variable "unmet need for medical examination and care" and the exogenous variables—the number of practicing doctors, dentists, and hospital beds—was established. Regression analysis was conducted to achieve the proposed goal. The indicator "unmet need for medical examination and care" suggests that dissatisfaction with medical services has increased in every second member state of the European Union over the past five years. However, in other EU countries, the number of satisfied individuals with the availability and quality of health services is increasing. In most EU countries, except for four, the number of hospital beds per hundred thousand inhabitants and hospitals has decreased in the last twelve years. Despite the surge in diseases during the COVID-19 pandemic, the downward trend persists. Thus, in some EU countries, there is a consistent downward trend in patient satisfaction with the accessibility and quality of medical care. The results obtained in this study support the hypothesis that the number of practicing doctors, dentists, and hospital beds influences the "unmet need for medical examination and care." It was also found that, compared to other countries, in the case of France, the regression coefficient between the number of doctors and the "unmet need for medical examination and care" is the largest (in absolute value).

Keywords: *unmet need for medical examination and care, access to health services, quality of healthcare services, inequality, healthy life years at birth (HALE), population well-being*

INTRODUCTION

In 2021, more than half of the world's population (4.5 billion people) lacked full access to essential medical services. One in four individuals could not afford medical services, and one in six individuals, even if they could pay for medical services, risked losing their livelihood (WHO, 2023). Older people are often faced with the dilemma of choosing between buying food and paying for medical services. Therefore, the availability of medical services, as the subject of this study, remains relevant in modern realities. Timely diagnosis and the prompt provision of medical care are crucial as they contribute to the improvement of health status, reduce the duration of illness and rehabilitation, and prevent premature disability and mortality. The availability of medical assistance is the focus of research in this article. The main objective of the study is to verify the hypothesis that the number of practicing doctors, dentists, and hospital beds influences the "unmet need for medical examination and care" (UNMEC).

The introduction of a private health system has resulted in the migration of experienced doctors from state

hospitals and clinics to private medical facilities. The energy crisis and high inflation have led to a decline in the standard of living for a portion of the European population. Consequently, the number of citizens unable to afford paid medical services has increased. Consequently, there is a consistent trend of decreasing population access to medical care and quality medical services in some EU countries. The public health level is contingent upon the performance of the healthcare system. An examination of the socio-economic policies of European Union countries reveals that nations with robust economies are implementing a wide range of healthcare reforms to enhance the efficiency of medical services.

For the first time, this work evaluates the availability of medical services by approaching the issue from a different angle and utilizing the UNMEC indicator as an endogenous variable. The novelty of this study lies in its identification of the main factors contributing to an increase in the UNMEC.

LITERATURE REVIEW

Researchers use various methods and concepts in assessing the availability of medical services. Vasilios Raftopoulos believes patient satisfaction is dominant in providing and improving health care quality. In developing grounded theory, he assumed that older patients are the primary users of health care services. The main research method was triangulation (in-depth interviews, focus groups, and direct observation) (Raftopoulos, 2005). Abbas Al-Refaie used a structural model to study the factors influencing patient satisfaction

with the quality of hospital services (Al-Refaie, 2013). Another commonly used method is multivariate logistic regression. Tamara Chambers-Richards, Batholomew Chireh, and Carl D'Arcy used this method to analyze multivariate predictors of patient satisfaction (Chambers-Richards et al., 2022). The number of predictors varies across studies. However, not all are statistically significant, even when a relatively large number of predictors are examined. Alina Abidova, Pedro Alcântara da Silva, and Sérgio Moreira analyzed

18 predictors of patient satisfaction in emergency care. According to the results, only three of these eighteen predictors have a statistically significant relationship with patient satisfaction: overall satisfaction with doctors, qualitative perceived waiting time for triage, and meeting expectations. These scientists also showed that only two of these eighteen predictors have a statistically significant relationship with the perceived quality of healthcare: overall satisfaction with doctors and meeting expectations (Abidova et al., 2020).

The population's quality of life (QL) directly depends on the availability of medical services and their quality. The correlation between quality of care (QC) and QL is positive. However, it may be either weak (Alonazi & Thomas, 2014) or significant depending on the country, the welfare of the patients, and the historical

period. German researchers Linda Baumbach and her colleagues consider that patients who are more satisfied with their medical care, compared with less confident patients, rate their quality of life as higher. The self-rated health of these patients is also comparatively higher. The main conclusion reached by the researchers is that patient satisfaction with medical care reflects both the quality of medical services and the quality of life (Baumbach et al., 2023).

Most studies on this topic are based on survey results. Few works use regression analysis and economic-mathematical modeling of statistical data. Of the models listed in Table 1, all but the first are based on survey data. There is insufficient data to build a model of patient satisfaction with the healthcare system.

Table 1.

Variables of some models of patient satisfaction with the healthcare system

Endogenous variable	Exogenous variables	Data	Scientific sources
Degree of patient satisfaction	Gross domestic product (GDP) per capita, expenditures on health (% GDP), unemployment rate, people above the age of 65 years old (% total population), number of physicians per 100,000 habitants, number of nurses per 100,000 habitants, and number of hospital beds per 100,000 habitants (Xesfingi & Vozikis, 2016).	Four years, 2007, 2008, 2009, and 2012. 22 European countries (88 observations divided by four years)	S. Xesfingi and A.Vozikis (2016)
Overall Patient Satisfaction	Service Quality Dimensions: assurance, reliability, tangibles, responsiveness, and empathy (Al-Damen, 2017).	August 2016 to January 2017. Four hundred forty-eight outpatient participants.	Rula Al-Damen (2017)
Patient Satisfaction	Access to care, costs of medical care, quality of care received, sociodemographic characteristics of patients (age, residency, income, etc.), and health service features (Zhang et al., 2020).	2007-2010 years. 5774 responses.	Hao Zhang, Wenhua Wang, Jeannie Haggerty and Tibor Schuster (2020)
Patient Satisfaction, Patient Loyalty	Perceived healthcare service quality: reliability, assurance, tangibles, empathy, responsiveness (Aladwan et al., 2021).	Four hundred patients of Jordan Mafraq Hospital.	Mohammad Abdallah Aladwan, Hayatul Safrah Salleh, Marhana Mohamed Anuar, Hosaam ALhwadi and Islam Almomani (2021)
Level of outpatient satisfaction	Socio-demographic factors (age, gender, education, nationality, etc.), speed of service, clinical and laboratory tests, and impressions of medical services (nursing care, administrative, and general service) (Theofilou, 2022).	May - June 2019. Thirty-six men and twenty-seven women.	Paraskevi Theofilou (2022)
Patient Satisfaction	Age categories, sex, marital status, educational level, income status, unmet health care needs, general life satisfaction, availability of provincial care, quality of care received, most recent patient, and physician type.	2010 year. Six thousand three hundred thirty-five respondents with neurological conditions.	Tamara Chambers-Richards, Batholomew Chireh and Carl D'Arcy (2022)
Patients' satisfaction with nursing care	Age, marital status, region, department, income, type of medical insurance, caring, trust, and professional ethics (Guo et al., 2022).	Twenty-nine thousand one hundred eight patients from 107 hospitals in China	Shujie Guo, Yulan Chang, Hongwei Chang, Xiaoxiao He, Qiuxue Zhang, Baoyun Song and Yilan Liu (2022)

Source: Systematization by authors

Many researchers argue that increased healthcare spending leads to increased patient satisfaction (Kringos et al., 2013), and healthcare expenditure, in turn, is related to GDP per capita. Not only real GDP per capita directly impacts “Patient Satisfaction with accessibility

and quality of medical care,” but also social exclusion, poverty, and material and social deprivation impact the endogenous variable (Gutium et al., 2023). Medical deprivation is an integral part of social deprivation.

DATA SOURCES AND USED METHODS

The availability of databases limits research. “Long-term spatial samples, where each object (individuals, firms, households) is observed many times over some time, are called panel data” (Ratnicova, 2006, p. 267). Any experienced researcher knows that Eurostat only provides time series; therefore, the panel data method cannot be applied.

Regression analysis is the primary method used to test the hypothesis that the number of practicing doctors, dentists, and hospital beds influence the UNMEC. The comparative analysis method was used to compare the dynamics of several indicators reflecting UNMEC, NALE, healthcare expenditure, etc., in EU countries to identify common characteristics and differences.

Using software EViews 9.5, regression equations for UNMEC were constructed, and influencing factors were identified. The study’s subject is the European Union countries. Data from Eurostat for 2010-2021 were used to build the models since not all indicators and countries have data for 2022. The definition, calculation methodology, and data on “self-reported unmet need for medical examination and care” are presented by Eurostat at <https://ec.europa.eu/eurostat/web/health/database>. The endogenous and exogenous variables of regression equations for EU countries are presented in Table 2. The significance level was 5% and 10% when testing the developed regression equations.

Table 2.
Endogenous and exogenous variables

Designation	Endogenous variable	Unit of measure
<i>unmet</i>	Unmet need for medical examination and care (UNMEC)	Percentage
Designation	Exogenous variable	Unit of measure
<i>doc</i>	Practicing physicians	Per hundred thousand inhabitants
<i>dentist</i>	Practicing dentists	Per hundred thousand inhabitants
<i>bed</i>	Hospital beds	Per hundred thousand inhabitants
<i>d1x</i>	Dummy variables	It takes value 1 in 201x; it takes value 0 in the rest years

Source: Systematization by authors

Although regression analysis was applied to all EU countries, the article presents only part of the results. The main selection criterion was relevance for developing measures to increase satisfaction with the need for medical examination and care. For example, the choice fell on Bulgaria, Latvia, and Romania since, in these

countries, the indicator UNMEC dropped significantly over the analyzed period. The results of a study of some countries with a high level of healthy life years at birth are also presented since healthcare is more developed in these countries.

SELECTION OF THE EUROPEAN UNION COUNTRIES TO IDENTIFY FACTORS INFLUENCING THE AVAILABILITY AND QUALITY OF MEDICAL SERVICES

In most countries that promote policies to improve and strengthen public health, the goals of increasing the birth rate, reducing mortality, and increasing the life expectancy of citizens are established. Unfortunately, the issue of accessibility and quality of medical services is often either ignored or not given sufficient attention. When formulating strategies and programs to develop the healthcare system, it is crucial to recognize that an

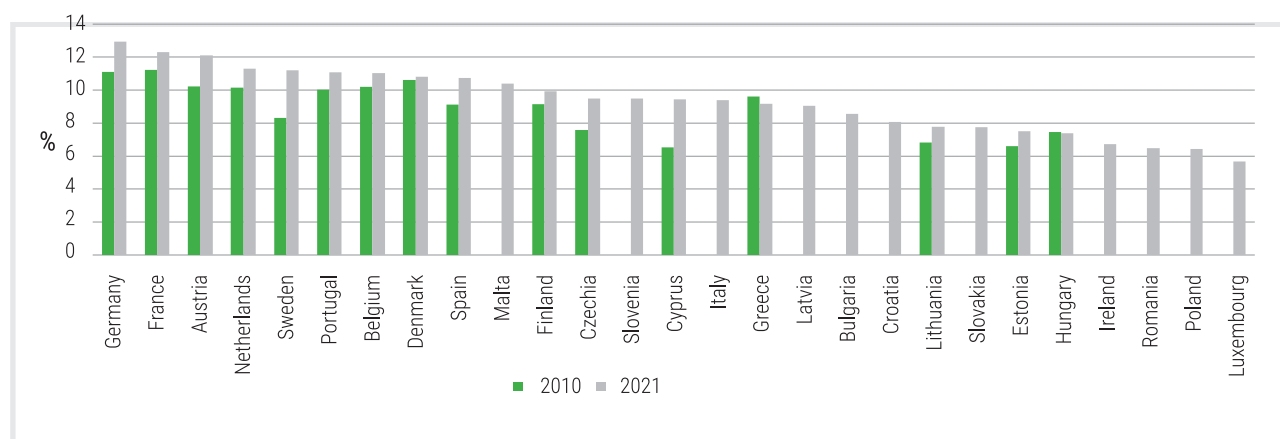
increase in healthcare expenditure only occasionally guarantees an improvement in the quality of medical services, although investment is indispensable for achieving tangible results. One of the criteria we use for selecting the European Union countries to be analyzed is the share of healthcare expenditures in Gross Domestic Product (GDP) and the growth of this indicator.

The top five countries with the highest share of healthcare expenditures in GDP (in 2021) are Germany (12.93%), France (12.30%), Austria (12.10%), Netherlands (11.29%), and Sweden (11.20%). The most

significant increase for 2010-2021 was recorded in Cyprus (2.91 percentage points), Sweden (2.88 p.p.), Czechia (1.90 p.p.), Austria (1.88 p.p.), and Germany (1.83 p.p.) (Figure 1).

Figure 1.

Share of total healthcare expenditure in GDP in the European Union countries



Source: Eurostat (Eurostat, 2023)

Note: Data for 2010 are missing for the following countries: Malta, Slovenia, Italy, Latvia, Bulgaria, Croatia, Slovakia, Ireland, Romania, Poland, and Luxembourg.

Other criteria for selecting the European Union countries are healthy life years at birth and the growth of this indicator. Among the countries noted when applying the first criterion, two countries were in the

top five countries with the highest healthy life years at birth in 2010: Sweden (68.4) and France (66.2), and the highest increase during 2010-2021 was recorded in Germany (7.3) and France (3.6) (Figure 2).

Figure 2.

Healthy life years at birth in the European Union countries



Source: Eurostat (Eurostat, 2023)

Note: Data for 2010 are missing for Italy

Healthy life years at birth in the Czech Republic fell by 1.3 years in 2010-2021 and in the Netherlands by 0.4 years. The results of applying all the listed criteria are shown in Table 3. Germany, Sweden, Austria, and

France are the first four selected countries that meet most of the requirements and will be used to identify the main factors influencing UNMEC.

Table 3.

Top the European Union countries by criteria

Country	The highest share of healthcare expenditures in GDP (2021)	The highest growth of the share of healthcare expenditures in GDP (2010-2021)	The highest healthy life years at birth (2021)	The highest growth of healthy life years at birth (2010-2021)
Germany	+	+	-	+
France	+	-	+	+
Austria	+	+	-	-
Netherlands	+	-	-	-
Sweden	+	+	+	-
Cyprus	-	+	-	-
Czechia	-	+	-	-
Malta	-	-	+	-
Italy	-	-	+	-
Ireland	-	-	+	-
Slovenia	-	-	-	+
Hungary	-	-	-	+
Slovakia	-	-	-	+

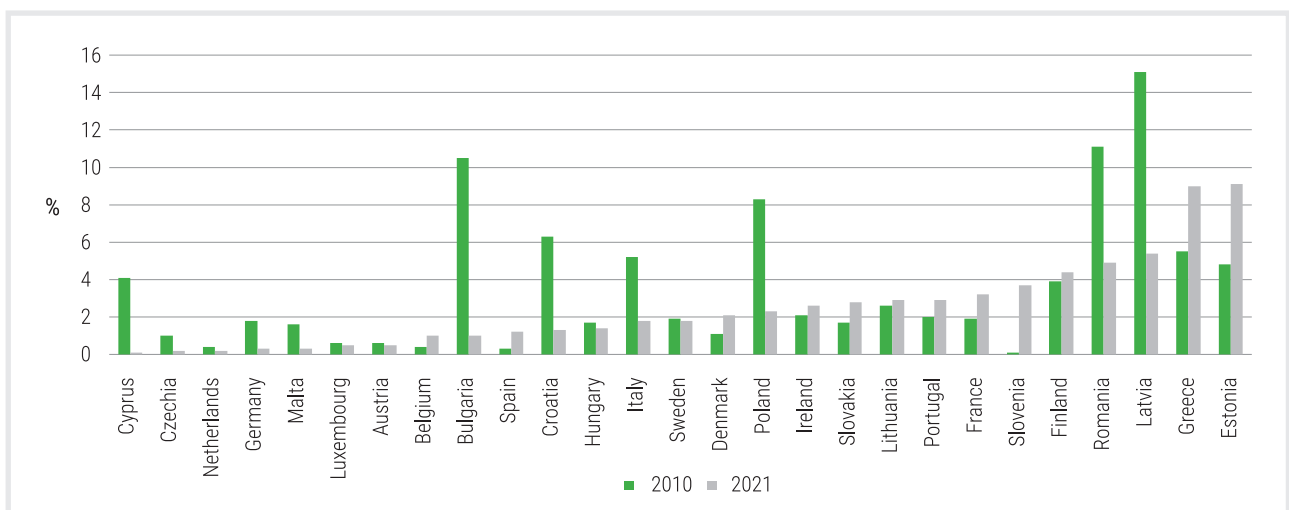
Source: Systematization by authors

Although Austria meets only two of the four criteria, since it, together with Germany, is among the top European Union countries with the lowest level of UNMEC (Figure

3), it was included in the list of countries studied to identify the main factors influencing the availability and quality of medical services.

Figure 3.

Unmet need for medical examination and care in the European Union countries



Source: Eurostat (Eurostat, 2023)

The criterion of decreasing the UNMEC was used to identify the other three countries. During 2010-2022, UNMEC dropped in Latvia by 9.7 percentage points, Bulgaria by 9.5 p.p., and Romania by 6.2 p.p. So, the

selection of European Union countries to identify factors influencing the availability and quality of medical services are Germany, Sweden, Austria, France, Latvia, Bulgaria, and Romania.

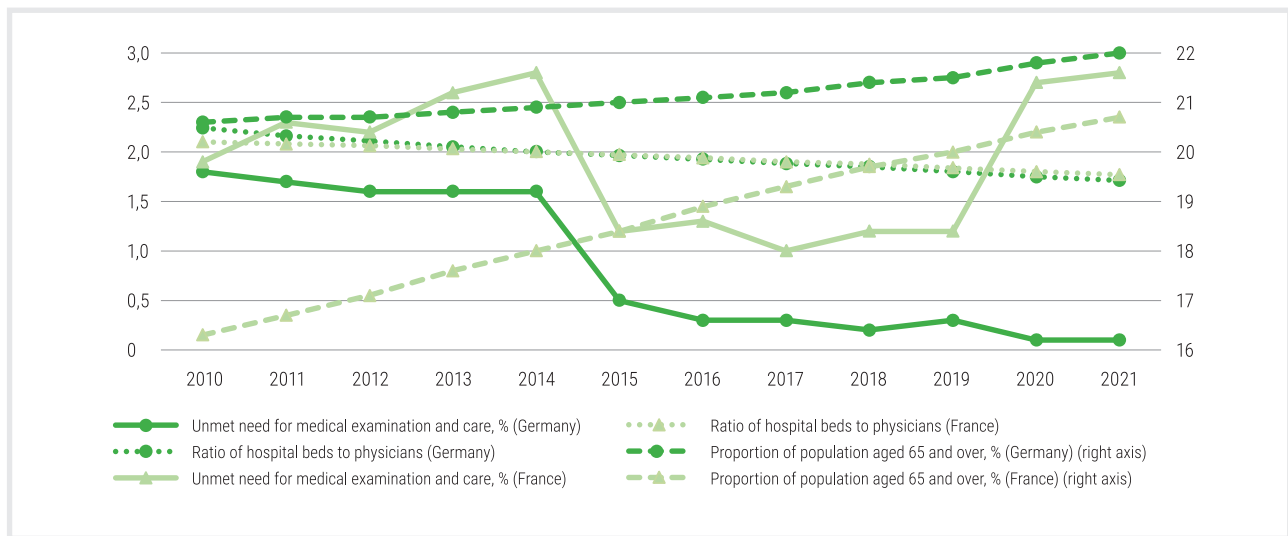
IDENTIFYING FACTORS INFLUENCING UNMET NEEDS FOR MEDICAL EXAMINATION AND CARE IN THE EUROPEAN UNION COUNTRIES

The proportion of the population aged 65 and over is increasing in Germany and France, and the ratio of hospital beds to physicians is decreasing. However, the evolution of

UNMEC differs (Figure 4). The value of this indicator in 2021 compared to 2010 fell in Germany by 1.7 percentage points and increased in France by almost one p.p.

Figure 4.

Evolution of “unmet need for medical examination and care” and other indicators in Germany and France



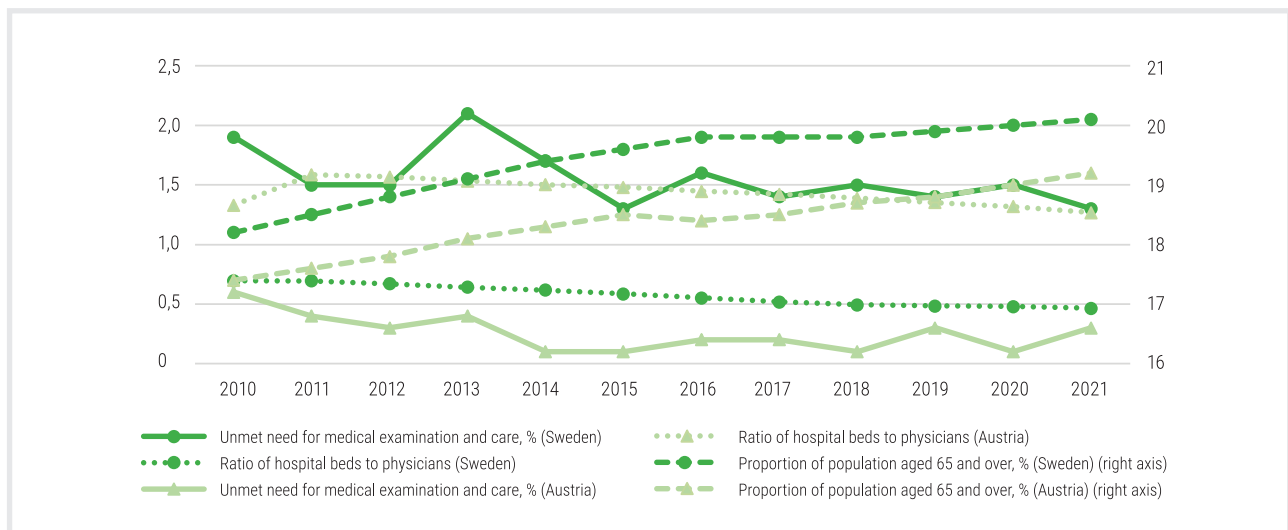
Source: elaborated by authors using Eurostat’s database (Eurostat,2023)

The trends in the studied indicators are identical in Austria and Sweden: the population aged 65 and over has

increased, the UNMEC has fallen, and the ratio of hospital beds to physicians has fallen (Figure 5).

Figure 5.

Evolution of “unmet need for medical examination and care” and other indicators in Sweden and Austria



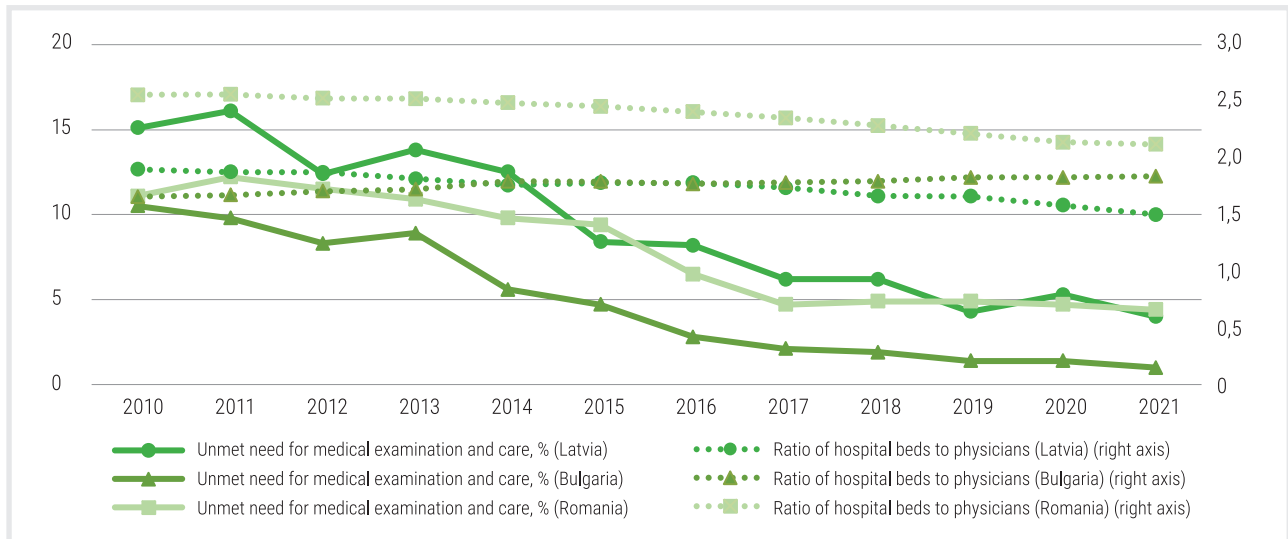
Source: elaborated by authors using Eurostat’s database (Eurostat, 2023)

Identical trends were recorded in Latvia, Bulgaria, and Romania, except for an increase in the ratio of hospital beds to physicians in Bulgaria (Figure 6). Thus, the comparative analysis of the dynamics of the UNMEC

and the ratio of hospital beds to physicians does not answer whether there is a correlation between these indicators.

Figure 6.

Evolution of “unmet need for medical examination and care” and the ratio of hospital beds to physicians in Latvia, Bulgaria, and Romania



Source: elaborated by authors using Eurostat’s database (Eurostat,2023)

The following regression equations were developed to test the hypothesis that the number of practicing

doctors, dentists, and hospital beds influence the UNMEC (Table 4).

Table 4.

Regression equations

Country	Regression equations	R-squared
Germany	$unmet = -80.432 + 0.076 \times doc - 0.364 \times dentist + 0.099 \times bed$ (1)	0.966
Austria	$unmet = -0.008 \times doc + 0.107 \times dentist - 0.002 \times bed$ (2)	0.760
France	$unmet = -0.403 \times doc + 2.175 \times dentist - 0.014 \times bed + 1.740 \times d14$ (3)	0.767
Latvia	$unmet = -1.052 \times dentist + 0.150 \times bed$ (4)	0.777
Bulgaria	$unmet = 68.856 - 0.081 \times doc - 0.310 \times dentist + 2.323 \times d13 =$ (5)	0.989
Romania	$\ln(unmet) = -5.403 \times \ln(doc) + 4.990 \times \ln(bed)$ (6)	0.851

Source: authors’ computations using EViews 9.5

In the case of Sweden, neither the number of practicing physicians nor the number of hospital beds influence

patient satisfaction with accessibility and quality of medical care (Table 5).

Table 5.

Testing the null hypothesis H0 that the regression parameters are equal to zero (case Sweden)

	Variables	$unmet = b_1 \times doc + b_2 \times dentist + b_3 \times bed$			
		Coefficient (bi)	Standard error	t-value	p-value
1	doc	0.000972	0.009013	0.107825	0.9165
2	dentist	-0.003173	0.076301	-0.041590	0.9677
3	bed	0.005965	0.010433	0.571758	0.5815

Source: authors’ computations using EViews 9.5

Table 6 represents the results of testing H_0 for regression equations (1-6) for which the regression parameters are equal to zero.

Table 6.

