



International
Labour
Organization

EMPLOYMENT
PROMOTION

International Mobility of Ukrainian Teaching and Research Professionals

Olga Kupets

International Mobility of Ukrainian Teaching and Research Professionals

Olga Kupets

ILO Decent Work Technical Support Team and Country Office for Central and Eastern Europe

Copyright © International Labour Organization 2013
First published 2013

Publications of the International Labour Office enjoy copyright under Protocol 2 of the Universal Copyright Convention. Nevertheless, short excerpts from them may be reproduced without authorization, on condition that the source is indicated. For rights of reproduction or translation, application should be made to ILO Publications (Rights and Permissions), International Labour Office, CH-1211 Geneva 22, Switzerland, or by email: pubdroit@ilo.org. The International Labour Office welcomes such applications.

Libraries, institutions and other users registered with reproduction rights organizations may make copies in accordance with the licences issued to them for this purpose. Visit www.ifro.org to find the reproduction rights organization in your country.

ILO Cataloguing in Publication Data

Olga Kupets

International mobility of Ukrainian teaching and research professionals / ILO Decent Work Technical Support Team and Country Office for Central and Eastern Europe (DWT/CO-Budapest). – Budapest: ILO, 2013

ISBN: 978-92-2-128091-0 (print); 978-92-2-128092-7 (web pdf)

ILO DWT and Country Office for Central and Eastern Europe

educational system / teacher / scientist / expatriate worker / migrant worker / labour migration / freedom of movement / international migration / Ukraine

06.01

Also available in Ukrainian: Міжнародна мобільність українських педагогів і науковців (ISBN 978-92-2-828091-3, Budapest, 2013).

This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of the authors and can in no way be taken to reflect the views of the European Union.

The designations employed in ILO publications, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the International Labour Office concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and publication does not constitute an endorsement by the International Labour Office of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the International Labour Office, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

ILO publications and electronic products can be obtained through major booksellers or ILO local offices in many countries, or direct from ILO Publications, International Labour Office, CH-1211 Geneva 22, Switzerland. Catalogues or lists of new publications are available free of charge from the above address, or by email: pubvente@ilo.org

Visit our website: www.ilo.org/publns

Printed in Ukraine



Project funded by the European Union



EU-ILO Project «Effective Governance of Labour Migration and its Skill Dimensions»

The publication was developed and printed within the framework of the EU-ILO Project
“Effective Governance of Labour Migration and its Skill Dimensions”.

For more detailed information contact the Project by e-mail:

migration@ilo-dp.kiev.ua

http://ilo.org.ua/ProjectsIloArticles/EU-ILO_Migrant.aspx

<http://www.ilo.org/budapest/lang--en/index.htm>

Project Brief: EU-ILO Project in Moldova and Ukraine “Effective Governance of Labour Migration and its Skill Dimensions”

This project is implemented by the International Labour Organization in cooperation with Moldovan and Ukrainian tripartite partners, the International Organization for Migration and the World Bank. The project is in the framework of the European Commission’s thematic programme of cooperation with third countries in the areas of migration and asylum.

The overall objective of the project is to strengthen Moldova’s and Ukraine’s capacity to regulate labour migration and promote sustainable return, with a particular focus on enhancing human resources capital and preventing skills waste.

This publication was printed with the support of the European Union

Table of Contents

	<i>Page</i>
Foreword	7
List of Abbreviations	9
Executive Summary.....	11
Chapter 1: Introduction	15
Chapter 2: Ukrainian Educational System and Research Sector: Background Information	19
2.1 Educational System.....	19
2.1.1 Basic Facts and Figures	19
2.1.2 Employment in the Education Sector	21
2.1.3 Public Spending and Compensation of Employees in the Education Sector	22
2.1.4 Recent Education Reforms and Their Potential Impact on Employment of Teachers and University Professors	24
2.1.5 Pre-Service and In-Service Teacher Training	26
2.2 Research Sector.....	28
2.2.1 Basic Facts and Figures	28
2.2.2 International Mobility of Researchers	31
Chapter 3: Methodology and Definitions	33
3.1 Methodological Framework and Main Components of the Study.....	33
3.2 Non-Migrants and Potential Migrants.....	34
3.2.1 Face-to-Face Surveys of Teachers, University Professors/ Researchers and Trainee Teachers.....	35
3.2.2 In-Depth Interviews with Unemployed Teachers.....	36
3.3 Expatriates	37
3.3.1 Online Survey of Teachers.....	37
3.3.2 Online Survey of University Professors and Researchers.....	38
3.3.3 Online Focus Group Discussion with Expatriate Teachers.....	38

3.4 Returned Migrants.....	39
3.4.1 Face-to-Face Survey of Teachers.....	39
3.4.2 Focus Group Discussion with University Professors and Researchers	39
3.5 Stakeholders	40
Chapter 4: Propensity to Migrate Among Teaching and Research Professionals	41
4.1 Teachers Working in Secondary General Education Institutions and in Vocational Schools	41
4.2 Unemployed Teachers.....	48
4.3 Trainee Teachers.....	49
4.4 Professors and Researchers.....	53
4.5 Summary of the Key Findings	59
Chapter 5: Migration Experience of Expatriate Teaching and Research Professionals..	61
5.1 Teachers.....	61
5.2 Professors and Researchers.....	66
5.3 Summary of the Key Findings	69
Chapter 6: Migration Experience of Returned Teaching and Research Professionals...	71
6.1 Teachers.....	71
6.2 Professors and Researchers.....	75
6.3 Summary of the Key Findings	77
Chapter 7: Impact of International Mobility of Teaching and Research Professionals on the Economy and Education System	79
7.1 Individual Benefits and Costs of Migration	79
7.2 Benefits and Costs of Migration and Return Migration to the Education System	82
7.3 Migration, Labour Market and Economic Development of Ukraine	84
Chapter 8: Conclusions	87
Chapter 9: Policy Implications	91
Bibliography.....	95
Annex A	101
Annex B	107
Annex C	109
Annex D	127

Foreword

This report is one of the outcomes of the large-scale project “Effective Governance of Labour Migration and its Skill Dimensions” implemented in Ukraine and Moldova during 1 March 2011–31 December 2013 by the International Labour Organization (ILO) together with Moldovan and Ukrainian constituents and its partners, the International Organization for Migration (IOM) and the World Bank (WB). The project is a part of the European Union’s thematic programme of cooperation with third countries in the areas of migration and asylum. It is funded by the European Union and co-funded by the ILO and IOM.

The project aims at strengthening Moldova’s and Ukraine’s capacity to regulate labour migration and promote sustainable return, with a particular focus on enhancing human resources and preventing skills waste. It also seeks to contribute to the development and effective implementation of rights-based migration policies and programmes, in line with the ILO labour standards (Conventions 97 and 143) and the principles and guidelines of the ILO Multilateral Framework on Labour Migration. With a view to achieving the overall objective, the project is designed to attain four independent yet complementary specific objectives, along the following components:

- component 1: building capacity to analyse the skills shortages and oversupply as a result of migration;
- component 2: enhancing the capacity of the migration sending countries to balance migration flow and return with local and international skills needs;
- component 3: building capacity to negotiate and manage rights-based labour migration schemes, including agreements on social protection;
- component 4: building capacity to govern labour migration, by enacting relevant legislation and engaging social partners.

As part of the component 1, this report provides the main findings of the study on the impact of migration from Ukraine on a specific profession particularly affected by migration, namely teaching and research professionals. The primary objective of the study is to analyse the impact of migration of teaching staff and researchers on the economy, education system and workforce competitiveness in the short, medium and long term. An

essential part of the report is an empirical study based on quantitative data and qualitative information collected during the fieldwork in January–April 2012.

This report is authored by Olga Kupets from the Economics Department of the National University of Kyiv–Mohyla Academy. Together with Kiev International Institute of Sociology subcontracted for the sociological part of the project (project manager is Alena Goroshko), she developed the detailed methodology of the study, prepared the questionnaires and guides for in-depth interviews and focus group discussions and drafted the analytical report. The draft questionnaires, sample design and analytical report were then reviewed and approved by the ILO Decent Work Technical Support Team and Country Office for Central and Eastern Europe.

The team would like to thank the Ministry of Education, Science, Youth and Sports of Ukraine, which facilitated data collection in educational institutions (secondary general schools, vocational schools, colleges and universities) in the selected regions and supported the participation of its representatives in in-depth interviews. The team is also grateful to all participants in the surveys, in-depth interviews and focus group discussions in Ukraine and abroad for their cooperation and honest answers. The author is also very grateful to Nina Tarasenkova (Vice-chancellor of Scientific Work of Cherkasy National University) and Irina Ovcharenko (Principal of Cherkasy Secondary General School No. 32) for their support in pre-testing the questionnaires and conducting the first surveys in their educational institutions at the end of January and beginning of February 2012. The author gratefully acknowledges Natalia Kharchenko, Alena Goroshko, the interviewers working in the regions and other staff of the Kiev International Institute of Sociology (KIIS) for their dedication and great contribution to the completion of the fieldwork. Special thanks must be given to colleagues who gave valuable help in collecting the data on expatriate teachers, namely Khalavka Yuriy and Ukrainian Scientists Worldwide social network, Mariana Tril and Ukrainian School “Prestige” in Rome (Italy), Myroslava Gorbenko and Ukrainian School “Santa Sophia” in Rome (Italy), Halyna Hevko and Cultural Association “Dyvo-Pysanka” in Italy, Mariya Gavrylyuk and Ukrainian School “Erudyt” in Prague (Czech Republic), Oksana Gorin and Ukrainian School “Dyvosvit” in Madrid (Spain), Maria Iaremenko and Tetiana Panasenko in Warsaw (Poland). Finally, the author thanks Kateryna Iekimova, Svitlana Repina and Yulia Matoshchuk for outstanding research assistance. A special thanks goes to Natalia Popova, Tetyana Minenko and Anna Farkas from ILO; Francesco Panzica, expert on migration and employment, for their support and valuable contribution along the entire drafting process; to Gloria Moreno-Fontes Chammartin, Senior Specialist on Migration Policy; and to Oliver Liang, Education Sector Specialist from the ILO for their helpful comments and suggestions.

A validation workshop was organised in November 2012 in Kyiv to present the draft report to key national stakeholders and to discuss its key findings with them. The report was finalized after the workshop based on the comments received from the stakeholders and from the ILO Budapest project team.

Antonio Graziosi
Director
ILO DWT/CO Budapest

List of Abbreviations

EI	Educational Institution
HEI	Higher Education Institution
ILO	International Labour Organization
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
KIIS	Kiev International Institute of Sociology
MoES	Ministry of Education and Science
MS Word	Microsoft Word
NACE	Statistical Classification of Economic Activities (the same as in the EU)
NAS	National Academy of Sciences
PES	Public Employment Service
Ph.D.	Doctor of Philosophy
PPP	Purchasing Power Parity
SSSU	State Statistics Service of Ukraine
UAH	Ukrainian hryvnia
UK	United Kingdom
USA	United States of America
USD	US dollar
n.a.	not available

Executive Summary

Education is central to development as it promotes economic growth, productivity, innovation and social cohesion. Teaching and research professionals are undoubtedly among the most significant contributors to education and science in the national development of any country, including Ukraine. However, achieving development goals may be complicated by international flows of trained teachers and researchers. International mobility of teaching and research professionals, depending on its magnitude and characteristics, may have direct and indirect effects on the skill composition of the workforce and the education system of the sending country, thus influencing considerably its economic and social situation in the short- and long-run.

This study provides a comprehensive analysis of international migration of Ukrainian teachers, university professors and researchers, including its main reasons, characteristics and the impact on the delivery of education services and the Ukrainian economy as a whole. It also assesses the proportion of local teachers and researchers who would be willing to leave Ukraine for education, temporary employment or permanent residence abroad. Based on the findings, the study developed policy recommendations. The study is based on information from targeted surveys of potential, current and return migrants, focus group discussions and in-depth interviews carried out in January–April 2012, as well as on the available administrative statistics.

The main findings are the following:

- The education system in Ukraine has to confront the challenges of population decline and ageing reflected in the reduction of the effective demand for teaching professionals. Despite the decreasing number of children and students in educational institutions of all levels from about 10 million in 2002 to about 8.3 million in 2012, the total number of employees in the education sector, excluding adult education, had been increasing steadily until 2009. The number of school teachers declined but not so much as the number of school children.
- Although Ukraine spends a relatively large amount of its budget resources on education – about 7.2 per cent of GDP in 2012 – the outcomes are poorer than expected because of the underlying problems of inefficiency in spending (including maintenance of small educational institutions) and lack of equity in access to education services. Salaries in the education and research sectors are very low, and productivity is decreasing.

- In order to address the low quality of education and inefficiency in public spending on education, the Ukrainian government initiated education reforms in 2010, including “optimization” of the network of educational institutions. However, there are many opponents to these reforms, including parents, teachers, trade unions and the local community, and the progress in the reforming process is very slow.
- So, while small schools are not closed and teachers are not laid off, teachers may work for as long as they tolerate the deterioration of working conditions, including decreasing pay, poor material and technical base, inconvenient schedule, worsening relations with administration and colleagues.
- There are no reliable data in Ukraine on how many teachers and researchers have migrated, how many of them have returned to Ukraine and what impact migration has had on the education system. Our research, being based on small-size sample surveys, does not provide information about the true extent of international flows of trained teachers and researchers either. However, there is evidence that migration intensity decreased compared to the end of the 1990s and beginning of the 2000s. It may certainly increase as a result of significant layoffs in the education sector, but the ongoing recession in the EU and many other countries is likely to slow down migration flows from Ukraine.
- Our surveys show that 22 per cent of interviewed teachers of secondary general and vocational schools and 43 per cent of university professors and researchers expressed an interest in moving abroad for studies, temporary employment or permanent residence. Nevertheless, only about 7 per cent of teachers and 14.7 per cent of university professors and researchers evaluated their chances of moving abroad in the next 12 months as likely or very likely. Even fewer respondents had necessary preconditions to realize their migration intentions. Interest in migration among trainee teachers (students of pedagogical colleges and universities) appears to be significantly higher than among their older colleagues with teaching experience: 45 per cent of young respondents reported thinking seriously about migrating abroad within the next 12 months.
- Economic factors were the main reasons given by teachers and trainee teachers for their interest in migration and realized migration intentions. For university professors and researchers, professional development was the most frequently mentioned factor, but economic reasons were also important. Dissatisfaction with future prospects and general living and working conditions in Ukraine was also frequently mentioned by all groups of migrants (potential, current and return).
- Therefore, professors/researchers and teachers migrate in completely different ways. The former migrate for education and professional development, with strong intentions of settling abroad and working in their profession. Teachers belong to typical labour migrants for economic reasons (*zarobitshany*), many of whom stay in the host country irregularly and take any available job which usually requires a lower level of education and skills.
- Non-recognition of qualifications obtained in Ukraine, language barriers, absence of citizenship or legal status, low demand for teachers in the destination countries, high

housing expenses as opposed to low teacher salary abroad and substantial differences in the approaches to teaching and children's discipline between the Ukrainian and other national education systems are the major reasons why qualified teachers from Ukraine do not work in their profession abroad. On the other hand, downward occupational mobility and skill waste during their stay abroad are the major reasons for not "adding value" in terms of employability of return migrants in Ukraine and skill gains in the education system.

- Although researchers working in their field abroad obtained valuable experience and skills during migration period(s), these skills appear not to be easily applicable in Ukraine because of outdated equipment and organizational problems.
- Improvement of the economic, social and political situation, substantial increases in real wages and improvement of opportunities for professional development and advancement are considered to be the most necessary changes that should be made in Ukraine in order to encourage current migrants to return and to impede further emigration. The serious detriment experienced by young professionals who may consider returning is the non-recognition of their foreign scientific degrees in Ukraine.
- Most teachers who have already returned to Ukraine did this for family reasons or because of the end of residence/work permits and employment contract. Homesickness and dissatisfaction with life and work abroad were also important reasons for return. University professors and researchers also mentioned language barriers to comfortable long-term stay abroad, the feeling of own inferiority compared to native people in the host country and increased competitiveness in the job markets abroad.
- There is no significant evidence of damaging shortages and qualitative losses in the Ukrainian education system caused by international migration of teachers and university professors. On the contrary, migration seems to play a critical role in reducing unemployment in the education sector and in improving the living standards of migrants and their families. The positive effects of return migration reflected in diffusion of new approaches and increased productivity have been negligible so far. The same applies to the possible impact of migration through Diaspora involvement, unless effective communication and cooperation with Ukrainians living abroad are established.
- Policies designed to stem the flow of highly skilled teaching and research professionals from Ukraine to developed countries, or attract them back, need to address a wide range of issues in the national education and research system at home and far beyond them.

CHAPTER 1

Introduction

Migration of highly skilled professionals from Ukraine has taken centre stage over the last decades, with the debate focusing on the economic and social implications of the process on the Ukrainian economy and human capital stock.¹ Ukraine, like many other transition economies, has to confront simultaneously the challenges of population decline and aging; decreasing interest among youth to choose professional career in engineering, sciences, education and health care; and of growing competition for highly skilled professionals in these fields in the international labour market.

A particularly interesting issue, which has not yet received sufficient attention from Ukrainian policymakers and researchers, is emigration of educators and research professionals that may act doubly as a “brain drain”: firstly, by directly depriving the country of its own human capital, and secondly, by indirectly impeding the accumulation of human capital by the future generations. Furthermore, migrant teachers and researchers that leave Ukraine for permanent residence abroad are usually productive members of society who can be helpful in completing the transition process in Ukraine. Another concern posed by international migration of teaching and research professionals is that the Ukrainian government uses the scarce resources available to subsidize education and training, but this investment in human capital may be lost. Even though migrants are likely to positively contribute to the household budget and the home country via remittances and savings, whether the income gains and other benefits of migration of the highly skilled exceed its economic and social costs remains an open question so far.²

On the other hand, it can be argued that teachers’ migration may be beneficial to Ukraine as a sending country with high unemployment and underemployment among teachers, as it relieves the short-term pressure on the labour market and provides redundant teachers

1. One of the recent public debates about the emigration of skilled workers and its impact on the Ukrainian economy was organized by the Foundation for Effective Governance in partnership with UK-based Intelligence Squared on 22 September 2011 (see: <http://www.feg.org.ua/en/article/34.html>).

2. There are no empirical studies on these issues in Ukraine due to the absence of reliable statistics on high-skilled migration. Findings of studies on the impact of high-skilled emigration in other countries are also rather mixed, and the dispute over gains and losses of migration remains largely conjectural (World Bank, 2006; de Haas, 2010).

and their families with a rather stable income. Apart from that, large-scale migration of teachers may signal the national education system about the imbalances in local labour markets and the need to make necessary adjustments in the supply of young teaching professionals (Appleton *et al.*, 2006a). The national education system may also benefit from the exchange of ideas, knowledge and practices (so called “brain circulation”) through international mobility of teachers and researchers. But this is likely to happen only if migrant teachers and researchers work in their field in the host country and have enough time first to absorb new skills and qualifications and then to apply them in the home country after their return. Finally, the literature on skilled migration often points that the opportunity to migrate, remittances and Diaspora investment may increase incentives of households to invest in education (Stark *et al.*, 1997; Lowell and Findlay, 2002; World Bank, 2006). It may, therefore, contribute to higher demand for education services, followed by the employment growth of highly skilled teaching professionals. On the other hand, migration can have a demotivating effect when educational background of migrant workers becomes irrelevant abroad due to non-recognition of diplomas and prior work experience in the host country. This experience among adult migrants may discourage young migrants from further education and enhancing human capital, as it has already happened in Tajikistan (ILO, 2010) and is likely to happen in Ukraine (Vakhitova *et al.*, 2013).

Despite the existence of many useful studies devoted to recent developments in the Ukrainian education system, labour market and international migration of Ukrainians,³ there remains a need for deeper understanding of the specific issues connected with international migration of Ukrainian teachers, university professors and researchers and its impact on the economy, education system and work force competitiveness.⁴ This study seeks to fill in the existing gaps of primary information and general knowledge in this field by conducting targeted, migration-related research of teaching professionals, researchers and relevant stakeholders in Ukraine and summarizing its main findings. The primary goal is to provide policy recommendations and contribute to the design of policies and strategies aimed at retention of potential migrants and encouraging those who have already migrated abroad to come back to Ukraine.

The main part of research devoted to migration has been conducted from a neutral position, i.e. neither from the negative perception of migration (pessimistic view), which focuses on the various negative effects in migrant sending societies such as “brain drain”, underdevelopment and socio-cultural changes, nor from the positive perception

3. See, for example, Coupe *et al.* (2011), ETF (2009, 2011), World Bank (2007), UNDP (2003, 2004) for analysis of the education system; ETF (2009) and ILO (2011) for recent analysis of the labour market; Kipen and Avksentiev (2011), IDSS (2010a), and UCSR (2009) for migration intentions and labour migration trends in Ukraine. Kupets (2011, 2012) and Malynovska (2011) analyse various economic and social implications of migration and remittances in Ukraine.

4. The impact of international teacher mobility on developing countries has been analysed in Morgan *et al.* (2006) A cross-country study for two sending countries – Jamaica and South Africa – and two receiving countries – Botswana and England) and in Voigt-Graf *et al.* (2009) A cross-country study for sending and receiving countries in the Pacific region). Existing studies in transition economies are mainly focused on “brain drain” issues posed by emigration of scientists (see, e.g. Ivakhnyuk (2006) and Fedyukin *et al.* (2010) for Russia and Horvat (2004) for the Balkan countries).

of migration (optimistic view), which emphasises the economic and cultural benefits of migration, with circular and return migration, remittances and Diaspora involvement as vital development tools (De Haas, 2010; Düvell, 2012).

According to the generally accepted definition, international migration refers to the movement of people across national borders (UNDP, 2010). But this term is often used in Ukraine as a synonym for permanent migration. Taking these issues into account that our study is focused on cross-border movements of Ukrainian teaching and research professionals for permanent residence as well as for the purposes of education or temporary employment abroad. The term ‘international mobility’ is used in the report and its title.

Section 2 of the report presents salient features of the Ukrainian education system and research sector, with a particular emphasis on employment and wages of teachers, university professors and researchers according to administrative statistics. It is necessary to note from the very beginning that university professors in our study include not only professors per se, but also all teaching professionals working in higher education institutions regardless of their scientific degree and title, and the accreditation level of their institution. Similarly, researchers (scientists) are people with or without scientific degree who conduct research using scientific methods and usually work in research institutions and/or higher education institutions. Section 3 provides the main definitions used in the study and explains which methods have been used to collect quantitative and qualitative information about potential, current and return migration among the target groups. Sections 4–6 present the main findings of surveys, focus group discussions and in-depth interviews on potential, current and return migration respectively, with an emphasis on the potential costs and benefits of international migration of teaching and research professionals from the respondents’ point of view. Section 7 summarizes the main messages of the study and looks at the impact of international migration on the economy, labour market and the education system of Ukraine. Section 8 concludes with a discussion of possible constraints and challenges posed by migration of teaching and research professionals and appropriate policy responses to these challenges.

CHAPTER 2

Ukrainian Educational System and Research Sector: Background Information

2.1 Educational System

2.1.1 Basic Facts and Figures

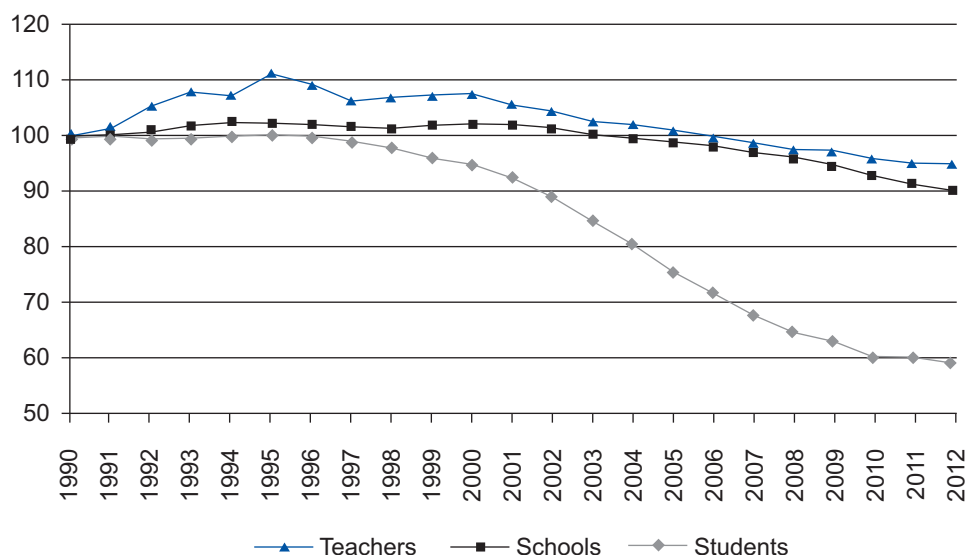
The Ukrainian education system is organized into five levels: (1) pre-primary, (2) general secondary, which includes primary and secondary, (3) vocational, (4) higher⁵ and (5) postgraduate education. The major ministry responsible for education in Ukraine is the Ministry of Education and Science (MoES), but several other line ministries and agencies maintain specific educational programmes in vocational and higher education institutions.

Statistics on the number of educational institutions and students in them is provided in Table A.1 in Annex A. As this table shows, the number of students in general secondary education institutions (hereafter – schools) has fallen by over 40 per cent since Ukraine gained independence, which may be attributed to decreasing fertility rates in the aftermath of the economic crisis in the 1990s. Meanwhile, the number of schools declined by less than 10 per cent and the number of teachers by about 5 per cent since 1990 (Figure 1). As a result, the average student-teacher ratio in general education declined from 13.3 in 1990 to 8.3 in 2012. Furthermore, the share of small schools in the total number of schools substantially increased, with the overwhelming majority located in rural areas. According to the World Bank, in the 2009/2010 academic year 30 per cent of schools providing primary education only (level I) had fewer than 10 students, 21 per cent of schools providing primary and basic secondary education (level I–II) had fewer than 40 students

5. Four levels of accreditation of higher education institutions are specified in the Law of Ukraine on Higher Education (№ 2984-III, 17 January 2002). According to Article 24 of the Law, HEI of the first accreditation level train students at the level of Junior Specialist's degree. HEI of the second accreditation level train students at the levels of Junior Specialist's and/or Bachelor's degree. HEI of the third and fourth accreditation levels train students at the levels of Bachelor's, Specialist's and Master's degree.

and 17 per cent of schools providing complete general secondary education (levels I–III) had fewer than 100 students (Coupe *et al.*, 2011).

Figure 1: Changes in the number of general secondary institutions, students and teachers (1990=100), 1990–2012



Source: State Statistics Service of Ukraine (online statistics on general secondary education), own calculations of indices.

Note: Data refers to the beginning of the corresponding academic year (i.e. September 1990, September 1991, etc.).

A substantial decrease in enrolment in vocational and higher education institutions of the I–II accreditation level observed in Ukraine since 1991 has been more than compensated by an increase in enrolment to higher education institutions of the III–IV accreditation levels (see Table A.1 in Annex A). This reorientation of students from lower to higher professional education and from technical to social sciences has resulted in oversupply of graduates with a university degree, particularly in social sciences and business, and shortages of skilled blue collar workers and engineering science professionals. This, in turn, has brought about the problems of skills mismatch, high unemployment of young people with higher education,⁶ and large numbers of overqualified employees not working in their field of studies⁷ (ETF, 2009; World Bank, 2009). However, enrolments in vocational and higher education institutions are projected to decline as the youth population is getting smaller (IDSS, 2010b). These demographic changes will further affect labour demand for teaching professionals at all levels of education.

6. The unemployment rate of young people aged 20–24 years with complete higher education (Specialist’s or Master’s degree and more) increased from 16.5 per cent in 2009 to 20.5 per cent in 2010. The highest unemployment rate (21.2 per cent in 2009 and 23.6 per cent in 2010) was among graduates of colleges and universities with basic higher education according to the national classification (Bachelor’s degree). In comparison, the unemployment rate among school graduates with complete and basic general secondary education was 14.8 per cent and 12.5 per cent, respectively, in 2010.

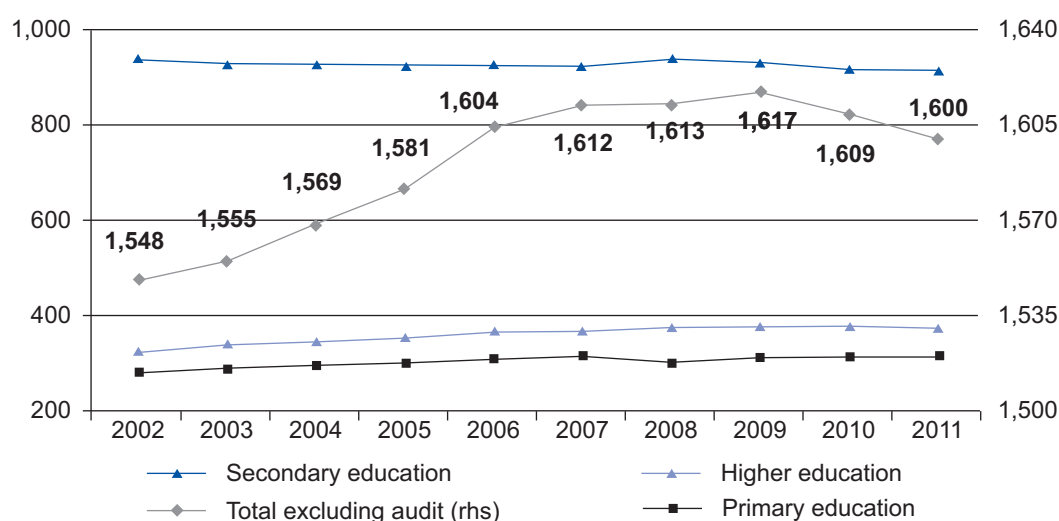
7. According to the ETF (2008), about 49 per cent of university graduates were overqualified for their jobs (as regards the first significant job after finishing education).

2.1.2 Employment in the Education Sector

The education sector, including adult education and other related activities, employed 1,628,417 teaching professionals and non-teaching staff, or 15.4 per cent of the annual average number of staff employees in Ukraine in 2011.⁸ Of them, 315,939 people are employed in primary education according to the NACE classification, 911,231 people in secondary education, 372,628 people in higher education, and 28,619 people in adult and other education.

It is important to note that despite the decreasing number of children and students in educational institutions of all levels from about 10 million in 2002 to about 8.3 million in 2011 (see Table A.2 in Annex A) and the steady downsizing of the formal wage employment in most sectors of the Ukrainian economy (except for 2005, 2006 and 2010), the total number of employees in the education sector, excluding adult education, had been increasing steadily until 2009 and then slightly declined (Figure 2). The number of employees decreased by less than 3 per cent in secondary education during 2002–2011, but this decline was more than offset by employment gains in primary and higher education (by 12.1 per cent and 14 per cent, respectively). This is reflected in net employment gain of 51,894 employees in the education sector between 2002 and 2011, excluding adult education.

Figure 2: Annual average number of listed employees in the education sector by level of education (thousand people), 2002–2011



Source: State Statistics Service of Ukraine (hard copies of the tables on average monthly wages and employment disaggregated by NACE sectors). These numbers are based on headcounts, not full-time equivalents.

Note(s) * Primary education (NACE code 80.1) includes pre-primary and primary education, secondary education (NACE code 80.2) includes general and vocational secondary education; and out-of-school education; higher education (NACE code 80.3) includes higher and postgraduate education.

8. The number of staff employees includes registered employees that are on the payroll of enterprises, organizations or institutions with the total number of employees of at least 10, regardless of the contract terms or hours of work. It does not include temporary absent workers being on maternity or parental leave, people holding multiple jobs and those employed under civil law contracts (sub-contractor agreements). Disaggregated employment and wage statistics in the education sector is provided by the Labour Statistics Department of the State Statistics Service of Ukraine. There are no separate entries for teaching and non-teaching staff so statistics presented in this section refers to the total number of staff employees.

Looking at the average student-to-staff ratios by level of education calculated as the total number of students divided by the total number of teaching professionals and non-teaching staff in the corresponding level of education (see Table A.2 in Annex A), it can be seen that they are low in international perspective and are decreasing over time. Low student-to-staff ratios may reflect existence of a multitude of small educational institutions and/or small classes within educational institutions. There is evidence in the literature on the effects of class size and school size on educational performance of school children in transition countries and Ukraine (Coupe *et al.*, 2011) that bigger schools appear to perform, on average, better than smaller schools, but school size appears to be a less important determinant of the educational quality of secondary schools than other school, individual and family characteristics.

Many teachers and professors are found to have a decreasing load in terms of teaching hours used as one of the most important indicators in the pay system. At the same time, they can work with large classes of students (over 30) and perform many time-consuming duties for which they are inadequately compensated.⁹

2.1.3 Public Spending and Compensation of Employees in the Education Sector

Although Ukraine spends a relatively large amount of its budget resources on education – about 20.6 per cent of total government expenditure and 7.2 per cent of GDP in 2012 (see expenditures by level of education in Table A.1 in Annex A.1) – the outcomes are poorer than expected because of the underlying problems of inefficiency in spending and lack of equity in access to education services (World Bank, 2007). Most of the public spending goes on compensation of employees and utilities,¹⁰ and relatively little on improving the quality of education via purchase of new textbooks, modern teaching tools and laboratory equipment, renovation of school premises and infrastructure, upgrading of computers and learning software, provision of internet access, school transport services, and so on.

At the same time, due to labour hoarding and underemployment, average teacher salary and that of other education sector employees remain fairly low both in absolute and relative terms. According to the estimates presented in a recent report on general secondary education in Ukraine (Vashchenko *et al.*, 2013), the annual base salary of Ukrainian teachers, which is roughly the same at all three levels of general secondary education (primary education, lower and upper secondary education), varies from 6,551 international dollars converted using PPP for private consumption for teachers with no experience to 8,189 international dollars for teachers with maximum experience. This is significantly lower than even the starting salaries for teachers of primary and secondary

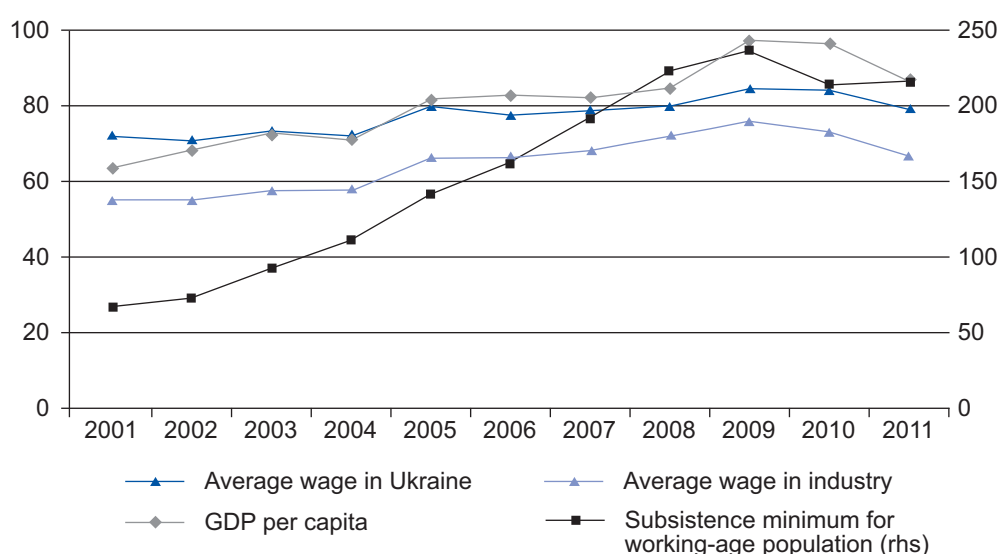
9. Examples of such activities include carrying out a census of children of pre-school age living in the nearby area, participation in various meetings and events (not related to teaching) organised by the local authorities, preparing shorthand records of staff meetings and other types of socially useful work.

10. According to the Ministry of Finance of Ukraine, compensation of employees accounted for 36.3 per cent of consolidated budget expenditures on education in 2010. About 13 per cent went to social security contributions, and 7.2 per cent were spent on payment of utilities. All capital expenditures made up about 4.4 per cent of consolidated budget expenditures on education.

educational institutions in all OECD countries. For example, in 2010 the average annual statutory salary in OECD countries amounted to 28,523 international dollars for primary education teachers, 29,800 international dollars for lower secondary education teachers and 30,899 international dollars for upper secondary education teachers (see Table D3.1 in OECD, 2012).

Employees working in the education sector in Ukraine earn much less than their colleagues from developed countries and also less than their nationals working in industry and many other sectors of the Ukrainian economy (Figure 3).

Figure 3: Average gross monthly salary in the education sector as a percentage of the national average wage, GDP per capita and statutory subsistence minimum (per cent), 2001–2011



Source: State Statistics Service of Ukraine (online statistics on average gross monthly wages by economic sector and GDP per capita), own calculations of the average subsistence minimum over a year (based on statutory levels set in the Laws On the State Budget) and the percentages.

As expected, teachers and other staff of primary and secondary education institutions earn on average less than their colleagues working in higher education institutions, but this wage gap is decreasing over time (Table 1). This trend points to a gradual wage compression in the education sector that might be attributed to the consequences of the Unified Pay Scale for public sector employees, which has been implemented in Ukraine since 2005 under conditions of regular minimum wage increases accompanied by significant budget pressures, particularly since 2009. Initially, the Unified Pay Scale linked salaries of all public employees to the minimum wages. But following the Memorandum of the Ukrainian government with the IMF in November 2008, the government tried to limit costs by delinking public wages from the minimum wage and indexing them to a government-set first-grade tariff.

The pay system in Ukraine's education sector based on the Unified Pay Scale is determined almost entirely by educational attainment, qualification category (or scientific degree and

title in higher education), teaching experience and teaching load rather than by individual teacher's performance and their students' achievements. Also, it does not envisage effective sanctions for behaviour that would invite disciplinary actions, including dismissal in the extreme cases. Such a system with weak incentives contributes to low teacher morale and commitment and leads to many problems including high rates of teacher absenteeism (mainly through the system of sick leaves), widespread corruption, the low quality of in-school teaching and increased focus on private tutoring or self-learning. Low salaries in the education sector also give rise to the difficulties in recruiting and retaining qualified teachers and professors, particularly those who are young, males and teachers working in rural or backward areas. This in turn has a negative impact on the quality of education, undermines public confidence in education programmes and qualifications and limits access of children from low-income families to high-quality education (World Bank, 2007; UNICEF, 2007; UNDP, 2003). As it will be seen below, low wages and weak incentives are the main push factors responsible for the international migration of teachers.

Table 1: Average gross monthly salary in the education sector by level of education (UAH), 2002–2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total	267	340	429	641	806	1,060	1,448	1,611	1,889	2,081
Primary	191	242	306	462	585	767	1,031	1,154	1,377	1,548
Secondary	247	313	399	604	763	1,010	1,393	1,558	1,836	2,016
Higher	385	491	606	875	1,087	1,407	1,891	2,084	2,417	2,660
Adult and other education	358	445	562	783	1,021	1,401	1,893	2,095	2,212	2,500
Wage gap between higher and primary education	2.02	2.03	1.98	1.89	1.86	1.83	1.83	1.81	1.76	1.72

Source: State Statistics Service of Ukraine (hard copies of the tables on average gross monthly wages disaggregated by NACE sectors). Disaggregated statistics for education is available since 2002.

2.1.4 Recent Education Reforms and Their Potential Impact on Employment of Teachers and University Professors

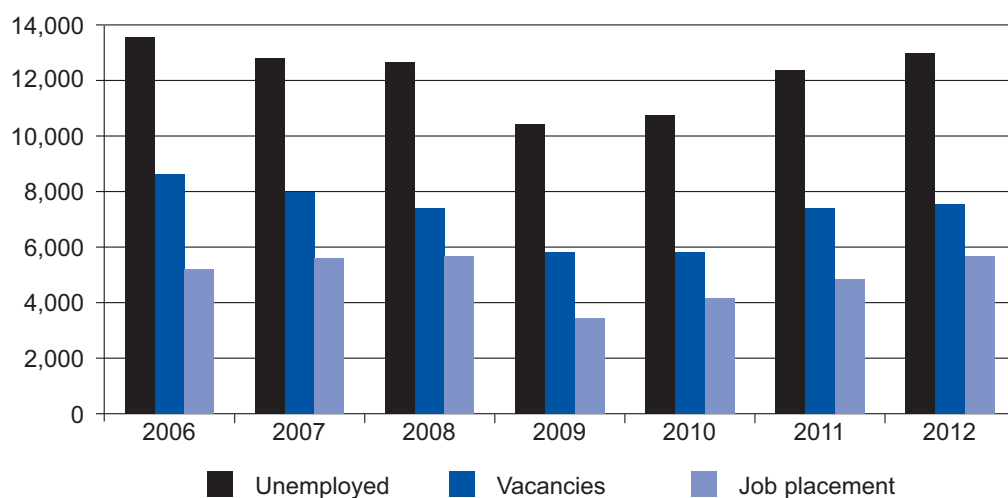
In view of the low quality of education and inefficiency of public spending on education, along with the ongoing demographic changes, the Ukrainian government launched the “optimization” (rationalization) of the educational institutions in 2010.¹¹ Apart from the

11. Optimization of the school network and the whole education system is among the key steps for reforms in the education sector according to the Presidential Economic Reforms Programme for 2010–2014 “Prosperous Society, Competitive Economy, and Effective Government”. Specific measures in support of the optimization process are envisaged in the 2011 and 2012 National Action Plans for the implementation of the above mentioned programme (approved by the President's Decrees № 504/2011 on 27 April 2011 and № 187/2012 on 12 March 2012 respectively).

closing of small schools, the optimization of general educational institutions (schools) system entails reorganization of educational institutions, creation of school and resource centres with organized transportation of school children from nearby villages to these educational centres or organization of accommodation in special boarding schools, and implementation of individual distance learning and other forms of learning (Deikun and Pastovenski, 2011). Opponents to the optimization of the school network system argue that this process threatens educational quality and accentuates inequalities, making educational opportunities available on the basis of geography and money rather than on children's aptitude and hard work. Empirical results (Coupe *et al.*, 2011) suggest, however, that the school network optimization through a downsizing of small schools and transfer of students to neighbouring ones is unlikely to harm school performance and may even increase educational outcomes, provided there is an efficient organization of transport for children from remote villages. Given this, the World Bank (2012) and other international donors insist on making better use of the resources allocated for the education sector by significantly downsizing the school network system to fit the smaller cohorts of students and by reallocating saved resources to quality-enhancing inputs.

Trade unions of employees of the education and science sectors are concerned also that such optimization would affect employment of teaching staff, with considerable layoffs of teachers and university professors and growing unemployment among newcomers to the labour market (graduates of teacher training institutions).¹² Administrative statistics of the Public Employment Service (PES) on the number of registered unemployed, vacancies and job placements among secondary education teaching professionals in 2006–2012 supports the view of growing unemployment since 2009, but it also reveals increasing number of vacancies and job placements in this occupational group after a dip in the crisis year 2009 (Figure 4). A similar situation is observed in other occupational groups of teaching professionals (see Table A.3 in Annex A). However, interviews with the unemployed teachers and anecdotal evidence show that often teachers looking for a job in the education sector do not register in the PES, preferring to contact directly school principals and local education authorities. Therefore, statistics on registered unemployment and vacancies presented here should be interpreted with great caution.

12. See <http://osvita.ua/school/news/13520>.

Figure 4: Registered unemployment and job placement of secondary education teaching professionals, 2006–2012

Source: Public Employment Service (online statistics on the occupational structure of the registered unemployed and vacancies).

Note(s): Data refers to the occupational group 232 according to the ISCO.

According to an alternative source of statistics on employment changes which is based on an establishment survey, layoffs in the education sector, as well as in the other sectors of the Ukrainian economy, are much less significant than voluntary withdrawing of employees due to regular turnover. Out of 221,100 employees who left the education sector in 2012, only 7,100 people (3.2 per cent) were laid off because of staff reduction (SSSU, 2013f). This suggests that because of strict employment protection legislation that does not allow easy dismissal of employees for economic reasons, and a very slow progress in the education reform, teachers may work for as long as they tolerate the worsening conditions of work, including decreasing pay, poor material and technical support, inconvenient schedule, and so on. After reaching the limits of their endurance, some teachers quit jobs even though they do not have alternative jobs. This hypothesis has been supported by the interviews with unemployed teachers who participated in our study. Therefore, there is a challenge of growing teachers' unemployment in Ukraine, and migration of teachers abroad may be one of its possible solutions.

2.1.5 Pre-Service and In-Service Teacher Training

Pre-service training

Teacher training can be pre-service or in-service. The conceptual framework of the teacher training system in Ukraine is provided in Annex A (Figure A.1). The network of institutions providing pre-service teacher training consists of 25 pedagogical universities, five institutes, 22 colleges and 14 college-type schools (*uchilische*) (Table 2). Furthermore,

many other universities and colleges created on the basis of pedagogical institutions¹³ also provide teacher training for selected fields of study. Significant downsizing in terms of the total number of students and in the number of first-year students in these pedagogical institutions occurred between 2007 and 2012 most likely due to a reduction in the “state order” for teaching professionals in response to negative demographic trends. However, the annual supply of newly qualified teaching professionals of all levels (number of graduates) remained almost unchanged – over 60 thousand persons. The total number of graduates from pedagogical universities and institutions in 2012 (54,621) was over 3.5 times larger than the total number of vacancies for teaching professionals registered in the PES over a year (see Table A.3 in Annex A), and this is not taking into account graduates with teaching qualification from other universities.

Table 2: Statistics on teacher training institutions, 2007/2008 vs. 2012/2013 academic years

Type of institution	Number of institutions		Total number of students		Number of students enrolled		Number of graduates	
	2007/08	2012/13	2007/08	2012/13	2007/08	2012/13	2007/08	2012/13
Universities	28	25	250,504	172,196	53,442	34,370	50,905	53,584
Institutes	8	5	14,184	4,441	2,900	982	2,886	1,037
Colleges	25	22	20,641	19,104	6,144	5,381	5,341	4,708
Uchilische	11	14	5,192	7,951	1,591	2,302	1,283	1,819
Total	72	66	290,521	203,692	64,077	43,035	60,415	61,148

Source: State Statistics Service of Ukraine (2008, 2013b).

Therefore, the annual flow of new professionals with teaching qualifications is substantially higher than the number of teaching posts that become vacant over a year because of retirement or for some other reasons. However, many talented and committed young people with teaching qualifications either avoid teaching at all or quit the profession after a three-year service, which is the minimum required period of work for those who were trained with public money (so-called “state order”). They are reluctant to enter teaching for a longer period because they think the profession is low-paid and not prestigious enough. Given this, in January 2007 the Ukrainian government introduced incentives for young teaching professionals in the form of lump-sum benefit equal to five minimum wages paid in addition to regular salary. But this incentive system does not seem to be very helpful, particularly in attracting young people to rural and backward areas, because of its fairly small size and coverage. According to the information of the Ministry of Education and Science of Ukraine,¹⁴ 73 graduates of pedagogical colleges and college-type schools (*uchilische*) and 3,797 graduates of universities and institutes received this payment in November 2011 amounting to over UAH 19 million.

13. For example, Cherkasy National University named after B. Khmelnytsky and Precarpathian National University named after V. Stefanyk, which were included in our sample for a survey of teacher trainees.

14. See <http://www.mon.gov.ua/index.php/ua/diyalnist/sotsialno-ekonomichni-pitannya/6541-viplata-u-2011-rotsi-odnorazovoji-adresnoji-groshovoji-dopomogi-vipuschnikam-vishchikh-navchalnikh-zakladiv-pedagogichnogo-profilu>.

With an apparent oversupply of locally trained teachers and unwillingness of many young people to work in their profession because of low salaries and poor working conditions, it is hard to argue that migration of young teachers abroad has more severe consequences on the Ukraine's education system in terms of quantity than the outflow of teaching professionals to other sectors of the Ukrainian economy.

In-service training and certification of teachers

In-service training of teachers is provided by the Central Institute of Postgraduate Pedagogical Education under the Academy of Pedagogical Science of Ukraine, 27 regional institutes of postgraduate pedagogical education in Ukraine, special departments in higher education institutions, and postgraduate programs (*aspirantura* and *doctorantura*).

According to the Law on Education (№ 1060-XII on 23 May 1991) and the Order of the MoESYS on the Certification of Teaching Staff (№ 930 on 6 October 2010), teachers must attend in-service training courses provided by the state to upgrade their qualification level at least once in five years. A certificate of participation is delivered to participants of such courses. However, in-service teacher training institutions cannot decide on the professional advancement of teachers by awarding a higher qualification category that directly affects the teachers' pay.¹⁵ This is a prerogative of special certification commissions whose activity is regulated by the mentioned Order of the MoES on the Certification of Teaching Staff.

The annual number of employees in the education sector who upgrade their skills in training courses exceeds 150 thousand people and accounts for about 10 per cent of the total registered employment in the sector. The number of employees of the education sector who completed skill upgrading courses increased from 149.9 thousand in 2006 to 181.8 thousand people in 2012 (SSSU, 2013f).

2.2 Research Sector

2.2.1 Basic Facts and Figures

In 2012, the research sector included 1,208 research institutions (theoretical and applied researches), with the majority operating in the business enterprise and government sectors (Table 3). The largest number of institutions is under the National Academy of Sciences (199), followed by the National Academy of Agricultural Sciences (93), and the Academy of Medical Sciences (35) (SSSU, 2013g).