Testing the null hypothesis that the regression parameters are equal to zero

Variables	Germany: $unmet = -80.432 + 0.076 \times doc - 0.364 \times dentist + 0.099 \times bed$		
	Standard error	t-value	p-value
c	15.70548	-5.121297	0.0009
doc	0.016398	4.652000	0.0016
dentist	0.085407	-4.259686	0.0028
bed	0.015612	6.351283	0.0002
Austria: $unmet = -0.008 \times doc + 0.107 \times dentist - 0.002 \times bed$			
doc	0.002103	-3.949467	0.0034
dentist	0.024358	4.405025	0.0017
bed	0.000797	-2.800237	0.0207
France: $unmet = -0.403 \times doc + 2.175 \times dentist - 0.014 \times bed + 1.740 \times d14$			
doc	0.101390	-3.971755	0.0041
dentist	0.541254	4.018768	0.0038
bed	0.005421	-2.563651	0.0335
d14	0.512371	3.395690	0.0094
Latvia: $unmet = -1.052 \times dentist + 0.150 \times bed$			
dentist	0.199483	-5.272739	0.0004
bed	0.025281	5.936750	0.0001
Bulgaria: $unmet = 68.856 - 0.081 \times doc - 0.310 \times dentist + 2.323 \times d13$			
c	4.307022	15.98691	0.0000
doc	0.027721	-2.929911	0.0190
dentist	0.078269	-3.965466	0.0041
d13	0.482255	4.816495	0.0013
Romania: $\ln(unmet) = -5.403 \times \ln(doc) + 4.990 \times \ln(bed)$			
$\ln(doc)$	0.695422	-7.769409	0.0000
$\ln(bed)$	0.603034	8.274353	0.0000

Source: authors' computations using EViews 9.5

Using the Breusch-Godfrey Serial Correlation LM test, the null hypothesis, that there is no autocorrelation of errors, was verified for equations (1-6) up to lag 2 (Table

7). The results of this test allow us to accept the null hypothesis for regression equations (1-5) but not for equation (6).

Table 7.

Breusch-Godfrey Serial Correlation LM test results

Variables	Germany: $unmet = -80.432 + 0.076 \times doc - 0.364 \times dentist + 0.099 \times bed$		
	Standard error	t-value	p-value
resid(-1)	0.412012	-0.915363	0.3953
resid(-2)	0.442189	-1.572106	0.1670
Austria: $unmet = -0.008 \times doc + 0.107 \times dentist - 0.002 \times bed$			
resid(-1)	0.384122	-1.435985	0.1941
resid(-2)	0.438113	-0.220251	0.8320

Variables	Standard error	t-value	p-value
France: $unmet = -0.403 \times doc + 2.175 \times dentist - 0.014 \times bed + 1.740 \times d14$			
resid(-1)	0.483662	-0.520821	0.6211
resid(-2)	0.521841	-0.609103	0.5648
Latvia: $unmet = -1.052 \times dentist + 0.150 \times bed$			
resid(-1)	0.374385	1.155732	0.2811
resid(-2)	0.439239	0.023852	0.9816
Bulgaria: $unmet = 68.856 - 0.081 \times doc - 0.310 \times dentist + 2.323 \times d13$			
resid(-1)	0.495188	-0.372576	0.7223
resid(-2)	0.645567	-0.453706	0.6660
Romania: $\ln(unmet) = -5.403 \times \ln(doc) + 4.990 \times \ln(bed)$			
resid(-1)	0.266058	3.873535	0.0047
resid(-2)	0.392596	-2.061117	0.0849

Source: authors' computations using EViews 9.5

The regression equation was modified, considering the errors' autocorrelation. In the case of Romania, the ARMA Maximum Likelihood method was applied, and the following equation was obtained:

$$\ln(unmet) = -5.696 \times \ln(doc) + 5.241 \times \ln(bed) + [AR(1) = 0.95, AR(2) = -0.66, UNCOND] \quad (7)$$

$$R^2 = 0.948$$

The Breusch-Pagan-Godfrey test was applied to check whether heteroscedasticity or homoscedasticity of errors occurs. The test results showed that the null hypothesis is valid, and the regression errors in regression equations (1-6) are homoscedastic (Table 8).

Table 8.

Breusch-Pagan-Godfrey test results

Germany: $unmet = -80.432 + 0.076 \times doc - 0.364 \times dentist + 0.099 \times bed$			
F-statistic	0.619292	Prob. F (3,8)	0.6219
Obs*R-squared	2.261595	Prob. Chi-Square (3)	0.5199
Scaled explained SS	0.531006	Prob. Chi-Square (3)	0.9120
Austria: $unmet = -0.008 \times doc + 0.107 \times dentist - 0.002 \times bed$			
F-statistic	1.840254	Prob. F (3,8)	0.2180
Obs*R-squared	4.899808	Prob. Chi-Square (3)	0.1793
Scaled explained SS	1.563951	Prob. Chi-Square (3)	0.6676
France: $unmet = -0.403 \times doc + 2.175 \times dentist - 0.014 \times bed + 1.740 \times d14$			
F-statistic	0.551682	Prob. F (4,7)	0.7047
Obs*R-squared	2.876239	Prob. Chi-Square (4)	0.5787
Scaled explained SS	0.873376	Prob. Chi-Square (4)	0.9283
Latvia: $unmet = -1.052 \times dentist + 0.150 \times bed$			
F-statistic	1.015158	Prob. F (2,9)	0.4004
Obs*R-squared	2.208802	Prob. Chi-Square (2)	0.3314
Scaled explained SS	0.245171	Prob. Chi-Square (2)	0.8846
Bulgaria: $unmet = 68.856 - 0.081 \times doc - 0.310 \times dentist + 2.323 \times d13$			
F-statistic	0.561208	Prob. F (3,8)	0.6555
Obs*R-squared	2.086357	Prob. Chi-Square (3)	0.5547
Scaled explained SS	0.522978	Prob. Chi-Square (3)	0.9138

Romania: $\ln(\text{unmet}) = -5.403 \times \ln(\text{doc}) + 4.990 \times \ln(\text{bed})$			
<i>F</i> -statistic	0.418314	<i>Prob. F</i> (2,9)	0.6703
<i>Obs</i> * <i>R</i> -squared	1.020627	<i>Prob. Chi-Square</i> (2)	0.6003
<i>Scaled explained SS</i>	0.867863	<i>Prob. Chi-Square</i> (2)	0.6480

Source: authors' computations using EViews 9.5

The correlation coefficient between the exogenous variable “number of practicing physicians per hundred thousand inhabitants” and the endogenous variable UNMEC is negative in most of the analyzed countries, indicating the need to increase the number of doctors in France, Bulgaria, and Romania to improve the availability of medical services. In the case of Austria, this coefficient is insignificant (0.008).

From 2010 to 2021, in Germany, the number of doctors increased by 20.92%, reaching 453.22 doctors per hundred thousand inhabitants. According to equation 1, this led to a 5.96 percentage point increase in UNMEC. This is attributed to the fact that German citizens were surveyed, and doctors in German private clinics serve not only German citizens but also many wealthy clients from other countries. The developed regression equation reflects the specifics of the German healthcare system, which differs from countries such as Romania and Bulgaria.

The energy crisis severely impacted European countries, including the German economy, leading to the bankruptcy of enterprises. Some German entrepreneurs relocated their businesses to other countries, including the United States, to avoid bankruptcy. These circumstances,

combined with inflation, have increased unemployment and impoverished the population, including the middle class, which cannot afford quality services from private clinics due to their high costs.

During the analyzed period, the number of hospital beds per hundred thousand inhabitants decreased in all EU countries except Bulgaria, Romania, Ireland, and Portugal. This reduction had varying effects on different EU countries. In Austria and France, a decrease in the exogenous variable “number of hospital beds per hundred thousand inhabitants” led to an increase in UNMEC. In the case of Germany and Latvia, the correlation coefficient is positive, indicating a direct relationship between these variables.

Medical tourism is common in Germany, with hospitals receiving over €1.2 billion annually from medical travelers and treating around a quarter of a million patients on average. Germany is preferred over the USA for medical tourism, mainly due to lower tariffs for medical services. In the US, tariffs are twice as high as in Germany (VisitWorld, 2022). In these countries, when choosing how to pay health care providers, the main criterion is ensuring the profitability of the bed, which has contributed to a decrease in days of hospitalization.

CONCLUSIONS AND RECOMMENDATIONS

The tested hypothesis was confirmed. A study of the relationship between UNMEC and healthcare indicators revealed that in most analyzed EU countries (with few exceptions), the endogenous variable is significantly influenced by the following independent variables: the number of practicing physicians per hundred thousand inhabitants, the number of practicing dentists per hundred thousand inhabitants, and the number of hospital beds per hundred thousand inhabitants.

When developing strategies and programs to enhance the accessibility and quality of medical services, it is crucial to draw insights from leading EU countries. Germany, Austria, Sweden, and France uphold high healthcare standards and employ innovative treatment methods. However, Germany attracts the main influx of medical tourism due to its high-quality medical services, skilled doctors, and shorter waiting times in clinics compared to many other countries. In France, Austria, and other European nations, the waiting time to schedule an appointment with a doctor is longer than in Germany. Germany could potentially decrease the

UNMEC by reducing income inequality and increasing total healthcare expenditure per inhabitant.

The primary advantages of the Austrian healthcare system include the coverage of the state health insurance program for nearly the entire population and the high quality of medical services within the public sector. While doctors' professionalism is commendable, some highly qualified specialists exclusively provide medical services in private medical institutions. Other drawbacks of the healthcare system include long waiting times and high congestion in public healthcare facilities. To enhance the availability of medical services for the Austrian population, it is imperative to improve overall well-being so that most citizens can access both public and private clinic services. Additionally, measures should be taken to reduce the “at-risk-of-poverty rate” and income inequality.

Sweden, akin to Germany and Austria, boasts a high level of healthcare, contributing to one of the highest levels of healthy life expectancy in the European Union for its

citizens. Although the overall accessibility of medical care is high, it remains low in remote regions. Another issue is the lengthy waiting times for elective surgery, which does not guarantee timely surgical intervention.

The French healthcare system is characterized by highly qualified medical personnel, reasonable prices, and personalized care. French doctors are compelled to uphold

their qualifications and minimize errors since even minor complaints can result in the revocation of their license.

Despite significant decreases in UNMEC during the analyzed period in Bulgaria, Latvia, and Romania, these countries must persist in enhancing their medical systems and implementing the advantageous practices observed in Germany, Austria, France, and Sweden.

REFERENCES

- Abidova, A., Alcântara da Silva, Pedro & Moreira, S. (2020). Predictors of Patient Satisfaction and the Perceived Quality of Healthcare in an Emergency Department in Portugal. *The Western Journal of Emergency Medicine*, 21(2), 391–403. <https://doi.org/10.5811/westjem.2019.9.44667>
- Aladwan, M.A., Salleh, H.S., Anuar, M.M., ALhwadi, H., & Almomani, I. (2021). The relationship among service quality, patient satisfaction and patient loyalty: case study in Jordan Mafraq hospital. *Linguistics and Culture Review*, 5(S3), 27–40. <https://doi.org/10.21744/linguere.v5nS3.1368>
- Al-Damen, R. (2017). Health Care Service Quality and Its Impact on Patient Satisfaction “Case of Al-Bashir Hospital.” *International Journal of Business and Management*, 12(9), 136–152. <https://doi.org/10.5539/ijbm.v12n9p136>
- Alonazi, W.B., & Thomas, S.A. (2014). Quality of Care and Quality of Life: Convergence or Divergence? *Health Services Insights*, 7, 1-12. <https://doi.org/10.4137/HSI.S13283>
- Al-Refai, A. (2013). A structural model to investigate factors that affect patient satisfaction and revisit intention in Jordanian hospitals. In: G.D. Magoulas (Ed.), *Investigations into Living Systems, Artificial Life, and Real-World Solutions* (pp. 136–147). Hershey, PA: IGI Global. <https://doi.org/10.4018/jalr.2011100105>
- Baumbach, L., Frese, M., Härter, M., König, H.H., & Hajek, A. (2023). Patients Satisfied with Care Report Better Quality of Life and Self-Rated Health-Cross-Sectional Findings Based on Hospital Quality Data. *Healthcare (Basel)*, 11(5), 775. <https://doi.org/10.3390/healthcare11050775>
- Chambers-Richards, T., Chireh, B., & D’Arcy, C. (2022). Unmet health care needs: factors predicting satisfaction with health care services among community-dwelling Canadians living with neurological conditions. *BioMed Central Health Services Research*, 22, 1256. <https://doi.org/10.1186/s12913-022-08611-0>
- Eurostat. (2023). *Health*. Eurostat Statistics Explained. <https://ec.europa.eu/eurostat/web/health/database>
- Guo, S., Chang, Y., Chang, H., He, X., Zhang, Q., Song, B. and Liu, Y. (2022). Patient satisfaction with nurses’ care is positively related to the nurse-patient relationship in Chinese hospitals: A multicentre study. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.1109313>
- Gutium, T., Gojaeva, E., & Huseynova, S. (2023). Social exclusion and poverty in the European Union and candidate countries. *Cogito Multidisciplinary Research Journal*, XV (2), 124-145.
- Kringos, D., Boerma, W., Van der Zee, J., & Groenewegen, P. (2013). Europe’s strong primary care systems are linked to better population health and higher health spending. *Health Affairs*, 32(4), 686-694. <https://doi.org/10.1377/hlthaff.2012.1242>
- Raftopoulos, V. (2005). A grounded theory for patients’ satisfaction with quality of hospital care. *ICUs & Nursing Web Journal*, 22, 1-15. <https://hdl.handle.net/20.500.14279/1933>
- Ratnikova, T. (2006). Introduction to econometric analysis of panel data. *Economic Journal of Higher School of Economics*, 2, 267–316. (In Russ.). https://ej.hse.ru/data/2010/12/31/1208183686/10_02_06.pdf
- Theofilou, P. (2022). Investigation of Outpatient Satisfaction in a General Hospital: The Effect of Socio-demographic Factors. *World Journal of Nursing Research*, 2(1), 11–20. <https://doi.org/10.31586/wjnr.2022.435>
- VisitWorld.Today. (2022). Medical tourism in Germany: health insurance for foreigners and how to go for treatment. VisitWorld Today. <https://visitworld.today/ru>
- WHO. (2023). *Billions left behind on the path to universal health coverage*. World Health Organization. <https://www.who.int/news/item/18-09-2023-billions-left-behind-on-the-path-to-universal-health-coverage>
- Xesfingi, S., & Vozikis, A. (2016). Patient satisfaction with the healthcare system: Assessing the impact of socio-economic and healthcare provision factors. *BioMed Central Health Services Research*, 16(94). <https://doi.org/10.1186/s12913-016-1327-4>
- Zhang, H., Wang, W., Haggerty, J., & Schuster, T. (2020). Predictors of patient satisfaction and outpatient health services in China: evidence from the WHO SAGE survey. (4), 465–472. <https://doi.org/10.1093/fampra/cmaa011>

MIGRATION, REMITTANCES, AND LOCAL DEVELOPMENT IN MOLDOVA

DOI: <https://doi.org/10.36004/nier.es.2023.2-06>

JEL Classification: F22, F24, R58, H71, Q19

UDC: 314.15+339.727.2](478)

Vitalie STIRBA

Scientific researcher, National Institute for Economic Research, Academy of Economic Studies of Moldova
PhD Student, Department of Demography and Geodemography, Charles University, Czechia

<https://orcid.org/0000-0001-5948-6509>

e-mail: vitalie.stirba@ccd.ince.md

Alexandru STRATAN

Corresponding Member of ASM, Dr. hab., Prof., Department of Management and Entrepreneurship, Faculty of Business Administration, Academy of Economic Studies of Moldova

<https://orcid.org/0000-0001-7086-8604>

e-mail: alex_stratan@yahoo.com

Eugenia LUCASENCO

Scientific researcher, National Institute for Economic Research, Academy of Economic Studies of Moldova

<https://orcid.org/0000-0002-5032-7963>

e-mail: eugenia_lucasenco@yahoo.com

Received 5 september 2023

Accepted for publication 20 december 2023

ACKNOWLEDGMENTS

The study was possible to carry out thanks to the European Union's Horizon 2020 research and innovation programme under grant agreement No 822730 for funding the work under the project entitled "AGRUMIG project – 'Leaving something behind' – Migration governance and agricultural & rural change in 'home' communities: Comparative experience from Europe, Asia and Africa".

SUMMARY

Remittances and know-how transfer play a significant role in economic development in countries with high out-migration, and Moldova, in this regard, has been abundantly studied. In our research, we tried to assess the influence of remittances and knowledge transfer on local development from the point of view of migrants' families, local entrepreneurs, and stakeholders. We used the empirical data from a nationwide survey of 608 rural households whose members experienced international migration and from the interviews with stakeholders and focus groups with farmers' attendees. The results revealed that remittances often support the household's budget, covering the salary gap and contributing to the initiation of local businesses. To encourage the investment of remittances in local infrastructure and entrepreneurship, the government launched several programs that aim to subsidize migrants' business incentives. However, the results show that migrants prefer to invest in improving living conditions and are more reluctant to invest in their own businesses, either because of the lack of a market or because of institutional mistrust. The local authorities acknowledge the importance of remittances on local development, but at the same time, they are concerned about the demographic resilience of the localities and emphasize the lack of labor force caused by migration. In the context of labor shortage, entrepreneurs in the agricultural field admit that they have to improve the technology of production processes but also adapt their field of activity to one that requires less intensive manual work. The obtained results contribute to a better understanding of the influence of remittances on migrants' households and local development.

Keywords: migration, remittances, local development, subsidies, agriculture

INTRODUCTION

Remittances are one of the primary sources of income for the migrants' households and contribute to economic growth in countries with high out-migration rates (Meyer & Shera, 2017). Particularly, the migrants' remittances add to the development of the community of their origin (De Haas, 2010), facilitating the increase in consumption and local entrepreneurship initiation (Piracha & Saraogi, 2012) and contributing to the local budget. Remittances are synergic to overall growth, especially when accompanied by good-quality local infrastructure and governance (Cingolani & Vietti, 2019).

In host countries, migrants accumulate financial resources, extend their networks, and acquire ideas and knowledge essential for entrepreneurial initiation. Often, business models initiated by migrants are inspired in the host countries or improved by the know-how transfer in terms of productive or managerial optimization. However, the migrant or migrant's family will only start a business when their remittances can cover household budget constraints and sufficient savings are accumulated (Kakhkharov, 2018).

Migrant transfers generally offer educational opportunities for remittance-receiving households by covering the budget gap, especially in secondary education. Additionally, overall remittance-created household improvements facilitate the family members' state of health and increase their life expectancy (Zhunio et al., 2012).

In Moldova, high out-migration has challenged the country's demographic resilience (Gagauz et al., 2023)

while remittances have improved living standards and contributed to poverty reduction among the household members left behind (Waidler et al., 2016; Meyer & Shera, 2017; Abduvaliev & Bustillo, 2019). Remittances in Moldovan households are widely used for consumption purposes, while investments are made when a certain amount of savings is accumulated (Ianioglo et al. 2020).

In the receiving countries, migrants interact with institutions and are involved in the production chain of goods and services – factors that shape their economic, political (Barsbai et al., 2017; Marcu, 2014), and social behavior. Nonetheless, migrants accumulate resources and knowledge, contributing to the sustainable development of their community of origin.

In this research, we aim to explore the influence of remittances and knowledge transfer on local development and national and local authority interventions in response to the population migration experience. We used national-representative qualitative and quantitative data collected within the AGRUMIG project for this analysis.

The results suggest that remittances' contribution to the development of the migrants' origin community also depends on the quality of the national and local governments and their policies to incentivize investments in the local economy. On the other hand, migrants are less willing to invest when there is a lack of infrastructure, high corruption, or extractive state bodies in the localities of their origin.

DATA SOURCES AND USED METHODS

The study is conducted based on collected qualitative data and refers to 608 respondents from a nationally-represented rural household survey, five interviews with the representatives of the academia and national and local authorities, seven focus groups with farmers attendees, and six in-depth interviews with Moldovan farmers. In the table insert is presented detailed information on the data used:

Source	Description
Household survey on agricultural activity and migration in rural households of the Republic of Moldova	A nationally representative study includes 608 households with emigrational experience, where at least one person is involved in agricultural activity and at least one member of the household has migrated seasonally / long-term in the last 10 years. The survey was carried out between 4 and 21 January 2021 in all three regions (North = 193 households, Centre = 250 households, and South = 165 households), covering 63 villages. The purpose of the survey was to analyze various aspects of rural households in Moldova and the strategies they adopt to manage the impact of migration – in particular, general living strategies, patterns of migration by family members, cultural patterns, changes in the allocation of agricultural resources, gender / generational roles and decision-making before and after migration and allocation of remittances. The questionnaire included 75 questions that mainly included blocks that concerned household characteristics, short and long-term migration, land cultivation, animal husbandry, means of living, remittances and financing of migration, public programs and subsidies, changes in lifestyle, and the impact of the COVID-19 pandemic.
In-depth interviews with stakeholders	In September-October 2021, were conducted five in-depth interviews with (1) two scholars from the State Agrarian University of Moldova, (2) the deputy mayor of the Ialoveni City, (3) three representatives of the Agency for Intervention and Payments in Agriculture (AIPA), (4) one representative of the Organization for Small and Medium Enterprises Sector Development (ODIMM), (5) the mayor of the Nișcani village, Călărași.
Focus group discussions with farmers' attendees	In January 2022, seven focus groups with farmers and rural entrepreneurs in Cahul (6 men and 2 women), Cioc-Maidan and Congaz, Comrat (7 men), Nisporeni (6 men), Gordinești, Edineț (8 men and 5 women), Țaul, Dondușeni (7 men and 1 women), Ungheni (6 men and 3 women), Cubolta, Singerei (6 men and 1 women).
In-depth interviews with Moldovan farmers	3 interviews in the Hancesti region (villages Loganesti, Draguseni, and Draguseni Noi) and 3 interviews in Cahul (villages Valeni, Gavanoasa, Gotesti)

MAIN RESULTS AND DISCUSSION

CHARACTERISTICS OF SURVEYED MIGRANTS' HOUSEHOLDS

In the survey, the households were selected based on two main criteria: at least one member of the household has migrated in the last 10 years (long-term or seasonally), and at least one household member is involved in agricultural activity. At the moment of data collection, 59% of the households had at least one member abroad for work, and the majority of the households' migrants were between 26 and 45 years of age, who in most cases were spouses/partners or children in relation to the persons interviewed. Migrants predominantly have vocational education (50%) and higher school completed (35 %),

while only 15% of migrants have higher education.

Most respondents (82%) indicated practicing agriculture in their household – cultivation of land and animal husbandry. Regarding the reasons for practicing agriculture, the interviewees most often indicated: producing healthy food for themselves and their household and providing enough food for the family, and rarely for selling. Among the respondents who practice agriculture, the most often produced crops are field vegetables, corn grains, and potatoes, whereas respondents generally rely mostly on irrigation through rain.

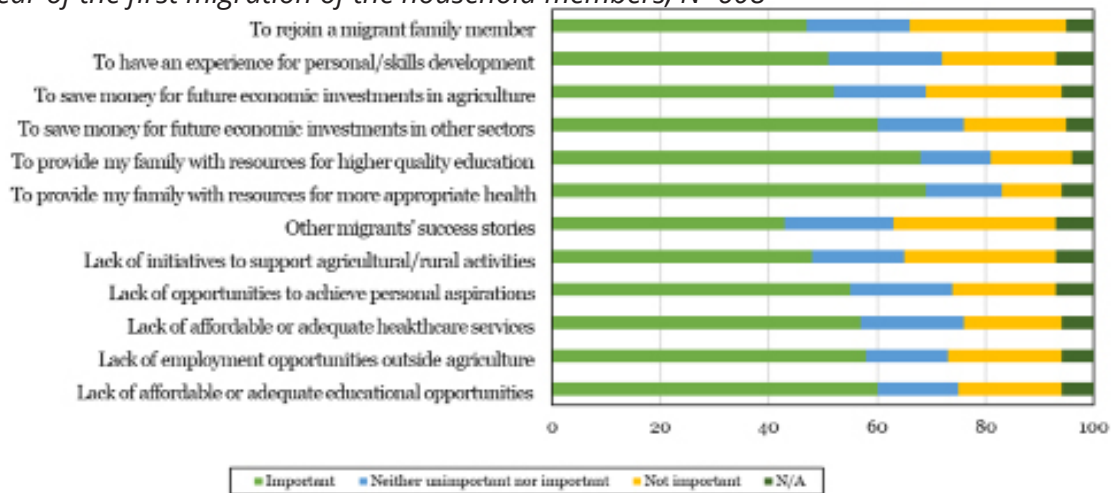
Among the respondents who have at least two members in the household, more than one-third (39%) pointed out that one household member is currently employed in Moldova and earns an income (outside of agricultural activity on their own farm). The average monthly income of these households amounts to 6900 MDL (median – 5000). As the results emphasize, the members of the interviewed households are highly involved in both seasonal and long-term migration, where the period of stay is predominantly determined by the country of destination. Among the main destinations were stated CIS (predominantly Russia) and EU countries (Italy,

Germany, France, Great Britain, Romania, Czechia, etc.), with a noticeable shift towards European countries in recent years.

The years of the first migration of the surveyed households' members are predominantly concentrated between 2000 and 2017, with 22% in 2000–2005, 28% in 2006–2011, and 33% in 2012–2017 (Figure 1). This period corresponds with the years when the population in Moldova had a young structure with high migration mobility. Of course, the high migration during this period was molded by economic uncertainty in Moldova, and opportunities emerged in receiving countries.

Figure 1.

The year of the first migration of the household members, N=608



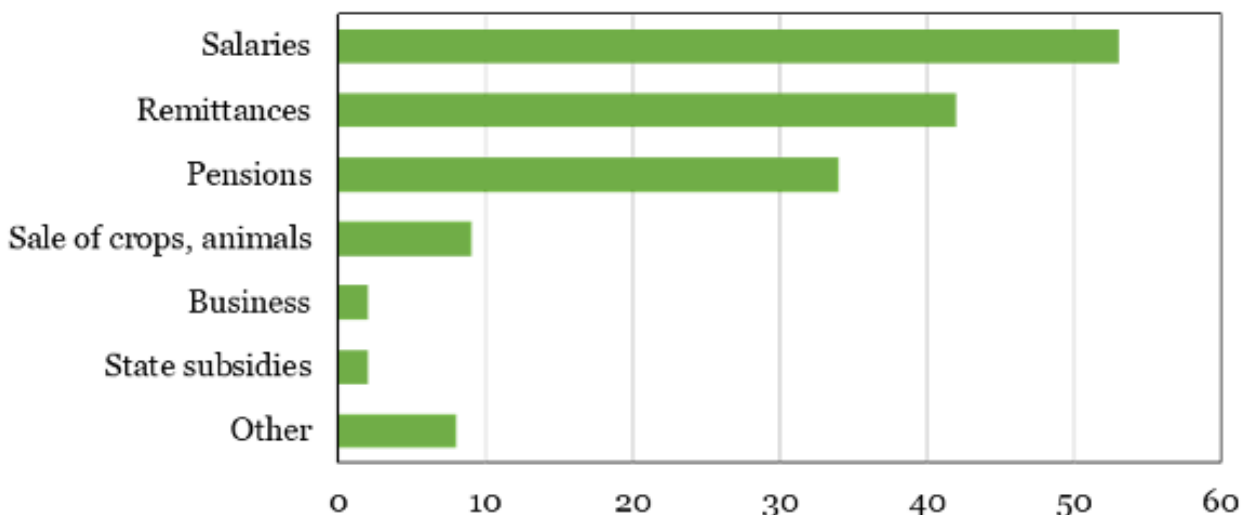
Source: Household survey on agricultural activity and migration in rural households of the Republic of Moldova

The received remittances of the interviewed families have significantly contributed to the overall household income (Figure 2), which on average amounted to 22.4 thousand Lei (median – 17.0 thousand Lei). In most cases, the migrant's spouse is responsible for deciding

how to use the remittances received by the household, which are predominantly directed to basic needs (education, health, food, clothes), family events, building or repairing the house, savings, and investments.

Figure 2.