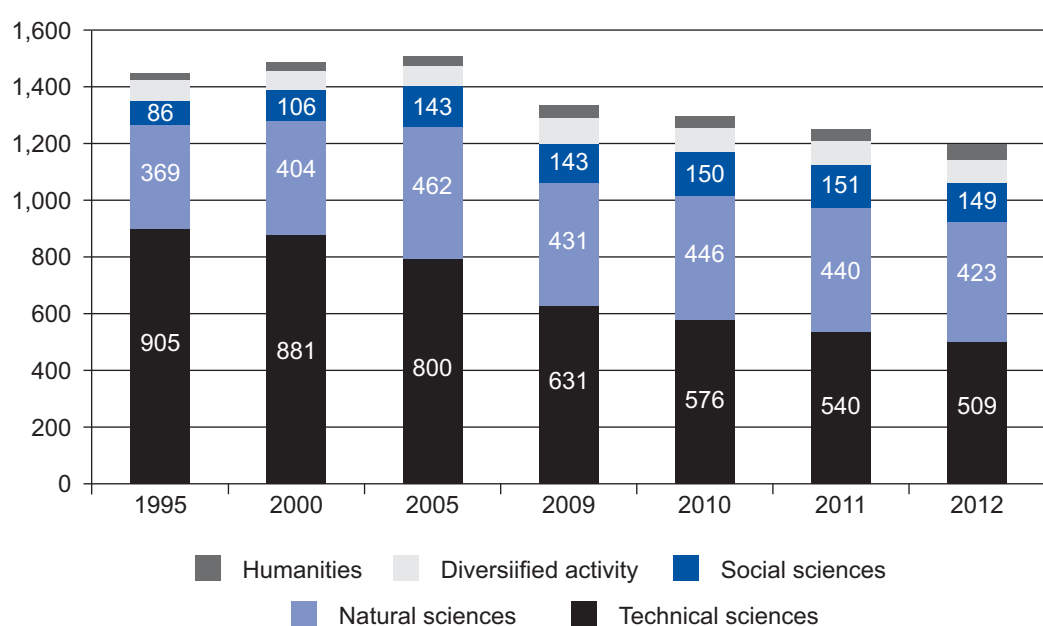
15. There are four qualification categories for teachers having complete higher education (with the most senior level last): specialist, specialist of the second category, specialist of the first category, and specialist of the highest category.

Table 3: Research institutions by sector, 2005–2012

	2005	2006	2007	2008	2009	2010	2011	2012
Total	1,510	1,452	1,404	1,378	1,340	1,303	1,255	1,208
Government sector	501	511	496	496	499	514	508	496
Business enterprise sector	837	767	729	698	658	610	570	535
Higher education sector	172	173	178	182	181	178	176	176
Private non-profit sector	–	1	1	2	2	1	1	1

Source: State Statistics Service of Ukraine (SSSU, 2013g).

The leading areas in terms of the number of research institutions are Kyiv City (317 institutions in 2012), Kharkiv oblast (189) and Lviv oblast (75). Figure 5 reveals that, in addition to a decreasing number of research institutions in Ukraine, there is a steady shift from technical sciences to natural and social sciences.

Figure 5: Research institutions by field of research, 1995–2012

Source: State Statistics Service of Ukraine (SSSU, 2013g).

Unlike the education sector, the research sector experienced dramatic employment losses, particularly in the aftermath of the economic crisis in the 1990s (Table 4). General stagnation in the research sector is accompanied by a fairly low salary of researchers and persistent wage arrears.¹⁶

16. According to express-bulletins of SSSU, wage arrears in the research and development sector amounted to over UAH 49 million as of 1 January 2013, or 5.5 per cent of the total wage arrears in Ukraine and 7.5 per cent of the total wage bill in the research and development sector in December 2012. The lion's share of these arrears (79.1 per cent) is accumulated by economically active enterprises (organizations), and about half of this amount is made up by unpaid wages in 2011 or even earlier.

Table 4: Number of researchers (in thousands) and average salary in research and development (in UAH), 1990–2012

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012
Total number of employees in research institutions*	494.2	293.1	188.0	170.6	160.8	155.5	149.7	146.8	141.1	134.7	129.9
Number of researchers and technicians	313.1	179.8	120.8	105.5	100.2	96.8	94.1	92.4	89.6	85.0	82.0
<i>of them</i>											
Doctors of sciences	3.2	4.1	4.1	4.2	4.3	4.4	4.5	4.4	4.5	4.4	4.5
Candidates of sciences	29.3	22.9	17.9	17.0	17.0	17.0	17.1	17.1	17.0	16.1	15.9
Number of professionals carrying out research as a second job**	36.0	41.7	53.9	68.5	74.9	76.9	75.8	71.8	69.4	68.2	61.1
<i>of them</i>											
Doctors of sciences	2.9	4.2	5.5	6.9	7.4	7.5	7.5	7.5	7.5	7.3	6.7
Candidates of sciences	21.1	18.6	23.3	25.7	29.2	30.1	30.1	30.3	29.7	30.1	26.1
Average monthly salary***											
nominal, UAH	n.a.	82	303	1,048	1,323	1,741	2,336	2,556	2,874	3,270	3,790
per cent to the national average	n.a.	112.3	131.7	130.0	127.1	128.9	129.3	134.1	128.4	124.2	125.2

Source: State Statistics Service of Ukraine (1990–2010: Statistical Yearbook for 2010, Table 15.1; 2011: SSSU, 2013g; online statistics on average gross monthly wages by economic sector).

Note(s): * Organizations providing research and technical services only are not covered since 2006. ** All research and teaching employees of higher education institutions are included since 2006. *** Salary is given for the NACE sector 73 “Research and development”.

The largest employment losses both in absolute and relative terms were in technical sciences (from 129,136 researchers and technicians in 1995 to 38,295 in 2011) and this is generally in line with the decrease in the number of research institutions in this field. At the same time, there were considerable employment gains in humanities (from 1,517 to 2,060 people) and social sciences (from 4,193 to 5,318 people), particularly in previously underdeveloped political sciences (from 42 to 292) and law (from 226 to 977). Official statistics also reveal that many fields in the “natural sciences” component such as physical and mathematical, biological, geographical and geological sciences experienced net employment gains between 1995 and 2011 (from 4.4 per cent in physical and mathematical sciences to 52 per cent in geographical sciences). Yet, veterinary, chemical, pharmaceutical, agricultural and medical sciences have lost many researchers

and technicians, which may be attributed to inadequate financing of these fields and implied worsening of working conditions. As expected, the majority of researchers and technicians are concentrated in the regions that are more economically developed and have the largest number of research and higher education institutions, namely Kyiv City (42.1 per cent of the total number in Ukraine in 2011) and Kharkiv oblast (17.2 per cent).

At the same time, the number of highly skilled professionals with scientific degrees working in the Ukrainian economy has increased significantly in recent years. For example, the number of doctors of sciences increased from 9,759 in 1995 to 15,592 in 2012, whereas the number of candidates of sciences grew from 57,610 to 88,057 over the same period (SSSU, 2013g). However, there are many negative qualitative changes in the stock of researchers and professionals with scientific degree, namely: (1) reduction in the share of professionals with scientific degrees involved in real research and development; (2) unjustified growth of specialized scientific councils that did not promote the quality of defended dissertations with awarded scientific degrees but rather paved the way for corruption in this sphere; (3) substantial reduction in the number of researchers involved in applied research and development in the real sector, which impedes Ukraine's progress in shifting towards an innovation-based economic model; and (4) critical ageing of researchers, which negatively affects their "absorption capacity" for innovation. According to recent statistics, the share of people older than 60 years among all doctors of sciences working in the Ukraine's economy increased from 40.2 per cent in 1991 to 52.4 per cent in 2012.¹⁷ The average age of researchers in 2011 was 47.6 years, of doctors of sciences – 63.1 years, and of candidates of sciences – 51.2 years (SSSU, 2012).

2.2.2 International Mobility of Researchers

It is often argued in the mass media and public debates that Ukraine has lost a significant part of its academic research potential and highly qualified professionals since 1991 due to emigration (the issue of "brain drain"). However, scanty statistical information on emigration of researchers reveals that the annual numbers of researchers leaving Ukraine were not that large compared to the total employment losses in the sector discussed above. This implies that the majority of Ukrainian scientists displaced in the 1990s changed profession rather than moved abroad for permanent residence.¹⁸

According to the official statistics,¹⁹ 675 doctors of sciences have moved abroad for permanent residence since 1991, with the largest outflows in 1994 and 1996. The number of candidates of sciences who have left Ukraine for permanent residence abroad since 1996 amounts to 1,151 people. The most popular destination countries for these professionals were the USA, Russia, Germany, Israel, Canada and Poland. According to the figures

17. The share of doctors of sciences older than 60 years is even larger in some fields, e.g. in geological, agricultural, technical and physical and mathematical sciences.

18. According to Sabirianova's study of occupational mobility in Russia (Sabirianova, 2002), the transition period brought about considerable flows to service-providing occupations and an increase in the number of unconventional career switches, including downward occupational mobility. The likelihood of downward occupational mobility was found to be higher among workers with higher skill transferability, higher education and shorter work experience.

19. Information is taken from the article "Ukraine to the world and the state to its citizens", *Dzerkalo tyzhnya*, № 31, 22 August 2009, available (in Ukrainian) at: http://dt.ua/POLITICS/ukrayina__svitu,_derzhava__groma_dyanam-57692.html.

provided by the National Academy of Sciences (NAS) Presidium, research institutes under the NAS lost 600 scientists because of migration during the last 15 years (of them 105 doctors of sciences and 327 candidates of sciences). Candidates of sciences were more likely to leave Ukraine at a young age (under 40 years), whereas most doctors of sciences emigrated at the age of 50 years and more.

However, the intensity of emigration among Ukrainian researchers decreased by more than 10 times compared to the first half of the 1990s. For example, the total number of doctors and candidates of sciences who emigrated in 2005–2010 amounted to 39 and 209 people correspondingly, compared to 59 doctors moving abroad in 1995 and 184 candidates of sciences who emigrated in 1996. In 2010–2012, the annual number of doctors of sciences leaving Ukraine decreased from 8 to 5 people whereas the number of emigrating candidates of sciences increased from 31 to 51 people (SSSU, 2013g).

An apparent decrease in the number of emigrants over the last decade, along with the strengthening of international collaboration and an increase in short-term cross-border movements of researchers (Table 5), supports the view of experts that international migration of Ukrainian scientists occurred in several phases: in the 1990s it was large-scale and permanent, whereas in the 2000s it became more circular and short-term. It is obvious that official statistics underestimates the number of researchers who moved abroad in various times and under different circumstances and stayed there for a long time or forever.

Table 5: International collaboration of Ukrainian researchers, 2006–2011

	2006	2007	2008	2009	2010	2011
Number of departures abroad among researchers, people	8,922	10,983	11,288	10,422	9,898	10,264
<i>of them with the purpose of:</i>						
internship, education, training and skills upgrading	2,793	3,914	3,797	3,990	3,933	3,787
teaching	419	570	891	538	574	489
doing research	5,710	6,499	6,600	5,914	5,391	5,988
<i>of them for the period of:</i>						
up to 3 months	7,982	9,855	10,216	9,467	8,906	9,354
3 months – 1 year	692	879	858	767	819	786
1 – 2 years	127	160	127	111	96	49
over 2 years	121	89	87	97	77	75
Number of departures abroad among researchers for participation in international conferences, workshops, and so on, units	10,943	10,646	10,588	10,112	9,737	11,369
Number of research grants received from international funds, units	1,378	1,674	1,592	1,745	1,723	1,727
Individual grants	622	864	806	896	898	918
Collective grants	756	810	786	849	825	809
Number of researchers receiving grants, people	3,851	3,881	3,989	4,844	4,541	5,155

Source: State Statistics Service of Ukraine (SSSU, 2012g).

CHAPTER 3

Methodology and Definitions

3.1 Methodological Framework and Main Components of the Study

The empirical part of the study is aimed at exploring the potential impact of migration of teachers, university professors and research professionals on the Ukrainian economy, labour market and the education system based on the data collected specifically for this study. A lack of reliable administrative data on the issue on the one hand, and high costs of collecting statistical data based on *ad hoc* nationally representative surveys on the other hand, make analysis of teachers' and researchers' migration at the macro level problematic.²⁰ This study, which is focused on individual educational institutions visited during the fieldwork and people with migration experience found via the snowballing technique, is basically at the micro level. Whilst such case-based and interdisciplinary research approach gives an insight into the migration process of skilled professionals under consideration and its likely impacts in Ukraine, the small sample size of quantitative surveys (from 57 to 419) does not allow wider generalizations at the regional or national levels with ascertaining the extent of international flows of trained teachers and researchers and testing statistical hypotheses. The study gives the answers not about *how many* people do and think this or that, but rather *what* people do and think.

Our migration research applies a multi-method (or mixed methods) approach by combining various qualitative and quantitative methods and thus bridging “the chasms between qualitative and quantitative methods” (Düvell, 2012). Qualitative research is conducted after quantitative small-scale surveys to follow up the survey findings and generate some explanations. Given the constraints of time and budget resources, this approach provided

20. The only nationwide survey on labour migration issues in Ukraine (further – the Modular Migration Survey) conducted in 2008 is not suitable for this study because of the small sample size of labour migrants in general and of specific occupational groups in particular. For example, out of 1,273 people defined as labour migrants in 2007–2008, 721 people reported about their job held before leaving Ukraine for employment abroad and 552 reported about not having any job. Of 721 migrants working before leaving Ukraine, only 33 people belonged to teaching profession (in pre-primary, primary and secondary education institutions).

the most comprehensive overview of the range of patterns, motives, values, beliefs and perceptions of migration among teachers, university professors and research professionals.

An independent consultant – Kiev International Institute of Sociology – was contracted for the fieldwork in January–April 2012. The fieldwork consisted of the following components grouped by the target groups:

- *potential migrants*: face-to-face surveys of teachers, university professors/ researchers and teacher trainees, respectively, and eight in-depth interviews with unemployed teachers to analyse their propensity to migrate;
- *expatriates*: online surveys with teachers and university professors/researchers who are currently working abroad to analyse their experience before and during emigration and possibilities for their return or contribution to the development of Ukraine from abroad. This quantitative data is supplemented by qualitative research based on focus group discussions (via Skype) with expatriate teachers to get the migrants' perceptions, attitudes, and opinions on international migration of teachers and its impact on the Ukrainian economy and education system;
- *returned migrants*: face-to-face survey of returned teachers, targeting 200 returnees, and one focus group discussion with returned university professors/researchers to analyse their experience abroad and after return to Ukraine;
- *stakeholders*: about thirty in-depth interviews with key stakeholders involved in the organization of teaching-learning process, training, employment and migration of teaching and research professionals, to get a deeper insight into the main subject of our study.

Quantitative data were mainly collected through the distribution of questionnaires to all target groups, namely non-migrants (with a proportion of potential migrants), expatriates and returned migrants among teachers and university professors/researchers. Questionnaires were also distributed to last-year students of higher educational institutions providing teacher training in order to explore the levels of interest in the teaching profession and migration among future graduates with a teaching qualification. Although the majority of the questionnaires comprised closed questions, there was an opportunity for interviewees to offer their own answers and comment on specific experience in some open-ended questions. Qualitative material was gathered through focus group discussions and in-depth interviews.

Six sets of questionnaires for each survey (in English and Ukrainian) and detailed guides for focus group discussions and in-depth interviews were elaborated by the author of this report and are available on request. Data collection in Ukraine was facilitated by the Ministry of Education, Science, Youth and Sports, which provided support through its regional departments and the central Department of Higher Education.

3.2 Non-Migrants and Potential Migrants

Potential migrants are defined in the study as individuals aged 20 years or more who had the strong intention of going abroad for the purpose of further studies, temporary employment

or permanent residence *within the next 12 months*. This component is focused on three main groups of respondents: (1) teachers who at the time of the survey worked in Ukraine in general secondary or vocational education institutions; (2) university professors and researchers who worked in higher education institutions or in public research institutions; and (3) last-year students of pedagogical colleges and universities.

Additional requirements to distinguish interest in migration from actual migration plans are that people interested in migration have the necessary documents for moving abroad as legal migrants, information on the destination country, ability to finance the move abroad, knowledge of the language of the most likely destination country, and so on. *Non-migrants* are their counterparts who either do not intend to go abroad or are not ready to migrate within the next 12 months.

3.2.1 Face-to-Face Surveys of Teachers, University Professors/ Researchers and Trainee Teachers

The sample for the analysis of migration intentions is not nationally representative but limited to three geographical regions – East (represented by Kharkiv oblast), West (represented by Ivano-Frankivsk oblast), and Centre (represented by Cherkasy oblast). Two oblasts in the east and the west have been chosen on the basis of the Modular Migration Survey-2008 as the regions with the largest number of teachers among labour migrants in 2007–2008. Cherkasy oblast has been chosen because of its relative proximity to Kyiv City (despite this, the intensity of international migration of teachers and health workers is very high there) and personal interest of the author who graduated from Cherkasy National University named after B. Khmelnytsky (former pedagogical institute) with a teaching qualification at the end of the 1990s.

A survey of researchers and university professors has also been carried out in Kyiv City to check the hypothesis of whether highly skilled professionals living and working in the capital city are more likely to go abroad because of closer contacts with international colleagues, or, on the contrary, are less interested in international migration because of better employment and income opportunities at home.

Then two-stage purposive sampling is used, with selection of educational institutions at the first stage and selection of individuals representing these institutions at the second stage. As there is no data on which educational institutions and research centres have been particularly affected by migration, the selection of sample units is not based on any pre-existing knowledge. In addition to the type of educational institution (primary and secondary general schools, vocational schools, colleges and universities), important criteria for selection of educational institutions include location (rural vs. small town vs. city) and type of ownership (state/communal vs. private – only for secondary schools). In each educational institution, individual respondents have been selected to meet predetermined quotas for individual characteristics depending on the target group. Specifically, teachers of secondary general and vocational schools have been selected on the basis of gender, age, and the subject field (primary school vs. sciences vs. humanities vs. arts), with about 10 teachers per one school.

University professors and researchers have been selected to meet the criterion of the research field (science vs. humanities and arts vs. engineering) but with additional requirements of representing different gender and age groups. As it has been mentioned in the introduction, scientific degree and title were not used as the pre-selection criteria.

The primary criterion for selection of students was the subject field which they were supposed to teach after graduation (primary school vs. sciences vs. humanities vs. arts).

The fieldwork was carried out at the end of January – February 2012. The details of the sample surveys of non-migrants and potential migrants by the main target groups are provided in Table 6.

Table 6: Composition of the sample surveys of non-migrants and potential migrants

Target group	Type of educational institution (EI)	Total number of EI visited (per cent of the total number of EI in Ukraine)	Location	Total number of individuals surveyed
Teachers	Primary and secondary general school	27 (0.14)	Cherkasy, Korsun-Shevchenkivskii, villages Sahnivka and Shenderivka Kharkiv, Balakleya, villages Brygadyrivka and Vyshneva Ivano-Frankivsk, Kolomya, villages Pyadyki and Lisnyi Khlilychyn	270
	Vocational school (PTU)	3 (0.31)	Cherkasy, Kharkiv, Ivano-Frankivsk	30
Professors and researchers	College	4 (0.80)	Korsun-Shevchenkivskii (Cherkasy oblast), Balakleya (Kharkiv oblast), Kolomya (Ivano-Frankivsk oblast)	13
	University	10 (2.9)	Cherkasy, Kharkiv, Ivano-Frankivsk, Kyiv	77
	Research institute	4 (0.31)	Kharkiv, Ivano-Frankivsk, Kyiv	19
	Pedagogical college	3 (8.3)	Korsun-Shevchenkivskii (Cherkasy oblast), Balakleya (Kharkiv oblast), Kolomya (Ivano-Frankivsk oblast)	130
Trainee teachers	Pedagogical university	3 (9.4)	Cherkasy, Kharkiv, Ivano-Frankivsk	289

3.2.2 In-Depth Interviews with Unemployed Teachers

Taking into account that Ukrainian teachers face serious difficulties in finding/keeping their jobs because of the demographic challenges and the school network optimization scheme (discussed above), it was decided to conduct in-depth interviews with unemployed teachers in order to get insight into the reasons for job separation

and individual coping strategies of the unemployed, including seeking employment opportunities abroad.

Eight unemployed teachers from towns and cities representing five Ukrainian regions (Crimean AR, Donetsk, Kharkiv, Lviv and Ivano-Frankivsk oblasts) were identified by local interviewers. In-depth interviews were conducted by phone from Kyiv during 27 March–9 April 2012 and were taken down in shorthand records for further analysis.

3.3 Expatriates

Expatriates are defined as individuals aged 20 years or more who moved to a country other than the country of usual residence (Ukraine) for the purpose of further studies, temporary employment, or permanent residence, and had been living there *for at least three months* continuously prior to the survey. Other purposes for going abroad such as short-term visits, tourism, academic trips on exchange programs/grants and family reunification among others are not considered. Initially, only individuals who worked as teachers, university professors and researchers before leaving Ukraine were considered as the target group. But after encountering problems with recruitment of expatriates among university professors and researchers, the criterion of teaching or doing research in Ukraine before emigration was softened: graduates of Ukrainian higher education institutions who moved abroad to pursue studies for a more advanced qualification and worked abroad in the research sector or academia at the time of the survey have also been classified as expatriate researchers and university professors. Similarly, the criterion for the start of migration period in 2002 or later, set initially, was relaxed.

3.3.1 Online Survey of Teachers

The fieldwork of the expatriate teachers survey was carried out during 24 February–12 April 2012. Sample stratification parameters used in the initial stage include the following: destination region (Russia vs. CEE vs. Western Europe); type of migration (permanent vs. labour; regular vs. irregular); gender and age groups; type of school before emigration (primary vs. secondary general vs. secondary vocational).

Several methods have been used to recruit respondents who meet the above mentioned criteria. Teachers working in Europe were found with the help of Ukrainian Sunday schools and cultural organizations abroad. Taking into account that no Ukrainian school or organization in Russia answered the request from the Kiev International Institute of Sociology, alternative ways have been found to contact respondents working in Russia; namely the database of an employment agency specialized in recruiting domestic staff and individual responses to Internet resources with free ads for babysitting and childminding services.

Further, three ways of data collection have been used: (1) gathering filled questionnaires online via special website <http://www.inpoll.net>, (2) sending questionnaires in the MS

Word format to the persons in charge abroad,²¹ with subsequent resending of the filled questionnaires via e-mail (electronic copies) or via courier bus (hard copies); and (3) phone interviews with respondents working in Russia. In total, 92 expatriate teachers that satisfy the criteria participated in the survey, with the bulk from Italy (55 per cent), Russia (26 per cent) and Czech Republic (7.6 per cent).

3.3.2 Online Survey of University Professors and Researchers

The fieldwork of the survey of expatriate professors and researchers was carried out between 22 February–12 April 2012. Important characteristics taken into consideration in the sampling stage were gender, age, type of migration and the field of research. Respondents were recruited via the snowball method (with initial data about names and e-mails from the surveys of researchers and university professors working in Ukraine and from author's personal contacts²²) and also via social networks (Facebook, Ukrainian Scientists Worldwide).

Recruited respondents had two options of filling the questionnaire: (1) online via special website <http://www.inpoll.net> in Ukrainian and (2) via e-mail in the MS Word format in Ukrainian or English. Despite the enormous efforts of the Kiev International Institute of Sociology to involve more people in the survey (the initial target was about 100 people), within the time allowed it managed to collect answers from only 57 respondents who met the basic criteria described above.

At an early stage of the project it was planned to collect information about professors and researchers working in Russia, USA, Germany, France, Canada and the UK, but due to difficulties in recruiting respondents online, particularly in Russia, the sample does not include Russian-based researchers.

3.3.3 Online Focus Group Discussion with Expatriate Teachers

An online focus group discussion was held at the beginning of April 2012 using voice group chat software (Skype). Respondents were recruited with the help of Ukrainian Sunday schools abroad. In total, four former teachers from Ukraine living in different European countries, namely Poland, Czech Republic, Italy and Spain, took part in the

21. Self-organized persons in charge, to whom the team is very grateful, include Khalavka Yuriy and Ukrainian Scientists Worldwide social network, Mariana Tril and Ukrainian School "Prestige" in Rome (Italy), Myroslava Gorbenko and Ukrainian School "Santa Sophia" in Rome (Italy), Halyna Hevko and Cultural Association "Dyvo-Pysanka" in Italy, Mariya Gavryluk and Ukrainian School "Erudyt" in Prague (Czech Republic), Oksana Gorin and Ukrainian School "Dyvosvit" in Madrid (Spain) and Maria Iaremenko and Tetiana Panasenko in Warsaw (Poland).

22. Author's contacts mainly refer to the graduates of the Kyiv School of Economics (KSE), which is the legal successor of the 2-year MA Programme in Economics founded by the Economics Education and Research Consortium (EERC) in 1996 in Kyiv. Out of 516 graduates produced by the KSE since 1998 (the author of this report is among them), there are 89 graduates who have already received a Ph.D. degree from Western universities, most of whom stayed in the North America or Western Europe to work in universities, research centres, international organizations and private companies (<http://www.kse.org.ua/en/about/kse-at-glance>). This explains the bias of the sample toward relatively young people with a degree in Economics and related sciences.

discussion. The discussion lasted over two hours and was taken down in shorthand records for further analysis.