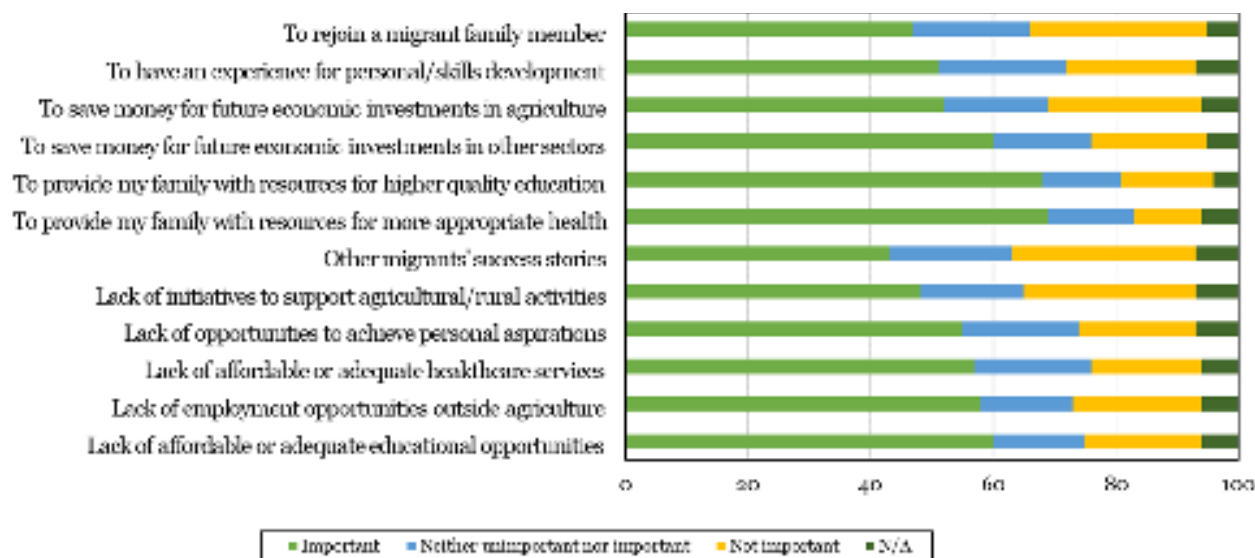
The sources of income of the interviewed households, N=608, %



Source: Household survey on agricultural activity and migration in rural households of the Republic of Moldova

Figure 3.

The role of individual and contextual factors in migration intentions, N=608, %



Source: Household survey on agricultural activity and migration in rural households of the Republic of Moldova

Migration decision is based on several factors that are strongly linked to the economic and social welfare of the population. With respect to the factors that would be considered by the respondents if they decided to migrate, 69% appreciated "the possibility to provide my family with resources for more appropriate healthcare" as a generally important factor, while 68% - said the same about "possibility to provide my family with resources for higher quality education". A higher share of male respondents (56%) than females (46%) noted that the possibility of having experience for personal/skills development would have a generally important role in their decision to migrate.

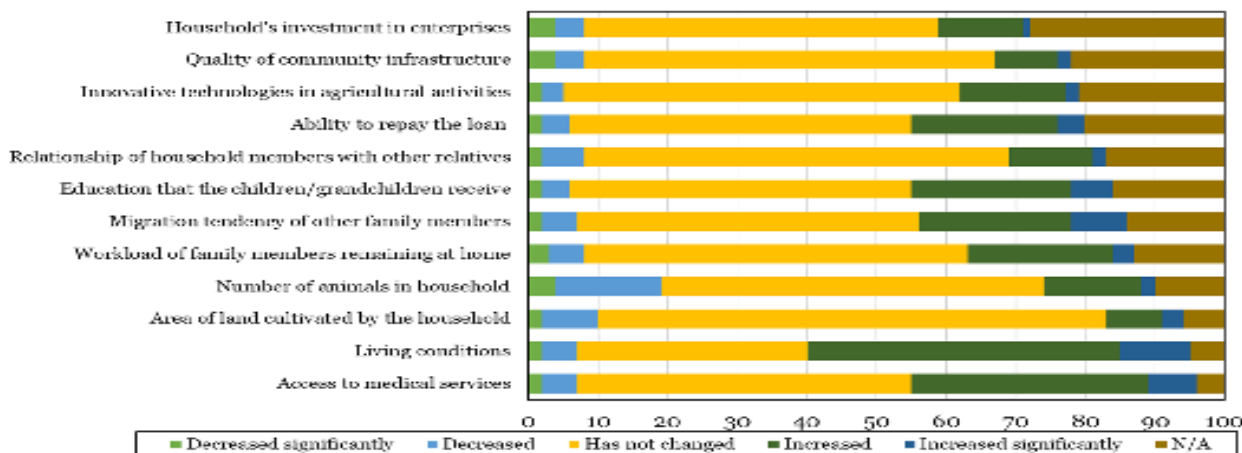
The use of remittances has visibly increased the socioeconomic state of the households, according to the persons interviewed (Figure 4). Thus, since a family member migrated, most households have

improved living conditions and increased their access to education and medical services. Interviewees also stated that migration has contributed to an increase in investment in entrepreneurship and improved the technologies used in agricultural activities. However, in numerous households, the person interviewed reported that migration of the family members had not changed their economic situation, while, as reported, in some households, it worsened.

The majority of the interviewed households have kept the original size of their agricultural land during the last 20 years, while 9% of the households sold their land plots, and 7% of the households increased the cultivated land. However, many households choose to lend their land plots to agricultural companies due to the lack of technical machinery necessary for land processing, aging, lack of time, and involvement in other non-agricultural activities.

Figure 4.

The impact of migration on households' socioeconomic state, N=608, %



Source: Household survey on agricultural activity and migration in rural households of the Republic of Moldova

The members of the households interviewed revealed that the main reason for a family member to migrate is usually economic. At the same time, the migrants keep strong ties with family members left behind, and, according to interviewees, they are disposed to return after a specific amount of money is earned.

The results emphasize some changes in migration patterns. If a considerable number of migrants were

previously working in CIS countries, currently, the main destinations are the EU countries, the United Kingdom, the USA, Israel, etc. Stakeholders and migrants' families explain this change through economic factors and from high accessibility to the European labor market and educational and social systems with dual citizenship holders. At the same time, early migration is associated with a life strategy in the young population.

MIGRATION AND LOCAL ENTREPRENEURSHIP

In addition to investing in the local economy, migrants often implement business models inspired by their experiences in destination countries. When investments are made in traditional businesses (predominantly agriculture in rural localities), emphasis is placed on optimizing production processes, especially in reducing the intensive labor force. However, the interviewed farmers revealed that among the main factors that incentivize them to invest in local entrepreneurship are the diverse co-financing programs and, for greater chances of receiving a grant, they have to propose a sustainable project.

While discussing with agricultural entrepreneurs who were previously involved in international migration, we noticed that they are highly informed about the opportunities of state co-financing programs, and the decision to invest in agriculture often derives thanks to the programs that aim to attract remittances in the local economy. Due to the limited budget of the co-financing programs, entrepreneurs often adopt a strategy of applying to multiple subsidizing programs for smaller projects that are part of a whole business. While conducting interviews, we observed that most small entrepreneurs with migratory experience applied for business financing programs by using remittances. However, only 1% of the households we interviewed indicated that they had received or applied for financial support from a public program to initiate or co-finance an existing business.

All the interviewees of co-financing program beneficiaries mentioned their positive contribution to starting and developing their businesses, also the importance of the consultancy support from the funding organization, and, ultimately, the beneficial economic and social consequences for their families. Moreover, interviewees

mentioned on the positive aspects of development of local agricultural businesses on the local (rural) development, many of them pointing to the concept of "living" villages as a result of accessing investment development programs.

Besides the programs that aim to attract remittances in the local economy, migrants are eligible to apply for other national funding projects. In this regard, as stated, migrants frequently use agricultural subsidies as an additional tool for financing their businesses. However, it was mentioned that migrants are reluctant to apply for financing projects due to a lack of certitude in selecting the applicants for financing. The subsidy measure for former migrants is not among the most popular, as it has only a few applications from farmers, mainly due to its recent introduction and lack of information for agricultural producers on the application process. But, at the same time, former migrants, when starting a business in the agricultural sector or developing the existing one, have the possibility to apply for any subsidy measures they are interested in.

Development of rural areas used to be based mainly on the agricultural sector. Over 50% of the Moldovan population lives in rural areas, and about 20% of the employed population is engaged in agricultural activities. The current support programs for migrants are more diversified, and their focus has shifted from agricultural activities to non-agricultural ones. Therefore, the development of the rural environment is foreseen through investments not only in agricultural machinery or technique but also through the development of businesses in the provision of services for the population, like food and catering, agro-pensions, tailoring, car washing, hairdressers, etc.

PROGRAM INTERVENTIONS AND LOCAL GOVERNANCE

By conducting in-depth interviews with scholars, international organizations, and national and local body representatives who interact with the migration process and its outcome, we tried to investigate the changes that occur in the communities where the migrants originate. We noticed that the interviewed parties have divergent opinions on the effect of migration on local development. While scholars and program intervention

representatives perceive migration as an opportunity for development while attracting remittances to the local economy, local authorities have a more reserved opinion in this regard. At the same time, interviewees agree on the necessity to incentivize the investment of remittances in local entrepreneurship through public programs and interventions.

By asking the local authorities about the benefits that co-financing programs and subsidies bring to the localities, some representatives highlighted their crucial role in further development. First, the co-financing programs are generally initiated by the central authorities, and each financed and subsidized project boost the inflow of funds from the national budget to the local economy. Second, the subsidies and co-financing programs incentivize migrants to invest in local businesses. Third, local entrepreneurship reduces the level of out-migration and increases the degree of employment of the local population.

The representatives of remote localities revealed that, even though remittances contributed to community development and increased living standards, migration was among the main factors that caused population decline and hastened the aging process. Also, it was stated that the youth whose parents have migrated are likely to migrate internally or abroad. In this regard, local authorities perceive migration as a challenge to the further demographic resilience of the community. Among the main issues reported that result from outmigration was the migration of qualified human resources. In contrast, the local authorities of the villages and cities located near Chisinau appear to be more optimistic concerning further development, where remittances are seen as an additional tool for economic growth.

Generally, interviewees acknowledge the importance of remittances in the context of regional development, and, according to their statements, numerous local businesses were initiated or financed by using sources earned abroad. As mentioned, migrants are encouraged by intervention programs and subsidies to start a business. ODIMM representatives mentioned program PARE 1+1 (actual name PARE 1+2) as a largely implemented project, which aims to attract remittances in small-enterprise investments by contributing 50% to the overall investment. The PARE 1+1 program was highly appreciated by the local authority representatives, who agreed that it had incentivized some investments in their communities and contributed to the initiation of local businesses, primarily in agriculture. At the same time, interviews with beneficiaries of the PARE 1+1 program revealed the contribution of public funds to small business development, either in the agricultural sector or not, with a specific emphasis on the needs of local communities. Among the public programs that target migrants, interviewees mentioned DAR 1+3, which aims to incentivize the involvement of the diaspora in local infrastructure development by contributing 25% of investment in the project the community decides to implement. As the interviewed stakeholders stated, this program is improving local infrastructure but also helps to forge the network of relationships of people within the community.

DISCUSSION AND CONCLUSIONS

Migration in Moldova is a widespread phenomenon involving a significant number of rural population, for whom migration became a livelihood strategy. In the last decades, remittances significantly contributed to poverty reduction and improved living conditions, especially in rural localities. The majority of respondents of the interviewed households stated that, since one of the family members migrated, the living conditions generally improved.

The results show that migrant families are reluctant to use remittances to invest in business initiation, even though the state has been trying to stimulate the use of remittances for starting businesses for years. This could be explained by the low standard of living in rural localities when remittances are used to improve living conditions and solve daily problems. Another reason would be the lack of trust in state institutions and the high level of

perception of corruption. However, migrants who intend to invest gladly apply for co-financing programs that aim to attract remittances.

In rural areas, the agricultural sector is one of the most attractive sectors for investments. The possibilities of obtaining co-financing of the business are backed up by such support programs as PARE 1+1, a subsidy program, but other national economy sectors are also incentivized with the aim of increasing rural development and improving local infrastructure and service provision.

The results of the study suggest that regional development also depends on the involvement of local authorities. Developed infrastructure and qualitative local governance could be the key factors for building a resilient business environment, where remittances will serve as a synergic factor for economic growth.

REFERENCES

- Abduvaliev, M., & Bustillo, R. (2019). Impact of remittances on economic growth and poverty reduction amongst CIS countries. *Post-Communist Economies*, 32(4), 525-546. <https://doi.org/10.1080/14631377.2019.1678094>
- Barsbai, T., Rapoport, H., Steinmayr, A., & Trebesch, C. (2017). The Effect of Labor Migration on the Diffusion of Democracy: Evidence from a Former Soviet Republic. *American Economic Journal: Applied Economics*, 9(3), 36-69. <https://doi.org/10.1257/app.20150517>
- Cingolani, P., & Vietti, F. (2019). Social remittances and local development in the Republic of Moldova. A critical analysis of migrants as agents of change. *Southeast European and Black Sea Studies*, 19(2), 1-17. <https://doi.org/10.1080/14683857.2019.1657685>
- De Haas, H. (2010). Migration and Development: A Theoretical Perspective. *International Migration Review*, 44(1), 227-264. <https://doi.org/10.1111/j.1747-7379.2009.00804.x>
- Gagauz, O., Tabac, T., & Pahomii, I. (2023). Depopulation in Moldova: the main challenge in the context of extremely high emigration. *Vienna Yearbook of Population Research*, 21, 419-443. <https://doi.org/10.1553/p-ke2z-76zz>
- Ianioglo, A., Tabac, T., Pahomii, I., Ceban, A., & Onofrei, N. (2020). Return Migration in the Republic of Moldova: Main Issues and Opportunities. *International Migration*, 59(3), 162-176. <https://doi.org/10.1111/imig.12737>
- Kakhkharov, J. (2018). Migrant Remittances as a Source of Financing for Entrepreneurship. *International Migration*. <https://doi.org/10.1111/imig.12531>
- Marcu, S. (2014). Between migration and cross-border mobility: return for development and Europeanization among Moldavian immigrants. *Southeast European and Black Sea Studies*, 14(1), 83-107. <https://doi.org/10.1080/14683857.2014.882086>
- Meyer, D., & Shera, A. (2017). The impact of remittances on economic growth: An econometric model. *Economia*, 18, 147-155. <https://doi.org/10.1016/j.econ.2016.06.001>
- Piracha, M., & Saraogi, A. (2012). The Determinants of Remittances: Evidence from Moldova. *Oxford Development Studies*, 40(4), 467-491. <https://doi.org/10.1080/13600818.2012.729573>
- Waidler, J., Hagen-Zanker, J., Gassmann, F., & Siegel, M. (2016). Do remittances and social assistance have different impacts on expenditure patterns of recipient households? The Moldovan Case. *Migration and Development*, 6(3), 355-375. <https://doi.org/10.1080/21632324.2016.1159887>
- Zhunio, M., Vishwasrao, S., & Chiang, E. (2012). The influence of remittances on education and health outcomes: a cross country study. *Applied Economics*, 44(35), 4605-4616. <https://doi.org/10.1080/00036846.2011.593499>

EXPERIENCES OF YOUTH IN TRANSITION TO ADULTHOOD: THE MODELS DEVELOPED IN BASE OF GENERATION AND GENDER SURVEY

DOI: <https://doi.org/10.36004/nier.es.2023.2-07>

JEL Classification: D80, D89, J15, P39

UDC: 316.346.32-053.6(478)

Mariana CRISMARU

PhD student, National Institute for Economic Research, Academy of Economic Studies of Moldova

<https://orcid.org/0000-0003-2802-5376>

e-mail: mariana.crismaru@yahoo.com

Received 7 May 2023

Accepted for publication 31 June 2023

ACKNOWLEDGMENTS

The study was carried out within the project 20.80009. 0807.21 "Migration, demographic changes and situation stabilization policies", 2020-2023.

SUMMARY

Understanding the specificities and patterns of transition to adulthood and timing of young adults' milestones is essential for developing targeted and effective social integration policies that address the needs and vulnerabilities of youth subcategories. The aim of the paper is to develop a typology of transition models within the specific context of Moldova by classifying different pathways that young people follow during the transition into adulthood. This study uses the data from Generations and Gender Survey (GGS) conducted in Moldova in 2020. Pathways are derived from key life events that mark the transition to adulthood, retrospectively observed for young people 25-35 years old (N = 2540). To explore the different patterns of transitions Two-Step Cluster analysis was used. This exploratory model is relevant for creating typologies and processing both continuous and categorical variables. The analysis identifies four main clusters of transition to adulthood, showing variations between them. The "complex transition" cluster includes young people who experience a smoother transition to adulthood, characterized by a higher level of education, followed by stable employment, while demographic events such as marriage and parenthood occur later in this group. The "uncertain transition" cluster reflects a degree of instability and uncertainty in terms of employment, many young people, especially men, are employed temporarily or informally, while women are often on maternity or childcare leave without being employed. The "precarious transition" cluster represents inactive young people in the labor market, most of them having a low level of education. The "early transition" cluster suggests a pattern of early transitions into adulthood, often accompanied by a low level of education and early family formation, especially among women.

Keywords: young people, transition to adulthood, complex, uncertain, precarious, early transitions, Moldova

INTRODUCTION

The youth transition to adulthood is a complex and critical period characterized by the establishment of life goals and aspirations, as well as the acquisition of new social statuses and interdependent roles that shape the path into a distinct stage of human development. It is an intense period in terms of key life events that mark it, including the completion of studies, leaving the parental home, entry into the labor market, marriage and becoming a parent (Coles, 1995; Billari & Liefbroer 2010; Paolini, Horváth, & Motiejūnaitė, 2018). Achieving these milestones is often seen as important for personal development and social integration, which means the movement into social majority and adult independence (Hall & Coffey, 2007; Pitti, 2022).

A significant increase in research concerning youth transition to adulthood is observed over the last decades, focusing on understanding how challenges of social transformations are influencing this process, as well as identifying policy measures to facilitate the transition and mitigate associated vulnerabilities. Studies have shown that regional trends and socio-economic changes, such as increasing inequality and exclusion, labor market insecurity and family fragility have had a greater impact on younger generations compared to the older ones (Taylor-Gooby, 2004; Walther & Pohl, 2007; Unt & Hofäcker, 2021). On the other hand, young people today have more opportunities to explore various life paths and experiences that diverge from traditional or standard trajectories (Beck & Beck-Gernsheim, 2002; Arnett, 2000). In this context, the transition to adulthood is characterized by de-standardization (Walther & Pohl, 2007), meaning the shift away from the traditional, normative timing and sequencing of major life events

(Elzinga & Liefbroer, 2007; France, 2007; Billari & Liefbroer, 2010; Mitrofanova, 2023). The new pattern of the transition to adulthood is, as a rule, characterized as late, protracted and complex (Billari & Liefbroer, 2010). This signifies that young people are experiencing these transitions at later ages, taking longer to complete them, and facing a more complex array of options and challenges compared to earlier generations.

The transition process of young people to adulthood in Moldova is particularly complex. Globalization, mobility and international integration influence how young people attain autonomy from one perspective, especially considering that a significant number of them are involved in international migration for work or studies. At the same time, country socioeconomic context, which has a crucial impact on the youth transition to adulthood, is characterized by instability, high dependence on internal and external shocks, while Moldova is classified as 'small-medium' income country (World Bank, 2022). Thus, in addition to global and regional challenges and trends, young people face a series of specific problems, exacerbated by the poor socioeconomic situation, the inconsistency of reforms in key areas, the structural inefficiency of the labor market, urban-rural disparities and others.

In spite of the extensive literature addressing different dimensions of young people's transition to adulthood and the associated challenges, studies in Moldova have predominantly focused on specific aspects of this transitional period. A comprehensive and cross-sectoral analysis of young people's transition to adulthood remains largely unexplored in scholarly literature.

This article aims to fill this gap by providing a more comprehensive understanding of the transition to adulthood among young people in Moldova. It does so by examining five key life events that are central to this transitional process. The article aims to elucidate

the patterns and timing of these key milestones in their transition to adulthood, while also emphasizing the necessity of a targeted and effective social policy that is tailored to the specific needs and vulnerabilities of various subcategories of young people.

LITERATURE REVIEW

There are numerous empirical studies analyzing the complexity of the transition from youth to adulthood, focusing on the timing and interconnectivity of key life events. These studies investigate how events such as completing education, employment, setting up independent living arrangements, starting a family and becoming a parent are interconnected and how their timing varies between individuals and across different cultural and national contexts.

A prominent study in this field has identified a notable shift in the traditional markers of the transition to adulthood across most European countries. The study suggests that indicators such as first marriage and parenthood are no longer adequate descriptors of this transition, as they are increasingly postponed and are less closely linked with age or interdependent with each other. The study highlights variation in patterns of leaving the parental home across countries, with Northern European countries showing earlier patterns compared to Eastern European countries. Additionally, the formation of own family is no longer solely linked to marriage or entry into the labor market, indicating a shift in traditional life trajectories (Corijn & Klijzing, 2001).

A more recent study conducted across eight European countries examined the transition to adulthood based on GGS data analysis. It revealed significant differences in transition models between Western and Eastern European countries. In Western European countries, modern life paths are more prevalent, characterized by a delayed departure from the parental home and extended periods of living alone or cohabitation. In contrast, Eastern European countries tend to follow more traditional transition patterns, which are characterized by early completion of studies, early entry into the workforce, early marriage and parenthood. Gender differences play a crucial role in shaping these transition models. Women are more likely to follow traditional transition paths, especially when starting work early and prioritizing family formation. On the other hand, men are more likely to delay departure from the parental home and partnership formation, particularly when extending their education. Education level also has a significant impact on young people's life trajectories. Higher levels of education are associated with delayed departure from the parental home and delayed parenthood. However, the effect of education varies across countries, with a more pronounced impact observed in Eastern European countries (Schwanitz, 2017).

Several studies have highlighted the impact of social stratification on young people's transition to adulthood. For instance, a study based on GGS data for Austria, Bulgaria, and France indicated that young people from higher socioeconomic status families tend to experience key life events later than those from lower socioeconomic backgrounds. These events, including leaving the parental home, cohabitation, marriage and the birth of the first child are pivotal in shaping individual life courses and are socially stratified (Billari, Hiekel, & Liefbroer, 2019).

Researches in Eastern European countries, using GGS data, have revealed significant trends in the transition to adulthood, convergent with regional trends. These include changes in family structures, partnership dynamics, marriage, and reproductive behaviors. Gender differentiation is prominent, with women in rural areas marrying and giving birth earlier, while having a child reduces women's chances of employment and continuing education. Transition models vary based on education level and urban or rural residence, with urban areas and higher education mitigating gender inequalities (Mitrofanova, 2011; Mitrofanova, 2016; Akulova et al., 2018).

A recent study examined six key events that mark adulthood: completion of professional education, leaving the parental home, first employment, first cohabitation, first marriage and first childbirth. Comparing the structure, timing, and tempo of these key life events in selected countries reveals that the transition to adulthood is becoming more standardized, yet still maintains country-specific characteristics. Socioeconomic events typically occur for the majority of Millennials (50-90%) between the ages of 18-20, with a more gradual progression in France and Finland, and a more abrupt transition in Estonia and Russia. Cohabitation emerges as the most common demographic event in the transition to adulthood. In comparison, first marriages and childbirth occur for less than 50% of respondents and at significantly older ages. Russians have the highest prevalence of these events and experience them at a younger age (Mitrofanova, 2023).

Studies analyzing youth transition pathways in Moldova, as mentioned above, have mainly focused on distinct dimensions rather than on interconnected key life events. Thus, research on the transition from school to work has revealed disparities based on residence and gender. Young people from rural areas were found to be more disadvantaged, and young women had fewer chances regarding access to the labor market and the quality of employment. On average, it takes a young person 8.6 months from graduation to obtain their first stable or satisfactory job. Successful transition to the labor market is influenced by the level of education (higher levels) and the residential environment (urban areas). Additionally, studies have highlighted the significant impact of youth migration abroad on the local labor market, leading to a lower participation rate and higher wage expectations among young people (Ganta & Shamchiyeva, 2016; Buciuceanu-Vrabie & Gagauz, 2017).

The analysis on educational path of young people and factors that influence it, showed the persistence of the phenomenon of early school leaving throughout the

last decades (Gagauz et al., 2017; Gagauz et al., 2021). Studies indicated that there is a close correlation between early school leaving and low level of education of parents, as well as rural residence, recorded as another important factor that is influencing on educational trajectories (Crismaru et al., 2018).

Studies focused on the matrimonial and reproductive behavior of young people has shown that in Moldova, as in other European countries, there are trends of fertility restructuring and changes in reproductive behavior in all age groups, with an increase in the proportion of women who gave birth during their reproductive life only one child and a gradual decrease in the proportion of women who gave birth to three or more children during their lifetime, especially within the younger generations (Grigoras, 2018).

This article would contribute to the understanding of the transition of young people to adulthood, a multifaceted concept encompassing significant life changes such as completing studies, entering the labor market, leaving the parental home, establishing a new family and parenthood.

DATA SOURCES AND USED METHODS

The life course paradigm is one of the main theoretical frameworks that studies population and human development. It provides a comprehensive understanding of how various factors, such as chronological age, interpersonal relationships, main life transitions and broader social changes influence individuals' lives (Elder, 1998; Giele & Elder, 1998; Mortimer & Shanahan, 2003). This approach is extensively used in investigating youth transition to adulthood, as it helps in identifying factors that influence an individual's experiences during this life stage. It also contributes to understanding life trajectories at a micro level by considering the individual's personal experiences and choices, while simultaneously recognizing the impact of broader structural processes at the macro level. This integrated approach provides a holistic understanding of the transition to adulthood (Irwin & Nilsen, 2018). Studying the transition to adulthood involves analyzing the key events, including completing education, leaving the parental home, entering the workforce, engaging in cohabitation, getting married and having the first child (Buchmann, 1989; Billari & Liefbroer, 2010). These milestones are commonly recognized as significant markers of the transition to adulthood across different cultures and societies. Understanding how individuals experience and navigate these events provides valuable insights into the complexities of the transition to adulthood.

Human capital refers to the knowledge, skills, qualifications, and individual characteristics that contribute to personal, social and economic well-being (OCDE, 2001). These remain the same in any social environment and can be capitalized on the labor market in exchange for economic resources of

any type (Voicu, 2004). This theory is fundamental for understanding intergenerational transmission of socioeconomic status, as parental investments in their children's human capital play a significant role in shaping their future socioeconomic outcomes. According to researchers, the dynamic process of human capital accumulation begins long before formal schooling and is influenced by the family background. Early personal and family characteristics are crucial determinants, as they can influence human capital accumulation and in a long run directly impact employability (Becker, 1964). In researching the transition of young people to adulthood, this theoretical framework emphasizes the need for deep exploration of the relationships between investments in human capital, the educational and professional trajectories of young people and the influence of intergenerational and family backgrounds.

Risk society theory (Beck, 2002) emphasizes the impact of structural change and risk in contemporary society, particularly on young people, providing a useful perspective for understanding the context in which they construct their identities and biographies. Young people can particularly feel this structural uncertainty, which can influence their decisions to drop out of education or experience difficulties in finding a job. Increasing uncertainty in everyday life affects individual decisions and planning processes. The theory stresses the loss of the advantages of a regime of certainty that previous generations have had, with young people being directly affected by the continuous changes that influence their commitment to education, careers and participation in society. The use of this theory, together with other conceptions and approaches, contributes to a more

complete and contextualized understanding of the experiences of young people in the contemporary society associated with multiple risks.

Demographic theories emphasize the description and understanding of demographic events and processes, while the transition to adult life is analyzed from the perspective of the occurrence of certain key demographic events, such as marriage, partnership, parenthood. The *theory of the second demographic transition* foresees the primary trends of the demographic transition, which include postponing births to older ages or late fertility, but also later marriages, thus increasing the number of cohabitation, divorce and non-marital births (Van de Kaa, 1987). According to the theory, these demographic changes are the result of changes in values and attitudes, as well as weaker normative regulation

and increased autonomy of women that contribute to a growing demand for self-development, autonomy and individualization (Lesthaeghe, 2014). Therefore, due to the emphasis placed on autonomy, it is possible that young people become less responsive to their parents' preferences or to social and normative expectations, and in their life choices they opt for choices that allow more autonomy, such as independent / solitary living or in a consensual union / cohabitation, rather than in a marriage, to postpone the choices from the point of view of demographic events, which require more involvement and measures. These demographic changes take place at different stages in different countries, and the differences are based on the extent to which the values and behaviors related to the demographic transition have been adopted at a given moment in time (Sobotka, 2008).

MAIN RESULTS AND DISCUSSION

The data for this study come from the Generations and Gender Survey (GGS) conducted in Moldova in 2020 among nationally representative samples of the 15–79-year-old resident population (GGS, 2020). The overall sample size were 19948 households and is nationally representative (excluding the Transnistria region) by residency areas (urban, rural) and regions (North, Center, South and Chisinau municipality). The study utilizes weighted data based on age and gender criteria to ensure the sample is adequately representative, which enables a detailed analysis of young people's transition to adulthood. A particular advantage of the GGS data for the purpose of this analysis is that include

a broad range of variables describing youth transition to adulthood, such as education path, employment and forms of employment, reproductive behavior, relationship history of marriage and partnership (including from intergenerational perspective).

To study patterns of youth transition to adulthood, a sub-sample of age range of 25–35 years was chosen. This age group was selected because most life events marking the transition to adult life typically occur after age 24. The sub-sample comprises 2540 individuals, ensuring a reliable sample size for statistical analyses across various categories of young people (Table 1).

Table 1.

Sample distribution by sex and area of residence (25-35 years)

		nr of observation (n=2540)	%
Gender	Male	1300	51.2
	Female	1240	48.8
Area	Urban	1124	44.3
	Rural	1416	55.7
Region	Mun. Chisinau	576	22.7
	North	491	19.3
	Centre	889	35.0
	South	584	23.0

Data on the occurrence of key life events of interest were systematically collected as part of the life course reconstruction process for each respondent. These events are analyzed across three main dimensions: *educational* (completion of professional education), *working* (employed, unemployed, inactive) and *family*

formation (living outside the parental home, married, have a child). For each event (when such data are available) the average age of occurrence is calculated. This approach enables the examination of potential variations in the timing of these transitions to adulthood (Table 2).

Table 2.

Descriptive information on event variables (25-35 years)

Dimintions	Variables	
Educational	Completion of professional education (not in education)	99.2
Working	Employed	46.6
	Unemployed	22.1
	Inactive	31.3
Family formation	Living outside the parental home	86.2
	Married	61.3
	Have a child	69.6

To identify the specifics of the transition to adult life, cluster analysis was utilized. This statistical technique effectively categorizes individuals into subgroups based on selected characteristics. The aim is to determine the similarities and differences in the transition of young people to adulthood by forming clusters. For this study, *Two-Step cluster* analysis was employed, and this approach first uses a distance measure to separate groups and then employs a probabilistic approach (similar to latent class analysis) to select the optimal subgroup model. It is suitable for this study as it allows for the analysis of both continuous and categorical variables. The following events (categorical variables) were included in the cluster analysis: living situation (does not live with parents), marital status, parenthood

status, and occupational status. Additionally, continuous variables such as the average age at obtaining the highest level of education, average age at first marriage, and average age when becoming a parent for the first time were also considered. However, data are not available for the variables - the age of first employment, and the age of leaving the parental home.

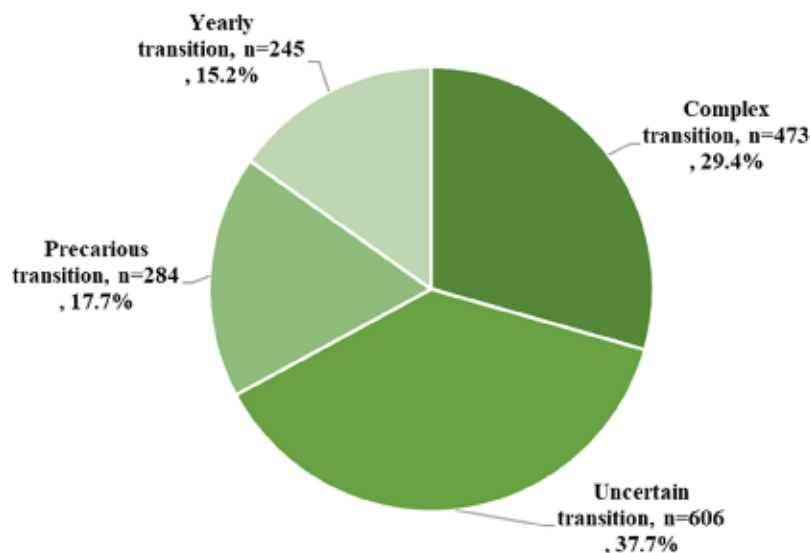
In the cluster analysis, the occupational status of young individuals in relation to the labor market proved to be the variable with the highest weight in determining cluster membership (1.00), followed by the average age at the completion of the educational process (0.735). The other variables had a more moderate weight in establishing the clusters.

DESCRIPTIVE AND MULTIVARIATE RESULTS

Following the cluster analysis, four main types were identified taking into account their occupational, matrimonial and parental status: cluster (1) Complex transition (29.4%); cluster (2) Uncertain transition (37.7%); cluster (3) Precarious transition (17.7%); cluster (4) Early transition (15.2%) (Figure 1).

Figure 1.

Distribution of clusters



Each cluster was subjected to separate analysis regarding individuals' sociodemographic characteristics, including gender, area of residence, level of education, occupational status, mean age of attaining the highest level of education, mean age at first marriage, and mean age at first childbirth (Table 3). The outcomes of the chi-square tests reveal statistically significant differences,

indicating that the clusters diverge significantly concerning gender ($\chi^2(3) = 71.936, p < .000$), area of residence ($\chi^2(3) = 116.958, p < .000$), education level ($\chi^2(6) = 209.152, p < .000$) and occupational status ($\chi^2(5) = 2356.127, p < .000$). These findings suggest that the composition of the clusters varies significantly in terms of these sociodemographic variables.

Table 3.

Descriptive statistics of the main characteristics of clusters by sex, area, education level and occupational status

		Complex transition	Uncertain transition	Precarious transition	Yearly transition
Sex	Female	47.1	66.8	43.7	75.9
	Male	52.9	33.2	56.3	24.1
Area	Urban	57.0	41.1	26.8	20.4
	Rural	43.0	58.9	73.2	79.6
Education level	Gymnasium	15.4	29.7	46.3	45.7
	General secondary /lyceum	8.7	11.2	12.7	16.7
	Secondary vocational	11.8	29.3	20.1	20
	Postsecondary vocational	16.3	11.7	8.5	10.2
Occupation status	Higher	47.8	18.1	12.4	7.3
	Employed	96.6	38.3	10.9	17.6
	Unemployed	0.6	1.8	37.7	20.0
	Inactive - not working / housewife	0.8	1.6	36.6	62.4
	Inactive - maternity/childcare leave	0.8	57.5	14.8	-

In Table 4, each cluster was individually analyzed regarding the average age at which individuals attained their highest level of education, the average age at first marriage, and the average age at first childbirth. A two-way ANOVA was employed to investigate the impact of gender on these variables. The results revealed statistically significant interactions between gender and

the variables: age of attaining highest level of education ($F(3) = 9.600, p = 0.000$), average age of first marriage ($F(3) = 9.600, p = 0.000$), and average age of childbirth ($F(3) = 5.888, p = 0.001$; $F(3) = 3.987, p = 0.008$). These findings suggest that the influence of gender on these life events varies significantly across the clusters.

Table 4.

Average age for highest level of education, first marriage and first childbirth

		Highest level of education		First marriage		First childbirth	
		Mean age	Std. Deviation	Mean age	Std. Deviation	Mean age	Std. Deviation
Male	Complex	21.23	4.300	24.83	3.518	24.90	3.596
	Uncertain	17.88	3.305	23.82	3.466	24.47	3.182
	Precarious	17.19	2.866	23.53	2.539	23.29	3.264
	Yearly	17.63	2.709	24.67	2.934	24.71	3.848
Female	Complex	20.31	3.874	21.75	3.086	22.09	3.064
	Uncertain	19.25	3.805	21.69	3.487	22.01	3.744
	Precarious	17.64	2.931	21.68	3.028	21.38	2.873
	Yearly	16.94	2.781	21.21	3.206	20.98	2.735
Total	Complex	20.87	4.161	23.66	3.675	23.71	3.651
	Uncertain	18.68	3.664	22.91	3.557	23.33	3.647
	Precarious	17.40	2.900	22.65	2.926	22.39	3.224
	Yearly	17.16	2.771	22.30	3.498	22.17	3.562

THE MODELS OF YOUTH IN TRANSITION TO ADULTHOOD

Cluster 1 “Complex transition” comprises 473 individuals, representing 29.4% of the total sample. This cluster is characterized by a more prolonged education path, resulting in a higher level of education. About half of the young people included have higher education. The higher level of education is associated with smoother access to the labor market, but also with delayed demographic events such as marriage and parenthood.

Occupational status is a crucial factor in determining placement in this cluster, with the vast majority of individuals being employed (96.6%). Gender distribution shows that men are slightly more represented in this cluster (52.9%) compared to women (47.1%). Additionally, there is a higher proportion of young people from urban area (57%) compared to rural area (43%) in this cluster.

The defining factor for this group is the level of education, with approximately half of the young people included having higher education (47.8%). These results align with data on the socio-professional integration dimension of young people. Due to the higher level of education, women in this cluster completed their studies at an average age of 20.31 years, while men completed theirs at 21.22 years. This educational trajectory is the most extensive compared to the other clusters. A longer educational path is associated with a later occurrence of demographic events related to marriage and parenthood, particularly among women. The average age at first marriage for women in this cluster is 22.24 years, and the average age at the birth of the first child is 22.49 years. Similarly, men in this cluster experience a delay in these demographic events due to their more extensive educational path.

Cluster 2. “Uncertain transition” is the largest cluster, comprising 606 young individuals, accounting for 37.7% of the total sample. This cluster stands out as the most diverse in terms of occupational status and education level among young people. More than half (57.5%) of individuals in this cluster are on maternity or childcare leave, with the vast majority being women. A significant portion of these young women did not have previous work experience, leaving them socially uninsured and facing uncertainty regarding their situation after the end of the childcare leave (typically 2 years). Additionally, 38.3% of young people in this cluster are employed, mostly men, often in temporary or unofficial positions, further indicating an uncertain situation.

Regarding education level, there is a varied distribution within this cluster, encompassing young people with different educational backgrounds: 29.7% have secondary education, 29.3% have secondary vocational education, 18.1% have higher education, and 11.7% have postsecondary vocational education.

Within this cluster, the average age at which women reach their highest level of education is 19.28 years,

while for men, it is 17.89 years. Similarly, the average age at first marriage for women is 21.69 years, and the average age at the birth of the first child is 22.01 years. As with other clusters, the average age of demographic events among men is higher compared to women.

Cluster 3. “Precarious transition” comprises 284 individuals, accounting for 17.7% of the total sample. This cluster primarily consists of young people who are outside the labor force, including those not working and seeking employment and those engaged in household activities, with a significant proportion having a low level of education.

Thus, among the individuals in this cluster, 37.7% are unemployed and actively looking for a job, with a higher proportion being men. Additionally, 36.6% are not working and are engaged in household activities, with the majority being women. In contrast to the previously described clusters, only about 11% of young people in this cluster are employed.

In terms of education level, there is a high representation of individuals with a low level of education, with 46% having only secondary education. This highlights the precarious situation on the labor market resulting from early school leaving. Individuals with vocational secondary education make up 20.1%, those with specialized secondary education account for 8.5%, and those with higher education represent 12.4%.

Analyzing the average ages related to the educational dimension, it is observed that women in this cluster complete their studies at an average age of 17.67 years and men complete theirs at 17.18 years. Regarding demographic events, the average age at first marriage for women is 21.68 years, and the average age at the birth of the first child is 21.37 years. In contrast, demographic events related to marriage and parenthood occur later for men in this cluster.

Cluster 4. “Early transition” comprises 245 individuals, representing 15% of the total sample. This cluster is characterized by individuals with a low average age of education completion, as well as a younger average age for demographic events, such as the birth of the first child and marriage. This type of transition is primarily observed among women with inactive status and is more prevalent in rural areas.

Regarding occupational status, a high proportion of individuals in this cluster are inactive on the labor market, with 62% not working but engaged in household activities. Only 20% of individuals in this cluster are employed or actively seeking employment. Women constitute the majority in this cluster (75.9%) compared to men (24.1%), and the majority of individuals are rural residents (almost 80%), with only 20% from urban areas.

Education level is a significant criterion in this cluster, with almost half (47%) having incomplete secondary

education (gymnasium), in comparison, only 7% have higher education. The average age at which individuals in this cluster reached their highest level of education is 16.96 years for women, one of the lowest average values among the clusters. Women in this cluster also have the youngest average ages at the birth of their first child (20.98 years) and at first marriage (21.2 years).

For men in this cluster, the situation is somewhat different. Although the average age at which they reached their highest level of education is low (17.63 years), their average ages at marriage (24.69 years) and parenthood (24.71 years) are higher, comparable to those in other clusters.

DISCUSSION AND CONCLUSIONS

The research findings provide valuable insights into the transition to adulthood in Moldova, revealing distinct patterns characterized by various socio-demographic and occupational indicators. These patterns differ based on gender, area of residence and level of education, having an impact on the occurrence and prevalence of key life events. Completing education, getting married, and having children are significant markers of this transition, while socio-professional integration shows lower rates by age 35. Urban residency acts as a proxy factor, mitigating these challenges through enhanced access to diverse educational, occupational and social infrastructure for young individuals.

The study identified four main types of transition to adult life within the 25-35 age category in Moldova. *Complex transition* is characterized by a more extensive educational path, leading to easier access to the labor market. However, it also results in later occurrences of demographic events such as marriage and parenthood. *Uncertain transition* is marked by a diversification in occupational status and education level among young people. It consists mainly of individuals on maternity or childcare leave (predominantly women) and young people engaged in temporary or informal employment (mainly men). *Precarious transition* consists mainly of young people that are outside the labor market, either actively seeking employment or inactive in relation to it. Most individuals in this group have a low level of education. *Early transition* is characterized by individuals who left the education system early, often leading to a younger average age at the occurrence of their first child's birth and marriage. This transition pattern is more common among women with an inactive status and is prevalent in rural areas.

The study revealed that demographic events related to marriage and the birth of a child are comparable to those recorded among young people from other countries in the region. There is a divergence of transition models with previous generations and a convergence with models demonstrated by countries that are in more advanced stages of family development, the diversification of partnership relationships, the transformation of the reproductive model, known by the concept of the "second demographic transition" (Billari & Liefbroer, 2010; Billari, Hiekel, & Liefbroer, 2019; Mitrofanova, 2016; Mitrofanova, 2023). At the same time, gender differentiation is observed in the transition models, which manifests itself prominently in the occurrence of demographic events: women marry and become parents

earlier than men, the appearance of a child, in the case of women, reduces their chances of employment and continuing education (Mitrofanova, 2011; Akulova et al., 2018).

The study emphasizes the significance of employment for young people in Moldova, as it plays a pivotal role in fostering financial independence and overall well-being. However, the findings reveal that, even after 24 years of age, the proportion of young individuals engaged in the labor force remains below 50% of the total cohort. This indicates a substantial segment of the youth population encountering challenges in accessing or maintaining employment opportunities. These labor market challenges are not unique to Moldova, being prevalent in many countries. Scholars have conceptualized these difficulties as "new social risks", highlighting the intricate interplay between young individuals, the labor market, and their endeavor to harmonize professional commitments with familial responsibilities (Taylor Gooby, 2004; Unt et al., 2021). Moreover, labor inactivity among young individuals in Moldova is notably linked to the female gender and the status of "mother with children", a trend also observed in neighboring countries such as Romania and Bulgaria (Caroleo, Rocca, & Neagu, 2021). This association is indicative of persistent traditional societal norms regarding gender roles, as well as the challenges faced by young women in reconciling work with family responsibilities (Chistruga-Sinchevici, 2021).

The research findings underscore the need for comprehensive and intersectoral policy interventions to address the challenges encountered by young individuals in their transition to adulthood. These interventions should encompass various domains, including education, health, the labor market, governance, political participation, and the enhancement of social protection systems. By adopting a holistic approach that spans multiple sectors, policymakers can better support young people in overcoming barriers to their successful transition to adulthood. Such interventions can help improve educational outcomes, enhance access to quality healthcare, create more opportunities for meaningful employment, promote good governance and political engagement among youth, and strengthen social safety nets to ensure the well-being of young individuals as they navigate this critical life stage.

REFERENCES

- Akulova, M. Yu., Antipova, E. A., Artemenko, E. K., Belov, A. A., Borodacheva, E. M., Burlutskaya, M. G., Dmitrieva, O. E., Elsukova, N. A., Efimova, N. V., Kapustin, S. A., Kirillova, A. V., Komarovskiy, A. V., Kroytor, S. N., Kupchinova, T. V., Lapeto, A. O., Mazol, O. I., Makarevich, E. E., Mardas, D. M., Nazarenko, Yu. S., . . . & Yakovleva, N. A. (2018). BELARUS: struktura semii, semeynye otnosheniya, reproduktivnoe povedenie. Tom II. Analiz rezultatov issledovaniya «Pokoleniya i gender». Minsk: Belsens. https://belarus.unfpa.org/sites/default/files/pub-pdf/Digest%20GGS%20_ru.pdf
- Arnett, J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469-480. <https://doi.org/10.1037/0003-066X.55.5.469>
- Beck, U. (2002). The Cosmopolitan Society and Its Enemies. *Theory, Culture & Society*, 19(1-2), 17-44. <https://doi.org/10.1177/026327640201900101>
- Beck, U., & Beck-Gernsheim, E. (2002). *Individualization. Institutionalized Individualism and Its Social and Political Consequences*. London: SAGE.
- Becker, G. (1964). *Human Capital. A Theoretical and Empirical Analysis*. New York: Columbia University Press for the National Bureau of Economic Research.
- Billari, F., Hiekel, N., & Liefbroer, A. (2019). The Social Stratification of Choice in the Transition to Adulthood. *European Sociological Review*, 35(5), 599-615. <https://doi.org/10.1093/esr/jcz025>
- Billari, F., & Liefbroer, A. (2010). Towards a new pattern of transition to adulthood? *Advances in Life Course Research*, 15(2-3), 59-75. <https://doi.org/10.1016/j.alcr.2010.10.003>
- Buchmann, M. (1989). *The script of life in modern society: entry into adulthood in a changing world*. Chicago: University of Chicago Press.
- Buciuceanu-Vrabie, M., & Gagauz, O. (2017). *Tinerii pe piața muncii din Republica Moldova: competențe și aspirații*. Chișinău: INCE.
- Caroleo, F., Rocca, A., & Neagu, G. (2021). NEETs and the Process of Transition From School to the Labor Market: A Comparative Analysis of Italy, Romania, and Bulgaria. *Youth & Society* 54(2), 109-129. <https://doi.org/10.1177/0044118X211056360>
- Chistruga-Sinchevici, I. (2021). *Echilibrul dintre muncă și viața de familie: necesități ale părinților și rolul politicilor sociale*. Chișinău: INCE. <https://doi.org/10.36004/nier.2022.978-9975-89-251-3>
- Coles, B. (1995). *Youth And Social Policy*. London: Routledge. <https://doi.org/10.4324/9780203991015>
- Corijn, M., & Klijzing, E. (2001). *Transitions to Adulthood in Europe*. European Studies of Population. Vol. 10. Springer-Science+Business Media, BV. <https://doi.org/10.1007/978-94-015-9717-3>
- Crișmaru, M., Gagauz, O., & Buciuceanu-Vrabie, M. (2018). *Incluziunea tinerilor aflați în afara sistemului de educație, formare și ocupație profesională (tineri NEET): studiul sociologic*. Chișinău.
- Elder, G. H. (1998). The Life Course as Developmental Theory. *Child Development*, 69(1), 1-12. <http://dspace.ince.md/jspui/handle/123456789/1822>
- Elzinga, C., & Liefbroer, A. C. (2007). De-standardization of Family-Life Trajectories of Young Adults: A Cross-National Comparison Using Sequence Analysis. *European Journal of Population*, 23(3-4), 225-250. <https://doi.org/10.1007/s10680-007-9133-7>
- France, A. (2007). *Understanding Youth In Late Modernity*. Open University Press.
- Gagauz, O., Buciuceanu-Vrabie, M., Pahomii, I. (2017). Părăsirea timpurie a sistemului educațional: factori și grupuri de risc. *Akados*, 2(45), 98-104. https://ibn.idsi.md/ro/vizualizare_articol/53354
- Gagauz, O., Buciuceanu-Vrabie, M., Pahomii, I., Știrba, V., Tabac, T., & Grigoraș, E. (2021). *Populația Republicii Moldova la 30 de ani de independență: provocări principale și politici necesare*. Chișinău: INCE. <https://doi.org/10.36004/nier.ccd.2021.978-9975-89-248-3>
- Ganta, V., & Shamchiyeva, L. (2016). *Tranziția tinerelor și tinerilor spre piața muncii în Republica Moldova*. Seria de publicații Work4Youth, No. 38. Biroul Internațional al Muncii. Geneva. https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_536294.pdf
- Generations and Gender Survey (GGS). (2020). <https://www.ggp-i.org/moldova/>

- Giele, J., & Elder, G. (1998). Life Course Research: Development of a Field. In: J. Giele, & G. Elder (Eds.), *Methods of Life Course Research: Qualitative and Quantitative Approaches*. Thousand Oaks: Sage Publications.
- Grigoraș, E. (2018). Particularitățile tranziției fertilității în Republica Moldova. In: *Tendențe contemporane ale dezvoltării științei: viziuni ale tinerilor cercetători* (ediția a 7-a, Vol. 2, pp. 261-265). Chișinău: Tipogr. Biotehdesign.
- Hall, T., & Coffey, A. (2007). Learning Selves And Citizenship: Gender And Youth Transitions. *Journal of Social Policy*, 36(2), 279-296. <https://doi.org/10.1017/S0047279406000602>
- Irwin, S., & Nilsen, A. (2018). Understanding youth transitions in difficult times. In: S. Irwin, & A. Nilsen, *Transitions to Adulthood Through Recession*. London: Routledge. https://doi.org/10.4324_9781315231686-1
- Lesthaeghe, R. (2014). The second demographic transition: A concise overview of its development. *Proceedings of the National Academy of Sciences*, 111(51), 18112-18115. <https://doi.org/10.1073/pnas.1420441111>
- Mitrofanova, E. S. (2011). Demograficheskoe povedenie pokoleniy rossiyan v sfere semi i rozhdaemosti. *Ekonomicheskii zhurnal Vysshey shkoly ekonomiki*, 15(4), ss. 519-542. [In Rus] <https://publications.hse.ru/articles/63622290>
- Mitrofanova, E. S. (2016). Perspektivy primeneniya analiza posledovatelnostey: Primer perekhoda vo vzroslyuyu zhizn. V: *Sotsiologiya i obshchestvo: Sotsialnoe neravenstvo i sotsialnaya spravedlivost: materialy V vserossiyskogo sotsiologicheskogo kongressa. 19-21 oktyabrya 2016 goda. Rossiyskoe obshchestvo sotsiologov.* (ss. 9591-9600). Ekaterinburg [In Rus] <https://publications.hse.ru/chapters/197808392>
- Mitrofanova, E. S., & Makarov, S. A. (2023). West and East: convergence or divergence of Millennials' transition to adulthood in four European countries. *Population and Economics*, 7(4), pp. 68-90. <https://doi.org/10.3897/popecon.7.e112452>
- Mortimer, J., & Shanahan, M. (2003). *Handbook of the Life Course*. New York: Kluwer Academic Publishers.
- Organisation de Coopération et de Développement Economiques (OCDE). (2001). *Du bien-être des nations: le rôle du capital humain et social*. <https://www.oecd.org/fr/education/innovation-education/1870581.pdf>
- Paolini, G., Horváth, A., & Motiejūnaitė, A. (2018). *Situation of young people in the European Union*. Commission Staff Working Document, European Union.
- Pitti, I. (2022). *Understanding, Problematizing and Rethinking Youth Transitions to Adulthood*. European Commission and the Council of Europe. https://pjp-eu.coe.int/documents/42128013/116339195/Symp_Analytical+Paper+-+Transitions+to+Adulthood.pdf/df42d656-d110-4c44-fe5f-c7e0c1336d4e
- Schwanitz, K. (2017). The transition to adulthood and pathways out of the parental home: A cross-national analysis. *Advances in Life Course Research*, 32, 21-34. <https://doi.org/10.1016/j.alcr.2017.03.001>
- Sobotka, T. (2008). The diverse faces of the Second Demographic Transition in Europe. *Demographic Research*, 19(8), 171-224. <https://doi.org/10.4054/DemRes.2008.19.8>
- Taylor Gooby, P. (2004). New social risks in postindustrial society: Some evidence on responses to active labour market policies from Eurobarometer. *International Social Security Review*, 57(3), 45-64. <https://doi.org/10.1111/j.1468-246x.2004.00194.x>
- Unt, M., Gebel, M., Bertolini, S., Deliyanni-Kouimtzi, V., & Hofäcker, Dirk (Eds.). (2021). *Social Exclusion of Youth in Europe. The Multifaceted Consequences of Labour Market Insecurity*. Bristol: Bristol University Press. <https://doi.org/10.47674/9781447358756>
- Van de Kaa, D. (1987). Europe's Second Demographic Transition. *Population Bulletin*, 42(1), 3-55. <https://estvitaesydemografia.wordpress.com/wp-content/uploads/2013/04/europec2b4s-second-demographic-transition.pdf>
- Voicu, B. (2004). Capitalul uman: componente, niveluri, structuri. România în context european. *Calitatea Vieții*, 15(1-2), 137-157.
- Walther, A., & Pohl, A. (2007). Activating the disadvantaged. Variations in addressing youth transitions across Europe. *International Journal of Lifelong Education*, 26(5), 533-553. <https://doi.org/10.1080/02601370701559631>
- Word Bank. (2022). <https://www.worldbank.org/ro/country/moldova>

SUBJECTIVE WELL-BEING OF NEET BASED ON GENDER AND GENERATION SURVEY IN MOLDOVA

DOI: <https://doi.org/10.36004/nier.es.2023.2-07>

JEL Classification: C25, I30, J13, O52

UDC: 316.346.32-053.6(478)

Maxim SLAV

Scientific Researcher, National Institute for Economic Research, Academy of Economic Studies of Moldova

<https://orcid.org/0000-0002-3061-1692>

e-mail: mgslav@gmail.com

Received 7 June 2023

Accepted for publication 29 October 2023

SUMMARY

NEET is an umbrella term for those who struggle with their school-to-work transition. It is a consensus today that NEET is an acutely heterogeneous group, and there are varying ways to classify its members. Some of them deliberately reject or postpone the school-to-work transition, for example, because they choose to fulfill their traditional gender role. In this article, the NEET classification was based on the individuals' well-being. Moldova suffers from simultaneous socio-economic crises, including high emigration and poverty rates. A standardized survey taken in Moldova thus would allow for greater flexibility when classifying NEET youth. The data were taken from the Gender and Generation Survey (GGS) conducted in 2020. The previous studies use different definitions of NEET; for this research, the 15 – 29 age group was chosen (298 observations comply with the NEET conditions and are complete). To conduct the classification, the author chose the questions on life satisfaction, happiness, and two depression sentiments. The variables are categorical and were analyzed with a Latent Class Analysis. There are substantial correspondences between the NEET well-being classes and the causes of NEET, as well as the SWB determinants. The results supplement the current knowledge on NEET heterogeneity from the side of self-assigned well-being rather than socio-economic inequalities.