3.4 Returned Migrants

According to our definition, *returned migrants* are (former) teachers, university professors and researchers, individuals aged 20 years or more, returning to Ukraine after having been international migrants (whether short-term or long-term) in another country and intending to stay in Ukraine *for at least a year before the next migration period*. Individuals returning for retirement are excluded. Only migration for the purpose of further studies, temporary employment, or long-term stay abroad is considered. Additional criteria for the definition of returned migrants in this study are that the age of individuals at the time of emigration should be 20 years or over, and that they should have returned at least three months but no more than 10 years before the survey (i.e. in 2002 or later).

3.4.1 Face-to-Face Survey of Teachers

The survey of returned migrants among (former) teachers was held in the period from 10 February–12 March 2012. As in the case of the survey of potential migration among teachers, a sample was designed so as to ensure proportional representation of sending geographical regions in Ukraine, type of community (urban vs. rural), gender and age groups and type of school (primary vs. secondary general vs. secondary vocational). Ownership of schools was not used as an additional stratification parameter because private schools are greatly underrepresented in Ukraine and in the selected regions. An important parameter used in the sampling stage of returned migrants was the destination region during the last migration period (Russia vs. CEE vs. Western Europe).

Respondents were selected using the snowball method, with initial contact information given by teachers participating in the survey of potential migrants (see Section 3.2.1) or found by local interviewers. Several respondents who had migration experience and met the criteria of returned migrants were found in schools during the survey of potential migrants. In total, 200 respondents living in 20 regions of Ukraine were interviewed.

3.4.2 Focus Group Discussion with University Professors and Researchers

Focus group discussion was held on 24 March 2012 in Kharkiv City as the second most important scientific centre in Ukraine after Kyiv City. In total, eight respondents meeting the criteria for returned migrants among university professors and researchers took part in the discussion: five respondents had migration experience related to their profession (teaching at the university or doing research) and three respondents worked abroad in low-skill jobs. The discussion was taken down in shorthand records for further analysis.

3.5 Stakeholders

Thirty-four in-depth interviews with national and regional education officials, principals of secondary general and vocational schools, representatives of higher education institutions, staff of private recruitment agencies and public employment services/centres, representatives of teacher trade unions, migration experts and others were conducted simultaneously with main fieldwork in February–March 2012. These interviews helped collect views and opinions of the key actors about specific issues regarding migration and return migration of teachers, university professors and researchers, their impact on the education system in general and educational institutions at various levels in particular, problems of unemployment of teachers in some regions and understaffing in others and general problems facing the Ukrainian educational system summarized in Sections 7 and 8. A full list of individuals who participated in the in-depth interviews is provided in Annex B.

Interviews were predominantly held in three regions selected for the study of potential migration – Kharkiv, Ivano-Frankivsk and Cherkasy oblasts, as well as in Kyiv City. Respondents from the regions were interviewed by phone, whereas stakeholders from Kyiv City were interviewed either by phone or in face-to-face interviews (depending on what way of communication was more comfortable for the respondent). For further analysis, all interviews were taken down in shorthand records.

CHAPTER 4

Propensity to Migrate among Teaching and Research Professionals

4.1 Teachers Working in Secondary General Education Institutions and in Vocational Schools

Twenty-seven general secondary schools from six urban locations and six rural locations, and three vocational schools in three urban locations were visited during the fieldwork (see Table 6). Given that the sampled schools account for only 0.14 per cent of all general secondary schools and 0.31 per cent of all vocational schools in Ukraine, clearly there are limitations with the data because of non-representativeness of the sample. However, using information on 300 teachers sampled in these thirty case studies, it is possible to highlight some of the trends in teachers' propensity to migrate. Table C.1 in Annex C provides composition of the sample of surveyed teachers by the main socio-demographic and school characteristics.

Interest in moving abroad

Out of 300 surveyed teachers, 66 of them (22 per cent) expressed a positive interest in moving abroad for temporary employment, studies or long-term stay, and 10 teachers (3.3 per cent) have already had such migration experience since 2002. Forty-nine teachers (16.3 per cent) would move for temporary employment, whereas 14 teachers (4.7 per cent) stated that they would choose to settle permanently in another country (Table 7). This result suggests that intended migration of teachers is predominantly temporary by nature, aimed at earning a living. There is a special term in Ukrainian for such labour migrants – “*zarobitchany*.”

The table below shows the breakdown of interest of teachers in migration depending on their individual characteristics, location and the type of school in which they work, and their financial status. As expected, young, single, male teachers who live in villages, work in ordinary secondary schools and have insufficient income to meet even basic needs show a higher intention to migrate. At the same time, the share of respondents willing to migrate for permanent residence is significantly larger among females, divorced/widowed people,

residents of cities and teachers of elite secondary and vocational schools who earn more than UAH 3,000 per month.

Table 7: Interest of teachers in migration abroad by characteristics

Characteristics	Yes (per cent)			No (per cent)	Total (per cent)
	Studies	Employment	Permanent residence		
Total (number)	3	49	14	234	300
Total (per cent)	1.0	16.3	4.7	78.0	100
Age					
20–29	0.0	25.9	5.6	68.5	100
30–39	2.6	19.5	5.2	72.7	100
40–55	0.7	12.9	5.0	81.4	100
55+	0.0	7.4	0.0	92.6	100
Gender					
Male	2.9	20.3	2.9	73.9	100
Female	0.4	15.2	5.2	79.2	100
Marital Status					
Single	0.0	25.0	6.8	68.2	100
Married	1.5	15.9	3.4	79.2	100
Divorced/Widowed	0.0	10.4	8.3	81.3	100
Subject field					
Primary education	0.0	12.1	0.0	87.9	100
Natural and mathematical Sciences	1.1	11.4	3.4	84.1	100
Humanities and social sciences	0.0	18.8	11.8	69.4	100
Arts and health	3.6	23.2	1.8	71.4	100
Technical subjects (PTU)	0.0	23.1	0.0	76.9	100
Settlement type					
City	0.0	14.8	6.7	78.5	100
Town	2.2	15.6	3.3	78.9	100
Village	1.6	21.3	1.6	75.4	100
Region					
Cherkasy oblast	2.0	14.9	3.0	80.2	100
Kharkiv oblast	0.0	8.0	5.0	87.0	100
Ivano-Frankivsk oblast	1.0	26.3	6.1	66.7	100
Type of school					

Characteristics	Yes (per cent)			No (per cent)	Total (per cent)
	Studies	Employment	Permanent residence		
Ordinary secondary school	0.8	17.7	3.6	77.8	100
Elite secondary school	4.6	4.6	9.1	81.8	100
Vocational school (PTU)	0.0	13.3	10.0	76.7	100
Ownership					
State/municipal	1.1	16.0	4.7	78.2	100
Private	0.0	20.0	4.0	76.0	100
Net wage					
Less than 1,000 UAH	0.0	36.4	4.6	59.1	100
1,000–1,999 UAH	1.4	18.6	4.3	75.7	100
2,000–2,999 UAH	0.9	9.8	4.5	84.8	100
3,000–3,999 UAH	0.0	16.7	5.6	77.8	100
Financial status					
Insufficient	6.3	25.0	12.5	56.3	100
Barely sufficient	0.7	18.5	6.9	74.0	100
Almost sufficient	0.0	11.1	1.0	87.9	100
Sufficient	2.8	19.4	2.8	75.0	100

Notes: Answers to the question: “Are you thinking seriously about moving abroad for studies, temporary employment, or permanent residence at the moment?”. Education is not shown in this table because the majority of surveyed teachers have completed higher education.

Regional differences in teachers’ intentions to migrate seem to fully correspond to migration intentions of the whole population, increasing from the east to the west of Ukraine. Unexpectedly, teachers of private schools express higher positive interest in migration than teachers of municipal secondary schools or state-funded vocational schools. If teachers’ migration intentions are examined from the viewpoint of the subject they teach, it can be seen that primary school teachers are the least interested in migration, whereas “Arts and health” teachers and those teaching “Technical subjects in vocational schools” are the most interested in working abroad. Meanwhile, English and Ukrainian language teachers dominate among those who are interested in migration for permanent residence, which might be related to a higher probability of working abroad in their profession or in a related field. Anecdotal evidence suggests that the most talented teachers of maths, Ukrainian, English, history and some other subjects who are in high demand for private tutoring, particularly in preparing children for external independent testing when graduating from high school, are less inclined to migrate abroad for temporary employment because they have fairly high incomes at home and do not want to lose their skills and important social connections.

Interestingly, the majority of teachers who would be willing to migrate are rather or very satisfied with their current jobs in general (70 per cent). Yet, this share of satisfied teachers is much lower than in the group of those who are not thinking about moving abroad (77.8

per cent). Overall, only three teachers in the group of potential migrants and two teachers in the group of non-migrants are completely dissatisfied with their current jobs.

Reasons for wanting to stay and general attitude towards migration of colleagues

Teachers who stated that they did not intend to move elsewhere for employment, studies or permanent residence, were asked to mark the three major reasons for wanting to stay in Ukraine. Answers from 234 teachers show that the overwhelming majority wants to remain in Ukraine because they want to work and live in their home country, where their children, close relatives and friends live (Table 8). Seventy-six respondents (about 32.5 per cent) believe that they would feel lonely abroad, and this fear is strong not only among older people, but also among the youngest (20–29 years), who are supposed to be more adaptable to a new social environment and are supposed to make new friends easier. In view of the fact that Ukrainians who have migrated abroad for employment (*zarobitchany*) rarely have the opportunity to practice their profession and usually work in jobs below their qualification level, 63 respondents (about 27 per cent of all non-migrants) worry about difficulties in finding a suitable job abroad. As one could expect, only few individuals mention their satisfaction with income, job, housing conditions and the overall situation in Ukraine as the major pull factor.

Table 8: Reasons for wanting to stay – teachers (number of answers; N=234)

	Reason 1	Reason 2	Reason 3	Total
My close relatives and friends are here	59	67	43	169
My children are here	54	69	8	131
This is my country, I want to live and work in my home country	85	18	24	127
I would feel lonely abroad	10	28	38	76
Impossible or very difficult to find work in my profession abroad	15	15	33	63
Impossible or very difficult to find any work abroad	3	7	8	18
Have a good house/apartment in Ukraine	2	5	9	16
Have a good job and satisfactory income in Ukraine	1	2	12	15
Other reasons	3	1	9	13
Low cost of living in Ukraine	2	3	3	8
Satisfied with education, health care, and other social conditions in Ukraine	0	0	3	3
Poor work conditions abroad	0	0	3	3

Notes: Answers to the question: “What are the main reasons you would have for staying? Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)”.

Most teachers not intending to migrate have a positive attitude towards emigration of their colleagues. At the same time, over 70 per cent of non-migrants think that if their colleagues manage to find work and settle abroad, there are no reasons for them to return to Ukraine (Table 9). Nevertheless, 62.8 per cent believe that if migrants do return, they are generally better off than those who stay in Ukraine, but this occurs not so much because of some specific experience, new skills and qualifications (if any) brought by returned migrants from abroad, but due to the earned income that helps improve the financial situation of migrants' families.

Table 9: Attitudes of non-migrant teachers towards migration of their colleagues (per cent of teachers not willing to migrate)

	Yes, fully agree	Yes, partly agree	No, partly disagree	No, fully disagree	No new skills/ qualifications	No answer
In general, I have a positive attitude towards emigration of my colleagues	32.5	39.7	16.7	8.6	X	2.6
If teachers manage to find work and settle abroad, there are no reasons for them to return to Ukraine (for a long stay)	41.5	30.3	18.0	9.0	X	1.3
Returnees are generally better off than those who haven't been abroad for education or employment	21.8	41.0	26.1	9.4	X	1.7
Our teachers who have lived and worked abroad have gained experiences abroad that help them find a better paid job/start their own business when they return to Ukraine	20.1	35.9	23.1	17.5	X	3.4
Returnees are able to use new skills that they learned abroad	17.1	38.9	24.8	13.3	4.7	1.3
Returnees' qualifications (diplomas, certificates) obtained abroad are recognized in Ukraine and help them find a better paid job/start own business when they return	17.1	33.3	27.8	14.1	5.1	2.6

Notes: N=234 (only those who are not interested in migration). Answers to the question: "To what extent do you agree with each of the following statements regarding the impact of migration of your colleagues, i.e. Ukrainian teachers?".

Reasons for wanting to migrate

One of the most obvious and foremost reasons for wanting to migrate is the very low salaries of Ukrainian teachers in absolute and relative terms (see Section 2.1.3), which pushes teachers to look for better income opportunities abroad, even though with significant downgrading, in order to improve the standard of living of their families or to buy a house or apartment. This was followed by dissatisfaction with future prospects and general conditions of living in Ukraine (Table 10). Only 14 teachers from various subject fields, age groups and regions mentioned professional development and advancement as one of the most important reasons for migration.

Table 10: Reasons for wanting to migrate – teachers (number of answers; N=66)

	Reason 1	Reason 2	Reason 3	Total
To take advantage of higher income abroad	22	10	10	42
To improve standard of living of my family staying in Ukraine	21	15	3	39
Do not like social, economic or political situation in Ukraine	3	9	16	28
To buy a house/apartment for my family/children	6	8	13	27
To take advantage of professional development and advancement by gaining work experience, training and access to the best facilities and technologies	5	8	1	14
No future in Ukraine for myself and my children	5	1	5	11
To finance children's education	1	3	6	10
To repay debts	0	5	2	7
Do not like climate/ecological environment in Ukraine	0	3	0	3
To get education abroad	1	0	1	2
To invest in or start a business in Ukraine	0	0	2	2
To accompany/follow spouse or parent	1	0	0	1
To escape family problems (conflict with parent/divorce)	0	1	0	1

Note(s): Answers to the question: "What are the main reasons you would have for leaving? Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)".

It is interesting to note that of those who expressed their first, second and third preferences, only two persons mentioned they were willing to migrate in order to invest in their own business in Ukraine after return, compared to 10 persons willing to invest in education of their children and 27 persons willing to invest in housing. This finding supports the view that migration of Ukrainian workers is not likely to boost entrepreneurship in Ukraine in the near future, as migrants and their households think about satisfying essential consumption needs and financing children's education rather than about investment in entrepreneurial activities (Kupets, 2011 and 2012).

Characteristics of potential migrants

Out of the 66 teachers who expressed a positive interest in moving abroad, only 21 persons estimated their chances of moving within the next 12 months as likely or very likely. Therefore, about seven per cent of all surveyed teachers can be considered as potential migrants according to our definition. If additional requirements are taken into account such as having necessary documents for moving abroad as legal migrants, information on the destination country, ability to finance the move abroad and knowledge of the language of the most likely destination country, the number of potential migrants appears to be very small: only three persons have enough money to finance their move abroad (whereas eight persons are not sure), only eight persons speak the official language of the most likely destination country fluently or fairly well (whereas four persons do not speak at all) and only two persons already have or have at least started preparing the necessary documents. Surprisingly, there is not one person that would satisfy all these criteria simultaneously.

The most likely destination countries reported by respondents who are likely to go abroad within the next 12 months are: USA, UK, Germany, France, Czech Republic, Russia, Poland, Austria, Portugal, Canada, Italy, Slovenia and Finland. The major reason for choosing this or that particular country is better employment and/or income opportunities compared to other countries. The other answers were “having relatives/friends there”, “knowledge of the language of that country”, “geographical/cultural proximity of that country to Ukraine”, and “relatively low living costs compared to other countries”.

It has been found that out of 20 potential migrants planning to work abroad, only six teachers (30 per cent) expressed their willingness to work as teachers in the host country. Seven teachers would like to work elsewhere but not in teaching (e.g. construction, babysitting, work in a sports club) and seven did not know where they would work. Furthermore, only three respondents out of 20, believed that their existing qualifications would be recognized in the most likely destination country.

The tentative conclusion about the likely impact of new outflows of teachers abroad is that migration is not likely to be very substantial in size and to cause quantitative shortages of teachers, given the number of newly qualified teachers supplied by pedagogical institutions and the decreasing demand due to the demographic changes. In view of the special system of promotion and advancement of teachers in Ukraine, which is linked to their regular training and certification (see Section 2.1.6), temporary migrants are either young specialists without strong attachment to the profession or teachers on the verge of retirement. Given this, teachers' migration is also unlikely to significantly erode the quality of teaching staff by “creaming off” the most effective teachers. The major challenge is, however, that due to the existing barriers such as language, lack of access to job networks, lack of recognition of diplomas and skills or credentialing requirements that are different from those in other countries, Ukrainian teachers cannot effectively apply their skills abroad and must take up any available jobs, often low-skilled. So, the issue of “brain waste” is far more important than “brain drain” or possible “brain gain” cited in the literature with respect to migration of the highly skilled.

4.2 Unemployed Teachers

It is often suggested in the literature that migration for economic purposes can help relieve surplus labour and unemployment pressures in the sending areas (IOM, 2005; World Bank, 2006). In order to test this hypothesis with respect to migration and unemployment of teachers in Ukraine, in-depth interviews with seven unemployed teachers and one inactive person were conducted.²³ As Table C.2 in Annex C shows, all respondents are females with higher education who previously worked in general secondary schools. They live in different parts of Ukraine and represent different age groups and subject fields.

The main findings of this part of the study are the following:

- None of the interviewed teachers were laid off by administration because of staff reduction, and this is generally in line with our expectations (see Section 2.1.4). However, most of them quit their jobs at school because of the worsening conditions of work as a result of the decreasing number of hours (teaching load) and changing schemes of sharing these hours among available teachers. An already small salary decreased further because of the reduced workload in terms of hours but not necessarily in terms of the number of children in a class. Relationships between colleagues worsened because of the increasing competitiveness for working hours and the need to curry favour with school administration. On the other hand, the demands imposed on teachers increased because of the ongoing reforms aimed at improving the quality of education. Taking these factors into account, six out of eight interviewed teachers were, in fact, forced to quit their jobs. One young teacher living in a city but working in a village school quit her job because of high travel costs (both in terms of money and time), and one teacher of pre-retirement age quit her job for family reasons. Some unemployed teachers mentioned also their dissatisfaction with additional time-consuming duties that were unpaid and were unrelated to their jobs such as making a census of school-age children. The need to buy teaching aids with their own money and widespread corruption in schools are also among the topical issues raised by the unemployed teachers. Overall, the respondents supported our view that the demographic challenges reflected in the decreasing number of students play a distinct role in underemployment and job separation of teachers, even though this effect is not so visible yet as in the case of school closures and mass layoffs;
- Despite general dissatisfaction with their previous jobs in general secondary schools, five out of seven unemployed teachers have been looking for a job in their profession. All of them agreed that winter and early spring were not a good time for searching for a job in the education system because teaching staff issues are usually decided before the beginning of the new school year in September. All the respondents agreed unanimously that they preferred to contact administration of schools or local education authorities rather than public employment centres, as

23. One person of pre-retirement age is not unemployed as she is not looking for a job because of the need to look after a granddaughter. But her comments about the problems in general secondary schools in a small town and how they have been changing during the transition process in Ukraine are very important for the study.

the latter were ineffective in matching jobseekers to available jobs, particularly in the education system;

- Another interesting finding of our interviews with unemployed teachers, which supports recent news in the mass media, is that it is necessary to give bribes or use personal connections in order to get a job in school. Many interviewees, including the person of pre-retirement age, agreed that one of the major ways to solve the problem of teacher unemployment and underemployment in Ukraine is to introduce restrictions for working pensioners;
- Four out of seven interviewees looking for a job – three are relatively young (27 and 32 years), and one is relatively old (52 years) – have been looking for possible employment abroad. However, this is seen as the second best option after decent employment in Ukraine. At the same time, internal migration within Ukraine is not considered at all because it is the case of being “*between the devil and the deep blue sea*” according to one respondent. Family reasons are the strongest pull factors not only for non-migrants, but also for potential migrants. Apart from that, lack of money to finance the move abroad and fear due to uncertainty are among the most frequently mentioned barriers to immediate realization of migration intentions;
- The pattern of choosing the most likely destination country suggests that unemployed teachers would like to use the advantage of speaking a foreign language in finding a job abroad: a former German teacher would like to work in Germany or Austria; an English teacher would like to move to the USA or Canada; an older biology teacher hopes for a possible job in Russia; and a young primary school teacher with a basic knowledge of English would like to work in England. Nevertheless, none of the respondents thought about working as teachers abroad but rather as babysitters, governesses or housekeepers in private households (maybe in Russian or Ukrainian-speaking families) or in the service sector. This finding is in line with the finding for employed teachers (see previous section) who are ready to take up any jobs abroad for the sake of higher earnings compared to those that they have in Ukraine.

As a short conclusion, a comment made by a former teacher from Lviv who is seriously thinking about emigrating to North America is cited: “*This process (of migration) is impossible to stop... Everybody needs to settle their life somehow. And everybody would like to do this to the best advantage... People want to live in Ukraine, but you see, since nothing has improved in Ukraine in the last 20 years, people have simply lost hope of any positive changes*”.

4.3 Trainee Teachers

The survey of trainee teachers, i.e. last-year full-time students of three pedagogical colleges and three universities providing teacher training, was conducted to examine the interest in migration among students in three selected regions – Cherkasy, Ivano-Frankivsk and Kharkiv oblasts (see Table 6 above). Table C.3 in Annex C provides composition of the sample of surveyed students by the main socio-demographic characteristics.

Interest in moving abroad

Out of 414 students' responses to the question about their future intentions, 45.4 per cent expressed an interest in moving abroad within the next 12 months for further studies, temporary employment or permanent residence (Table 11). Thus, the overall level of interest in moving abroad among students who were supposed to get teaching qualification in June 2012 (45.4 per cent) is twice as high as the similar indicator, presented beforehand, for their colleagues with teaching experience (22 per cent).

Table 11: Interest of teacher trainees in migration abroad by characteristics

Characteristics	Yes (per cent)			No (per cent)	Total (per cent)
	Studies	Employment	Permanent residence		
Total (number)	33	119	36	226	414
Total (per cent)	8.0	28.7	8.7	54.6	100
Age					
18–21	11.6	21.7	8.0	58.7	100
22–25	6.2	32.3	9.1	52.5	100
Gender					
Male	8.2	31.5	19.2	41.1	100
Female	7.9	28.2	6.5	57.5	100
Marital Status					
Single	8.6	30.2	9.8	51.5	100
Married	4.2	23.9	4.2	67.6	100
Education (expected degree)					
Junior specialist degree	12.2	20.6	8.4	58.8	100
Specialist or master degree	6.2	32.4	8.7	52.7	100
Field of studies					
Pre-primary and primary education	10.8	27.7	7.4	54.1	100
Natural and mathematical sciences	8.8	30.8	15.4	45.1	100
Humanities and social sciences	5.4	26.2	6.9	61.5	100
Arts and health	5.6	36.1	2.8	55.6	100
Settlement type (origin)					
City	6.8	34.8	12.7	45.8	100
Town	5.2	22.2	10.4	62.2	100
Village	11.4	29.1	4.4	55.1	100
Region (education)					
Cherkasy oblast	8.8	32.2	10.7	48.3	100
Kharkiv oblast	3.2	16.8	5.3	74.7	100
Ivano-Frankivsk oblast	10.5	32.5	7.9	49.1	100

Note(s): Answers to the question: "Are you thinking seriously about moving abroad for education, temporary employment or permanent residence *within the next 12 months?*".

As Table 11 shows, students of universities pursuing a specialist or master degree, aged 22–25 years, express relatively higher interest in migrating for temporary employment and permanent residence. At the same time, younger individuals studying in colleges for a junior specialist degree in “Pre-primary and primary education” are more likely to go abroad to study. Students living and studying in the eastern region are more inert than students pursuing studies in the central and western regions of Ukraine. The lowest level of interest in migration is expressed by students coming from small towns, probably due to lack of access to information about education and employment opportunities abroad.

Reasons for wanting to migrate

Low salaries and uncertain career development in Ukraine are among the major contributing factors to high interest of students in going abroad. The same way as teachers, students are attracted by better income opportunities abroad to earn money for their families and to solve housing problems (Table 12). Many students are pushed away by poor prospects of staying in Ukraine now and in the future, and 68 per cent of them are those who have already moved from their origin places (mainly villages and small towns) to study. However, unlike their mature colleagues, students are more interested in moving abroad to take advantage of professional development and advancement (by gaining work experience, training and access to the best facilities and technologies), to get education abroad and to invest earned income in business.

Table 12: Reasons for wanting to migrate – students (number of answers; N=192)

	Reason 1	Reason 2	Reason 3	Total
To take advantage of higher income abroad	98	20	17	135
To improve standard of living of my family staying in Ukraine	18	51	22	91
To take advantage of professional development and advancement by gaining work experience, training and access to the best facilities and technologies	23	25	18	66
To buy a house/apartment for myself/family	7	22	27	56
Do not like social, economic or political situation in Ukraine	4	24	25	53
To take advantage of better employment opportunities abroad	19	17	9	45
To get education abroad	8	17	16	41
No future in Ukraine for myself and my children	5	6	24	35
Other	8	1	10	19
To invest in or start a business in Ukraine	2	4	11	17

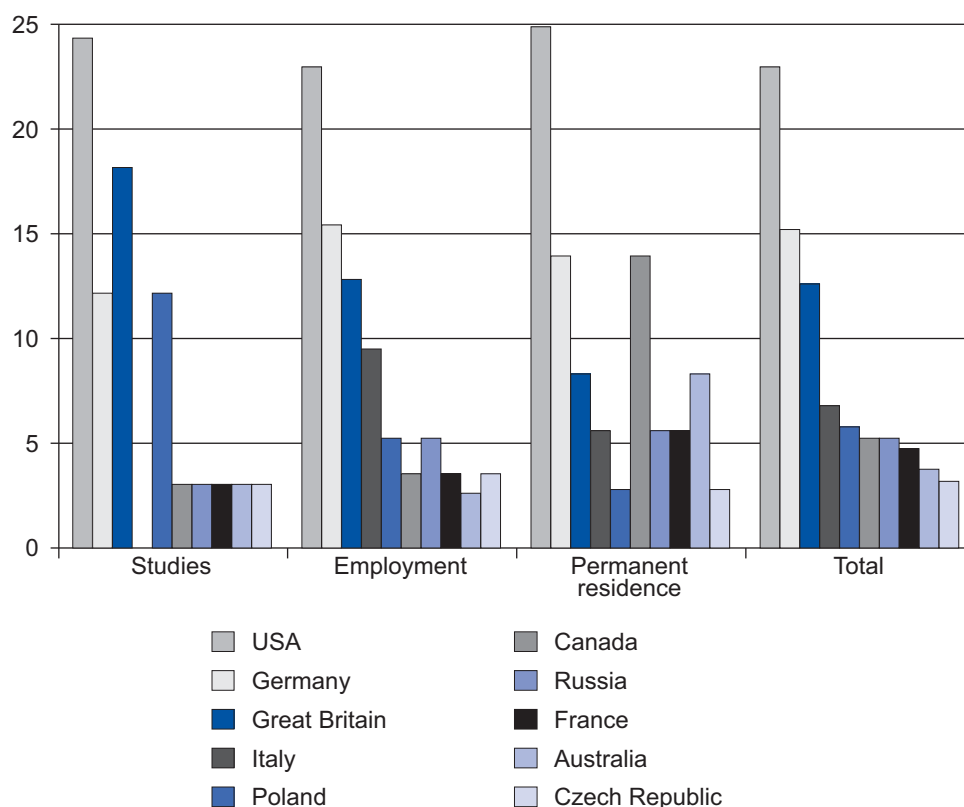
Note(s): Answers to the question: “If you were to move abroad *within the next 12 months*, please give the main reasons you would have for leaving? Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)”.

Characteristics of potential migrants

The bulk of students expressing an interest in migration may never actually migrate because of various reasons, including: (1) lack of finance for the move abroad (60.4 per cent of potential migrants need to borrow money to finance the move abroad, whereas 24 per cent do not have any idea about this issue); (2) not speaking the language of the country they would like to move to; and (3) not having the necessary documents. Consequently, only eight students (4.2 per cent of the group) satisfy all the necessary criteria (able to finance the move abroad, speak the foreign language fairly well or well, and have the necessary documents or are in the process of their preparation) and can be considered to have high chances of actual migration.

The USA, Germany, the UK, Italy, Poland, Canada and Russia are the most desirable destinations among students. Therefore, young people do not generally choose to settle somewhere close to Ukraine but in a country with better working conditions and education opportunities. Furthermore, there are expected differences in the choice of destinations depending on the purpose of migration: students willing to migrate for further studies choose to go primarily to the USA, the UK, Germany and Poland; those who would like to settle abroad for permanent residence are more likely to choose the USA, Canada and Germany; and those who would like to work abroad choose the USA, Germany, the UK, Italy and Poland (Figure 6).

Figure 6: Most desirable destination countries among trainee teachers by the purpose of migration (per cent)



Note(s): Answers to the question: "If you were to move abroad for temporary employment, education or permanent residence within the next 12 months, which country would you be most likely to go to? Specify your most likely destination country".

In response to the question about work expectations abroad, the majority of students (50 out of 74 persons) said they expected to work neither as teachers nor in the fields related to their speciality such as law, IT, choreography or translation. They predominantly anticipated employment opportunities in construction, hotels and restaurants, trade, household work (including babysitting and private tutoring), and so on. Roughly one in three students mentioned teaching abroad as a possible job, but many of them went on to add lower-skilled jobs in the household sector as a substitute or expressed their willingness to teach in Ukrainian schools or households abroad. This means that potential young migrants, being aware of the specific demand for immigrant labour and existing barriers to highly skilled jobs abroad, have low expectations in terms of a job up to their qualifications and skill level. Hence, international migration of young people with teaching qualification is quite unlikely to become a two-way process of “brain circulations” that could positively affect the Ukrainian system of education as opposed to a one-way “brain drain” and “brain waste”.

However, the international mobility of young people seems to pose less of an economic threat in terms of “brain waste” for the education system than wrong youth career orientation and structural imbalances in the Ukrainian labour market for teachers, both of which discourage graduates of pedagogical universities from entering teaching profession. The survey of graduate students shows that less than half of all students who were not going to pursue further studies expected to teach in the next 12 months (130 out of 285 persons). At the same time, about 33 per cent expected to take any available work in Ukraine or elsewhere but not teaching. Twenty-one per cent of the respondents were not sure about their future activity. As the interviews with several students and representatives of pedagogical universities show, this uncertainty may be related to the impossibility of finding work in the education sector after graduation due to a limited job creation (if any) accompanied by high numbers of working pensioners.

4.4 Professors and Researchers

Four colleges located in three towns, 10 universities and four research institutes located in four cities were visited during the fieldwork. In total, 90 teaching professionals working in higher education institutions (hereinafter: professors) and 19 researchers working in research institutes were interviewed (see Table 6). Table C.4 in Annex C provides the sample composition of surveyed professors and researchers by the main socio-demographic characteristics. Comparing characteristics of this sample with those of the teachers sample (Table C.1 in Annex C), it can be seen that, as expected, the former contains relatively more males, young (20–29 years) and old (over 55 years) people, higher income earners, multiple job holders and those who are, in general, more satisfied with their job. Research fields – natural and mathematical sciences vs. humanities (including foreign languages) and social sciences vs. engineering – are almost equally represented in the sample of professors and researchers.

Interest in moving abroad

Table 13 shows that 43 per cent of respondents have thought seriously about moving abroad. The intention to migrate among professors and researchers is almost twice as high as among teachers of secondary general and vocational schools (see Section 4.1) and is slightly lower than among graduate students of pedagogical institutions (see Section 4.3). Teaching professionals working in higher education institutions and researchers are better trained than secondary school teachers and see more scope for migrating internationally in order to pursue studies, find temporary employment or stay for permanent residence.

Table 13: Interest of professors and researchers in migration abroad by characteristics

Characteristics	Yes (per cent)			No (per cent)	Total (per cent)
	Studies	Employment	Permanent residence		
Total (number)	12	26	9	62	109
Total (per cent)	11.0	23.9	8.3	56.9	100
Age					
20–29	18.5	33.3	11.1	37.0	100
30–39	18.8	28.1	6.3	46.9	100
40–55	2.8	19.4	11.1	66.7	100
55+	0.0	7.1	0.0	92.9	100
Gender					
Male	7.6	32.1	13.2	47.2	100
Female	14.3	16.1	3.6	66.1	100
Marital Status					
Single	19.2	26.9	7.7	46.2	100
Married	6.9	22.2	8.3	62.5	100
Divorced/Widowed	18.2	27.3	9.1	45.5	100
Education					
Specialist/Master	7.4	25.9	7.4	59.3	100
Candidate of sciences	17.0	19.2	10.6	53.2	100
Doctor of sciences	0.0	37.5	0.0	62.5	100
Research field					
Foreign languages	27.3	18.2	0.0	54.6	100
Humanities and social sciences	20.8	12.5	8.3	58.3	100
Natural and mathematical sciences	8.1	29.7	10.8	51.4	100
Engineering	2.7	27.0	8.1	62.2	100
International cooperation					
Yes	12.1	32.8	5.2	50.0	100
No	9.8	13.7	11.8	64.7	100

Characteristics	Yes (per cent)			No (per cent)	Total (per cent)
	Studies	Employment	Permanent residence		
Settlement type					
City	12.2	24.5	8.2	55.1	100
Town	0.0	18.2	9.1	72.7	100
Region					
Cherkasy oblast	7.1	17.9	7.1	67.9	100
Kharkiv oblast	3.7	22.2	14.8	59.3	100
Ivano-Frankivsk oblast	12.0	12.0	8.0	68.0	100
Kyiv City	20.7	41.4	3.5	34.5	100
Type of institution					
College	0.0	15.4	7.7	76.9	100
University	15.6	22.1	9.1	53.3	100
Research institute	0.0	36.8	5.3	57.9	100
Net wage					
Less than 1,000 UAH	9.1	18.2	27.3	45.5	100
1,000–1,999 UAH	13.6	36.4	4.6	45.5	100
2,000–3,999 UAH	12.5	14.6	6.3	66.7	100
4,000–5,999 UAH	11.1	22.2	11.1	55.6	100
Financial status					
Barely sufficient	6.5	22.6	3.2	67.7	100
Almost sufficient	13.7	21.6	9.8	54.9	100
Sufficient	9.5	28.6	9.5	52.4	100

Note(s): Answers to the question: "Are you thinking seriously about moving abroad for studies, temporary employment, or permanent residence at the moment?". Some entries are not shown because of small cell size.

A high share of young respondents willing to migrate for studies, particularly among candidates of sciences in humanities and social sciences working in universities and living in large cities, suggests that these categories of the population are dissatisfied with advanced education and research in Ukraine. Hence, they would like to use studies abroad as a valuable opportunity to develop professionally and to integrate into the international research community. Likewise, they might be interested in getting a Western degree to qualify for high-wage positions in their fields abroad and stay there for permanent residence.

There are also striking differences between various categories of professors and researchers in their intentions to seek temporary employment or to emigrate (for permanent residence). For example, teaching professionals working in universities express relatively higher interest in emigration than their colleagues doing research (9.1 per cent vs. 5.3 per cent of all respondents of the corresponding category) but lower interest in temporary employment (22.1 per cent vs. 36.8 per cent). Similar differences are between residents of Kharkiv and Kyiv cities, and between holders of candidate and doctor of sciences degrees.

Unexpectedly high migration potential among the residents in the capital city provides grounds for rejecting the hypothesis that they might be less interested in international migration because of better employment opportunities at home. Therefore, highly skilled professionals living and working in the capital city are more likely to go abroad for studies or temporary employment than their colleagues living in the rest of the country. This is attributed to closer contacts with international colleagues, better access to information and available resources to finance the move abroad.

Reasons for wanting to stay and general attitude towards migration of colleagues

Table 14 shows the answers of professors and researchers about the reasons for not being willing to migrate. It reveals that the most common reasons are the same as among non-migrant teachers – the desire to live and work in Ukraine, family connections, fear of being lonely and the limited opportunity to practice their profession abroad. Meanwhile, relatively more researchers and professors compared to teachers (29 per cent vs. 13.2 per cent) would prefer to stay in Ukraine because of satisfactory income and housing conditions. This is quite an expected result in view of the fact that researchers and professors have, on average, higher income than school teachers, which includes not only salary from the main job, but also income from secondary activities (including entrepreneurship), research grants, and various bribes and gifts from students and lower ranked colleagues. None of the respondents mentioned their satisfaction with the overall situation in Ukraine and only two respondents mentioned low cost of living in Ukraine among attractive factors.

Table 14: Reasons for wanting to stay – professors and researchers – potential migration (number of answers; N=62)

	Reason 1	Reason 2	Reason 3	Total
This is my country, I want to live and work in my home country	32	5	5	42
My close relatives and friends are here	8	13	18	39
My children are here	9	16	2	27
I would feel lonely abroad	1	4	12	17
Impossible or very difficult to find work at my profession abroad	3	5	5	13
Have a good job and satisfactory income in Ukraine	2	4	4	10
Have a good house/apartment in Ukraine	1	5	2	8
Poor work conditions abroad	2	1	1	4
Age is inappropriate for migration	2	1	1	4
Other	1	1	1	3
Low cost of living in Ukraine	0	0	2	2
Impossible or very difficult to find any work abroad	1	0	0	1

Note(s): Answers to the question: “What are the main reasons you would have for staying? Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)”. Alternative “Satisfied with education, health care, and other social conditions in Ukraine” is not shown as it was not chosen by any respondent.

A comparative analysis of non-migrants' responses to the question about their attitude to their colleagues' emigration shows that professors and researchers, on average, treat this phenomenon less positively than teachers (see Tables 15 and 9). Also, relatively more researchers and professors disagree with the statement that if their colleagues manage to find work and settle abroad, there are no reasons for them to return to Ukraine for a long stay. On the other hand, they are more positive about general experience and new skills brought by returning migrants from abroad.

Table 15: Attitudes of non-migrant professors and researchers towards migration of their colleagues (per cent of professors and researchers not willing to migrate)

	Yes, fully agree	Yes, partly agree	No, partly disagree	No, fully disagree	No new skills/ qualifications	No answer
In general, I have a positive attitude towards emigration of our colleagues	22.6	41.9	17.7	16.1	X	1.6
If our colleagues manage to find work and settle abroad, there are no reasons for them to return to Ukraine (for a long stay)	37.1	27.4	21.0	12.9	X	1.6
Returnees are generally better off than those who haven't been abroad for education or employment	25.8	37.1	22.6	14.5	X	
Our colleagues who have lived and worked abroad have gained experiences abroad that help them find a better paid job/start their own business when they return to Ukraine	25.8	40.3	17.7	16.1	X	
Returnees are able to use new skills that they learned abroad	30.7	40.3	14.5	11.3	3.2	
Returnees' qualifications (diplomas, certificates) obtained abroad are recognized in Ukraine and help them find a better paid job/start own business when they return	12.9	32.3	30.7	17.7	1.6	4.8

Note(s): N=62 (only those who are not interested in migration). Answers to the question: "To what extent do you agree with each of the following statements regarding the impact of migration of your colleagues, i.e. Ukrainian professors and researchers?".

An interesting finding is a widespread scepticism among university professors and researchers about the recognition of foreign qualifications (diplomas, certificates) in Ukraine: only 13 per cent of the respondents fully agree that returnees' qualifications obtained abroad are recognized in Ukraine and help them find a better paid job/start own business when they

return (Table 15). This is mainly due to the existing problem with the recognition of foreign academic degrees received in the countries which do not have bilateral agreements with Ukraine. A person seeking the recognition of a doctoral degree received abroad (e.g. Ph.D.) has to prepare a lot of documents for the Attestation Board of the MoES (former Supreme Attestation Commission), including translation into Ukrainian and notarized summary of dissertation that should be written according to the official requirements in Ukraine. In most cases, this is not an easy procedure of recognition, but a rather complicated procedure of receiving a degree almost from scratch (so called re-attestation).

Reasons for wanting to migrate

In contrast to the surveyed teachers (employed, unemployed and graduates of teacher training institutions), highly skilled teaching and research professionals give higher priority to better opportunities for professional development than to economic reasons (higher income abroad and the need to improve family living standards) as a motivation for their desire to migrate (Table 16). Similar results have been found in Macedonia: young scientists and science teachers ranked having poor facilities for scientific work at home higher than wage differentials as reasons for intending to emigrate (Verica, 2003).

Table 16: Reasons for wanting to migrate – professors and researchers (number of answers, N=47)

	Reason 1	Reason 2	Reason 3	Total
To take advantage of better opportunities for professional development and advancement by gaining work experience, training and access to the best facilities and technologies	22	9	2	33
To take advantage of higher income abroad	15	11	5	31
Do not like social, economic or political situation in Ukraine	5	8	7	20
To improve standard of living of my family staying in Ukraine	2	10	3	15
No future in Ukraine for myself and my children	1	2	7	10
To buy a house/apartment for my family/children	1	2	5	8
To get education abroad	1	1	4	6
To finance children's education	0	0	2	2
To invest in or start a business in Ukraine	0	1	1	2
Other	0	0	2	2
Do not like climate/ecological environment in Ukraine	0	0	1	1

Note(s): Answers to the question: "What are the main reasons you would have for leaving? Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)". Alternatives "To repay debts", "To accompany/follow spouse or parent", "To escape family problems (conflict with parent/divorce)" are not shown as they were not chosen by any respondent.

Groups giving a particular priority to the professional development factor are young professionals who want to advance further by getting better training abroad (education migration) as well as those who have made some career progress in Ukraine but would

like to get more varied experience and access to better facilities and technologies during temporary employment abroad. Those opting for permanent residence appear to be driven by their dissatisfaction with the current and future social, economic and political situation in Ukraine and the opportunity to earn more abroad. This presents a relative disadvantage of Ukraine in its competition for highly skilled professionals, with richer countries offering better training facilities and work opportunities, higher incomes and a more comfortable life.

Characteristics of potential migrants

Despite generally high migration intentions among researchers and professors, it is estimated that roughly one in three respondents willing to migrate and one in seven of all surveyed evaluates his/her chances of realization of migration intentions within the next 12 months as likely or very likely. Furthermore, there are only four respondents (8.5 per cent of all professors willing to migrate) who satisfy all the criteria for being classified as potential migrants (able to finance the move abroad, speak the foreign language fairly well or well, have the necessary documents or are in the process of their preparation).

The most likely destination countries include Germany, Russia, Canada, Spain, Bulgaria and France. Better employment and income opportunities, having relatives and friends, knowledge of the official language and geographical/cultural proximity of the destination country are the most common reasons for choosing the most likely country of destination.

Majority of potential migrants would stay abroad for up to five years. Unlike the surveyed teachers and graduate students, all highly skilled potential migrants from universities and research institutes would like to continue their profession abroad. These results give hope for a possible “brain gain” effect, as the departure of the highly skilled scientists with their subsequent return to Ukraine is likely to spur innovation-led research activities and help Ukraine’s development, given that intentions to return are stronger than intentions to settle abroad and that return migration is not negatively selected.

4.5 Summary of the Key Findings

- While a positive interest in migration does not signal actual departure, it gives rough estimates of potential migration amongst teachers and researchers which could turn into action by the liberalization of the visa regime with the most desirable destination countries (USA, UK, Germany and Canada) or by significant changes in the demand for immigrant labour and working conditions abroad.
- Our surveys show that 22 per cent of the visited teachers in secondary general and vocational schools and 43 per cent of university professors and researchers expressed an interest in moving abroad for studies, temporary employment or permanent residence. Teachers who quit their jobs because of demographic transition and inherent changes in their teaching load and salary (the unemployed teachers participating in in-depth interviews) were also interested in temporary migration abroad, but viewed this alternative mainly as the second best.

- Only about seven per cent of the surveyed teachers and 14.7 per cent of surveyed university professors and researchers evaluated their chances of moving abroad in the next 12 months as likely or very likely. Even fewer respondents had the necessary documents for moving abroad as legal migrants, information on the destination country, ability to finance the move abroad and knowledge of the language of the most likely destination country to realize their migration intentions.
- Interest in migration within the next 12 months among trainee teachers is higher than among their colleagues with teaching experience (45 per cent). There is evidence of higher potential of international migration among future teachers specialising in natural and mathematical sciences. This may be related to very low salaries in the education sector and the low prestige of the teaching profession, but also to the limited employment opportunities after graduation due to limited job creation (if any) accompanied by high numbers of working retirees in schools.
- Economic factors were the main reasons given by teachers and trainee teachers for their interest in migration. For university professors and researchers, professional development was the most frequently mentioned factor, but economic reasons were also important. Dissatisfaction with future prospects and general conditions of living in Ukraine was also a frequently mentioned factor by all groups of potential migrants.
- Young, highly skilled professionals are also interested in moving abroad to study. This may be a sign of their dissatisfaction with the level of education and research in Ukraine, which induces them to take a valuable opportunity of studying abroad to develop professionally and to integrate into the international research community. On the other hand, they might be interested in getting a Western degree to qualify for high-wage positions in their fields abroad and stay there for permanent residence.
- Most teachers and trainee teachers who would like to migrate and were likely to do this within the next 12 months did not even think about employment abroad in the education sector. In contrast, potential migrants from universities and research institutes would like to continue their profession abroad believing that new knowledge and skills, qualifications, useful contacts acquired abroad and earned income would help them find a better paid job in Ukraine after their return.
- Desire to live and work in Ukraine, strong family connections, fear of being lonely and the limited opportunity to practice their profession abroad are among the major reasons for the surveyed teachers and researchers' reluctance to migrate.
- Comparative analysis of the attitudes expressed by respondents not willing to migrate towards their colleagues' emigration shows that surveyed researchers and professors, on average, treat this phenomenon less positively than teachers and that they are rather sceptical about possible individual benefits for returned colleagues because of no automatic recognition of formal foreign qualifications (diplomas and degrees) in Ukraine and limited applicability of new skills (if any).

CHAPTER 5

Migration Experience of Expatriate Teaching and Research Professionals

5.1 Teachers

To complement the analysis on migration intentions, this section includes the results from survey data and focus group discussion with teachers working abroad at the time of the survey. Out of 100 initially surveyed teachers, a total of 92 (former) teachers were classified as expatriates according to our criteria (see Section 3.3).²⁴

As Table C.5 in Annex C shows, the sample predominantly consists of highly educated females, aged from 40 to 55 years, who taught in ordinary general education institutions (levels I to III) located in western areas of Ukraine. The largest group of subject specialists to leave Ukraine was that of foreign language teachers, including English, French, Spanish, Polish and Russian and primary school teachers followed by Ukrainian language teachers. One in three teachers had the lowest qualification category before migration (specialist), whereas one in five had the highest category (specialist of the highest category). Despite a bias of the sample towards relatively old respondents, the share of those who had a relatively short teaching experience in Ukraine (less than 10 years) is about 58 per cent. This may be attributed to the long duration of migration period as well as to interruptions in teaching for other reasons (e.g. parental leave, work in non-teaching position, and so on). The overwhelming majority of respondents have had one or two migration intervals for employment, studies or permanent residence since 2002, but several respondents stated that they had had 10 or even 20 migration spells since then. The rest of this section refers to the last migration period.

Reasons for migration

Expatriate teachers participating in the survey left Ukraine for the last time predominantly for temporary employment (68.5 per cent) or for permanent residence (25 per cent).

24. Two cases were dropped because of a short migration period (moved abroad in February-March 2012). Five cases did not satisfy our criterion on the purpose of migration, as family reasons are not considered in our study. One respondent was a Ph.D. student before migration and did not work as a school teacher.

Like their colleagues working in Ukraine and willing to migrate, those who have already migrated cited higher income and the possibility to improve the living standard of their families and to buy a house as the most important reasons for migrating (Table C.6 in Annex C). Only six people said professional development was their first reason, while eight people reported it as the second one (mostly after financial reasons). Eleven respondents moved abroad because they did not like the social, economic and political situation in Ukraine and nine respondents migrated due to the lack of future prospects in Ukraine. Neither of the respondents chose intention to invest in or start a business in Ukraine among the major reasons for migration. Similar reasons were mentioned by four participants of the online focus group discussion.

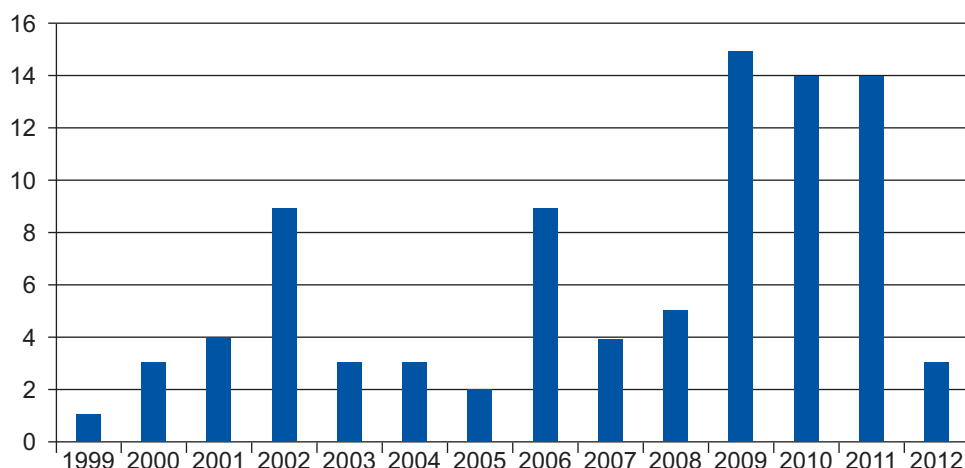
Year of moving abroad and destination country

The general view of stakeholders and teachers in Ukraine is that the peak years of teacher migration were in the 1990s and beginning of the 2000s but not later. Expatriate teachers who were participants in the focus group discussion explained this trend by the fact that increasing prices in Ukraine and almost unchanging income abroad had substantially decreased migration's financial returns in the last five years compared to the earlier years when migrants were able to make a lot of money abroad and buy two or three houses or flats in Ukraine. This discourages potential migrants from realizing their plans. On the other hand, decreasing financial returns to migration induce current migrants with a certain saving target to stay abroad longer than they had initially planned. One participant of the focus group discussion – a young teacher who moved to Spain to earn money for “*a corner of one's own*” (i.e. own home) – said: “*I thought I'd stay for two to three years, I did not plan to stay for eight or nine years... I meant to stay two years, maximum three. I thought I'd make enough money, because flats were cheaper then. But, by the time I earned money for the flat I wanted to buy, prices had gone up. So I stayed on and said to myself, this'll be just for a little while, just for a little while and then I'll go back home*”.