Keywords: NEET, well-being, youth, Moldova, latent class analysis

INTRODUCTION

NEET is defined here as a group of people aged 15 – 29 who were not in employment, education, or training in the four weeks by the time of the poll. The concept attempts to highlight the most vulnerable part of the youth using the school-to-work transition framework (Contini et al., 2019). Since it is defined through negations, as Yates and Payne (2006) note, NEET was predetermined to unite various groups. The studies that followed the concept introduction showed various ways to dissect the group by socioeconomic status (e.g., UCW, 2013; Tamesberger & Bacher, 2014). Several research groups focused on the frequency and duration of the NEET state (Contini et al., 2019; Tamesberger & Bacher, 2014) NEET and the intra-NEET inequalities were studied in Moldova before. In their deep overview, Crismaru et al. (2017) took the differences in skills and education as the base of the classification.

Intuitively, the NEET status should be associated with subjective well-being (SWB). Those with a greater propensity to become and stay unemployed are likely to have an unprivileged position that unites other predictors and correlates of low SWB (i.e., low savings and consumption levels, low probability to get a high-paying job, etc. (Carver & Grimes, 2019)). At the same time, stay-at-home mothers are also part of NEET, and for some women, it is a desirable gendered position (Enneli & Enneli, 2017); fulfilling a gender role implies better life satisfaction and overall SWB. The causality in the relationship between SWB and NEET is generally hard to determine because poor SWB and psychological diseases are predictors of the acquisition of NEET status (Bonanomi & Rosina, 2022)

Thus, hypothetically, the NEET SWB classes should be associated with the socio-economic groups and have an ambiguous relationship with the class (i.e., primarily, with income and consumption) due to some additional factors. This study attempts to capture this ambiguity. Previously, researchers classified NEET via the causes of NEET and then studied the resulting clusters' SWB. In this paper, the NEET is classified by SWB, and then the profiles of these SWB classes are described. While, to my knowledge, this is the first attempt to cluster NEET this way, classification of *individuals* by their SWB indicators was done before. The chief utility of this method is the differences between the SWB indicators. For example, unhappy and life-satisfied individuals differ from happy and unsatisfied ones. The classification is done via Latent Class Analysis based on the Gender and Generation Survey (GGS, MH, et al., 2020) conducted in Moldova in 2020. While the distribution of the classes throughout the pandemic year was unequal, the influence of the pandemic stage is counterintuitive (e.g., a widespread positive affect in the middle of the pandemic and a widespread negative one before it).

The rest of the paper is organized as follows. In the literature review, I overview the research on NEET socio-economic and SWB heterogeneity. I also cover the differences between the SWB indicators including life satisfaction, happiness, and depression symptoms. Next, I describe the data I use as well as the method, the Latent Class Analysis (LCA). Since I do not have hypotheses in this article and rather attempt to describe the individuals, the optimal number of classes is determined in this study via information criteria and cut-off points. Finally, I discuss the results: I describe the classes by their well-being and socio-economic position.

LITERATURE REVIEW

SOCIO-ECONOMIC HETEROGENEITIES OF NEET

Due to the general measurement, the group must contain those in natural unemployment and those unemployed long-term. The classical definition of NEET is based on the period of four weeks, but Bynner and Parsons (2002) used a definition of NEET based on six months rather than four weeks. Contini et al. (2019) define different NEET subgroups based on the duration of their status (e.g., up to three months, up to eleven months, etc.). There must also be the absence of some vulnerable youth (i.e., those that NEET is supposed to describe) with a low-paying precarious job.

Even with the problems of definition put aside, one can find heterogeneities inside the group. One of the main axes of such differentiation is the easiness of exit NEET and the factors that contribute to it. These include the education and skills of the individuals (Crismaru et al., 2017; De Luca et al., 2020) or their parents (Alfieri et al., 2015), the labor market status (Gagauz & Crismaru, 2024), age (Caroleo et al., 2020), and region (Özdemir et al., 2023). Universal rules are yet to be found, as the patterns differ from country to country and region to region. For example, women are more likely to be NEET in the South of Italy compared to the North (Contini et al., 2019). Tamesberger and Bacher (2014) dissect the Austrian NEET by the causes of NEET. They conclude

with a quite complicated seven-group classification that includes, besides the others, “young married women with a migration background.” The studies on Moldova do not mention this group, which I would explain with the high level of emigration rather than immigration (Gagauz & Crismaru, 2024).

As Crismaru et al. (2017) reported before, the rates of NEET in Moldova are inflated due to the official statistics not accounting for immigration. The researchers estimated the NEET rate (for those aged 15 – 29 years) to be around 28%¹, which is still very high by European standards. The reported rates are higher only for Turkey and Macedonia. Gagauz and Crismaru (2024) dissect NEET by two axes: women vs. men and unemployed NEET vs. inactive NEET. The inactive NEETs are primarily women living in rural areas and with at least one child. The reverse is true: 75% of women aged 15 – 34 are NEET, and around 75% of them are homemakers (i.e., inactive). Most of the unemployed NEET are men who live in Chisinau. 40% of NEET men aged 15 – 24 and 61% of NEET men aged 25 – 34 work abroad or intend to leave Moldova. Those with secondary education or parents without tertiary education are more likely to be inactive or unemployed NEET. Finally, getting transfers from abroad is also a predictor for these two statuses.

SWB AND NEET

This article focuses on four SWB indicators: life satisfaction, happiness, and two depression sentiments. Both life satisfaction and affective well-being indicators are assessments of one’s life (Van Praag et al., 2003; Vladislavljević & Mentus, 2019). However, the former results from self-reflection and life evaluation, and the second is based on pleasant and unpleasant feelings (positive and negative affective well-being). The difference manifests in the predictors of each: “Factors such as income, education, or marital status predict life satisfaction, while time use predicts affective balance more strongly” (Vladislavljević & Mentus, 2019, p.39). Such differences are more complicated if the affect is evaluated retrospectively (e.g., “Did you feel happy today?”). According to Ganzach et al. (2023), retrospective evaluation of positive affect is more based on the heuristics, e.g., self-image, while retrospective evaluation is closer to the experienced affect. Personality traits, e.g., neuroticism, also affect SWB, but their considerations are out of the scope of this paper.

Typically, the SWB of NEET was contrasted with the SWB of non-NEET. On average, NEET is associated with lower happiness and life satisfaction (Bonanomi

& Rosina, 2022; Felaco & Parola, 2022) and a higher probability of mental health problems (Bonanomi & Rosina, 2022; Goldman-Mellor et al., 2016). There are reasons for NEET status to deteriorate the SWB of individuals, including lower incomes and worse prospects. However, those with mental health problems in childhood and adolescence (ADHD, depression, etc.) do have significantly and substantially higher chances of becoming NEET (Goldman-Mellor et al., 2016), which suggests a causal loop.

If one accounts for socio-economic aspects alone, the well-being of NEET should be heterogeneous for several reasons. One of the reasons is the socio-economical NEET heterogeneity. The lack of employment (or enrollment in an education institution as a socially approved alternative to employment) is natural for some situations, e.g., for the younger part of the youth (Caroleo et al., 2020). Second, NEET is constructed to target specifically those who do not work or have no socially accepted substitutes to work (training or education). A great part of the association is non-meeting the expectations from oneself, disappointment, and marginalization (Crismaru et al., 2017). Some believe a

¹ The rate is quite stable, i.e., it was 30% in 2022 (Gagauz & Crismaru, 2024).

young person must work or study to get a job. The correct position of a young person, one can claim, is to work or to study to get a job. Theoretically, such claims echo the concept of an ‘out of place’ position (Douglas, 2001) and lead individuals to fatalism (Thompson et al., 2018). Researchers on SWB of NEET note the present-fatalistic orientation of the NEET youth (Felaco & Parola, 2022).

The aspired position varies. For example, Enneli and Enneli (2017) studied young lower-class Turkish women who were discontent² with their low-income jobs and dreamed of being a traditional housewife (i.e., of a NEET position). There are traces of these divisions in Moldova. 80% of NEET women desire to have a happy family, and only 15% want to earn “a lot of money” (the figures are 40% and 48%, respectively, for men (Crismaru et al.,

2017). Enneli and Enneli (2017) argue that two groups criticize the gender roles: the higher-educated women and the men who cannot fulfill the breadwinner role. Sobotka (2008) observed the same phenomenon in the post-communist countries. Low education levels are associated there with both traditional values and wide adoption of cohabitation and extra-marital childbearing. In other words, the lower class may strive towards an old family ideal with a hierarchy and fixed boundaries and be unable to afford it.

There is evidence that the NEET’s subjective well-being is affected the way mentioned above: the NEET women with children do not suffer from the same effects as the childless women and men (Bonanomi & Rosina, 2022).

DATA SOURCES AND USED METHODS

Gender and Generation survey (MH, et al., 2020) was used to study the well-being of the NEET. NEET was formed from two questions. First, demo6, a question on employment status. The following replies were accepted as NEET: unemployed, homemaker, ill or disabled. Second, demo8a, a question on training in the past four weeks. As a result, 298 individuals remained in the sample.

To a limited extent, the survey allowed for following the methodology of the other well-being researcher (Bonanomi & Rosina, 2022). Specifically, the questions used were on satisfaction with life (welo1), happiness (welo8), and two depression sentiments: feeling depressed (wel11b) and feeling life was a failure (wel11c). The scale for the *welo1* question was framed as follows: 0 means “absolutely not satisfied”, 10 is “absolutely satisfied”, and 5 is “neither satisfied nor unsatisfied” (welo8, the question on happiness, is scaled accordingly). For the analysis simplicity and due to the

software limitations, the scales for these two variables were recoded into four- and five-level scales, respectively. Cronbach’s alphas equal 0.924 and 0.949, respectively. Since alphas greater than 0.9 are considered excellent, no substantial distortions due to the recoding are expected. Finally, the two depressive symptoms have four-point scales with “Never” being recoded as “1”, and “Most of the time” being recoded as “4”. Thus, greater values refer to stronger sentiments. The descriptive statistics for the [pre-recoded] variables used as well as for gender and age can be found in Table 1.

It was mentioned above that heterogeneities in NEET’s SWB must exist because of the socio-economic heterogeneities: there is a finite number of statuses that individuals in NEET have that affect their socio-economic position (Tamesberger & Bacher, 2014). Another reason to use clusterization is the multimodality of the SWB indicators (see Table 1).

Table 1.

Descriptive Statistics of the Independent Variables.

	Minimum	1st Quartile	Median	Mean	3rd Quartile	Maximum	Standard Deviation
Gender	Male: 126	Female: 172					
Age	15	22	25	24,48	28	29	3,66
Life Satisfaction	0	8	9	8,36	10	10	1,72
Happiness	5	8	9	8,52	10	10	1,52
Feeling depressed	1	1	1	1,55	2	4	0,66
Feeling life was a failure	1	1	1	1,34	2	4	0,64

² The desire to be a stay-at-home mother may be a result of resentment, as shown above, but it can also be a conscious strategic prioritization of one’s responsibilities (Yates & Payne, 2006).

It is supposed that there are links between the above-mentioned variables, and hence the Latent Variable approach is used. It implies that the values of the variables are determined by an unknown variable. The previous research shows there are subgroups in the NEET group; the variables offered by GGS are categorical. This leads to the Latent Class model (LCA).

To report the results of LCA, I follow the guidelines of Weller et al. (2020) and Nylund-Gibson and Choi (2018). To run LCA, I use the poLCA package for R (Linzer & Lewis, 2011). When the optimal number of classes was determined, every model calculation was repeated 200 times with 5000 iterations for each model. The rules to establish the optimal number of classes can be divided into three groups. First, several indicators have cut-off points; if a model does not satisfy them, it is usually not considered. The first measure with such a criterion is *entropy*, the degree of separation between the classes, and the second one is *the minimal posterior probability*, the accuracy with which the model determines the class of an observation. For both, the desired value is 1, but the cut-off points vary being 0.6 for entropy and 0.8 for

the posterior probability (Weller et al., 2020). Finally, generally, no class should contain less than 5% of a sample and less than 50 observations, although samples of 30 observations are sometimes enough for the whole LCA (Nylund-Gibson and Choi, 2018).

Second, the optimal number of classes is determined through information criteria. For all three provided below, AIC, BIC, and log-likelihood, it is optimal to be the minimal. AIC and BIC are based on log-likelihood and, unlike log-likelihood, they punish for the number of parameters used. It was reported before that BIC tends to underestimate the correct number of classes while AIC tends to overestimate it. Nylund-Gibson and Choi (2018). suggest considering AIC as the upper bound of the optimal number of classes and BIC as the lower bound.

The third criterion for the determination of the number of classes is the prior expectations of the number of classes. I expect at least two: those comfortable with their NEET position and the others. A greater number of classes would mean that there are either levels of (dis) satisfaction or varying types of dissatisfaction.

MAIN RESULTS AND DISCUSSION

FINDING THE OPTIMAL NUMBER OF CLASSES.

In Table 2, the fit indices are presented. Following the guidelines, the optimal number of classes for this model must be between three and five. Three, however, is the maximum number of classes without the cut-off points being violated (see the minimal number of a class in

the four- and five-class model). The three-class model also has acceptable entropy and good minimal posterior probability values. See Table 3 for the frequencies and proportions of the classes.

Table 2.

Fit indices for Six LCA Models.

Number of classes	AIC	BIC	Log-lik	Entropy	min posterior	min number	min share
1	2650	2698	-1312		1	298	1
2	2490	2590	-1218	0,793	0,913	86	0,289
3	2422	2573	-1170	0,882	0,931	67	0,225
4	2403	2606	-1146	0,879	0,933	45	0,151
5	2390	2645	-1126	0,899	0,935	12	0,04

Table 3.

Classes' Frequencies and Proportions (%).

	Class 1	Class 2	Class 3
Frequency	134	97	67
Proportion, %	45	32.6	22.5

THE OVERVIEW OF THE MODEL

The statistics on the SWB indicators can be found in Appendix 1. Overall, the positive affect and life satisfaction of the classes can be ranged linearly with Class 2 having the highest life satisfaction and happiness levels, Class 3 having the lowest, and Class 1 having the intermediate position. The negative affect (sadness and disappointment in life) also can be ranged with Class 1 being slightly better off compared to Class 2 and substantially better off compared to Class 3. The Class 3 position may be intuitively clear; after all, a class with low SWB was expected. Apart from the pure description of the classes, the existence of two classes with (different) high SWB indicators should be explained. The next two subsections are focused on the socio-economic

characteristics of the classes and their values with the potential solution being suggested in the Discussion section.

An exact Fisher test suggested that the distribution of the classes was uneven throughout 2020 (a link especially important during the pandemic; the significance level for the Fisher test is 5%). At the same time, it is hard to explain the association. 30% of Class 3, the one with the lowest SWB, was in February, more than a month before the COVID regulations took place in Moldova. 32% of Class 1 were interviewed in August. The distribution of Classes by the month of the interview can be found in Table 4.

Table 4.

Distribution of Classes Across the Months of 2020.

	January	February	March	July	August	September	October	November	December
Class 1	1,5	11,4	8,3	9,8	31,8	18,9	13,6	4,5	0
Class 2	1,1	19,4	5,4	16,1	14	14	17,2	10,8	2,2
Class 3	0	29,5	6,6	11,5	18	18	8,2	8,2	0

CLASSES' SOCIO-ECONOMIC CHARACTERISTICS.

Socio-demographically, the classes have similar demographic status distribution. Class 1 has the highest proportion of women (60.5%), but it is only slightly higher than the lowest share (53.7%, Class 3). The classes differ more regarding the age composition with Class 2 being younger and Class 3 being older. Still, every age group exists in every class; those aged 20-24 take a third in each class, and those aged 25-29 take up between one-half and two-thirds of each class. Finally, every second representative of each class has a child. See Tables 5 and

6 for statistics on the classes' gender, urban/rural, age, employment, partnership, marriage, and parenthood status composition. The only significant differences³ between classes are in their employment and marriage status. Only 27% of Class 3 have a spouse, and 45% of Class 1 are married; Class 2 has an intermediate position. There are also significantly and substantially more disabled and unemployed people in Class 3 compared to the other two classes, in which homemakers are a majority.

Table 5.

Gender, Rural/Urban, and Age Composition of Class, %.

	Women	Aged 15-19	Aged 20-24	Aged 25-29	Have a partner	Married	Have a child
Class 1	60.5	11.9	32.1	56.0	62.7	44.8	49.3
Class 2	56.7	16.5	30.9	52.6	62.9	37.1	47.4
Class 3	53.7	4.5	31.3	64.2	47.8	26.9	50.7

Table 6.

Employment Status and Place of Residence, by Class, %.

	Unemployed	Homemaker	Ill or disabled	Rural residents, %
Class 1	44	53.7	2.2	80.5
Class 2	40.2	58.8	1	76.3
Class 3	47.8	41.8	10.4	68.7

Class 1 respondents (46.2% of the sample), *the moderate and tranquil NEET*, have low levels of negative affect and moderate levels of positive affect and life satisfaction. For example, only 12,3% gave the highest scores of happiness, and nobody gave the highest satisfaction scores, but only 98% said they felt their life was a failure. The low negative affect levels also reveal themselves by other indicators, including various loneliness symptoms, e.g., 77% have enough people to rely on, and 80% have enough people they feel close to.

Socio-economically, they are the most educated class with 10% having higher education and 37% having a professional education. As for their income, 27% of the class make ends meet “with difficulty” or “with great difficulty”, and 29% do not report any hardships at all. By consumption possibilities, they have an intermediate position with basic needs almost fully covered and having no or almost no budget for luxuries. For example, 75% of the classes can buy new clothes and 73% can afford two pairs of shoes, 69 can keep their houses warm. At the same time, only 15% can afford a one-week holiday outside of their residence, 19% can have leisure activities, and 29% can buy a car. Finally, 86% of Class 1 mostly speak Romanian or Moldovan at home, and only 8.2% speak Russian.

Class 2, *affluent and happy NEET*, (32.5% of the sample) shows the greatest happiness and life satisfaction: 96% have the highest satisfaction score, and 75% have the highest happiness score. At the same time, 14% feel disappointment in life from time to time. They also have low levels of loneliness and depression symptoms that are not substantially different from those of Class 1. For example, 82% never feel emptiness, 82% have people they can rely on, etc.

Socio-economically, two-thirds of the class only went to school, and only 6% got higher education. By their consumption patterns and possibilities, Class 2 is the most affluent. 26% of them report they make their ends meet “with difficulty” or “with great difficulty”. 40% of them report no difficulties at all. A majority can entertain their friends or family (89%), keep up with their credit payments (83%), keep their houses warm (80%), and buy clothes (79%) or two pairs of shoes (76%). 57% can afford unexpected payments,

42% can replace their furniture, and 39% can buy a car. An overwhelming majority of Class 2 speak Romanian (46%) or Moldovan (43%) at home.

Class 3, *poor and unhappy NEET*, (21.3% of the sample) contains all those completely unsatisfied (7%) and unhappy (45%), as well as those who feel depressed (6%) or disappointed in themselves (6%). They have the worst levels of other SWB indicators: the frequencies of sadness (each third feels it ‘often’), fearfulness (each fifth), or inability “to shake off the blues” (each fifth) as well as the spread of the sense of emptiness (every fourth feels empty). They also have the worst social deprivation by various measurements: only 50% have people they feel close to, less than 50% have people to rely on, and more than 25% feel rejected. At the same time, this is also the class with the highest share of those helping others with childcare (37.5% vs. 20% for other NEET groups). Their physical well-being is also the worst in the group. It was mentioned before that 10% of the Class 3 representatives are ill or disabled; it can be added that 48% of the class consider their health state as “acceptable” or “bad” (20% for the other two classes).

Socio-economically, Class 3 is the least affluent of the classes. An overwhelming majority reports some levels of difficulty in making ends meet. This translates into their low consumption possibilities on virtually every good mentioned above. 59% of them can afford to buy clothes, 55% can afford shoes, and 60% keep their houses warm. However, 14% of them can afford a vacation and 19% afford leisure activities. 36% cannot keep up with their credit payments. Finally, only 21% of them can afford to replace furniture. Finally, almost 40% of them do not have home internet (compared to 23% for other classes). This disadvantaged financial situation is coupled with the lowest education among the classes: only 5% have higher education and 21% have professional education.

25% of Class 3 speak Russian at home, 27% speak Romanian, and 42% speak Moldovan. The highest proportion of Russian speakers and the lowest proportion of Romanian speakers may indicate their ethnic background or political views; it should be specifically highlighted that the share of Gagauz, Bulgarian, or Romani speakers in the group is not substantially different for Class 3 compared to the other two.

³ Unless specified otherwise, the indices that I report but do not provide tables for have a statistically significant (i.e., at least 5% significance level) association with the class of the respondents. If the classical chi-squared test could not have been performed because of the assumptions’ violation (for example, because more than 20% of the cells have observed frequencies of less than five), the Fisher test was performed.

CLASSES' OPINIONS ON GENDER ROLES

The GGS dataset offers eleven questions on gender roles. There were statistically significant associations between the class and five of them: two on marriage (if marriage is outdated and if unmarried cohabitation is normal) and three on childbearing (if women (men) need children to be fulfilled and if a working mother can secure warm relationship with her child). Overall, one can attempt to put them on the *traditional values – modern values* scale, but a deeper analysis suggests the picture is more complicated.

First, the Class 3 representatives value the marriage institution the least, and Class 2 values it the most. Only 48% of Class 3 believe that marriage is not outdated, and 20% believe that a partnership without a marriage is not normal. The values are 63% and 35%, respectively, for Class 2. Class 1 has a mixed position, believing that marriage is not outdated (65%) while also tolerating unofficial partnerships (they are not normal for 19%). Second, more than 75% “absolutely” or “partially” agree that both men and women need children to be fulfilled in their lives. The Class 2 members are more rigid in this regard than the others: 84% “absolutely believe” that women need children whereas only 76% of Class 1 and

58% of Class 3 do. Similarly, more than 75% of each class assured that the bond between a child and a working mother can be as strong as a bond between a child and a non-working one.

It can be summed up as follows: Class 2 has more traditional views, and Class 3 has the more diverse ones. However, the answers to the other questions do not show statistical significance between the classes. Among these questions is another question on working mothers, fatherless families, and LGBT+ rights. Coupled with the previously mentioned financial struggles of Class 3 members, one can suggest that these are examples of traditional values becoming blurred when people cannot afford to people who cannot afford to have an ideal traditional family. The analysis becomes more complicated when one analyses the genders separately. For example, there are statistical differences between women (but not men) in different classes regarding the question of marriage for life: Class 2 is the most radical in their stance (69% “absolutely” agree), and Class 3 has more individuals with modern views (28% “partially” or “absolutely” disagree compared to 7% for the other classes.

DISCUSSION AND CONCLUSIONS

While previously, the NEET was first classified through socio-economic characteristics and then the groups' SWB was studied, this article undertook a different route: from the SWB to class. NEET includes individuals with varying opportunities and statuses. The literature suggested that the two major groups of NEET in Moldova are inactive women and unemployed men. It was thus hypothesized that those chronically NEET should have worse SWB compared with those casually NEET. Values are one of the mediators of the NEET status on SWB. For example, men who accept the traditional breadwinner role but do not comply with it must have worse SWB. At the same time, as the previous studies show, the inability to act on the gender role also weakens the role.

In this study, NEET youth were differentiated with four SWB indicators: life satisfaction, happiness, feeling depressed, and being disappointed in their life. It was hypothesized that two classes exist: those with low affluence and SWB and those with high affluence and SWB. With Latent Class Analysis, three classes were found. Class 3 (21% of the sample) has the worst SWB with the lowest life satisfaction and positive affect and the highest depression symptoms. Class 2 (33%) has the highest positive affect and life satisfaction with quite low levels of negative affect. Class 1 (46%) has moderate positive affect and life satisfaction levels and very low negative affect. The mere fact that Class 2 has moderate (and not the lowest) levels of negative affect bars one from putting the classes on a “worse SWB – better SWB” scale.

Several explanations could be suggested. Perhaps, the simplest one is the fact that many people report having no negative affect (Schimmack, 2006). However, the question should be reformulated then: is there a reason why the share of those who [generally] report no negative affect is so high in Class 1? The sections on the socio-economic characteristics of the classes and their values show that Class 1 generally holds an intermediate position between the other two classes. Class 1 only has a more affluent position than Class 2 in education. A greater model complication may also be an answer. While the differences between classes may be pronounced for one gender, this may not be true for the other and vice versa.

While there are statistically significant differences in labor market status between the classes (i.e., unemployed vs. inactive), other factors seem to be more substantial. SWB also has a pronounced link with health, income, and consumption patterns. The ‘out of place’ state, i.e., the impossibility of confirming with the traditional roles, was suggested as a major factor of mental health deterioration. The methods of this study did not allow to confirm or to reject the hypothesis, but it is tangentially supported by the fact that the class with the highest proportion of the unemployed and men has the lowest SWB indicators. At the same time, the link between the SWB classes and the gender roles opinions (while holding the gender fixed) should be explored more.