However, the emigration pattern of surveyed teachers by years (Figure 7) does not confirm the view about the decreasing migration intensity among teachers. This is probably due to a bias in the sampling given that our sample was initially focused only on potential respondents whose last migration period started in 2002 or later.

Given the information about the duration of stay abroad, which is calculated from the starting month and year of the last migration period to the date of the interview, 76 out of 89 respondents can be classified as long-term migrants (12 months or more). Thirty-six of them stayed abroad for five years or more (Table C.5 in Annex C). Italy and Russia are the major destinations for both long- and short-term migrant teachers in our sample, but this result should be interpreted with care in view of non-representativeness of the sample.

There is a variety of reasons why the surveyed teachers have chosen their country of destination. The most popular explanations for the first and second major reasons are “have relatives/friends here” and “better employment and/or income opportunities compared to other countries,” which points to the significance of social networks and better employment opportunities for choosing this or that country. The same major reasons were reported by focus group participants.

Figure 7: Year of migrating from Ukraine (for the last time)

Note(s): Answers to the question: “When did you leave Ukraine? If you had several migration periods since 2002, please tell us about the first and the last (that lasts till now) periods”. The data for 2012 refers to January only.

Then follow other reasons such as “knowledge of the language of this country”, “geographical/cultural proximity of this country to Ukraine”, “relatively low living costs compared to other countries”, and so forth. (see Table C.7 in Annex C). Interestingly, only four respondents from Russia, Poland and Czech Republic stated that they had chosen the country of destination in view of the fact that the professional qualifications of Ukrainian teachers were recognized there so it was possible to find a job in their field abroad.

At the same time, for nine respondents (predominantly those staying in Italy) it was important that it was not difficult to enter this country irregularly. According to the answers on the legal status abroad (Table C.5 in Annex C), 15 respondents (or 16.3 per cent of all surveyed teachers abroad) stay in the host country – Italy and Russia – irregularly. These findings confirm the view about high incidence of irregular migration among Ukrainian workers frequently mentioned in the local and international studies.

General work experience abroad

The overwhelming majority of surveyed teachers (85 out of 92) worked in a paid job during their last stay abroad, and two respondents had their own business. The prevailing way of finding information about employment abroad is via friends and relatives staying abroad (stated by 47 respondents). The other popular ways include job search via Internet (19 respondents), Ukrainian church and associations of Ukrainians abroad (six), private employment agencies in Ukraine (three) or in the country of destination (four).

As regards their employment status at the date of interview, 57.6 per cent of the respondents were employed by households, about nine per cent were casual workers and only 17.4 per cent worked in the corporate sector (Table C.5 in Annex C). Nevertheless, about 47 per cent of the respondents, including those who worked in the household sector, had official employment contracts (i.e. written and registered according to the law of the destination country) with their employers. In most cases, these employment contracts

provided for regular paid vacation and official holidays, social insurance and paid sick leave. Other social benefits such as housing provided by the employer, paid parental leave or training and transport provided or paid for by the employer are much less frequent. On the other hand, regardless of the type of employment – formal or informal – over half of the employed migrants had experience of various distressing situations such as not duly remunerated overtime work, bad working conditions, delayed or partial pay and content of work or remuneration different from the one promised initially.

Teaching experience abroad

As expected, Ukrainian teachers do not work in their field abroad but predominantly at jobs which require a lower level of education and skills such as babysitting/tutoring, caring for old people (in a household or in nursing home), housekeeping, cooking, clerical work and construction services, resulting in temporary or permanent de-skilling. Out of 65 respondents giving information about their current occupation at their main job abroad, only three Ukrainian language teachers continued their profession abroad (one in Czech Republic and two in Poland). Apart from that, 17 respondents stated that they had or had had a secondary job teaching Ukrainian children in Ukrainian schools during weekends. But according to focus group participants who work in such schools, they face many difficulties there because of short working hours compared to an ordinary five-day school in Ukraine; low salary (which “*compensates for expenses rather than provides additional earnings*”); lack of textbooks and teaching aids from Ukraine; language barriers among Ukrainian children born abroad; slack discipline of schoolchildren who got used to a relaxed school discipline in local schools in the host country; no skill upgrading courses like the ones which are regularly provided to the local teachers in Ukraine; and a lack of general support from the Ukrainian authorities abroad.

It is noteworthy that 58 respondents (or 63.7 per cent of the total sample) have never tried to find a teaching job abroad during the last migration period. At the same time, over half of all surveyed teachers (52 people) said that they would probably continue working as teachers in Ukraine if they did not go abroad.

Commenting on the major factors preventing Ukrainian teachers from finding a job abroad which would correspond to their teaching profession, the respondents (both in the survey and in the focus group discussion) report the following barriers:

- non-recognition of qualifications (diplomas, certificates) obtained in Ukraine or difficult and time-consuming procedures for recognition;
- language barriers;
- absence of citizenship or legal status and work permit in the host country;
- low demand for immigrant teachers in the destination country;
- low salary of local teachers compared to high housing expenses (mentioned by those who live together with the employing household);
- substantial differences in the approaches to teaching and children’s discipline between the Ukrainian and local education systems.

However, significant salary gains, with the ratio of net monthly salary/income abroad to the one before leaving Ukraine ranging from 1.6 to 67 times, more than compensate for downgrading and hard working conditions. Due to the improved financial status during employment abroad, new skills and knowledge, improved health and positive changes in perception of the world and future prospects, over half of the surveyed teachers (54 out of 92) considered themselves, in general, better off now than before they left Ukraine. Ten people were not satisfied with their stay abroad due to worsened relations with a spouse, children, other relatives and friends staying in Ukraine, bad health as a consequence of hard work abroad and worsened financial state (despite reported salary gain).

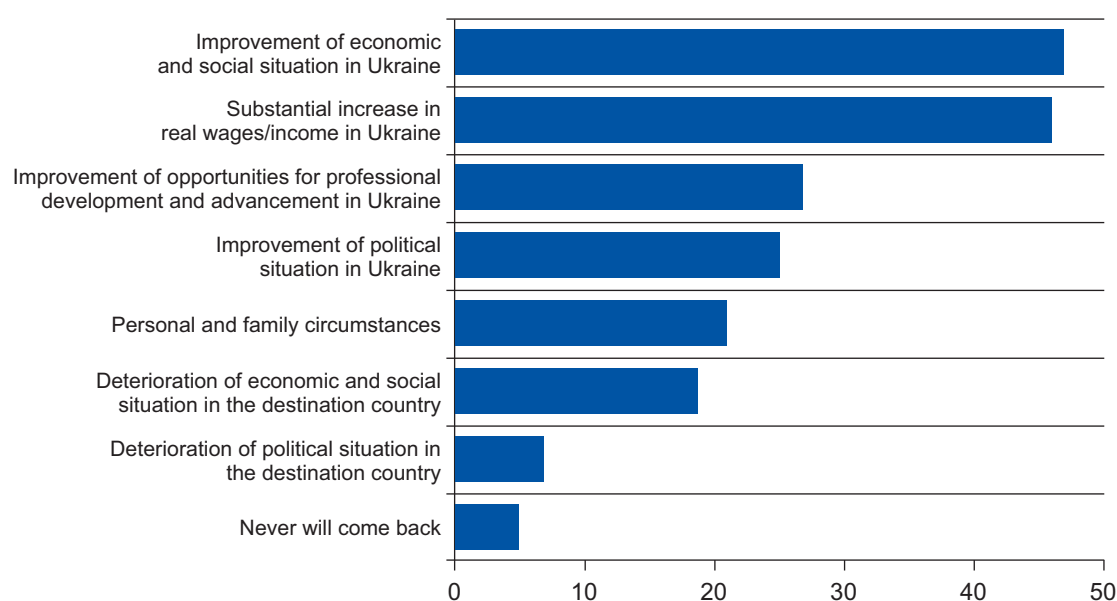
Planning to return

Nearly 57 per cent of the (former) teachers abroad report intending to return to Ukraine either for retirement (17.4 per cent) or employment (39.1 per cent). Thirteen per cent of those responding intend to settle permanently abroad, and 30.4 per cent are not sure about return to their homeland.

Among the teachers who expressed their desire to return home for employment (36 respondents), 15 would probably return to teaching, 12 of them could not foresee any future activity, nine respondents expressed a desire to be entrepreneurs, five would like to work in a field not related to education, and four would look for re-emigration. These intentions might not reflect what actually occurs upon migrants' return to Ukraine, but if they are realized, it can be estimated that the school system will receive back only about 16.3 per cent of teachers who left Ukraine in various years.

Among those who expressed a distinct interest in return to Ukraine (55 persons), only 12 plan to go back within two years. Fourteen respondents would like to come back in two to five years, and 11 would prefer to return not earlier than in five years.

Figure 8: Situations encouraging migrant teachers to change their decision about return/ time of return to Ukraine (number of answers, N=92)



Note(s): Answers to the question: "Would you change your decision about return/time of return to Ukraine in any of the following situations? Mark all that apply".

As Figure 8 shows, improvement of economic, social and political situation and substantial increases in real wages in Ukraine are considered to be the most necessary changes that should be made in order to encourage migrant teachers to return earlier. The same changes are required by migrant teachers participating in a focus group discussion. They also stressed that the overall stability, favourable business climate and decent employment opportunities were very important for the return of former teachers and their spouses to Ukraine. At the same time, the deterioration of economic and social situation in the destination country, for example due to the ongoing economic recession in European countries, is much less likely to push migrants back to their home country.

5.2 Professors and Researchers

This section summarizes the main findings of the online survey of highly skilled teaching and research professionals who worked abroad at the time of the survey. The final sample includes 57 people who either worked in higher education institution/research centre in Ukraine before migrating or moved abroad to pursue studies at the postgraduate level and work now in the university or research centre abroad. Given that the sample consists of people found via snowball network sampling who agreed to fill in the questionnaire, one would imagine that the sample consists of a fairly successful group who are happy to talk about their experiences and who would also like to facilitate data collection for our study because they know how important empirical data are for an evidence-based analysis. It should, anyhow, be considered that there is a high risk of snowball bias, that is “that people in one ‘snowball’ often belong to a network, have similar characteristics and are thus more likely to behave similarly” (Düvell, 2012). Also, there are risks of under-sampling “of those who are attached to only small or no networks”. In order to minimise this bias and avoid repetition of findings, as many entry points as possible have been used.

As Table C.8 in Annex C shows, over two-thirds of respondents are aged from 30 to 39 years, women outnumber men only by one person, and there are many more married (including those living in de facto relationships) and far fewer divorced people than in the sample of migrant teachers. One in five in the sample does not have an academic degree yet, whereas about 60 per cent of respondents hold the highest academic degree – doctor of sciences or Ph.D. It is noteworthy that the majority of the surveyed professors and researchers obtained their highest degree abroad, predominantly in the USA, Canada, the UK and Poland. Unlike former teachers staying abroad now (Table C.5 in Annex C), the surveyed professors and researchers mainly came from Kyiv City and eastern regions and less frequently from lagging western and southern oblasts. Furthermore, they have had, on average, fewer migration periods since 2002 but with longer duration of the last migration period.

Reasons for migration

The primary reason for migration mentioned by the majority of surveyed expatriate professors and researchers is taking advantage of better opportunities for professional development and advancement (Table C.9 in Annex C). Only 16 per cent of expatriates (compared to 66 per cent among potential migrants) gave a reason related to higher

income opportunities abroad. Hence, pursuing a better career was the major motivation for most emigrant respondents.

At the same time, the most important reason stated by 18 respondents is related to getting education abroad. This suggests that for approximately every third respondent migration was part of an overall strategy to get a Western degree first and then to pursue a better career in a more secure place.

Comparison of the main reasons for migration among professors/researchers and teachers (Section 5.1) reveals significant differences between these two groups of migrants that point to different types of migration – migration for education and professional development among professors/researchers and typical labour migration for economic reasons (*zarobitchanstvo*) among teachers.

Year of moving abroad and destination country

Eight respondents (out of 57) left Ukraine before 2002, 25 respondents moved abroad for the last time between 2002 and 2006, and 24 respondents migrated after 2007. Only seven respondents can be classified as short-term migrants, as they moved abroad in the second half of 2011.

Major countries of destination for researchers and professors who realized their migration intentions substantially differ from the most likely destination countries mentioned by potential migrants in Section 4.4. There are many expatriates in our sample living in the USA, the UK, the Netherlands and some other countries (Table C.8 in Annex C) that were not even mentioned as likely destinations by potential migrants. Out of 33 respondents who obtained their highest education degree abroad, 23 live in the same country where they studied and only 10 live in another country.

The most popular characteristics of destination countries that attracted highly skilled migrants from Ukraine are availability of acknowledged universities/research centres in their field, better employment, income and education opportunities compared to other countries and knowledge of the official language of destination country (Table C.10 in Annex C). Having friends or relatives abroad, geographical/cultural proximity to Ukraine, lower living costs compared to other countries and easy access to residence and work permits appear to be much less important for researchers and professors than for teachers (compare Tables C.7 and C.10 in Annex C). This finding may be explained by different types of migration among these two groups, professors/researchers' better access to information about the destination country and completely different channels used by them for moving abroad and finding employment there. Differences in the age composition of two samples, with a higher share of young people among researchers and a higher share of older people among teachers, may also play a distinct role.

All surveyed professors/researchers have a legal status in their country of destination, and 10 of them living now in Australia, Canada, Poland and the USA have already received citizenship (Table C.8 in Annex C).

Work experience abroad

Unlike Ukrainian teachers, who predominantly work in the household sector abroad, most migrants among the surveyed professors and researchers (45 out of 57) were employed by a legal entity. All of them worked in their field – either in universities or in research centres, and all but one had official employment contracts with typical fringe benefits. This demonstrates their complete integration in the destination country's workforce. Nevertheless, two respondents mentioned that their current job requires a lower level of education and skills than they have; seven respondents reported that their professional qualifications (diplomas and scientific degrees) acquired in Ukraine were recognized in the destination country only partially, whereas four respondents stated that their qualifications were not recognized at all. For those who had worked before leaving Ukraine and who worked in a paid job at the time of the survey, the salary gain ranged from 0.6 to 120 times.

As regards the other employment statuses, two respondents were part-time workers (in the services sector), and two worked in their own business abroad (consulting). The most important sources of information about jobs were Internet and direct contacts with potential employers. Often, a job was offered by an employer (university or research centre) without a job search. The help of friends and relatives was used by only three respondents.

The overwhelming majority of surveyed migrants (87.7 per cent) considered themselves better off abroad compared to the time before they left Ukraine, due to new knowledge and skills, improvement of the financial state, professional development and better health.

Planning to return

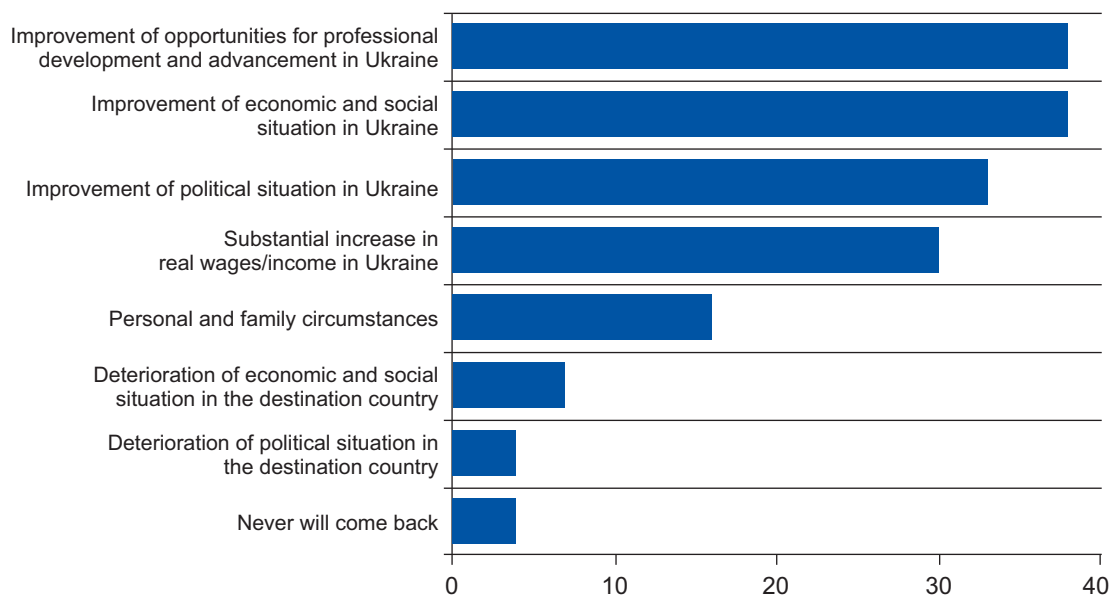
The extent to which international mobility of highly skilled professionals represents a “brain drain” for a sending country depends on whether the migrants plan to come back to their home country and, if yes, how long they plan to stay abroad. The results of our survey are amazing: only seven people (12.3 per cent) expressed their interest in returning to Ukraine for employment and two persons said they would return for retirement. Thirty-two out of 57 surveyed professors and researchers (56.1 per cent) were uncertain about whether they would return to Ukraine in the future. The remaining 16 people in the sample said they would never return. These are mainly holders of a doctoral degree in Economics and Policy Analysis, Biology and Biotechnology, English, Education and IT.

Regarding further intentions after coming back to Ukraine, of those seven persons who would like to return to Ukraine for employment only five persons intended to work in their field (academic or research) in Ukraine and two were not certain.

When asked about the changes that would need to occur to lead them to change their minds about return/time of return to Ukraine (Figure 9), the most frequent answers given were “improvement of opportunities for professional development and advancement in Ukraine”, “improvement of economic and social situation in Ukraine”, “improvement of political situation in Ukraine” and “substantial increase in real wages/income in Ukraine”. Negative changes in the destination country or personal circumstances were reported much

less frequently. Some respondents mentioned also the need to simplify the recognition procedure of their Ph.D. diplomas in Ukraine.

Figure 9: Situations encouraging migrant professors and researchers to change their decision about return/time of return to Ukraine (number of answers, N=57)



Note(s): Answers to the question: "Would you change your decision about return/time of return to Ukraine in any of the following situations? Mark all that apply".

5.3 Summary of the Key Findings

- Surveyed groups – professors/researchers and teachers – migrate in completely different ways. The former migrate for education and professional development, with strong intentions of settling abroad and working in their profession. Teachers belong to typical labour migrants for economic reasons (*zarobitshany*), many of whom stay in the host country irregularly and take any available job.
- Most teachers work abroad at jobs which require a lower level of education and skills such as babysitting/tutoring, caring for old people, housekeeping, cooking, clerical work and construction services, thus resulting in de-skilling.
- Non-recognition of qualifications obtained in Ukraine, language barriers, absence of citizenship or a legal status, low demand for immigrant teachers in the destination country, high housing expenses and low teacher salary abroad, and substantial differences in the approaches to teaching and children's discipline between the Ukrainian and local education systems are among the major reasons why former teachers did not work in their profession abroad.
- Despite downward mobility, migrant teachers seemed to benefit from higher earnings and were satisfied in general with their current situation.

- Thirteen per cent of surveyed teachers and 28 per cent of surveyed professors and researchers staying abroad at the time of the survey planned to stay there permanently. Over 30 per cent of surveyed migrants in both groups were uncertain about their return to Ukraine.
- Improvement of economic, social and political situation (both groups), substantial increases in real wages (teachers) and improvement of opportunities for professional development and advancement (professors and researchers) are considered to be the most necessary changes that should be made in Ukraine in order to encourage migrants to return (earlier).
- Non-recognition of foreign academic degrees in Ukraine and the need to start again at the bottom of the teaching/research scale is a serious disadvantage experienced by young professionals with Western degrees who may consider returning.

CHAPTER 6

Migration Experience of Returned Teaching and Research Professionals

6.1 Teachers

The sample of returned migrant teachers consists of 200 individuals who had taught before they went abroad for the last time, were living, studying or working, in any capacity, abroad and were staying in Ukraine at the time of the survey. Composition of this sample by the main socio-demographic characteristics (Table C.11 in Annex C) is very similar to the sample of expatriate migrant teachers (Table C.5 in Annex C), with a bias towards highly educated females aged 40 years or more and having a teaching background in humanities and social sciences. A noteworthy fact is that the share of divorced or widowed individuals in the sample of returned teachers (25.5 per cent) is larger than among the surveyed teachers working in Ukraine (16 per cent, see Table C.1 in Annex C) but smaller than among current migrants (39 per cent). This suggests that divorced women, often being single mothers and facing particular financial difficulties, take the initiative to migrate more often than their married or single colleagues. Alternatively, divorce may be a consequence rather than a reason for migration, but there is no sufficient information to examine this issue rigorously.

Reasons for migration

The main three reasons for migration given by returned teachers match the reasons mentioned by their colleagues staying abroad: higher incomes abroad, possibility to improve one's standard of living in Ukraine and to buy a house/apartment (Table C.12 in Annex C). Dissatisfaction with economic, social and political situation in Ukraine, better opportunities for professional development abroad, the need to finance children's education or get own education abroad are also important factors. However, returned teachers seem to be more inclined to invest in own business in Ukraine compared to potential migrants and expatriates. Three former teachers cited unemployment as an explanation for deciding to migrate. Given these reasons, it is not surprising that 88.8 per cent of the sample moved abroad for temporary employment, 5.6 per cent for studies and 5.6 per cent for long-term stay abroad.

Duration of the (last) migration period and destination country

The returned teachers stayed abroad for shorter periods (22.2 months on average) than their colleagues still working abroad (56.2 months on average). Almost half of the sample (46 per cent) had stayed abroad for less than a year, but 35.5 per cent had stayed for more than two years (Table C.11 in Annex C).

The most popular destinations were: Russia, Poland, Italy, Germany, the USA, Portugal, Spain, Czech Republic and Israel. Some teachers also worked in Belarus, Greece, Turkey, France, Bulgaria, Canada, China, Cyprus, UK, UAE, Slovakia, Denmark, Ireland, Cuba, Moldova and Finland.

Work experience abroad

Returned teachers predominantly worked in private households abroad (52.5 per cent of the total sample). Only one in five teachers was employed by a legal entity, whereas 16.5 per cent defined themselves as casual temporary workers (Table C.11 in Annex C). The bulk of those who had worked before in any status found out information about jobs abroad via their friends and relatives staying in the destination country (74.3 per cent).

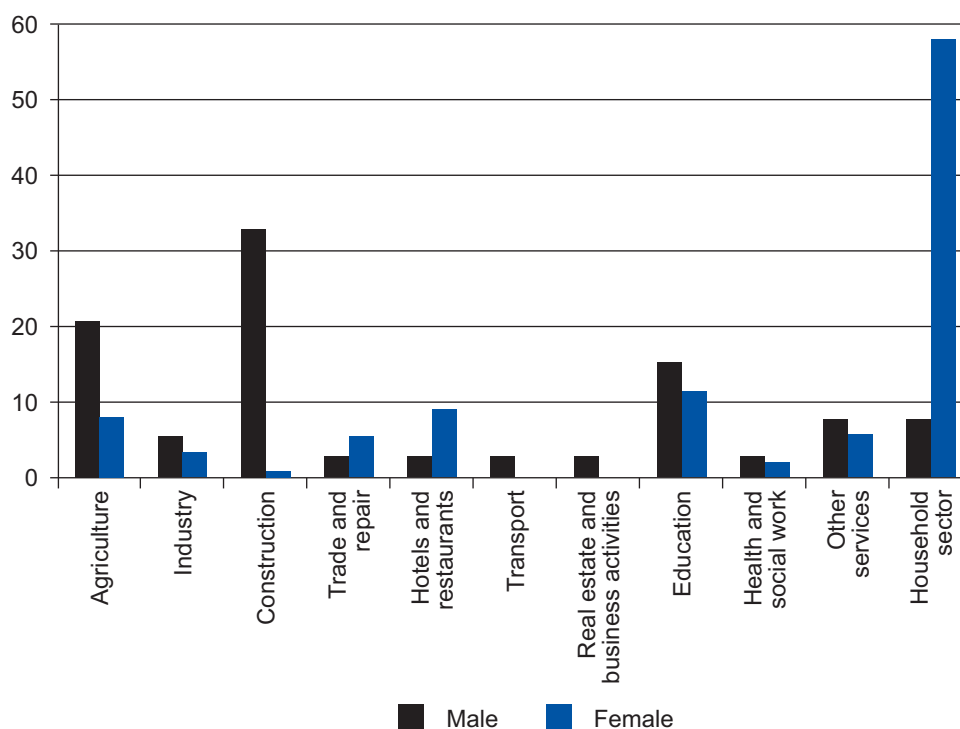
Despite the fact that most surveyed migrants stayed abroad legally, the majority of migrant workers (53.4 per cent), particularly those employed by private households, were employed informally, i.e. without officially written employment contracts. Informal employment prevailed among longer-term migrants working in Russia and Italy.