REFERENCES

- Alfieri, S., Sironi, E., Marta, E., Rosina, A., & Marzana, D. (2015). Young Italian NEETs (Not in Employment, Education, or Training) and the Influence of Their Family Background. *Europe's Journal of Psychology*, 11(2), 311-322. <https://doi.org/10.5964/ejop.v11i2.901>
- Bonanomi, A., & Rosina, A. (2022). Employment Status and Well-Being: A Longitudinal Study on Young Italian People. *Social Indicators Research*, 161(2-3), 581-598. <https://doi.org/10.1007/s11205-020-02376-x>
- Bynner, J., & Parsons, S. (2002). Social Exclusion and the Transition from School to Work: The Case of Young People Not in Education, Employment, or Training (NEET). *Journal of Vocational Behavior*, 60(2), 289-309. <https://doi.org/10.1006/jvbe.2001.1868>
- Caroleo, F. E., Rocca, A., Mazzocchi, P., & Quintano, C. (2020). Being NEET in Europe Before and After the Economic Crisis: An Analysis of the Micro and Macro Determinants. *Social Indicators Research*, 149(3), 991-1024. <https://doi.org/10.1007/s11205-020-02270-6>
- Carver, T., & Grimes, A. (2019). Income or Consumption: Which Better Predicts Subjective Well-Being? *Review of Income and Wealth*, 65, S1, S256-S280. <https://doi.org/10.1111/roiw.12414>
- Contini, D., Filandri, M., & Pacelli, L. (2019). Persistency in the NEET state: A longitudinal analysis. *Journal of Youth Studies*, 22(7), 959-980. <https://doi.org/10.1080/13676261.2018.1562161>
- Crismaru, M., Gagauz, O., & Buciuceanu-Vrabie, M. (2017). *Inclusion of Youth Not in Employment, Education or Training (NEET Youth)*. NIER. <http://dspace.ince.md/xmlui/handle/123456789/1821>
- De Luca, G., Mazzocchi, P., Quintano, C., & Rocca, A. (2020). Going Behind the High Rates of NEETs in Italy and Spain: The Role of Early School Leavers. *Social Indicators Research*, 151(1), 345-363. <https://doi.org/10.1007/s11205-020-02370-3>
- Douglas, M. (2001). *Purity and Danger*. Routledge. https://monoskop.org/images/7/7d/Douglas_Mary_Purity_and_Danger_An_Analysis_of_Concepts_of_Pollution_and_Taboo_2001.pdf
- Enneli, H. Ç., & Enneli, P. (2017). Reinforcement and erosion of traditional gender roles among young people in a poor metropolitan area of Turkey. *Journal of Youth Studies*, 20(3), 349-365. <http://dx.doi.org/10.1080/13676261.2016.1217320>
- Felaco, C., & Parola, A. (2022). Subjective Well-Being and Future Orientation of NEETs: Evidence from the Italian Sample of the European Social Survey. *Social Sciences*, 11(10), 482. <https://doi.org/10.3390/socsci11100482>
- Gagauz, O., & Crişmaru, M. (2024). Factorii de risc pentru plasarea tinerilor în categoria NEET: cazul Republicii Moldova. *Calitatea Vieții*, 35(1), 1-19. <https://revistacalitateavietii.ro/journal/issue/view/2024-1>
- Ganzach, Y., Bulmash, B., & Pazy, A. (2023). Top-down versus bottom-up processes in the formation of positive and negative retrospective affect. *Cognition and Emotion*, 37(1), 86-97. <https://doi.org/10.1080/02699931.2022.2146658>
- Goldman-Mellor, S., Caspi, A., Arseneault, L., Ajala, N., Ambler, A., Danese, A., Fisher, H., Hucker, A., Odgers, C., Williams, T., Wong, C., & Moffitt, T. E. (2016). Committed to work but vulnerable: Self-perceptions and mental health in NEET 18-year olds from a contemporary British cohort. *Journal of Child Psychology and Psychiatry*, 57(2), 196-203. <https://doi.org/10.1111/jcpp.12459>
- Linzer, D. A., & Lewis, J. B. (2011). polCA: An R Package for Polytomous Variable Latent Class Analysis. *Journal of Statistical Software*, 42(10), 1-29. <https://doi.org/10.18637/jss.v042.i10>
- Ministry of Health, Labour and Social Protection of the Republic of Moldova, National Bureau of Statistics (sample development), UNFPA & NIDI-GGP (partner and data distributor). (2020). *Republic of Moldova - Generations and Gender Survey*. https://moldova.unfpa.org/sites/default/files/pub-pdf/summary_of_generations_and_gender_survey_1.pdf
- Nylund-Gibson, K., & Choi, A. Y. (2018). Ten frequently asked questions about latent class analysis. *Translational Issues in Psychological Science*, 4(4), 440-461. <https://doi.org/10.1037/tps0000176>
- Özdemir, M. O., Ozcan, K. M., & Üçdoğruk, Ş. (2023). Youth not in Employment, Education, or Training (NEET) in Turkey: A Regional Analysis. *Ege Academic Review*, 23(3), 409-426. <https://doi.org/10.21121/eab.1178984>
- Schimmack, U. (2006). Methodological Issues in the Assessment of the Affective Component of Subjective Well-Being. In: A. D. Ong, M. H. M. van Dulmen (Eds.), *Oxford Handbook of Methods in Positive Psychology* (pp. 96-110). New York: Oxford University Press. <https://doi.org/10.1093/oso/9780195172188.003.0007>
- Sobotka, T. (2008). The diverse faces of the Second Demographic Transition in Europe. Overview Chapter 6. *Demographic Research*, 19, July - December, 171-224. <https://doi.org/10.4054/DemRes.2008.19.8>
- Tamesberger, D., & Bacher, J. (2014). NEET youth in Austria: A typology including socio-demography, labour market behaviour and permanence. *Journal of Youth Studies*, 17(9), 1239-1259. <https://doi.org/10.1080/13676261.2014.901492>

- Thompson, M., Ellis, R., & Wildavsky, A. (2018). *Cultural Theory*. Routledge: Taylor & Francis Group.
- Understanding Children's Work (UCW) Programme. (2013). *NEET youth dynamics in Indonesia and Brazil. A cohort analysis*. <https://thedocs.worldbank.org/en/doc/81b760637f22dc1f26465c9397efdac2-0050022022/original/NEET-Youth-cohort-effects-Indonesia-Brazil.pdf>
- Van Praag, B. M. S., Frijters, P., & Ferrer-i-Carbonell, A. (2003). The anatomy of subjective well-being. *Journal of Economic Behavior & Organization*, 51(1), 29-49. [https://doi.org/10.1016/S0167-2681\(02\)00140-3](https://doi.org/10.1016/S0167-2681(02)00140-3)
- Vladislavljević, M., & Mentus, V. (2019). The Structure of Subjective Well-Being and Its Relation to Objective Well-Being Indicators: Evidence from EU-SILC for Serbia. *Psychological Reports*, 122(1), 36-60. <https://doi.org/10.1177/0033294118756335>
- Weller, B. E., Bowen, N. K., & Faubert, S. J. (2020). Latent Class Analysis: A Guide to Best Practice. *Journal of Black Psychology*, 46(4), 287-311. <https://doi.org/10.1177/0095798420930932>
- Yates, S., & Payne, M. (2006). Not so NEET? A Critique of the Use of 'NEET' in Setting Targets for Interventions with Young People. *Journal of Youth Studies*, 9(3), 329-344. <https://doi.org/10.1080/13676260600805671>

APPENDIX 1.

SWB and Socio-Demographic Characteristics of the Classes.

Table 1.

The Share of Individuals with Respective Life Satisfaction Levels, by Class, %

	Absolutely not satisfied	2	3	4	Absolutely satisfied
Class 1	0	8,3	54,6	37,1	0
Class 2	0	0	0	3,8	96,2
Class 3	7,3	35,3	39,6	11,9	5,9

Table 2.

The Share of Individuals with Respective Happiness Levels, by Class, %

	Absolutely not happy	2	3	Absolutely happy
Class 1	16,1	33,5	38,1	12,3
Class 2	3,7	11,7	9,7	74,9
Class 3	44,6	26,1	14,4	15

Table 3.

The Share of Individuals Reporting the Respective Frequency of Feelings Depressed, by Class, %

	Never	Sometimes	Often	Most or all of the time
Class 1	68,4	31,6	0	0
Class 2	68,5	30,1	1,5	0
Class 3	0	72,9	21,2	5,8

Table 4.

The Share of Individuals Reporting the Respective Frequency of Disappointment in Life, by Class, %

	Never	Sometimes	Often	Most or all of the time
Class 1	98	2	0	0
Class 2	84,9	13,4	0,7	1
Class 3	11,9	65,8	16,5	5,8

POLICIES AIMED AT ENHANCING FINANCIAL INCLUSION DURING A PANDEMIC: A LITERATURE REVIEW

DOI: <https://doi.org/10.36004/nier.es.2023.2-09>

JEL classification: G28, O16, E61

UDC: 336.02

Serghei PETIGHIN

PhD student, Doctoral School, Academy of Economic Studies of Moldova

<https://orcid.org/0009-0004-8681-3770>

e-mail: spetighin@mail.ru

Received 08 September 2023

Accepted for publication 23 November 2023

SUMMARY

This study examines the financial inclusion policies during pandemics, particularly focusing on their efficacy within emerging economies and areas dominated by informal sectors. The urgency and relevance of the topic are underscored by the heightened economic vulnerabilities these regions face during global health crises, such as the COVID-19 pandemic, which starkly amplify the necessity for robust financial inclusion to uphold economic resilience. The primary objectives of this paper are twofold: firstly, to critically assess the array of financial inclusion policies deployed during pandemics, and secondly, to pinpoint potential policy enhancements informed by contemporary research alongside successful international implementations. Employing a mixed-methods approach, the research synthesizes quantitative data on policy outcomes with qualitative insights from policy analyses and stakeholder interviews. This methodology allows for a nuanced understanding of the multifaceted impacts of financial inclusion initiatives and their adaptability to crisis conditions. Key findings highlight the pivotal role of digital financial services, effective public-private collaborations, and the establishment of adaptive social support mechanisms in promoting financial inclusivity amidst pandemic-induced economic disruptions. These strategies emerge as crucial levers for advancing financial inclusion, providing valuable lessons for crafting policies that are resilient, targeted, and capable of fostering sustainable economic growth and stability in the face of ongoing and future global challenges. The study's insights offer critical guidance for policymakers and financial institutions seeking to enhance financial inclusion frameworks, thereby contributing to the development of more inclusive, equitable, and resilient financial ecosystems worldwide.

Keywords: financial inclusion, pandemic, policy innovations

INTRODUCTION

Financial inclusion is the availability and accessibility of financial services to all individuals and businesses, regardless of socioeconomic status (Demirgüç-Kunt, et al., 2018). It involves providing affordable, convenient, and safe financial products and services that meet the diverse needs of the population, including savings, credit, insurance, and payments. Financial inclusion is essential during a pandemic for several reasons:

- *Pandemics, such as COVID-19, have significant economic consequences, leading to job losses, reduced income, and financial instability (Nicola et al., 2020). Financial inclusion helps cushion the economic impact by providing vulnerable populations access to essential financial services (Beck et al., 2007).*
- *Financially inclusive systems can facilitate the rapid and efficient distribution of emergency funds to those in need, helping mitigate the pandemic's negative effects.*
- *Enhanced financial inclusion can contribute to economic recovery by enabling households and businesses to access credit and other financial resources, thereby supporting investment and growth (Aghion et al., 2005).*

During a pandemic, underserved populations face several challenges in accessing capital:

- *Reduced income and job losses may lead to lower creditworthiness, making it harder for vulnerable individuals and businesses to access loans.*
- *Lending institutions may tighten their credit standards due to increased risk aversion and economic uncertainty, further restricting access to capital for underserved populations (Borio et al., 2017).*
- *Traditional face-to-face banking services may be disrupted or restricted due to lockdowns and social distancing measures, making it more difficult for individuals with limited digital or financial literacy to access financial services.*
- *Inadequate access to financial information and advice can exacerbate the challenges underserved populations face during a pandemic, as they may be less aware of the financial assistance programs and resources available to them (Ramakrishnan, 2012).*

The need for policy transformation to ensure access to capital during a pandemic arises from the unique challenges and vulnerabilities faced by underserved

populations and the broader economy during such crises. Policy transformation is necessary to:

- Address the heightened financial risks and uncertainties that can exacerbate financial exclusion during a pandemic (Borio et al., 2017).
- Facilitate the rapid and efficient distribution of financial assistance to affected individuals and businesses, supporting economic stability and recovery.
- Encourage innovation and adoption of digital financial services, which can help overcome the limitations of traditional banking channels in the context of social distancing and lockdown measures (Pindyck, 2020; World Bank, 2022).
- Promote resilience and adaptability in the financial system, enabling it to better respond to the evolving needs of underserved populations during a pandemic and beyond (Beck et al., 2007).

The paper’s objectives are:

- Based on existing research and practice, assess the effectiveness of policies enhancing financial inclusion during a pandemic. This involves examining the outcomes and impacts of various policies in terms of improving access to capital and mitigating the adverse economic effects of the pandemic.
- Suggest improvements and potential policy transformations to better address the financial needs of underserved populations during a pandemic. This includes identifying best practices and lessons learned from other countries and evaluating innovative approaches to financial inclusion that can be adapted to the specific context of a pandemic.

In this analysis, we delve into the intricate dynamics of financial inclusion policies during pandemics, with a particular emphasis on emerging economies and regions characterized by significant informal economies. These areas, often marked by disparities in access to formal financial services and digital infrastructure, present unique challenges and opportunities for policy interventions. The pandemic’s disproportionate impact

on these vulnerable economies underscores the urgent need for tailored financial inclusion strategies. By focusing on these regions, our study aims to shed light on effective policy measures that can enhance financial resilience, reduce economic inequalities, and promote sustainable development in contexts where it is most needed.

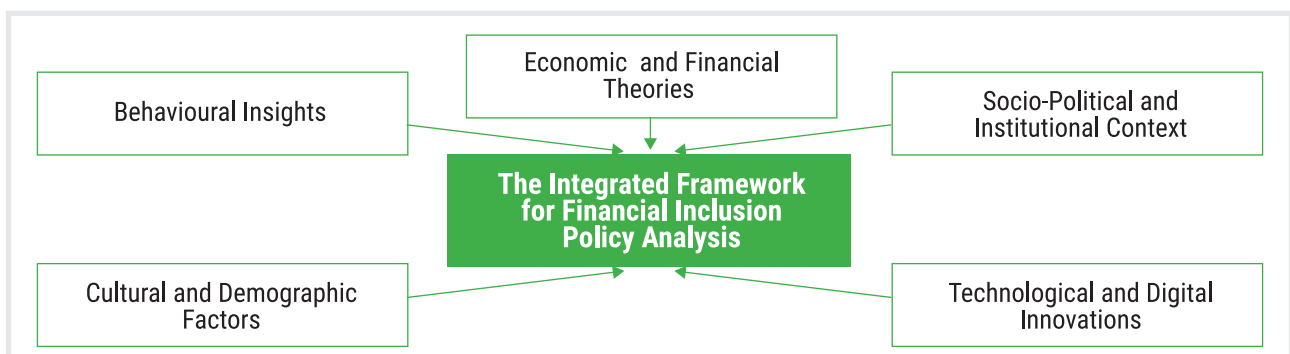
LITERATURE REVIEW

In response to the pandemic’s economic disruptions, a myriad of financial inclusion policies were deployed globally. To critically assess their multifaceted impacts, we introduce the Integrated Framework for Financial Inclusion Policy Analysis (Fig. 1). This framework blends

insights from economics, behavioral sciences, public policy, and technology studies, offering a comprehensive lens through which to examine policy effectiveness and challenges (World Bank, 2020).

Figure 1.

The Integrated Framework for Financial Inclusion Policy Analysis



Source: Elaborated by the author

At the core of financial inclusion dynamics are market imperfections and information asymmetries, which significantly hinder equitable access to financial services. The framework considers how central banks' monetary policies, such as interest rate adjustments, influence the financial inclusion landscape, addressing foundational market inefficiencies.

Behavioral economics provides critical insights into how individuals and businesses navigate financial decisions amidst uncertainty, highlighting psychological barriers like trust and risk aversion that impact financial service uptake (Thaler & Sunstein, 2009). This perspective is essential for understanding the human factors influencing policy success.

The regulatory environment plays a pivotal role in shaping financial inclusion. Policies such as loan guarantees and digital finance regulations must navigate governance structures to be effective (Katz et al., 2020). Additionally, social protection programs are crucial for extending financial inclusion to vulnerable groups, necessitating a nuanced understanding of policy interplay within institutional context.

Digital financial services (DFS) have emerged as a cornerstone of financial inclusion strategies, especially during the pandemic. This segment of the framework evaluates the adoption and impact of DFS, considering the challenges posed by the digital divide and infrastructure limitations (Sha'ban et al., 2021). The success of DFS hinges on robust digital ecosystems and regulatory frameworks conducive to innovation (Kabengele & Hahn, 2021).

Cultural attitudes towards finance and demographic characteristics significantly influence financial inclusion

efforts. The framework acknowledges the diversity in financial behaviors and needs across different population segments, underlining the importance of culturally and demographically informed policy design (Carlsson et al, 2017).

The Integrated Framework for Financial Inclusion Policy Analysis equips policymakers and researchers with a multidimensional tool for examining the nuanced impacts of financial inclusion initiatives. By integrating economic theories with behavioral insights, institutional contexts, technological advancements, and cultural considerations, this framework facilitates a deeper understanding of the pathways to and barriers against effective financial inclusion, especially critical in times of global crises (Ruggeri, 2018).

The paper makes a significant contribution to existing knowledge by providing a timely and comprehensive analysis of financial inclusion policies during a pandemic. It introduces a novel framework that integrates interdisciplinary insights to assess the impact of these policies on vulnerable populations in emerging economies. This approach is crucial for understanding the nuances of financial access and resilience in the face of global economic disruptions caused by the pandemic. Furthermore, the paper offers actionable recommendations for policymakers, aiming to enhance the effectiveness of financial inclusion strategies in mitigating the economic fallout from health crises. By focusing on the pandemic context, the study not only enriches the academic discourse on financial inclusion but also provides a valuable guide for designing policies that are responsive to the challenges posed by such unprecedented global events.

DATA AND METHODS

The systematic literature review approach involves a comprehensive and structured search for published research, reports, and policy documents relevant to

financial inclusion and investment policy transformation during a pandemic (Petticrew & Roberts, 2006). This method includes:

- *Identifying relevant databases for the search, such as PubMed, Scopus, Web of Science, EconLit, and SSRN.*
- *Developing search terms and strategies that capture the key concepts related to financial inclusion, investment policies, and pandemics (“financial inclusion,” “investment policy,” “policy transformation,” “access to capital,” “underserved populations,” “COVID-19,” and “pandemic”).*
- *Using Boolean operators (AND, OR, NOT) and wildcard symbols to combine and refine search terms, ensuring a comprehensive and focused search.*

The selection criteria for relevant articles, reports, and policy documents include:

- *Publication date: Focus on recent literature (e.g., published within the last 10 years) to ensure the review captures the most up-to-date research and policy developments.*
- *Language: Include only articles published in English due to language limitations.*
- *Relevance: Assess each identified source's title, abstract, and keywords to determine its relevance to financial inclusion and investment policy transformation during a pandemic.*
- *Quality: Evaluate the methodological rigor and credibility of the source, prioritizing peer-reviewed articles, official reports from government agencies or international organizations, and policy documents (Moher et al., 2009).*

The data extraction process involves systematically reviewing and synthesizing the critical information on policies, their implementation, and impacts from the selected sources. This may include:

- *Developing a data extraction template to record relevant information such as the policy name, objective, target population, implementation strategy, and outcomes (e.g., access to capital, financial stability, income inequality) (Higgins & Green, 2011).*
- *Assessing the effectiveness of each policy based on the evidence presented in the literature, taking into account potential biases, limitations, and conflicting findings.*
- *Identifying common themes, trends, and gaps in the literature to inform the paper's discussion and recommendations for policy transformation and improvement (Petticrew & Roberts, 2006).*

MAIN RESULTS AND DISCUSSION

A summary of policies aimed at enhancing financial inclusion during a pandemic includes various monetary, fiscal, and regulatory measures designed to improve access to capital and mitigate the economic impact of the crisis (see Tab. 1).

Central banks may reduce interest rates to lower borrowing costs and encourage lending, which can help businesses and households access to credit more easily during a pandemic (Aiyar et al., 2015; Borio et al., 2017; Çevik & Mutlu, 2022; Ferrero et al., 2021; Mosser, 2020).

While this policy improved credit access by reducing borrowing costs, its effectiveness was limited in environments where interest rates were already low or lenders were averse to risk during heightened uncertainties. The reluctance to lend during such

periods posed significant challenges, limiting the policy's impact in stimulating economic activity among underserved populations.

Governments can provide guarantees on loans issued by financial institutions to businesses and individuals, reducing the risk for lenders and increasing credit availability for underserved populations (Aristei & Gallo, 2024; Gentilini, 2022; Jung, 2020; Liu et al., 2022; Preziuso et al., 2023).

Although it succeeded in increasing credit availability, the effectiveness of loan guarantee schemes heavily depended on their design and implementation. Challenges included difficulties in reaching intended beneficiaries and issues related to the schemes' design, which sometimes prevented the policy from achieving its desired impact on financial inclusion.

Table 1.
Summary of Financial Inclusion Policies During the Pandemic

Policy Type	Main Findings	Effectiveness	Challenges	Works
Interest Rate Cuts	Central banks lowered interest rates to reduce borrowing costs, aiming to ease credit access for businesses and households.	Can improve credit access by reducing borrowing costs, but effectiveness may be limited in low-interest environments or due to lender risk aversion.	Limited impact where rates are already low; reluctance to lend during heightened risks.	(Aiyar et al., 2015; C. Borio et al., 2017; Çevik & Mutlu, 2022; Ferrero et al., 2022; Mosser, 2020)
Loan Guarantee Schemes	Governments provided loan guarantees to reduce lender risk and increase credit availability, especially for underserved populations.	Increases credit availability by reducing risk for lenders, but success is highly dependent on scheme design and implementation.	Challenges in reaching intended beneficiaries; design and implementation issues.	(Aristei & Gallo, 2024; Gentilini, 2022; Jung, 2020; Liu et al., 2022; Preziuso et al., 2023)
Direct Cash Transfers	Implementation of direct cash transfer programs to support vulnerable individuals and households, aiming to maintain consumption and alleviate financial strain.	Effective in reducing poverty and income inequality, but limited impact on financial inclusion without access to formal financial services.	May not reach those without bank accounts or digital payment access; limited long-term impact on financial inclusion.	(Dev, 2020; Gentilini, 2022; Kumar et al., 2023; Mazenda, Masiya, & Mandiyanike, 2022; Nicola et al., 2020)
Temporary Suspension of Loan Repayments	Policies allowing temporary suspension of loan repayments to relieve borrowers facing financial difficulties.	Provides short-term relief for borrowers, but long-term effects on financial inclusion and stability are uncertain.	Risk of accumulating non-performing loans; potential future reduction in credit access.	(Aiyar et al., 2020) (Ervo, 2022; Jung, 2020; Leong, 2022; Tsvirko, 2021)
Social Protection Programs	Enhancing or introducing new social protection programs to provide access to essential financial services and resources.	Can improve financial inclusion by providing access to financial services, but effectiveness depends on program design and integration.	Dependence on design, targeting, and integration with other financial inclusion initiatives.	(Abdoul-Azize & El Gamil, 2021; Eichhorst, Marx, & Rinne, 2020; Gentilini, 2022; Jung, 2020; Prates & Barbosa, 2020)
Digital Financial Services	Use of digital financial services to overcome traditional banking limitations during lockdowns and social distancing.	Helps overcome traditional banking limitations and enables easier access to financial services, but success depends on digital infrastructure and literacy.	Digital divide issues; inadequate infrastructure in rural areas; regulatory barriers; financial literacy gaps.	(Jung, 2020; Mansour, 2022; Pindyck, 2020; Pu, Qamruzzaman, Mehta, Naqvi, & Karim, 2021; Rabbani et al., 2021; Tay, Tai, & Tan, 2022)

Source: Elaborated by the author

Governments may implement direct cash transfer programs to provide financial support to vulnerable individuals and households, helping to maintain consumption and reduce the financial strain caused by the pandemic (Dev, 2020; Gentilini, 2022; Kumar et al., 2023; Mazenda et al., 2022; Nicola et al., 2020).

This policy was effective in reducing poverty and income

inequality, demonstrating a direct positive impact on the welfare of recipients. However, its influence on broader financial inclusion was limited, particularly when recipients lacked access to formal financial services. Challenges included ensuring that the transfers reached those without bank accounts or digital payment access, highlighting the need for complementary policies to enhance financial inclusion.

Temporary suspension of loan repayments can relieve borrowers facing financial difficulties during a pandemic, allowing them to maintain access to credit and meet their immediate (Ervo, 2022; Jung, 2020; Leong, 2022; Tsvirko, 2021).

While offering immediate relief, the long-term effects of such policies on financial inclusion and stability remained uncertain. A significant risk was the potential accumulation of non-performing loans, which could strain the financial system and reduce future credit access for underserved populations.

Enhancing existing social protection programs or introducing new ones can improve financial inclusion by providing vulnerable populations access to essential financial services and resources during a pandemic (Abdoul-Azize & El Gamil, 2021; Eichhorst et al., 2020; Gentilini, 2022; Jung, 2020; Prates & Barbosa, 2020).

The effectiveness of these programs varied based on their design, targeting, and implementation, as well as their integration with other financial inclusion initiatives. While they played a crucial role in providing immediate support, challenges included ensuring effective program design and integration with broader financial inclusion strategies.

Governments and financial institutions can use digital financial services, such as mobile banking and electronic payments, to overcome the limitations of traditional banking channels during lockdowns and social distancing measures (Jung, 2020; Mansour, 2022; Pindyck, 2020; Pu et al., 2021; Rabbani et al., 2021; Tay et al., 2022).

This policy facilitated easier access to financial services for underserved populations, depending on the availability of digital infrastructure and financial literacy among the target populations. Challenges included addressing the digital divide, ensuring adequate infrastructure in rural areas, overcoming regulatory barriers, and improving financial literacy to maximize the policy's effectiveness.

The effectiveness of these policies in enhancing financial inclusion during a pandemic can be evaluated based on existing research in terms of increased access to credit, improved financial stability, and reduced income inequality.

Research suggests that lowering interest rates can help improve access to credit by reducing borrowing costs for businesses and households (Borio et al., 2017). However, the effectiveness of this policy can be limited in

situations where interest rates are already low or when lenders are reluctant to extend credit due to heightened risks and uncertainties during a pandemic (Aiyar et al., 2015).

Evidence indicates that loan guarantee schemes can increase credit availability for underserved populations by reducing the risk for lenders. However, the success of such schemes depends on their design, targeting, and implementation, with some studies suggesting that they may only sometimes reach the intended beneficiaries or have the desired impact on financial inclusion (Jung, 2020).

Research has found that direct cash transfer programs can provide vital financial support to vulnerable individuals and households during a pandemic, helping to maintain consumption and alleviate financial strain (Nicola et al., 2020). These programs have been shown to be effective in reducing poverty and income inequality. However, their impact on financial inclusion may be limited if they are not accompanied by efforts to promote access to formal financial services.

Studies have shown that temporary suspension of loan repayments can relieve borrowers during a pandemic, but the long-term effects of this policy on financial inclusion and stability remain uncertain (Aiyar et al., 2015). There is a risk that prolonged moratoriums could accumulate non-performing loans, putting pressure on the financial system and potentially reducing access to credit for underserved populations in the future (Jung, 2020).

Research suggests that expanding social protection programs can improve financial inclusion by providing vulnerable populations access to essential financial services and resources during a pandemic (Jung, 2020). However, the effectiveness of these programs depends on their design, targeting, and implementation, as well as their integration with other financial inclusion initiatives.

Studies have demonstrated that using digital financial services can help overcome the limitations of traditional banking channels during a pandemic, enabling underserved populations to access credit, savings, and payment services more easily (Pindyck, 2020). However, the success of this approach depends on factors such as digital infrastructure, financial literacy, and regulatory support, with some research suggesting that digital financial services may only sometimes reach the most vulnerable or marginalized groups (Jung, 2020).

Gaps and shortcomings in the current policy landscape related to financial inclusion during a pandemic include:

- **Poor targeting and outreach:** Policies may not effectively reach the most vulnerable and underserved populations, particularly those in the informal sector or without access to formal financial services. For example, direct cash transfers may only benefit those with bank accounts or access to digital payment platforms.

- **Inadequate digital infrastructure:** Promoting digital financial services as a means to enhance financial inclusion during a pandemic relies on reliable digital infrastructure and internet connectivity, which may be lacking in rural or remote areas. Additionally, issues related to digital literacy and cyber-security can limit the effectiveness of digital financial services in reaching underserved populations.
- **Limited financial literacy and awareness:** Policies to improve financial inclusion may be less effective if targeted populations lack the financial literacy and awareness to make informed decisions about accessing and using financial products and services (Jung, 2020). This can limit the uptake of available financial resources, such as credit or savings products, during a pandemic.
- **Regulatory barriers:** Overly restrictive or outdated regulations can hinder the developing and adoption of innovative financial services and products designed to improve financial inclusion during a pandemic. For example, regulations may limit the ability of non-bank financial institutions to provide credit or payment services, restricting access to capital for underserved populations.
- **Short-term focus:** Many policies aimed at enhancing financial inclusion during a pandemic focus on providing immediate relief and support without addressing the underlying structural issues contributing to financial exclusion and inequality. This can result in a short-term focus that fails to create sustainable financial inclusion and resilience improvements.

DISCUSSION

The analysis of the findings highlights a complex relationship between policy effectiveness and financial inclusion during a pandemic. Several factors contribute to the success or failure of policies that enhance financial inclusion, and understanding these factors is crucial for designing more effective policies.

The design and implementation of policies play a significant role in their effectiveness in promoting financial inclusion. Poorly targeted policies or those with weak implementation mechanisms may fail to reach the intended beneficiaries, limiting their impact on financial inclusion. This highlights the need for well-designed, evidence-based policies that consider the specific needs and vulnerabilities of underserved populations.

The effectiveness of individual policies can be enhanced when they are combined with complementary measures designed to address different aspects of financial exclusion. For example, direct cash transfers can be more effective in promoting financial inclusion if they are accompanied by efforts to expand access to formal financial services and improve financial literacy.

The effectiveness of policies to enhance financial inclusion during a pandemic can be influenced by context-specific factors, such as the existing financial infrastructure, digital connectivity, and regulatory environment. This underscores the importance of tailoring policy responses to the specific circumstances and challenges different countries and regions face.

Policies that address the underlying structural issues contributing to financial exclusion and inequality are likely to have a more sustainable impact on financial inclusion. This highlights the need for a long-term focus on improving financial resilience and access to capital

beyond the immediate relief provided by short-term measures during a pandemic.

While policies aimed at enhancing financial inclusion during a pandemic can have positive effects, they may also entail trade-offs or unintended consequences, such as moral hazard and inflationary pressures.

Loan guarantee schemes and moratoriums on loan repayments may create moral hazard, as borrowers may engage in riskier behavior, knowing they will not bear the full consequences of their actions. For example, borrowers may take on excessive debt or invest in riskier projects, knowing that the government guarantees a portion of their loans or that they can defer repayments. This can lead to an accumulation of non-performing loans, putting pressure on the financial system and potentially reducing access to credit for underserved populations in the future.

Expansionary monetary policies, such as interest rate cuts or direct cash transfers, can generate inflationary pressures if they result in excessive money supply growth relative to the economy's productive capacity. Inflation can erode the purchasing power of money, disproportionately affecting low-income households that rely on cash savings and fixed incomes. Moreover, high inflation can reduce the effectiveness of other financial inclusion policies by increasing borrowing costs and eroding the actual value of financial assets.

Policy trade-offs and unintended consequences underscore the importance of carefully designing and implementing policies to promote financial inclusion during a pandemic. Policymakers must balance providing immediate relief and support to underserved populations and addressing potential risks and adverse side effects associated with these measures.

Drawing on best practices and lessons learned from other countries, potential improvements to policies aimed at enhancing financial inclusion during a pandemic could include:

- **Targeted and well-coordinated policy interventions:** Ensuring policies are well-targeted and coordinated can help maximize their impact on financial inclusion. For example, combining direct cash transfers with measures to expand access to formal financial services and improve financial literacy can create a more comprehensive approach to addressing financial exclusion.
- **Leveraging digital financial services:** Expanding access to digital financial services can help overcome physical barriers to accessing capital during a pandemic. Policymakers can promote digital financial inclusion by investing in digital infrastructure, promoting interoperability between different financial service providers, and supporting the development of innovative digital financial products and services.
- **Fostering public-private partnerships:** Encouraging collaboration between the public and private sectors can help facilitate the development and delivery of financial services that cater to the needs of underserved populations. Public-private partnerships can support the growth of financial service providers, such as mobile money operators, microfinance institutions, and fintech companies, well-positioned to expand access to capital during a pandemic.
- **Adaptive social protection systems:** Building adaptive social protection systems that can respond flexibly to economic shocks can help ensure that vulnerable populations can access financial support during a pandemic. This may involve creating mechanisms to rapidly expand coverage of social protection programs, such as cash transfers or unemployment benefits, during times of crisis.
- **Monitoring and evaluation:** Regular monitoring and evaluation of financial inclusion policies can help identify areas for improvement and inform the design of more effective interventions. Policymakers should invest in building robust data systems and analytical capacities to track the progress of financial inclusion efforts and assess their impact on targeted populations.

CONCLUSIONS

This study has undertaken a thorough examination of the effectiveness of various financial inclusion policies during the pandemic, shedding light on the nuanced ways in which these policies have translated into practical outcomes. While our findings underscore the potential of meticulously crafted, precisely targeted, and well-coordinated interventions to significantly advance financial inclusion during times of crisis, they also reveal the complexities and challenges inherent in deploying such policies effectively.

Our analysis delves deeper into the impact of specific policies, offering a more granulated understanding of their influence on financial inclusion. For instance, interest rate cuts, while generally beneficial in reducing borrowing costs, highlighted the limitations of such measures in environments already characterized by low-interest rates or where lender risk aversion remained high. Loan guarantee schemes, on the other hand, underscored the importance of scheme design and implementation, with success varying significantly based on how these aspects were managed. Direct cash transfers emerged as a critical tool for immediate relief to vulnerable populations, yet their impact on broader financial inclusion pointed to the need for complementary strategies to ensure these measures

reached those most in need, including those without traditional banking relationships.

The journey towards achieving financial inclusion, both during and after a pandemic, calls for a dynamic evolution of policies and a commitment to innovation. It necessitates that policymakers and financial institutions remain agile, continuously refining their approaches in response to emerging challenges. This study's insights into the specific impacts of financial inclusion policies provide a crucial foundation for such efforts, emphasizing the need for strategies that not only address the immediate financial needs of marginalized groups but also work to mitigate adverse effects and foster long-term resilience.

Further research building on this study's groundwork is essential for exploring the enduring effects of financial inclusion initiatives on economic stability and resilience. By focusing on the specific impacts of these policies, future inquiries can enhance our understanding of how to design financial inclusion measures that are not only effective in the short term but also sustainable in the long term, thereby contributing to a more inclusive, equitable, and robust financial ecosystem worldwide.

REFERENCES

- Abdoul-Azize, H. T., El Gamil, R. (2021). Social protection as a key tool in crisis management: learnt lessons from the COVID-19 pandemic. *Global Social Welfare*, 8, 107-116. <https://doi.org/10.1007/s40609-020-00190-4>
- Aghion, P., Howitt, P., Mayer-Foulkes, D. (2005). The effect of financial development on convergence: Theory and evidence. *The quarterly journal of economics*, 120(1), 173-222. <https://dash.harvard.edu/handle/1/4481509>
- Aiyar, M. S., Bergthaler, M. W., Garrido, J. M., Ilyina, M. A., Jobst, A., Kang, K., Kovtun, D., Liu Y., Monaghan, D., Moretti, M. (2015). A strategy for resolving Europe's problem loans: International Monetary Fund. <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1519.pdf>
- Aristei, D., Gallo, M. (2024). Green management, access to credit, and firms' vulnerability to the COVID-19 crisis. *Small Business Economics*, 62(1), 179-211. <https://doi.org/10.1007/s11187-023-00759-1>
- Beck, T., Demirgüç-Kunt, A., Levine, R. (2007). Finance, inequality and the poor. *Journal of economic growth*, 12, 27-49. <https://doi.org/10.1007/s10887-007-9010-6>
- Borio, C. E., Disyatat, P., Juselius, M., Rungcharoenkitkul, P. (2018). Monetary policy in the grip of a pincer movement. *BISS Working Papers No 706*. <https://www.bde.es/f/webpi/SES/seminars/2019/Fich/sie20191125.pdf>
- Borio, C., Gambacorta, L., Hofmann, B. (2017). The influence of monetary policy on bank profitability. *International Finance*, 20(1), 48-63. <https://doi.org/10.1111/infi.12104>
- Carlsson, H., Larsson, S., Svensson, L., Åström, F. (2017). Consumer credit behavior in the digital context: A bibliometric analysis and literature review. *Journal of financial counseling and planning*, 28(1), 76-94. <https://doi.org/10.1891/1052-3073.28.1.76>
- Çevik, Ü., & Mutlu, B. Y. (2022). Liquidity Steps: Policy Actions Taken by Central Banks during Coronavirus Pandemic. In: *Pandemnomics: The Pandemic's Lasting Economic Effects* (pp. 205-220) Springer. https://link.springer.com/chapter/10.1007/978-981-16-8024-3_10
- Demirgüç-Kunt, A., Asli, Klapper, L., Singer, D., Ansar, S. (2018). *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/332881525873182837/the-global-findex-database-2017-measuring-financial-inclusion-and-the-fintech-revolution>
- Dev, S. M. (2020). Income support through cash transfers and employment guarantee schemes during the pandemic times in India. *The Indian Journal of Labour Economics*, 63(Suppl 1), 133-138. <https://doi.org/10.1007/s41027-020-00268-9>
- Eichhorst, W., Marx, P., & Rinne, U. (2020). Manoeuvring through the crisis: Labour market and social policies during the COVID-19 pandemic. *Intereconomics*, 55(6), 375-380. <https://www.intereconomics.eu/contents/year/2020/number/6/article/manoeuvring-through-the-crisis-labour-market-and-social-policies-during-the-covid-19-pandemic.html>
- Ervo, L. (2022). Insolvency Law and Covid-19: The Finnish Example on Tackling the Pandemic. In: *Finance, Law, and the Crisis of COVID-19: An Interdisciplinary Perspective*. [ed] Mansour N., Bujosa Vadell Lorenzo M. (pp. 123-138): Springer. <https://doi.org/10.1007/978-3-030-89416-0>
- Ferrero, G., Pisani, M., Tasso, M. (2021). *Policy mix during a pandemic crisis: a review of the debate on monetary and fiscal responses and the legacy for the future*. Questioni di Economia e Finanza (Occasional Papers) 623, Bank of Italy, Economic Research and International Relations Area. https://ideas.repec.org/p/bdi/opques/qef_623_21.html
- Gentilini, U. (2022). *Cash Transfers in Pandemic Times. Evidence, Practices, and Implications from the Largest Scale Up in History*. Washington, DC: World Bank. <https://documents1.worldbank.org/curated/en/099800007112236655/pdf/P17658505ca3820930a254018e229a30bf8.pdf>
- Gentilini, U., Almenfi, M., Orton, I., Dale, P. (2020). Social protection and jobs responses to COVID-19. A Real-Time Review of Country Measures. World Bank, Washington, DC. https://www.ugogentilini.net/wp-content/uploads/2020/12/Global-SP-COVID19-responses_Dec11.pdf
- Higgins, J. P., Green, S. (2011). *Cochrane handbook for systematic reviews of interventions*. The Cochrane Collaboration. London, UK. <https://handbook-5-1.cochrane.org/>
- Jung, W. (2020). Two models of community-centered development in Myanmar. *World Development*, 136, 105081. <https://doi.org/10.1016/j.worlddev.2020.105081>
- Kabengele, C., Hahn, R. (2021). Institutional and firm-level factors for mobile money adoption in emerging markets - A configurational analysis. *Technological Forecasting and Social Change*, 171, 120934. <https://doi.org/10.1016/j.techfore.2021.120934>
- Katz, R. L., Callorda, F. M., Jung, J. (2020). Can digitization mitigate COVID-19 damages? Evidence from developing countries. Available at SSRN: <https://ssrn.com/abstract=3600829> or <http://dx.doi.org/10.2139/ssrn.3600829>

- Kumar, S. L., Calvo-Friedman, A., Freeman, A. L., Fazio, D., Johnson, A. K., Seiferth, F., Clapp, J., Davis, N. J., Schretzman, M., Springer, B., Harmony N. A., Kaplan, Sue A., Berry, C. A. Doran. K. M. Springer, B. (2023). An Unconditional Cash Transfer Program for Low-Income New Yorkers Affected by COVID-19. *Journal of Urban Health*, 100(1), 16-28. <https://doi.org/10.1007/s11524-022-00693-9>
- Leong, E. (2022). Regulating Borrower Hardship in Australia, Singapore, and Hong Kong: Payment Holidays During COVID-19 and Beyond. *Journal of Consumer Policy*, 45(3), 411-433. <https://doi.org/10.1007/s10603-022-09515-6>
- Liu, Y., Zhang, Y., Fang, H., Chen, X. (2022). SMEs' line of credit under the COVID-19: evidence from China. *Small Business Economics* 58, 807-828. <https://doi.org/10.1007/s11187-021-00474-9>
- Mansour, H. (2022). How successful countries are in promoting digital transactions during COVID-19. *Journal of Economic Studies*, 49(3), 435-452. <https://doi.org/10.1108/JES-10-2020-0489>
- Mazenda, A., Masiya, T., Mandiyanike, D. (2022). The Effectiveness of the COVID-19 Economic and Social Relief Package as a Poverty Alleviation Strategy in South Africa. In: Faghih, N., Forouharfar, A. (eds) *Socioeconomic Dynamics of the COVID-19 Crisis. Contributions to Economics*. Springer, Cham. pp. 215-230. https://doi.org/10.1007/978-3-030-89996-7_10
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., PRISMA Group (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Plos medicine*, 6(7). <https://doi.org/10.1371/journal.pmed.1000097>
- Mosser, P. C. (2020). Central bank responses to COVID-19. *Business Economics*, 55, 191-201. *Business Economics* (2020) 55:191–201 <https://doi.org/10.1057/s11369-020-00189-x>
- Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., Aghae, M., Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International journal of surgery*, 78, 185-193. <https://doi.org/10.1016/j.ijisu.2020.04.018>
- Petticrew, M., Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide*. <https://doi.org/10.1002/9780470754887>
- Pindyck, R. S. (2020). COVID-19 and the welfare effects of reducing contagion. *NBER Working Paper No. 27121*. Retrieved from: <http://www.nber.org/papers/w27121>
- Prates, I., Barbosa, R. J. (2020). The impact of COVID-19 in Brazil: labour market and social protection responses. *The Indian Journal of Labour Economics*, 63, (Suppl 1), 31-35. <https://doi.org/10.1007/s41027-020-00252-3>
- Preziuso, M., Koefer, F., Ehrenhard, M. (2023). Open banking and inclusive finance in the European Union: perspectives from the Dutch stakeholder ecosystem. *Financial Innovation*, 9(1), 111. <https://doi.org/10.1186/s40854-023-00522-1>
- Pu, G., Qamruzzaman, M., Mehta, A. M., Naqvi, F. N., Karim, S. (2021). Innovative finance, technological adaptation and SMEs sustainability: the mediating role of government support during COVID-19 pandemic. *Sustainability*, 13(16), 9218. <https://doi.org/10.3390/su13169218>
- Rabbani, M. R., Bashar, A., Nawaz, N., Karim, S., Ali, M. A. M., Rahiman, H. U., Alam, M. S. (2021). Exploring the role of Islamic fintech in combating the aftershocks of covid-19: The open social innovation of the Islamic financial system. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 136. <https://doi.org/10.3390/joitmc7020136>
- Ramakrishnan, D. (2012). *Financial Literacy and Financial Inclusion*. 13th Thinkers and Writers Forum, June 2012, Available at SSRN: <https://ssrn.com/abstract=2204173>
- Ruggeri, K. (Ed.). (2018). *Behavioral Insights for Public Policy: Concepts and Cases* (1st ed.). Routledge. <https://doi.org/10.4324/9781351052542>
- Sha'ban, M., Girardone, C., Sarkisyan, A. (2021). Cross-country variation in financial inclusion: a global perspective. *The European Journal of Finance* 26(4-5), 319-340. <https://doi.org/10.1080/1351847X.2019.1686709>
- Tay, L.-Y., Tai, H.-T., & Tan, G.-S. (2022). Digital financial inclusion: A gateway to sustainable development. *Heliyon* 8, e09766. <https://doi.org/10.1016/j.heliyon.2022.e09766>
- Thaler, R. H., Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth, and happiness*. Available at <https://issc.al.uw.edu.pl/wp-content/uploads/sites/2/2022/05/Nudge-Improving-Decisions-About-Health-Wealth-and-Happiness-by-Richard-H.-Thaler-Cass-R.-Sunstein.pdf>
- Tsvirko, S. (2021). Coronavirus Pandemic as a Challenge in Debt Sphere. In: Antipova, T. (eds) *Advances in Digital Science. ICADS 2021. Advances in Intelligent Systems and Computing*, vol 1352. Springer, Cham. https://doi.org/10.1007/978-3-030-71782-7_9
- World Bank. (2020). *Global Economic Prospects*, June 2020. Retrieved from Washington, D.C. <https://doi.org/10.1596/978-1-4648-1553-9>
- World Bank. (2022). COVID-19 Boosted the Adoption of Digital Financial Services. 2022. Available at The World Bank <https://www.worldbank.org/en/news/feature/2022/07/21/covid-19-boosted-the-adoption-of-digital-financial-services>

FINANCING TRENDS OF TRADE AND LOGISTICS SECTOR IN DEVELOPING COUNTRIES: THE CASE OF AZERBAIJAN

DOI: <https://doi.org/10.36004/nier.es.2023.2-10>

JEL Classification: A1, B17, E6, F4

UDC: 336.77:339.1](479.24)

Ayaz MUSEYIBOV¹

PhD candidate in economics. Azerbaijan State University of Economics (UNEC),
Azerbaijan Technical Univeristy (ATU)

<https://orcid.org/0009-0000-9635-4935>

e-mail: ayaz.museyibov@unec.edu.az

rafigoglu.ayaz@gmail.com

Ayhan SATIJI²

PhD candidate in economics. Azerbaijan State University of Economics (UNEC),
Azerbaijan Technical Univeristy (ATU)

<https://orcid.org/0009-0002-8649-8796>

e-mail: Asatiji2019@ada.edu.az

Received 03 October 2023

Accepted for publication 20 November 2023

¹ In this study, the analysis related to the banking sector has been mainly conducted by Mr. Ayaz Museyibov (contributed to 50% of the article)

² In this study, the analysis related to the trade, transport and logistic sector has been mainly conducted by Mr. Ayhan Satiji (contributed to 50% of the article)

SUMMARY

The banking sector of Azerbaijan plays an important role in the stimulation of the economic development and thus contribute to the stability of the financial system with a special accent to the sphere of the trade and the subsidization of some financial services, especially logistics. This study touches on how the area augments in the rural areas. The evaluation follows this up with economic growth largely through the adoption of the assessment of the performance of the private sector smart governmental interventions with the integration financing in this context, and how once substantial credit of digital advancements. Applying the mixed-method programs can be used in the betterment of the transport approach, which entails both qualitative and quantitative and logistics sector, among other things. The research research techniques, and taking data ranging from 2010 which merges macroeconomic factors with sector- to 2022 from State Statistical Committee of Azerbaijan, specific details puts the emphasis on more favourable World Bank and other financial reports and documents, financing mechanisms to catalyse the exceptional growth the study set out to reveal main financial flows in sectors in this township and suggests that we look constantly for of overall economy of Azerbaijan. It tests the banking pathways through complexities of economic development, sector's finding through the calculation of amount loaned logistics, and complexities.

Keywords: banking sector, economic development, trade, transport, logistics, financial inclusion

INTRODUCTION

This global development creates an extremely complex and intertwined space that can hardly be defined on a national foundation. A strong financial sector has not only an indisputable economic growth effect but the banking system put in its functioning can speed up the unravelling of financial products for various population groups in. However, this relationship is sensitive and requires effective regulation and governance to mitigate risks and prevent financial crises, as seen in Commonwealth of Independent States analyses. In this article, we aim to address the role of banking system, its interaction with economic development and financial crises and the effect of macroeconomic and institutional stable on the banking system, amongst others factors, by examining the impact of transport and logistic sector as one of the intervening variables. Along with this, it looks at the function of financial intermediation in conveying left growth - based on theory and empiricism presented by different scholars.

A comprehensive picture focusing on the economy of Azerbaijan reveals the importance of various sectors in the formation of the economic landscape of the country. Sectors among agriculture, mining, construction, trade, transport and logistics rise as the leading players, underlining the importance of having strategic development plans. In this context, the banking sector of Azerbaijan has gained the recognition of a dynamic power that works in a strong economy and with the participation of the state (Suleymanov & Makhdut, 2020). The deployment of digital technologies and an attempt to diversify the economy give new opportunities to the banking sector, attract foreign capital investment and help in achieving the economic stability of the country.

Investigating the qualities of Azerbaijan's banking sector, this article continues by showing the advantages of the banking sector, its deposit culture, loan system, and current economic state. The stability of the sector encouraged by a high deposit base becomes a solid base that could be expanded through credit. Nevertheless, prudent lending practices, concentration in big cities and rural areas are the quality ingredients for the future growth (BSA, n.d.). The paper examines the sector's GDP contribution and its funds and further explores the existing opportunities for the sector to expand.

Apart from that, the research aims to regional view which deals with the economic situations of Azerbaijan and its neighbouring countries. Evidently, the leading role played by the private sector may be connected with the gaps in economic development, which may explain the inconsistency of financial depth and sectoral growth indicators. Moreover, the paper conducts a sectoral loan allocation evaluation over the last ten years and identifies changes in growth scenarios. The essay appraises the fact that there is indeed economy and considers stumbling blocks to and opportunities in logistics and trade flows. Relying on the result of studied years, the paper is devoted to the correlation between credit fluctuations, financial depth and the growth of economic. An additional point into articles is an integration of international cargo and dedication to competition, economic efficiency and prosperity. The findings from previous research mentioning the logistics role in cost-reducing, global trade liberalization, and environment protection are becoming more and more clear.

LITERATURE REVIEW

THE POSITIVE AND NEGATIVE IMPACT OF THE BANKING SYSTEM ON ECONOMIC DEVELOPMENT

Another role of banking system in the promotion of economic development is to lend to businesses and households. The credit can be used in domestic currency to invest in the new products and services, expand existing businesses, or purchase homes and other assets. Through investments businesses and households create jobs and develop the economy. The banking sector can be a catalyst for economic growth through its provision of financial services, for example checking and savings accounts, money transfers, and payments. These are services that facilitate for businesses and individual households to do transactions and manage money more easily which also contribute to the growth of the economy (Mursalov, 2020). During the process of economic development, a strong banking system will facilitate, while a weak banking system will not. For instance, countries with the weak banking sectors might face problems of supplying credit to companies and households. In this case, business growth might be thwarted and job creation becomes an issue, and

households may be unable provide to their homes and buy assets. On the other side, the weaker the banking systems are, the greater the risk of financial crises would be. The crisis of financial nature gives the rise to a big drop in economic activity. For instance, the global financial crisis of 2008-2009 resulted into a recession in many countries all over the world (Reserve Bank of Australia, 2023).

The COVID-19 pandemic also caused a decrease in GDP (more than 4%) of Azerbaijan, as well as the closure of 4 banks, negative trends in the banking sector's profit, deposit and credit indicators. This triggered a further decrease in financing of real economic sectors indicators. However, the fiscal stimulus package adopted during the pandemic and the Central Bank's special program for supporting banks, as well as the spending of capital funds on reconstruction works in Karabakh and Eastern Zangezur, have created new opportunities for the development of the banking sector in the post-pandemic period (Guliyeva, Museyibov & Satiji, 2022).

POSITIVE IMPACTS CHALLENGES AND FUTURE DIRECTIONS

Economic development can be supported by the state through the provision of financial assistances to businesses and households. For instance, governments can give such businesses loans or subsidies which guarantee to enable them to get alternative sources of credit when the formal banks are not able to give them to them. The authority can also give out subsidies or rebates to plants and houses that buy new production goods or household commodities. Considering the rising role of the transport and logistic sectors in Azerbaijan, it is indeed important to have macro level support and financial supports.

Moreover, the studies by Christopher (1994) and Ballou (1997) demonstrate how efficient logistics through optimized inventory management, reduced lead times, and streamlined supply chains can significantly reduce costs and boost productivity across various industries. Globalization has increased the importance of logistics, as highlighted by Rosa et al. (2020) and Yao et al. (2020). Effective infrastructure and logistics systems enable

greater cross-border trade, fostering interdependence and economic progress. Goh and Lee (2018) emphasize the direct impact of investments in logistics infrastructure like storage facilities and transportation networks on economic development. Such investments improve connectivity, shorten transit times, attract foreign direct investment, and ultimately spur economic growth.

The growing awareness of environmental impact has led to research on environmentally friendly logistics strategies, as explored by Rushton et al. (1992) and McKinnon et al. (2015). These strategies aim to reduce environmental harm and promote sustainable economic growth. Moreover, while logistics demonstrably benefits the economy, challenges like traffic congestion, cybersecurity threats, and the need for greener solutions remain (De Carvalho et al., 2014). Research by Christopher and Peck (2004) and Tatham and Pettit (2010) emphasizes the need for continuous research to shape the future of logistics and its economic impact, proposing strategies to address these issues.

HYPOTHESIS DEVELOPMENT

- As a result of the scope of the study and the existing literature review, the following hypotheses are formulated:
- H_0 : There is no significant relationship between investment in logistics infrastructure and economic growth in Azerbaijan.
- H_1 : Investment in logistics infrastructure is positively correlated with economic growth in Azerbaijan.
- H_0 : Diversification of financial products does not significantly improve access to finance and economic development in Azerbaijan.
- H_1 : Diversification of financial products leads to increased access to finance and supports economic development in Azerbaijan.

DATA SOURCES AND USED METHODS

For this research, we use the qualitative-quantitative method to delve into the multi-layered interconnection between banking sector and national development, paying special attention to the movement of trade, logistics, and other critical sectors in Azerbaijan. The quantitative data represented in the section came across from secondary source revision, data collected from the State Statistical Committee of Azerbaijan Republic, World Bank databases, and recently published financial and economic reports. This database comprises numerous indicators, including, for instance, the GDP share by sector, statistics on employment, loans of banking sector going to the certain direction, and several financial depth indicators. The research period covers the period of 2010-2022 hence it provides the chance of showing changes and patterns in the present and past.

In nonqualitative part, we do a comparative analysis between different sector's financial depth and distribution of bank's credit with taking opportunity to compare it with other developing countries' experiences. Through such a comparative study, we are able to

determine those characteristics and difficulties that are specific to Azerbaijani banking sector and economy and, on the ground of such analysis, we can reach the conclusions regarding the general implications of economic policy for this economy. The natural migration to a robust framework that merges both a macro and an industry-specific perspective is the core principle of our methodology which helps to perform a comprehensive analysis of the complex sector's economic implications and sectoral role in economic growth as conduits.

Statistical analysis implies describing the data, as well as an analysis of trend and an inter-country comparison. Such balanced method will not only disclose the status of the sector and its historical growth and performance over different periods but also will put it on the backdrop of the world's economic trends. The paper design is based on the methodology outlined above, and it is expected that this study will be able to offer valuable insights to the literature on financial development and macroeconomic growth in developing countries and some specific recommendations with respect to Azerbaijan.

MAIN RESULTS AND DISCUSSION

SNAPSHOT OF AZERBAIJANI ECONOMY

The corporate structuring which is carried out with a target of quantitative economic indicators such as the GDP and employment, considering its priority in the state's economic development policy, indicates that sectors like agriculture, forestry and fishing, mining industry, construction, trade, maintenance of transportation vehicles, transportation and warehouse infrastructure, and education hold a special position

in the country's economic growth (The State Statistical Committee of the Republic of Azerbaijan). Although other sectors, for example, the information and communication sector, have the highest potential, they do not contribute sufficiently to the new value created, though they can become a prime factor in the country's economic development by providing the necessary impetus (SSC, 2023).

Table 1.
Corporate mapping by economic sectors

Economic sectors/2022	Quantitative indicators		Qualitative indicators
	GDP share (structure of added value by types of economic activity, in percentage)	Employment share (in percent)	State priority in economic development policy
Agriculture, forestry and fishing	5.1	35.8	High
Mining industry	48.6	0.8	High
Processing industry	5.4	5.6	High
Electricity, gas and steam generation, distribution and supply	1.0	0.6	Medium
Water supply, waste treatment and processing	0.2	0.7	Medium
Construction	5.2	7.7	Medium
Trade; vehicle repair	8.9	14.3	High
Transport and warehousing	6.5	4.1	Medium
Tourist accommodation and public catering	1.7	1.8	Medium
Information and communication	1.5	1.2	High
Financial and insurance activities	1.8	0.7	High
Transactions related to real estate	2.2	1.8	Medium
Professional, scientific and technical activity	1.2	1.3	Medium
Provision of administrative and support services	0.6	2.0	Medium
Public administration and defense; social security	3.3	4.8	Medium
Education	2.8	7.7	High
Provision of health and social services to the population	2.0	3.8	Medium
Activities in the field of recreation, entertainment and art	1.0	1.3	Medium
Provision of services in other areas	1.0	4.0	Medium

Source: State Statistics Committee, analysis of strategic state programs of the last 10 years, results of interviews <https://www.stat.gov.az/source/labour/>

It is worth to mention that inspite of the measures taken the share of the mining industry in the additional value that is formed in the economy is still high (48.6% as of 2022). The other segment with the vital ratios for the country's economic development is the repair sector of trade and transportation vehicles, producing 8.9% of the additional value generated in 2022. The transportation

and warehouse infrastructure accounted for 6.5%, the processing industry for 5.4%, the construction sector for 5.2%, and the key area of employment and provider of food security, the agriculture, forestry, and fishing sector, made up 5.1% (SSC, 2023). The financial and insurance sector created an additional value of 1.8% (SSC, 2023).