Out of 179 respondents giving information about the type of work they did abroad, only 21 individuals worked abroad as teachers in local schools or educators in local kindergartens. At the same time, 84 individuals (or 46.9 per cent of respondents) worked in the private household sector as governesses, babysitters, nurses and housekeepers. Other returned migrants often worked in agriculture, construction, hotels and restaurants, community, social and personal services, trade and repair, but they rarely performed highly skilled work that would require their level of education and skills.

As Figure 10 reveals, there are significant gender differences in terms of employment abroad, with prevailing female employment in the household sector and more diversified male employment. Men were relatively more often engaged in construction, agriculture, industry, transport, real estate and business activities, education and other services during their employment abroad, which is generally in line with the findings of a study on Ukrainian labour migrants in 2007–2008 (UCSR, 2009, p. 40).

Almost two-thirds of respondents with work experience abroad (64.8 per cent) stated that their professional qualifications were not recognized at all, whereas 17.9 per cent conceded that their qualifications were recognized but partly. At the same time, 79.5 per cent of all surveyed returned teachers had never tried to look for a teaching position during their last migration period.

Figure 10: Employment of returned teachers during their stay abroad by economic sector and gender (per cent of respondents of respective gender group)



Note(s): N=40 for men and 139 for women. Answers to the question: "What kind of business/economic activity was your main job abroad?". Respondents were offered to choose one of 14 economic sectors according to the NACE classification.

Major barriers mentioned by returned teachers that prevented Ukrainian teachers from finding work in their field abroad are exactly the same as those mentioned by their colleagues currently working abroad, namely the non-recognition of Ukrainian diplomas and differences in the education systems and specializations, language barriers, low teacher salaries and low demand for immigrant teachers, irregular status and housing problems. Some respondents also mentioned other reasons such as their orientation on short-term employment with higher returns and lack of money for education abroad.

Despite substantial skills downgrading or de-skilling during employment abroad, the overwhelming majority of returned teachers experienced salary gains compared to their teacher salary in Ukraine, ranging from two to 100 times, and this was the major factor pulling them to low-skilled jobs abroad.

Reasons for return

Various family circumstances are the most commonly cited reasons for the teachers' return, followed by the end of residence/work permits and employment contracts (Table C.13 in Annex C). Homesickness and dissatisfaction with life and work abroad were also important reasons for return. Every tenth respondent mentioned that he/she returned because the saving target had been reached. Only five respondents (2.5 per cent of the total sample) returned to start a business in Ukraine as soon as possible. These results support findings

of the author's previous study on return migration (Kupets, 2011) and in most cases return migration to Ukraine may be classified according to the Cerase typology (1974) as return of failure (return migrants who came back because they could not integrate in their host country) or return of conservatism (returnees who saved enough money to acquire land and take care of their individual and family needs, but who would like to preserve the existing social context in their home country), as opposed to return of innovation (return migrants who used their human and financial capital acquired abroad to achieve their aspirations at home).

Experiences of the returned teachers in Ukraine

As Table 17 shows, nearly two-thirds of returned teachers looked for a job and got it while 8.5 per cent of respondents were not able to get a job after return. In total, 15.5 per cent of respondents tried to organize their own business, but one-third of potential entrepreneurs failed in this. Most returned teachers that found employment in Ukraine did this relatively quickly, within first six months after their last return (130 out of 154). Just under ten per cent of respondents did not look for a job, mainly because of family reasons, doubt about the possibility of finding a job and remigration intention.

Table 17: Jobseeking experience by the returned teachers after return to Ukraine

	N	per cent
Looked for a job and got it	133	66.5
Looked for a possibility of starting own business and started it	21	10.5
Looked for a job but didn't get it	17	8.5
Looked for a possibility of starting own business but didn't start it	10	5.0
Never looked for a job/possibility of starting business after return	19	9.5

Note(s): Answers to the question: "Did you look for a job/possibility of starting own business after your (last) return to Ukraine? Was this endeavour successful?"

Of 155 returned teachers who were employed at the time of the survey and gave information about their current main job, only 79 respondents (51 per cent) were working in teaching. Fifteen former teachers (9.7 per cent) were found working in their own businesses in trade and in business and individual services although there had been considerably more interest in this kind of work initially. The remaining 39.3 per cent neither returned to teaching nor started their own business. They predominantly worked in trade and repair as managers and salespersons, in construction as labourers, in education as librarians or administrators and in some other sectors.

In terms of the impact of migration experience on job search in Ukraine, it should be noted that only 14.8 per cent of the (former) teachers with work experience stated after return that their experiences abroad had helped them to find a better paid job or start their own business in Ukraine. Over 45 per cent said that migration experience did not help them at all and 23.2 per cent explained that this experience did not help them much. Most respondents agreed that their de-skilling and skills or "brain waste" during stay abroad were the major reasons for not "adding value" to their employability in Ukraine. The other

most cited reasons were difficulties in doing business in Ukraine compared to developed countries (lack of initial capital, bureaucratic barriers and high taxes) and widespread unemployment in the place of residence that forced people to take any available job.

An interesting question is whether returned teachers who came back to teach were contributing to the Ukrainian education system. Sixty-two out of 79 teachers had not attended any special training before moving abroad and 57 out of 79 teachers had not undertaken any professional development while working abroad. Only four teachers attended vocational training to bring existing qualifications up to local standards and to work in their field abroad, and seven teachers studied at the university/college abroad. At the same time, only 11 teachers, working in local or Ukrainian schools and kindergartens, did not interrupt their teaching experience abroad. Given this, it is not surprising that returned teachers, who spent abroad from two months to about nine years, were very sceptical about the relevance of their migration experience for their current job at schools.

Therefore, it can be concluded that teachers who move abroad for economic reasons but not for professional development are not likely to add significant value to the Ukrainian education system upon their return if we do not take into consideration fluency in a foreign language and positive changes in general values and attitudes. Furthermore, returned migrants are often disadvantaged compared to their colleagues who did not go abroad and therefore did not interrupt their teaching experience, as they have to start teaching at the bottom of the career and salary scale. For this reason, those teachers who would like to continue teaching in Ukraine increasingly prefer temporary migration during summer time or one academic year with a strong attachment to their employer (school).

6.2 Professors and Researchers

In order to examine migration experience of returned professors and researchers, a focus group discussion was conducted in Kharkiv with eight individuals who had experience of working in higher education or research institution before migration and were staying in Ukraine at the time of the fieldwork. This small sample consists of six men and two women, aged between 26 and 45 years, representing social sciences (economics – one person), engineering (motor building and radio electronics – one person in each), natural sciences (human physiology – one person) and mathematical sciences (physics – three persons). Three persons with backgrounds in economics, motor-building and human physiology were typical labour migrants, whereas the remaining five persons moved abroad for professional development and worked in their field.

The main findings of the focus group discussion are the following:

- Respondents were very dissatisfied with poor financing and weak incentives in their universities and research centres in Ukraine, which were dominant push factors for migration. On the one hand, special funds are allocated neither on research within universities nor on short-term business trips abroad or within Ukraine for research and conferences. On the other hand, *“everybody can sit, receive salary and do nothing. The system encourages people to sit, receive salary and do nothing... And it*

is impossible in principle to lay off a person of working age". Overall, *"money and science are totally unrelated matters in Ukraine"*;

- Most respondents agreed that if someone wants to make a scientific career he/she should certainly do this abroad, where there are all the conditions for research, including special equipment, high salary and a lot of additional bonuses, funds for academic trips, no bureaucratic paperwork for scientists that is usually performed by clerks, friendly relations between mature scientists and younger researchers and a good balance between work and private life. One respondent working in the Department of Physics and Technology of the Kharkiv National University named after V. N. Karazin stated: *"Success for Ukrainian scientists was associated with successful emigration abroad"*;
- Emigration of Ukrainian researchers is perceived as a long-lasting phenomenon: *"People have been moving abroad for the last 20 years. Not only have we moved, but also our teachers"*. It seems to satisfy all relevant parties, i.e. migrants themselves (through their access to better wages, opportunities of professional development and comfortable life), their families or relatives staying in Ukraine (through remittances), former Ukrainian colleagues (due to reduced competition in their universities and institutes), destination countries (through tax revenues and "brain gain") and the Ukrainian authorities (through remittances and an outflow of politically active people with high protest potential);
- Despite possibilities of staying abroad for permanent residence, researchers participating in our discussion returned to Ukraine due to decreasing net benefits of migration and homesickness. As the oldest respondent with background in Physics mentioned, *"life is not only a career, and if money is no longer an issue, you rethink what to do"*. With a decreasing gap in standards of living between CIS and European countries, net financial returns to migration decreased substantially since 2004–2005 to about two to three times, and this is not taking into account emotional costs related to migration, namely discontinuity of relations with friends and relatives staying in Ukraine and the need to assimilate into the host society. Furthermore, there is a strong competition in the labour market for researchers abroad, whereas many researchers in Ukraine, particularly older ones, have a *free field*. So, there are many factors that have made life abroad less attractive and life in Ukraine more attractive than ten years ago (pulling factors). Although the funding for science and higher education has not improved in Ukraine, the possibilities for higher earnings have widened. These include not only formal methods such as grants and participation in joint projects with international colleagues (see Table 5), but also informal methods such as bribes given by students for higher grades and earnings from preparation of term papers, theses and dissertations for students. As one respondent-economist commented: *"It is easier (to earn money) making shady deals"*. Labour migrants going to Germany and Italy from time to time still see monetary benefits of working abroad, but they do not want to stay there for permanent residence because of the feeling of inferiority abroad, which grows with age. Only one woman doing her Ph.D. in Warsaw would like to go back to Poland for permanent residence. The other respondents prefer to go abroad for short-term visits (up to six months), but *"everything depends on the current situation here and there"*;

- Respondents working in their field abroad obtained valuable experience and skills during migration period(s). However, these skills are not easily transferable because of absence of the same equipment in Ukraine. Other important benefit of their migration experiences is new contacts and relations acquired abroad that are essential for exchange of ideas and knowledge (“brain circulation”), particularly in fundamental sciences;
- Commenting on the impact of the global economic crisis on migration and subsequent return, one respondent stated that “*if there is a crisis like the Great Depression in the 1930s in the USA and Western Europe, the first to feel the brunt of it will be immigrants*”, and other respondents agreed with him. In other words, researchers who anticipate decreasing demand for their skills in the developed world prefer to stay in their home country;
- The problems mentioned by the respondents that should be solved in order to increase collaboration between Ukrainian and international researchers, to encourage return of Ukrainians from abroad and to retain young scientists from outflowing to other sectors and countries include the following: (1) non-recognition of scientific degrees obtained abroad; (2) non-existence of double taxation avoidance agreements between Ukraine and such countries as the USA; (3) no special programmes for young people which would encourage them to work in the research sector at home; (4) no autonomy of higher education and research institutions in their spending; (5) widespread red tape in the Ukrainian education and science systems, which takes away researchers’ precious time on preparing unnecessary reports and documents and (6) huge wage differentials between highly skilled professionals working in the education and research sectors and those working in many other sectors of the Ukrainian economy.

6.3 Summary of the Key Findings

- Various family circumstances are the most commonly cited reasons for the teachers’ return, followed by the end of residence/work permits and employment contracts. Homesickness and dissatisfaction with life and work abroad were also important reasons for return. University professors and researchers mentioned also language barriers to comfortable long-term stay abroad, the feeling of own inferiority compared to native people in the host country and increased competitiveness in the job markets abroad.
- Of all returned teachers who were employed at the time of the survey and gave information about their current main job, only about 51 per cent were working in teaching. Despite high initial interest in entrepreneurship upon return to Ukraine, only 9.7 per cent of employed respondents were found working in own business in trade or business and individual services. The remaining 39.3 per cent were wage earners in trade, construction, education administration and some other sectors.
- Only 14.8 per cent of teachers with work experience abroad stated after return that their experiences abroad had helped them a lot to find a better paid job or start own

business in Ukraine, whereas 68.4 per cent said that migration experience had not helped them advance professionally. Downward occupational mobility and de-skilling during stay abroad were the major reasons for not 'adding value' to their employability in Ukraine.

- Researchers working in their field abroad obtained valuable experience and skills during migration period(s) but these skills appear not to be easily applicable in Ukraine because of outdated equipment and organizational inertia.

CHAPTER 7

Impact of International Mobility of Teaching and Research Professionals on the Economy and Education System

7.1 Individual Benefits and Costs of Migration

The major benefit of migration for individuals is financial gain of working abroad. Higher income was the leading reason for working abroad as given by migrant teachers and the third most important reason cited by university professors and researchers. It is clear from the figures collected during surveys of expatriates and returned migrants (Table 18) that, despite working in low-skill jobs abroad, (former) teachers earned, on average, 9.5 times the salary they had been earning in Ukraine. Migrant professors and researchers, who usually work in their profession abroad, experienced even larger gains (on average about 28.5 times). Certainly, real incomes differ less than nominal salaries due to variations in cost of living expenses, particularly in housing and health insurance. For these reasons, migrant teachers – who are typically temporary migrants moving without family – prefer to work in the private household sector abroad. Living together with the employing household, they manage to earmark substantial proportions of their earnings to send back home or accumulate as savings.

Table 18: Salary/income gains from working abroad, by target groups

Target group	Number	Salary gain			
		Mean	Std. Dev.	Min.	Max.
Expatriate teachers	67	9.5	12.2	1.6	67
Expatriate professors	41	28.5	51.3	0.6	260
Returned teachers	173	6.7	8.2	1	100

Note(s): Own estimates based on the answers to the question: “What was the salary/income gain from working abroad compared to your last salary/income in Ukraine before migrating? Please tell us the ratio of your average monthly salary/income abroad to the one you had in Ukraine (after taxes and social contributions). For example, if the net wage abroad was USD 1,000 and you earned USD 200 per month in Ukraine, the ratio that should be written in the box is 5”.

Taking into account high propensity of all target groups to remit money to Ukraine (Table 19), it can be argued that financial gains from international migration accrue not only to the migrants themselves, but also to their families and relatives staying in Ukraine. If the main ways of using remittances among the surveyed teaching professionals (Table 19) and labour migrants of all professions according to the ETF migration survey in 2007 and the Modular Migration Survey in 2008 (compiled and discussed in Kupets (2012), Table 5) are compared, no significant differences in the most popular expense are found. The most important reason is basic consumption needs of the families staying in Ukraine (mentioned by over 70 per cent of remitters). However, there are differences in the second most popular expense – migrant teachers are more likely to send their money to finance children’s education (27.5 per cent of expatriate teachers and 26.2 per cent of returned teachers in our sample) than labour migrants in general (12.4 per cent according to the Modular Migration Survey and 16.6 per cent according to the ETF survey). Labour migrants of all professions tend to give much higher preference to spending on real estate (29.1 per cent) and durable goods (39.3 per cent).

Table 19: Propensity to remit and the main ways of using remittances in Ukraine, by target groups

Sectors	Expatriate teachers	Expatriate professors	Returned teachers
Propensity to remit at least once a year (per cent of all respondents)	79.3	68.4	51.5
<i>Remittances are mainly spent on (per cent of all remitters, multiple answers are allowed):</i>			
Living expenses of family staying in Ukraine	71.0	82.1	73.8
Financing of children’s education	27.5	5.1	26.2
Purchase or repair of a house/ apartment	24.6	10.3	14.6
Repayment of debts	13.0	5.1	20.4
Medical treatment of relatives	2.9	—	1.9
Savings	2.9	—	1.0
Investment in business in Ukraine	1.4	5.1	1.9
Other	8.7	10.3	—

Note(s): Answers to the questions: “Have you ever sent money to your relatives in Ukraine whilst you were abroad?” and “What is the money sent to Ukraine mainly used for? Mark all that apply”.

Hence, migrant teachers place particular emphasis on their children’s education. Most likely, they believe that investment in higher education could positively affect employability and earnings of their children. But a substantial skills mismatch, the shortage of well-paid decent jobs and fairly low returns to education in Ukraine produce undesirable outcomes for the educated youth and for the economy as a whole.

Teachers and particularly university professors and researchers have also gained through professional development and new skills learned abroad (Table 20). These skills may help them in finding a better paid job or organizing own business in Ukraine as well as in

settling abroad for permanent residence. Many respondents, but less frequently among returned teachers, also mentioned improvement in their general health, probably due to higher income and therefore better nutrition, access to quality medical services and more opportunities for adequate recreation.

Table 20: Individual costs and benefits of migration, by target groups

	Expatriate teachers		Expatriate professors		Returned teachers	
	Improved	Worsened	Improved	Worsened	Improved	Worsened
Changes by components compared to the time when they left Ukraine (per cent of respondents, multiple answers were allowed)						
Financial status	66.3	3.3	86.0	3.5	44.0	13.5
Knowledge and skills	22.8	7.6	78.9	3.5	15.5	3.0
Health status	18.5	17.4	26.3	5.3	2.5	9.5
Relations with a spouse	12.0	14.1	10.5	7.0	10.5	3.0
Relations with children	6.5	8.7	5.3	1.8	11.0	0.5
Relations with other relatives/ friends	7.6	14.1	8.8	24.6	8.5	1.5
Nothing has become better/ worse	14.1	20.7	1.8	57.9	31.0	2.0
General change compared to the time when they left Ukraine (per cent of respondents)						
Much better off	29.3		49.1		10.5	
Better off	29.3		38.6		31.0	
About the same as before	27.2		8.8		37.5	
Worse off	9.8		3.5		15.5	
Much worse off	1.1		0.0		5.0	
N	92		57		200	

Note(s): The questions for expatriates is formulated as follows: "When compared to the time before you left Ukraine (for the last time), do you consider yourself better or worse off now (in general)? In what way do you feel better off/ worse off?". Returned migrants are asked to compare the time before they left Ukraine and immediately after return.

On the other hand, 17.4 per cent of expatriate teachers and 9.5 per cent of returned teachers stated that their health status had significantly worsened as a result of migration period due to poor working conditions and the need to save on everything to reach the saving target (Table 20). Many teachers – who went abroad for a long time and left their children, spouses, parents and other relatives in Ukraine – were also worrying about worsened relations with their family members. Social costs of migration for the relevant families

(called “transnational”), including eroding emotional ties and increasing consumerism among those left behind, redistributing gender roles, changing family functions and high risk of divorce, may even outweigh its economic benefits (Tolstokorova, 2009).

Professors and researchers who went abroad at a younger age or were able to migrate with their families and who worked in their field appear to be more optimistic about their migration experience than temporary migrant workers amongst (former) teachers. The latter typically face a trade-off between economic benefits in the short term and social costs in the longer term that include de-skilling, deterioration of health, worsened relations with family members and disconnection from the local community in the place of origin.

7.2 Benefits and Costs of Migration and Return Migration to the Education System

The main focus of this section is on the extent to which international mobility of teaching professionals has helped or hindered the education system in Ukraine. It is based on the interviews with representatives of educational institutions and key stakeholders (see the list in Annex B) as well as on the survey results of migrants presented above.

The main concerns cited in the literature in developing countries are related to the cost of teacher training in the sending country, direct impact of staff shortages on affected educational institutions and possible qualitative changes – either positive or negative – due to migration of teaching professionals and their subsequent return (Appleton *et al.*, 2006a and 2006b; Morgan *et al.*, 2006; Voigt-Graf *et al.*, 2009).

According to the interviews with five school principals, one director of vocational education institution and representatives of one college and three universities, the respondents did not experience staff shortages in recent years and, on the contrary, they reported overstaffing due to demographic changes and low teacher turnover. Owing to the oversupply of young teachers by local teacher training institutions, they did not have difficulty filling a small number of vacancies with suitable candidates in any subject, with many schools claiming to receive “dozens” of applications for each post. The only difficulty mentioned by several school principals was in attracting male teachers. When talking about school education in general but not their particular school, some of them also pointed to problems in the recruitment of teachers in rural areas and also in finding real professionals in physics or chemistry: “*The state shows no interest in physicists. Few people will be interested in learning physics for five years and then receiving salary of UAH 1,000. Difficult subjects as physics and chemistry are degenerating...*”.

As regards the incidence of international migration in certain schools, only one school principal reported about a one-year migration period of their former teacher who worked in Germany as a governess and returned to Ukraine but not to teaching. A representative of the college reported on one case of employing a lecturer after she came back from Germany, where she had worked in her field. Representatives of Cherkasy National University pointed to increased international mobility of their professors and students via

the Fulbright programme and collaboration of their famous researchers in physics and chemistry with their international colleagues. The major losses from emigration – both in terms of quantity and quality – were experienced by its Institute of Foreign Languages, which lost talented young professors (“*real stars*” according to an interviewee) at the beginning of the 2000s.

Overall, school principals and representatives of local education authorities agree that staff shortages resulting from outflows of teachers abroad were more common in the past (end of the 1990s and beginning of the 2000s) but not now, when teachers are not migrating at all or use summer time for additional earnings abroad (the latter is more widespread in western oblasts).

Senior and successful university professors and researchers often prefer short-term exchange programs and grants rather than permanent emigration, and therefore the issue of “brain drain” and its adverse impact on the education system is not so pressing now as before. On the contrary, there is evidence of “brain circulation”, which gives rise to benefits not only for individuals (higher income and professional development), but also to the Ukrainian universities and research centres in which they work. This finding of the in-depth interviews in Cherkasy is supported by focus group discussion with returned professors and researchers in Kharkiv and by individual interviews conducted by the author in Cherkasy and Kyiv.

Officials from the Ministry of Education and Science seem not to worry a lot about the lost investment in teacher training and other adverse effects of teacher migration. Instead, they express gratitude to international migration for reducing the pool of the unemployed and providing migrant teachers with means of subsistence: “*Migration of Ukrainian teachers is an objective process. During the last 20 years the number of children in schools decreased by 2.5 million in Ukraine, whereas the number of teachers was reduced by only about 20 thousand. ... So, the number of teachers decreased much less than the number of students, and, perhaps, it is an objective process that our teachers also look for jobs abroad...*”. Furthermore, the same officials point to the increased competition of teachers within schools for “*students and teaching posts*”, with the general belief that the best and the brightest teachers remain in the Ukrainian education system and keep working in local schools, teaching children.

In summary, international migration of teachers did not appear to cause direct shortages and qualitative losses in the education system. Due to decreasing numbers of students and increasing numbers of newly qualified teachers, schools were able to replace teachers who went overseas in the past without significant losses in the quality of teaching. The positive effects of return migration reflected in diffusion of new approaches and mutually beneficial exchanges of ideas have been negligible so far. Teachers rarely worked in their profession abroad and therefore did not acquire new skills that would be useful in the Ukrainian education system.

The major losses are, however, in higher education and science, as the most prominent university professors and researchers who went abroad for professional development and international recognition long ago are very unlikely to return to Ukraine. The serious barriers experienced by young professionals who may consider returning, i.e. non-recognition of

their foreign degrees and the need to start again at the bottom of the teaching/research scale, are unlikely to encourage their return. Therefore, only those involved in circular academic migration but attached to their homeland are likely to bring the expected benefits for the education and research system in Ukraine. However, only a few universities and research institutes are able to absorb these benefits because of poor material and technical basis and organizational inertia.

7.3 Migration, Labour Market and Economic Development of Ukraine

One of the direct effects of emigration and labour migration of highly skilled teaching and research professionals is a reduction in the number of educated workers in Ukraine, who are critical to human capital formation, innovation-based growth and effective transition to democracy. However, the key argument made by the interviewed stakeholders, teachers and researchers in favour of the international mobility of Ukrainian skilled professionals is the extent to which it helps relieve labour market pressures by reducing unemployment and underemployment of these professionals. In fact, it acts as a safety valve allowing excess labour to escape when some level of pressure is reached in the Ukrainian labour market. Furthermore, earnings and remittances from migrant workers have proved extremely important to migrants' families and to the Ukrainian economy (Kupets, 2012).

Moreover, mass emigration of teaching and research professionals in the late 1990s – early 2000s played a positive role by signalling the government about the need to improve pay and working conditions.²⁵ Declining intensity of teacher migration and falling labour demand for teaching professionals has significantly relaxed the wage pressures since then, passing wage issues in the education sector into the background of the government's agenda. At the same time, this situation has induced higher competition among the available teachers and professors. This could have a positive impact on the quality of education and long-term work force competitiveness, but the existing problems in the Ukrainian education sector such as weak incentives for performance, lack of social accountability, widespread corruption and low responsiveness of the education system to labour market needs produced opposite results. Business representatives who participated in the World Economic Forum surveys estimated the quality of the educational system in Ukraine at 3.6 out of seven points in 2012–2013, which is 0.6 points lower than in 2008–2009 (WEF, 2012 and 2008).²⁶ As a result, Ukraine dropped from the 40th to the 70th position in the global ranking in terms of the quality of the educational system.

As regards a positive feedback effect from the international mobility of teaching and research professionals through return migration, our survey data for expatriates indicate a fairly high

25. It is necessary to note that a gradual salary growth for teachers, researchers and employees of the other budget-supported sectors in the 2000s was feasible due to a recovery of the Ukrainian economy after its long-lasting crisis in the 1990s.