SNAPSHOT OF AZERBAIJANI BANKING SECTOR

The banking sector of Azerbaijan is characterized by many strengths crucial for its growth and stability. The resilient and robust economy of the country supported by abundant natural resources like oil and gas have shown solid performance that has increased investor confidence and created a solid ground for financial activities. This economic strength is additionally enhanced by a strong governmental support, as it is

actively taking part in the implementation of reforms and regulatory changes aimed at improving financial stability, increasing transparency, and fostering growth (Huseynova, 2020). An important development in this field is the implementation of digital technologies such as online and mobile banking which have greatly improved efficiency and customer service (Banking System of Azerbaijan, n.d).

Additionally, the actions of the country to diversify its economy from oil and gas to other sectors is generating new channels of financing and so strengthening the banking sector. The industry is also a magnet for foreign investments, bringing both capital and global skills and practices. Azerbaijan, being geographically located between Europe and Asia, presents unique advantages in the sphere of regional trade and investment. Furthermore, the government and regulatory bodies are in the process of improving the regulatory framework which is crucial in the risk management and financial stability (Guliyeva, 2020). Azerbaijan's small and medium-sized enterprises (SME) sector development creates new opportunities for banks to grow their lending portfolios and develop financial solutions tailored for these businesses. In this manner, all the components strengthen Azerbaijani banking sector's position as a dynamic and robust part of the country's economy which is able to face the future challenges (Central Bank of the Republic of Azerbaijan, June, 2022).

The banking sector of Azerbaijan is supported by a strong savings culture as evidenced by a deposit portfolio that is equivalent to 29% of the GDP. This important figure reiterates the degree of confidence that the population has in financial institutions and highlights the stability of banking sector. These deposits serve as a good reserve upon which more lending can be done within the economy. This information brings out the financial viability of the sector and its capability to support sustained economic development through reinvestment and strategic growth initiatives. The credit allocation approach of the finance sector is cautious and the total loan portfolio as of 9 months of 2023 constituted only 18% of the GDP (SSCRA, 2023). The low level of financial inclusion implies that a large part of the Azerbaijan market still remains unexplored. Loans are mostly distributed to households, with personal and mortgage loans forming the major part of the portfolio. This could be a reflection of the wider approach to risk management. The deposit to loan ratio of about 60% shows a cautious lending policy with non-performing loans accounting for no more 3% of the portfolio as of 2023. This conservative stance on lending makes

the financial sector more stable but also opens space for credit services extension to trigger economic activity and social inclusion. The distribution of financial services is concentrated on the urban areas like Baku and the Absheron region. The imbalance shows the possible increase of rural areas with sufficient financial services, a precondition for the spread of economic participation and development through financial inclusion.

Azerbaijan's finance sector contributes to the country's GDP in a stable and effective way, with a 3% contribution and total assets worth 35,6 billion AZN (Central Bank of the Republic of Azerbaijan). However, the small asset-to-GDP ratio suggests that the sector has not yet fully explored its potential to become a key driver of the economy. The finance sector in Azerbaijan will have the potential growth due to the low to moderate asset-to-GDP ratio and prudent lending practices. Through the diversification of its services and the expansion of its reach to the least banked areas, the sector can attain wider market penetration and make greater contributions to the economy. The financial sector of Azerbaijan is a crucial component of its economy, based on its sound revenue generation and long-term deposits. Nevertheless, its conservative credit distribution and the concentration of services in urban locales demonstrate room for growth and development. As the sector braces up to integrate innovation and global financial trends, it is set to usher in a future of increased economic contribution and inclusive growth.

The disparity in the proportion of loans extended to the private sector in GDP has implications for Azerbaijan's transport and logistics sector. With the private sector accounting for only 18.3 percent of GDP in 2022, significantly lower than in neighboring countries like Georgia (64 percent), Kazakhstan (25.6 percent), Kyrgyzstan (23.1 percent), and Uzbekistan (36.7 percent), there is potential for increased investment in the transport and logistics sector through targeted credit allocation (World Bank Open Data). If more credits were directed towards companies in the transport and logistics sectors, it could potentially unlock new opportunities for growth and development in this vital sector of the economy (World Bank Open Data, n.d.).

Table 2.

The share of private sector loans in GDP by country, 2010-2022.

Country name / Date	2010	2015	2016	2017	2018	2019	2020	2021	2022
Azerbaijan	N/A	N/A	32,9	22,1	20,8	23,0	26,0	22,9	18,3
Belgium	56,8	60,6	63,4	65,1	68,1	69,5	76,8	75,3	74,2
Belarus	42,8	27,9	25,7	26,2	27,6	28,8	32,5	29,2	N/A
Germany	88,5	78,1	77,5	77,6	78,2	79,4	84,9	84,6	83,6
European Union	102,1	89,7	88,9	87,6	86,3	85,4	93,5	89,9	86,2
Great Britain	184,2	130,6	131,8	133,1	133,7	132,3	146,6	139,3	130,7
Georgia	32,3	49,1	55,1	55,8	60,5	65,6	79,9	73,8	64,0
Kazakhstan	N/A	37,7	33,0	29,2	25,9	24,3	25,6	26,0	25,6
Kyrgyzstan	13,6	22,8	20,6	21,4	23,4	24,6	28,3	25,6	23,1
Moldova	29,5	28,9	25,8	23,1	23,6	25,3	28,7	28,5	27,7
Russia	42,8	56,0	53,1	52,1	51,2	52,6	59,6	54,4	N/A
Tajikistan	14,2	21,6	19,1	13,0	11,9	11,6	13,0	10,3	10,6
Türkiye	44,4	66,5	69,4	70,5	67,5	65,6	75,2	72,4	54,5
Ukraine	75,8	56,7	47,3	38,3	34,5	30,0	28,2	23,6	23,5
USA	181,9	180,7	183,6	191,6	180,5	191,2	215,8	216,3	N/A
Uzbekistan	N/A	10,3	11,8	15,8	22,7	28,9	35,5	35,6	36,7

Source: World Bank <https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS?view=chart>

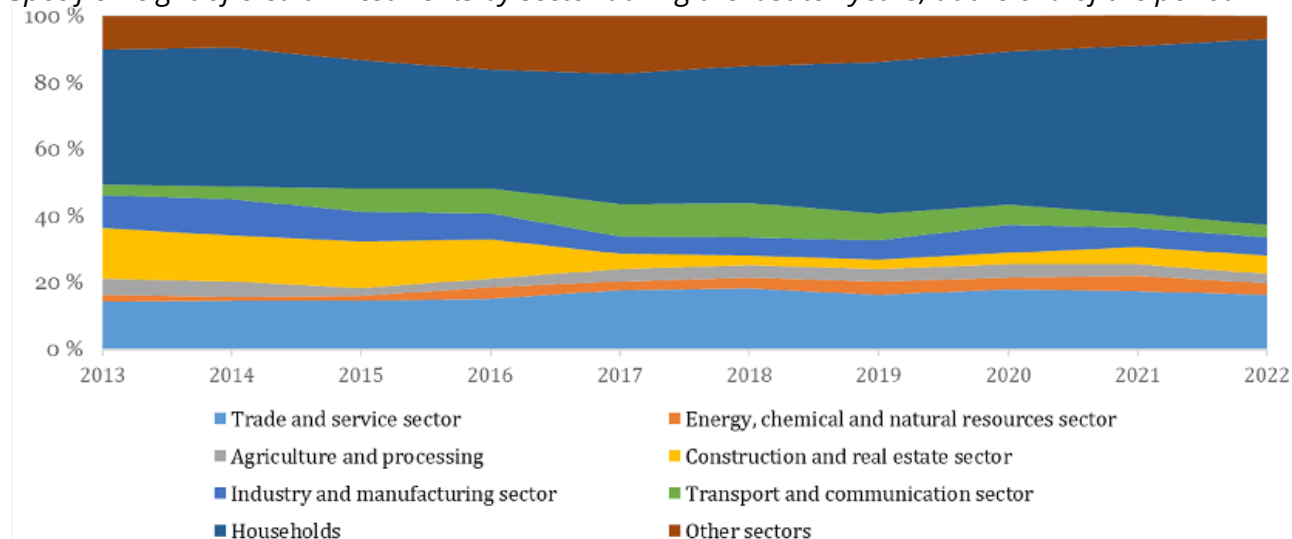
FINANCING OF REAL SECTOR

The analysis of data from the last 10 years indicates a decrease in the share of credits allocated to the agricultural sector in the overall credit portfolio of the banking sector, declining from 4.8% in 2013 to 3.1% in 2022. Over the past decade, there have been marginal increases in the share of credits to the trade and service sector (a 2% increase in portfolio share), the energy, chemical, and natural resources sector (a 1.3% increase in portfolio share), and the

transportation and communication sector (a 0.6% increase in portfolio share). The credits allocated to the industrial and manufacturing sector have seen a notable decrease, dropping from 9.8% in 2013 to 5.3% in 2022, highlighting a specific decline in its share in the overall credit portfolio. The most significant decline, however, has occurred in the construction and real estate sector, decreasing from 15.3% in 2013 to 5.4% in 2022 (Central Bank of the Republic of Azerbaijan).

Figure 1.

Specific weight of credit investments by sector during the last ten years, at the end of the period



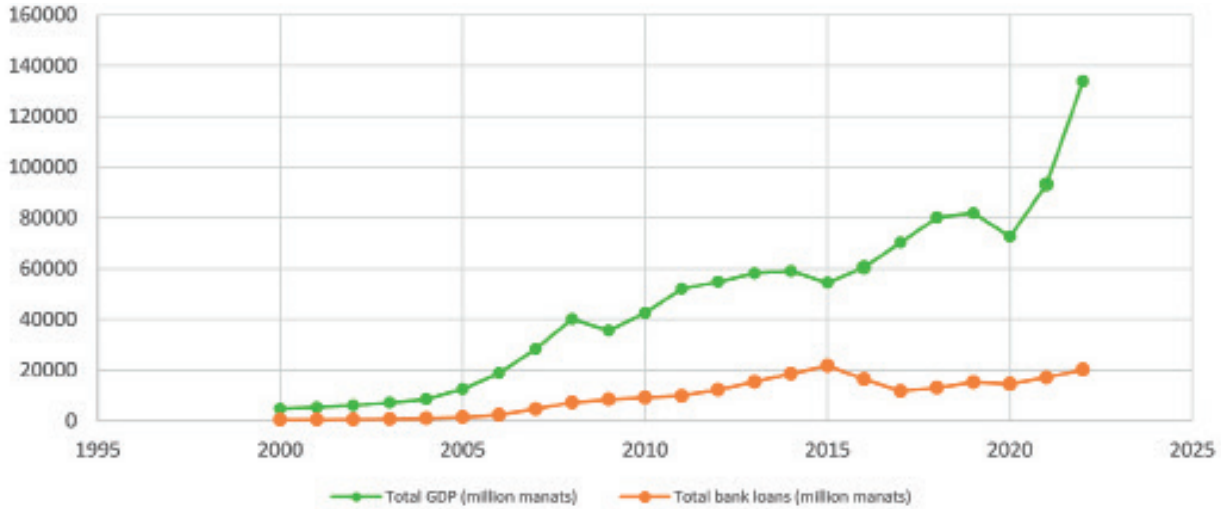
Source: Prepared by the author based on the information of the Central Bank of the Republic of Azerbaijan. <https://navigation.e-cbar.az/obiee/>

Currently, differences in methodological approaches between the Central Bank and the State Statistics Committee regarding the credit portfolio by sectors and the share of sectors in the created GDP indicators limit the possibilities for analyzing sectoral financial depth indicators. Setting aside the respective minor methodological differences, trends over the past decade in the share of credits allocated to certain sectors in

relation to the GDP generated in those sectors indicate that the financialization of real economic sectors does not align with the development trends of these sectors and is not sufficiently supportive in character. Over the last 10 years, financial depth in terms of credits has decreased from 26,5% in 2013 to 15.1% in 2022, highlighting a decline in the financialization of the economy during this period (Central bank of the Republic of Azerbaijan).

Figure 2.

Dynamics of total GDP and bank loans, million manats, 2000-2022.



Source: World Bank <https://www.cbar.az/page-41/macroeconomic-indicators>

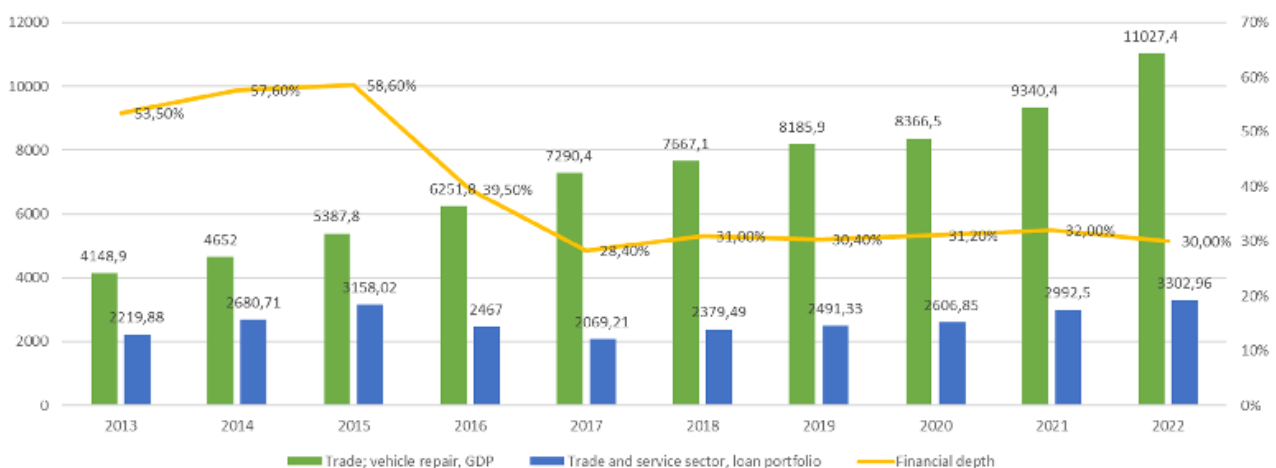
FINANCIAL DEEPNESS IN LOGISTICS AND TRADE SECTORS

The trade and service sector with the highest specific weight compared to other sectors of real economy in the overall credit portfolio has exhibited significant fluctuations throughout the last decade. In 2013, these credits amounted to 2.2 billion manats and by 2017 they declined to the lowest level in recent years reaching 2

billion manats. The declines seen in 2017 are symbolic of a continent-wide phenomenon, mirroring the economic crisis in the country where the effect of two devaluations that happened in 2015 is felt (Central Bank of the Republic of Azerbaijan).

Figure 3.

Correlation of loans to the trade sector and sectoral GDP trends, million manats, 2013-2022



Source: Prepared by the author based on the information of the Central Bank of the Republic of Azerbaijan and the State Statistics Committee.

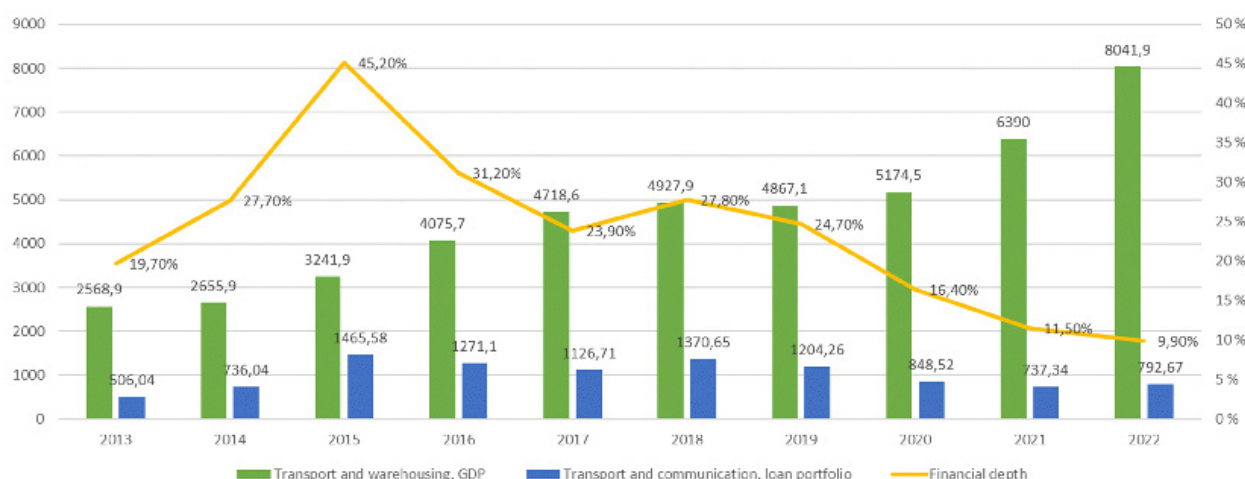
The transportation and warehouse infrastructure sector stands out as one of the sectors subjected to the most significant fluctuations in accessing credit resources. Despite a 3.1-fold increase in the GDP generated by the sector over the past 10 years, the sector's financial depth has decreased from 19.7% to 9.9%, with a marginal increase (57%) in the volume of credits allocated to the sector. It is noteworthy that the respective indicator

constituted 45.2% in 2015 (State Statistics Committee).

In 2013, the GDP generated in the sector was 2.5 billion manats, the credit portfolio was 506 million manats, and in 2022, these figures have reached 8 billion manats and 792 million manats, respectively. Despite the growth in GDP, the modest increase in the credit volume has resulted in a notable decline in sectoral financial depth over the specified period.

Figure 4.

Correlation of loans to the transport and warehousing sector and sectoral GDP trends, million manats, 2013-2022



Source: Prepared by the author based on the information of the Central Bank of the Republic of Azerbaijan and the State Statistics Committee.

Therefore, based on the indicators of the last 10 years, despite the increase in the overall credit portfolio volume, it has fallen short in comparison to the development indicators of the real economy. Financial depth has

decreased in the trade and service sector (down by 44% band) and the transportation and communication sectors (down by 50% band) (Central bank of the Republic of Azerbaijan).

DISCUSSION AND CONCLUSIONS

In conclusion, this comprehensive analysis of the dynamic relationship between the banking system, economic growth and financial crisis provides valuable insights into the unique case of Azerbaijan. Azerbaijani banking sector is exposed as a strong force backed by a strong economy, strategic state intervention and the use of digital technologies. However, as with any multilateral initiative, challenges and opportunities exist and affect the role of the sector in economic development. The article does not only provide a comprehensive analysis of the current state of Azerbaijan's banking sector, but also identifies areas for improvement and future research directions to enhance its role in promoting sustainable economic development.

Exploring the uniqueness of Azerbaijan's banking sector, the knowledge highlights strengths such as significant savings and prudent lending practices. The approach provides complexity, but also opportunities

for expansion, especially in rural areas. The study emphasizes the contribution of the sector to GDP and wealth, and calls for a more comprehensive use of its potential for economic growth. Moreover, the study highlights the importance of the banking sector in economic diversification, attracting foreign investment and contributing to economic stability.

The economic situation in Azerbaijan and neighbouring regions provides a regional perspective, highlighting differences in credit distribution and economic growth. The study highlights the importance of matching financial depth indicators with regional growth and seeks towards conduct research to address challenges in economic development and shape future logistics. However, challenges and future directions are also identified, particularly in the area of green logistics strategies to address traffic congestion, cyber security threats and the need for greener solutions. The article

shows that continuous research is critical to shaping the future of logistics and its economic impact. Finally, the analysis of the allocation of loans to sectors of the real economy reveals fluctuations and difficulties in indicators of financial depth. Despite the increase of the total loan portfolio, it cannot adapt to the development indicators of the real economy. The study highlights the need for more supportive financing of economic sectors to support inclusive growth and economic development.

In our view, Azerbaijan has made significant progress in the development of financial markets and economic sectors such as trade and logistics. Therefore, the opportunities for development of access to financial resources, financial inclusion and diversification of financial products are wide. In this regard, the development of traditional and alternative financing mechanisms is particularly important. To conclude, based on analysis we recommend following policy enhancements at national and bank level:

- Implementation of policies for the development of the financial infrastructure to support trade and logistics sectors.
- Developing special programs to improve access to finance for, which are of key importance in the trade and logistics sector.
- Allocating capital resources from state budget and private sources to build and modernize commercial and logistics infrastructure, increase efficiency and reduce costs.
- Developing incentives for the adoption of environmentally friendly logistics strategies to promote sustainable economic growth.
- Creating a favourable environment for attracting foreign direct investment to country, particularly in trade and logistics, through tax privileges, reducing bureaucratic hurdles and other methods.
- Continuously developing financial regulatory framework to manage risks and create a stable financial ecosystem.
- Investing in digital banking technologies, including mobile banking platforms that can reach remote areas.
- Developing risk management capacity of the banking sector to better mitigate industry-specific risks, particularly for commercial and logistics sectors.
- The growth of alternative financing mechanisms such as peer-to-peer lending platforms, crowdfunding and Islamic financing options can be utilized to promote real sector financing including trade and logistics sector.
- Designing financial products that match the needs of business subjects in the trade and logistics sector, taking into considerations fluctuating oil prices and international trade barriers factors.

REFERENCES

- Ballou, R. H. (1997). Business logistics: importance and some research opportunities. *Gestão & Produção*, 4(2), 117-129. <https://doi.org/10.1590/s0104-530x1997000200001>
- Banking system of Azerbaijan. (n.d.). <https://azerbaijan.az/en/related-information/279>
- Central Bank of the Republic of Azerbaijan. (2022). *Financial Stability Report*. https://uploads.cbar.az/assets/FSR_2022%20annual_eng.pdf
- Central Bank of the Republic of Azerbaijan. (n.d.). *Macroeconomic indicators*. <https://www.cbar.az/page-41/macroeconomic-indicators?language=en>
- Christopher, M. (1994). Logistics and Supply Chain Management: Strategies for reducing costs and improving services. *Journal of the Operational Research Society*, 45(11), 1341. <https://doi.org/10.2307/2583864>
- Christopher, M., & Peck, H. (2004). Building the resilient supply chain. *The International Journal of Logistics Management*, 15(2), 1-14. <https://doi.org/10.1108/09574090410700275>
- De Carvalho, J. C., Vilas-Boas, J. P., & Neill, H. O. (2014). Logistics and Supply Chain Management: An Area with a Strategic Service Perspective. *American Journal of Industrial and Business Management*, 4(1), 24-30. <https://doi.org/10.4236/ajibm.2014.41005>
- Goh, E., & Lee, C. (2018). A workforce to be reckoned with: The emerging pivotal Generation Z hospitality workforce. *International Journal of Hospitality Management*, 73, 20-28. <https://doi.org/10.1016/j.ijhm.2018.01.016>
- Guliyeva, G, Museyibov, A, & Satiji, A. (2022, June 23-25). Pandemic Challenges and Post-Pandemic Opportunities for the Banking System of Azerbaijan. In: *International Scientific Conference of Economics and Management Researchers* (pp. 428-445). Azerbaijan, Baku.

- Guliyeva, N. (2020). Prospects for the Development of the Financial Market of Azerbaijan in the Contemporary Time. In: *Economic and Social Development: book of proceedings* (Vol. 4, pp. 432-439). <https://adauniversity.on.worldcat.org/oclc/8627504252>
- Huseynova, A. (2020). The Stability of Commercial Banks of the Republic of Azerbaijan and its impact on the Economic Development of the Country. In: *Economic and Social Development: book of proceedings*. (Vol. 3, pp. 338-343). <https://adauniversity.on.worldcat.org/oclc/8628745070>
- McKinnon, A., Browne, M., Whiteing, A., & Piecyk, M. (2015). *Green logistics: Improving the environmental sustainability of logistics (3rd ed.)*. Kogan Page Limited.
- Mursalov, M. (2020). Current Problems of Azerbaijan Banking System of Azerbaijan in the Conditions of the Global Financial Crisis and the Direction of Improving the Mechanisms of Solution. In: *Economic and Social Development: book of proceedings* (Vol. 3, pp. 358-366). <https://adauniversity.on.worldcat.org/oclc/8628806711>
- Reserve Bank of Australia. (2023, May 26). *The Global Financial Crisis. Explainer. Education*. <https://www.rba.gov.au/education/resources/explainers>
- Rosa, B., Gugler, P., & Verbeke, A. (2020). Regional and global strategies of MNEs: Revisiting Rugman & Verbeke (2004). *Journal of International Business Studies*, 51(7), 1045-1053. <https://doi.org/10.1057/s41267-020-00347-5>
- Rushton, A., & Saw, R. (1992). A methodology for logistics Strategy planning. *The International Journal of Logistics Management*, 3(1), 46-62. <https://doi.org/10.1108/09574099210804804>
- Suleymanov, E., & Makhdut, U. Y. (2020, December 26-28). Comparative Analysis of the Azerbaijani Banking Sector in 2019 and 2020. In: *Science and Practice: Implementation to Modern Society: proceedings of the 8 th international scientific and practical conference*. Scientific Collection InterConf (№ 3(39), pp. 408-412). Manchester, Great Britain: Peal Press Ltd. https://ibn.idsi.md/sites/default/files/imag_file/Scientific%20Collection_InterConf_2020_o.pdf#page=409
- Tatham, P., & Pettit, S. J. (2010). Transforming humanitarian logistics: the journey to supply network management. *International Journal of Physical Distribution & Logistics Management*, 40(8/9), 609-622. <https://doi.org/10.1108/09600031011079283>
- The State Statistical Committee of the Republic of Azerbaijan. (2023). *System of national accounts and balance of payments*. https://www.stat.gov.az/source/system_nat_accounts/?lang=en
- The State Statistical Committee of the Republic of Azerbaijan. (2024). *Labour Market*. <https://www.stat.gov.az/source/labour/?lang=en>
- The World Bank. (n.d.). *World Bank Open Data*. <https://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS?view=chart>
- Yao, X., Cheng, Y., Zhou, L., & Song, M. (2020). Green efficiency performance analysis of the logistics industry in China: based on a kind of machine learning methods. *Annals of Operations Research*, 308(1/2), 727-752. <https://doi.org/10.1007/s10479-020-03763-w>

The sources used here mirrors the interrelation of logistics, finance, and economic growth in Azerbaijan in a three-dimensional form. The Reserve Bank of Australia's information in relation to the Global Financial Crisis therefore is a key element in the financial stability context, while Ballou's supply chain optimization way is crucial for the sound address of the economic growth issue. Analysis generated from the Central Bank of Azerbaijan provides essential information about the financial sector's stability and functionality, which is apparent from theoretical studies dedicated to robust supply chains and industry-oriented logistics management. Economic models that take account the dynamics of labor force and the issues of bank stability are extremely practical for lawmakers and businesses; collated official data on the level of particular economic indicators helps to understand quantitative trends. As a result, the scale of these references gives a holistic and broad view of Azerbaijan's economy. Such informing strategies based on this broad view are then used to help develop the economy in a sustainable and responsible way.

Editor's address:
National Institute of Economic Research
Ion Creanga Street, 45, mun. Chisinau, MD-2064
website: <https://es.ince.md>
Tel. + 373 22 501130