26. The question was formulated as: "How well does the educational system in your country meet the needs of a competitive economy?" with 7 alternative answers varying from 1 (not well at all) to 7 (very well).

level of anticipated return migration for further employment in Ukraine among teachers (39.1 per cent for sure and 30.4 per cent not sure) but much lower level of anticipated return among professors and researchers (12.3 per cent for sure and 56 per cent not sure). This means that if policies could be put in place to attract them back to Ukraine, many of them would clearly be interested in coming back. Some of the returning teachers would be willing to come back to teaching. But the education sector and the labour market in general would be unable to absorb them all; particularly in view of the fact that many migrants have lost their teaching qualifications while working abroad. Also, returnees may be disappointed by the wages and working conditions in Ukraine and may have difficulties in readapting to the home country.

Some returnees would be interested in starting a business at home, but high administrative costs of operating a business, inadequate enforcement of contracts and property rights (with raider attacks) and other barriers to doing business would limit the possibilities of potential entrepreneurs to realize their intentions upon returning to Ukraine.

Another channel through which migration could contribute to the development of home country is a well-educated Diaspora, both Old and New (World Bank, 2006 and 2011). According to the USAID,²⁷ there are six strategic Diaspora engagement mechanisms: Philanthropy, Volunteerism, Entrepreneurship and Diaspora Direct Investment (DDI), Capital Markets, Tourism & Nostalgic Trade, and Advocacy & Diplomacy. Having these mechanisms in mind, expatriate teachers, university professors and researchers were asked whether they supported Ukraine's development through various activities while being abroad. Table 21 highlights that the most popular mechanisms of expatriates' engagement are Tourism & Nostalgic Trade, Advocacy & Diplomacy and Volunteerism, but over 35 per cent of respondents were not involved in Ukraine's development at all.

Migrant teachers working in Ukrainian schools abroad during weekends mentioned also that they help Ukraine by teaching children born abroad to love Ukraine, its traditions and its language, improving the image of Ukraine in the world and by facilitating the exchange of knowledge. Commenting on the possibilities to help Ukraine while staying abroad, one teacher working in a Ukrainian school in Prague since 2006 said: *"There are a lot of Ukrainians here, and it would be possible to do a lot (for Ukraine), but some programme that would specify our step-by-step actions is needed for this. However, for the time being, Ukraine alienates us, and this does not cultivate love for this country... Then it is difficult to explain to a child born abroad that this is an excellent country and a native land, if he/she directly asks why you emigrated from this country... How to cultivate this love for Ukraine if, at every turn, you almost damn some miseries (related to Ukraine)?"* So, the effectiveness of Diaspora, migrants' networks and efforts of individual migrants in promoting democratic institutions, civil society, national identity and professional exchange is open to question, unless the Ukrainian authorities start effective communication and cooperation with Ukrainians living abroad.

27. See Diaspora Networks Alliance, Framework for Leveraging Migrant Resources for Effective Development & Diplomacy at: http://pdf.usaid.gov/pdf_docs/PDACM860.pdf

Table 21: Engagement of expatriate teachers and professors in Ukraine’s development (per cent of respondents)

USAID Mechanisms of Diaspora’s engagement	Suggested options in the questionnaire	Expatriate teachers	Expatriate professors
Tourism & nostalgic trade	I support the Ukrainian economy via tourism and nostalgic trade	32.6	24.6
Advocacy & diplomacy	I’m actively involved in Diaspora’s activities participating in the policy dialogues and advocating for Ukraine in the host country	18.5	19.3
Volunteerism	I came (plan to come) to Ukraine to perform short-term public service, bringing specialized knowledge and skills to the tasks of economic and social development	6.5	15.8
Philanthropy	I’m actively involved in Diaspora’s activities contributing to the collective donations to finance community development projects in Ukraine	4.3	3.5
Entrepreneurship and Diaspora Direct Investment (DDI)	I invest in the Ukrainian economy as a private entrepreneur	2.2	7.0
Collaboration with Ukrainian colleagues	I collaborate with my Ukrainian colleagues, participating in joint scientific activities and financing research in Ukraine	–	5.3
Other mechanisms not mentioned above	I support Ukraine’s development in the way not mentioned above	8.7	24.6
Nothing	I do nothing for Ukraine’s development	39.1	35.1

Note(s): Answers to the question: “Do you support your homeland development through the following activities while you are abroad? Mark all that apply”.

To sum up, it is difficult to generalize about the true impact of migration of teaching and research professionals on Ukraine’s economic development and human capital formation in the past 20 years, in which Ukraine passed through a turbulent period of economic and political transformations and Ukrainians adjusted to the changes as well as they could. Our tentative conclusion based on the conducted analysis is that emigration of the highly skilled professionals (Ph.D. students, professors and researchers) has negative long-term consequences for Ukraine’s development, as it deprives the country of a qualified and experienced workforce, often in reproductive age, and limits the prospects for sustainable economic growth and democratic development. Temporary labour migration of (former) teachers who moved abroad at an older age to work in the private household sector or low-skilled jobs seems to be less harmful in the long-term. But it raises the issues of real possibilities of reintegration of returned migrants, upgrading of their skill level, improvement of their health, and portability of social insurance and pension benefits from the destination country.

CHAPTER 8

Conclusions

The results of the present study suggest that the loss of teachers and researchers through international migration does not appear to be a critical issue in Ukraine. Schools and universities do not see any difficulties in filling teaching positions, and if some problems in certain subjects or regions do appear, migration is far from being the major factor. Outflow of skilled teaching and research professionals to other economic sectors because of dissatisfaction with working conditions seems to be a much more important factor.

Surveys of teachers, university professors and researchers working in Ukraine show that despite general satisfaction with their current jobs, respondents were dissatisfied with their salaries (Table 22). Given these results, it is not surprising that 73.4 per cent of surveyed professors and researchers and about 94 per cent of surveyed teachers pointed out to “increased salaries” when asked about the changes that would need to occur in Ukraine to make their professions more attractive (see Figure 11 below). Another important suggested change in this respect is to resolve the housing problem for young professionals by providing housing benefits, low-interest mortgage loans or free public housing (supported by 49.7 per cent of surveyed teachers and 36.7 per cent of surveyed professors and researchers).

Taking into account the reasons for teacher labour migration discussed in the previous sections, the same changes are required to retain highly skilled teachers in Ukraine and attract migrants back home. But doing so would necessitate paying competitive salaries that are comparable with those paid in the destination countries (with taking into account differences in living costs), which seems to be a very expensive option for Ukraine. Furthermore, it may be an undesirable option on the grounds of growing inequity between returned wage earners and those who have been continuously paying taxes to the Ukraine’s budget (Chappell *et al.*, 2009).

As Table 22 reveals, teachers are also dissatisfied with low prestige of their profession, lack of textbooks, resources and materials/equipment for doing their jobs, limited ability to balance personal life and work, insufficient fringe benefits, poor behaviour on the part of some students and inadequate support from students’ parents. Professors and researchers are on average more satisfied with professional prestige and work-life balance compared to teachers, but more of them are concerned about poor facilities for doing their jobs,

workload, limited opportunities for professional development and inadequate support from their managers and colleagues.

Table 22: Satisfaction of teaching and research professionals with their jobs in Ukraine

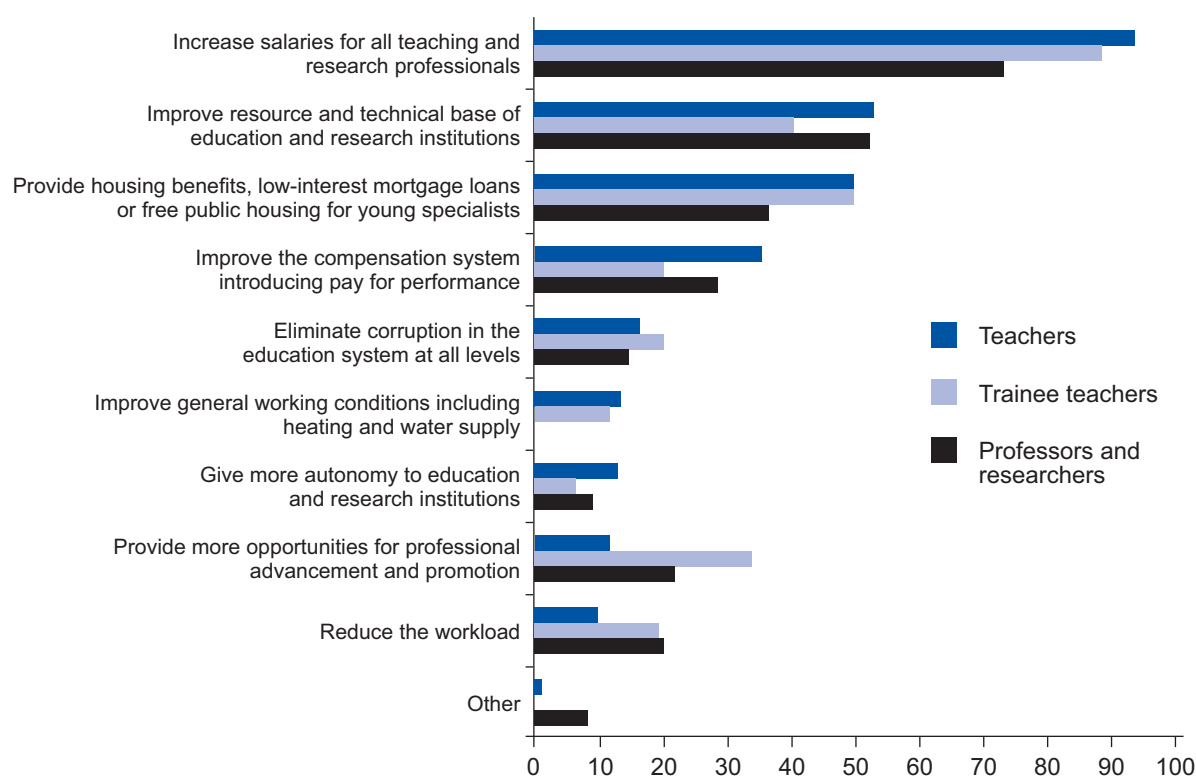
	Teachers (N=300)		Professors and researchers (N=109)	
	Mean (5 is max)	Share of dissatisfied (per cent)	Mean (5 is max)	Share of dissatisfied (per cent)
General job satisfaction	3.8	7	4.1	1.8
Salary	2.3	56.2	2.6	46.8
Benefits (e.g. paid sick leaves and regular leaves, social insurance)	3.2	24.2	3.2	24.8
Location of school/university/institution	4.1	7.4	—	—
Availability of textbooks, resources and materials/equipment	3.2	28.3	3.4	29.4
General working conditions (e.g. basic facilities such as water, heating, light, indoor toilet; state of school premises)	3.8	14.7	—	—
Workload (including the number of students in one class)	3.8	12.7	3.6	19.4
Teaching assignment (subject area and/or grade level)	4	4.8	—	—
Student discipline	3.5	18.1	—	—
Recognition and support from administrators/managers	4.2	2.7	4	4.6
Recognition and support from international colleagues	—	—	3.3	14.9
Social relationships with colleagues	4.4	0.7	—	—
Support from students' parents	3.4	19.5	—	—
Opportunities for professional promotion and advancement	3.6	8.5	3.5	13
Opportunities for professional development	3.7	5.8	3.9	5.5
Professional prestige	2.9	37.2	3.6	15.6
Intellectual challenge	3.9	3.4	4.3	0
Opportunities to make a difference in the lives of others	3.5	9.4	3.8	3.9
Ability to balance personal life and work	3.2	25.3	3.8	9.3

Note(s): Answers to the questions: "To what extent are you generally satisfied with your current job? How would you rate your current teaching/research position in terms of each of the following aspects?". A 5-grade scale was offered, with 1 referring to "Very dissatisfied" and 5 to "Very satisfied". The share of dissatisfied covers those who are dissatisfied (2) or very dissatisfied (1). Missing answers are not taken into account.

In order to solve the existing problems in education and science and make their professions more attractive, surveyed teachers and professors working in Ukraine see the following changes as the most necessary (Figure 11):

- improve material and technical base of education and research institutions (over 52 per cent in both samples);
- introduce the evaluation of performance and improve the compensation system via introduction of pay for performance (35.5 per cent among teachers and 28.4 per cent among professors and researchers);
- provide more opportunities for professional development (11.7 per cent and 22 per cent, respectively);
- give more autonomy and flexibility to individual professors and researchers (mentioned by 21.1 per cent of the respondents in visited universities and research centres) as well as to education and research institutions in general (13 per cent among teachers and 9.2 per cent among professors and researchers);
- reduce the workload (10 per cent and 20.2 per cent, respectively);
- eliminate corruption in the education system at all levels (16.3 per cent and 14.7 per cent, respectively).

Figure 11: Suggested changes in Ukraine to make teaching and research more attractive for highly skilled professionals and youth (per cent of respondents)



Note(s): The question for teachers is formulated as follows: "Please comment what changes could be made to the education system in Ukraine or the teaching profession to make teaching more attractive for highly skilled professionals and youth. Mark *no more than three major changes*, starting from the most important to the least important one". Questions for professors and last-years students of teacher training institutions are very similar.

As our study shows, many of these changes would also discourage many potential migrants from moving abroad but would possibly facilitate more beneficial return and circular migration. However, decision-making about migration and subsequent return involves a wider range of factors than income and employment opportunities. This means that policy considerations designed to stem the flow of highly skilled teaching and research professionals from Ukraine to developed countries, or attract them back, need to address a wide range of issues beyond the system of education and science.

From the emphasis migrants place on Ukraine's economic, social and political problems in their discussions of the main reasons for migration and the possibility of return, it becomes apparent that significant improvements in Ukraine are needed to attract and retain highly skilled professionals. It is essential not only to increase income and salaries from time to time, but also to create decent jobs in the non-teaching sector; to improve the business climate; to provide retraining for (returned) teachers and university professors who would be willing to change profession because of existing demographic challenges and decreasing demand for teaching professionals; to make concerted efforts in ensuring macroeconomic stability; to increase government effectiveness and ensure political stability; to improve the quality of infrastructure, public goods and services; and to improve the prospects for a more secure and comfortable life in Ukraine. It is also very important for Ukraine to introduce a simple and fast mechanism of validation of education and skills acquired abroad.

CHAPTER 9

Policy Implications

Even if the research has not detected a dramatic problem in terms of skills shortages in both research and teaching sectors, some tensions and challenges have been identified that, in the long run, can impact on the quality of education and research, which are important for the country's development.

Based on the findings of the research, it is possible to identify short-, medium- and long-term measures that could be put in place by the Ukrainian stakeholders.

Short-term measures

- To create a data base of Ukrainian teachers and researchers abroad. Any policy initiative involving these workers needs a clear quantitative and qualitative inventory. Involvement of the Diaspora associations can help in fulfilling this task. The data base has to be established and maintained by the State Migration Service or the State Statistics Service.
- To improve the system of career guidance in secondary schools in order to give adequate information to students about the working opportunities in the education sector and to prevent overcrowding in a shrinking market.
- To consolidate the activity of Ukrainian Diaspora and to involve these organizations in the implementation of various educational and research programmes in the country of origin and in the monitoring of the situation of expatriate teachers and researchers.
- To invite representatives of scientific Diaspora and expatriate migrants to scientific conferences and professional meetings.
- To establish partnerships and to conduct joint projects with institutions from which returned migrants graduated.
- To provide legal and protected channels of migration.

Medium-term measures

- To elaborate a plan of incentives for attracting and keeping teachers in rural areas.²⁸ The plan also has to consider the main difficulties, pointed out by the interviewed teachers, concerning housing.
- To provide more opportunities for professional development of teachers and researchers and introducing compensation system linked to the evaluation of their performance.
- To develop policies aimed at improving the image of these professions.
- To design and implement the measures for retraining of teachers working abroad in Ukrainian schools as well as of those who return to Ukraine.
- To provide retraining for returned teaching professionals interested in pursuing other occupational choices.
- To implement an effective mechanism for the recognition of informal learning abroad.
- To negotiate bilateral and multilateral agreements on recognition of diplomas with main countries of destination.

Long-term measures

- To improve the quality of the education system by using redundant teachers coming from the rationalization of school network system in the creation of quality support services and thematic training and upgrading centres.
- To discuss with social partners a plan aiming at the rationalization of the education system in line with the declining population and according to pupils' effective needs and reinvest the savings in increasing teachers' salaries and improving the quality of teaching through appropriate equipment and modern teaching materials. A plan for regional teacher mobility frameworks might be discussed and agreed with social partners, as there will be a lack of teachers in countries in the developing world and in parts of Europe (Germany). The example of Spain might be a good reference as there is consistent mobility of teachers towards Latin American countries.
- To attract Ukrainian researchers residing abroad with specific programmes. Inspiration might be taken from some interesting initiatives adopted in India: in 2005, the Indian Ministry of Science and Technology set up a programme called the Ramanujan Fellowship to attract highly skilled scientists and engineers of Indian origin to take up research positions in India. Also the Defence Research and Development Organization, through the Talent Search Scheme for Non-Resident Indians offered career opportunities in their research centres to people of Indian origin based abroad.²⁹
- To use virtual return initiatives. An interesting form of "virtual" return is the involvement of skilled Diaspora members contributing to the development of

28. Further policies to improve the status of teachers are discussed in the Handbook on good Human Practices in the Teaching Profession, ILO 2012 – http://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/publication/wcms_187793.pdf.

29. See Nurul, Islam (2010) "Strategy paper for re-integration of returnee migrants", prepared for International Labour Office, Dhaka, available at <http://www.bmet.gov.bd/BMET/resources/Static%20PDF%20and%20DOC/publication/Strategy%20Pap%20for%20re-integration.pdf>.

their country of origin by sharing their skills and knowledge with those who have remained at home. The German-Moldovan project “Migrants’ Capacities for the Moldovan Health System Development”³⁰ was implemented within the Joint EU-UN Initiative “Migration for Development” in October 2009–April 2011. The goal of this project consisted in exploring the potential of Moldovan Diaspora doctors (scientists, practitioners) for the development of the Moldovan health system.

30. See <http://www.migration4development.org/content/migrants%E2%80%99-capacities-moldovan-health-system-development-brain-gain-project>.

Bibliography

Appleton, S., Morgan, W. J. and Sives, A. (2006a) “Should teachers stay at home? The impact of international teacher mobility”, *Journal of International Development*, Vol. 18(6), pp. 771–786.

Appleton, S., Sives, A., and Morgan, W. J. (2006b) “The impact of international teacher migration on schooling in developing countries – The case of South Africa”, *Globalisation, Societies and Education*, Vol. 4 (1), pp. 121–142.

Cerase, F. P. (1974) “Expectations and Reality: A Case Study of Return Migration from the United States to Southern Italy”, *International Migration Review*, Vol. 8 (2), pp. 245–262.

Chappell, L., Sanchez, L., and Shah, J. (2009) “Easing the strain: Understanding brain drain and where policy can respond”, Development on the Move Working Paper No.3, Global Development Network and Institute for Public Policy Research.

Coupé, T., Olefir, A., and Alonso, J. D. (2011) “Is optimization an opportunity? An assessment of the impact of class size and school size on the performance of Ukrainian secondary schools”, Policy Research Working Paper No. 5879 (Washington, D.C., World Bank).

De Haas, H. (2010) “Migration and development: A theoretical perspective”, *International Migration Review*, Vol. 44, pp. 227–264.

Deikun, D. and Pastovenskiy, O. (2011) *Methodical recommendations on optimization of the network of general education institutions in rural areas*, Ministry of Education, Science, Youth and Sports of Ukraine, Institute of Innovative Technologies and the Content of Education (in Ukrainian: Дейкун Д.І., Пастовенський О. В. *Методичні рекомендації з оптимізації мережі загальноосвітніх навчальних закладів у сільських районах: Навчально-методичний посібник.* – Міністерство освіти і науки, молоді та спорту України, Інститут інноваційних технологій і змісту освіти, 2011).

Düvell, F. (2012) *Qualitative research in migration studies*, Analytic and Synthetic Note 2012/01 (Florence, Consortium for Applied Research on International Migration (CARIM-East)). Available at: <http://www.carim-east.eu/media/CARIM-East-AS2012-01.pdf>

Fedyukin I., Froumin, I., Popov, D. and Tvorogova, S. (2010) *Leveraging Russia's talent abroad in social sciences: Evidence from a survey? Possibilities of cooperation with Russian academic Diaspora in social, economic and business disciplines*, Working Paper WP1/2010/01 (Moscow, State University – Higher School of Economics) (in Russian: Рука об руку или порознь? Возможности сотрудничества с российской академической диаспорой в сфере социально-экономических наук / Д. Попов, С. Творогова, И. Федюкин, И. Фрумин: Препринт WP1/2010/01. – М.: Издательский дом Государственного университета – Высшей школы экономики, 2010.)

European Training Foundation (ETF) (2008) *Transition from education to work in EU neighbouring countries* (Turin, European Training Foundation).

European Training Foundation (ETF) (2009) *Black Sea labour market reviews – Ukraine country report* (Turin, European Training Foundation).

European Training Foundation (ETF) (2011) *Torino Process 2010. Ukraine (national report)* (Turin, European Training Foundation).

Horvat, V. (2004) “Brain drain. Threat to successful transition in South East Europe?”, *Southeast European Politics*, Vol. 5(1), pp. 76–93.

Institute of Demography and Social Studies (IDSS) (2010a) *Population of Ukraine. Labour emigration in Ukraine* (Kyiv, IDSS) (in Ukrainian: Населення України. Трудова еміграція в Україні. – Київ: ІДСД ім. М.В.Птухи НАН України, 2010).

Institute of Demography and Social Studies (IDSS) (2010b) “Demographic, social and economic trends in Ukraine and their impact on educational enrolment”, presentation prepared by E. Libanova, L. Lisogor, P. Shevchuk, O. Khmelevskaya, and I. Rodicheva for a workshop “*Using Resources Efficiently – Consolidating the School Network in Ukraine: What are the Challenges? What are the Options?*”, organized by the World Bank in Kyiv on February 25–26, 2010.

International Labour Organization (2010) *Migration and development in Tajikistan – Emigration, return and Diaspora* (Moscow, ILO).

International Labour Organization (ILO) (2011) *Decent work country profile: Ukraine* (Geneva, ILO).

International Organization for Migration (IOM) (2005) *World migration report 2005: Costs and benefits of international migration* (Geneva, IOM).

Ivakhnyuk, I. (2006) *Brain drain from Russia: In search for a solution*, Report No. 15/06 (Warsaw: Centre for International Relations).

Kipen, V. and Avksentiev, M. (2011) *Migration potential of Ukraine in the context of acquiring a visa-free regime with the EU: Analytical report* (Donetsk, Institute of Social Research and Political Analysis) (in Ukrainian: Кіпень В.П., Авксентьєв М.В. Міграційний потенціал України в контексті візового режиму з ЄС: Аналітичний звіт. – Донецьк: Інститут соціальних досліджень і політичного аналізу, 2011).

Kupets, O. (2011) *Brain gain or brain waste? The performance of return labour migrants in the Ukrainian labour market*, Working paper No. 11/06E (Kyiv, Economics Education and Research Consortium). Available at: <http://www.eerc.ru/paperinfo/310>

Kupets, O. (2012) *The development and the side effects of remittances in the CIS countries: The case of Ukraine*, Research Report 2012/02 (Florence, Consortium for Applied Research on International Migration (CARIM-East)). Available at: <http://www.carim-east.eu/media/CARIM-East-2012-02.pdf>

Lowell, L. B. and Findlay, A. (2002) *Migration of highly skilled persons from developing countries: Impact and policy responses* (Geneva and London, International Labour Organization and United Kingdom Department for International Development).

Malynovska, O. (2011) *Labour migration: Social consequences and political response*, Analytical report (Kyiv, National Institute for Strategic Studies). Available at: <http://www.niss.gov.ua/articles/607/> (in Ukrainian: Малиновська О. А. Трудова міграція: соціальні наслідки та шляхи реагування. – Київ: НІСД, 2011).

Morgan, W., Sives, A. and Appleton, S. (2006) *Teacher mobility, 'brain drain', labour markets and educational resources in the commonwealth* (London, Department for International Development).

Organization for Economic Cooperation and Development. (OECD) (2012) *Education at a glance 2012: OECD indicators* (Paris, OECD).

Sabirianova, K. (2002) "The great human capital reallocation: A study of occupational mobility in transitional Russia", *Journal of Comparative Economics*, Vol. 30, pp. 191–217.

Stark, O. Helmenstein, C. and Prskawetz, A. (1997) "A brain gain with a brain drain", *Economics Letters*, Vol. 55 (2), pp. 227–234.

State Statistics Service of Ukraine (SSSU) (2008) *Main indicators of activity of higher education institutions of Ukraine at the beginning of 2007/2008 academic year: Statistical bulletin* (in Ukrainian: Основні показники діяльності вищих навчальних закладів України на початок 2007/2008 навчального року: Статистичний бюлетень. – Київ: Державна служба статистики України, 2008).

State Statistics Service of Ukraine (SSSU) (2012g) *Scientific and innovative activity in Ukraine: Statistical book* (in Ukrainian: Наукова та інноваційна діяльність в Україні: Статистичний збірник. – Київ: Державна служба статистики України, 2012).

State Statistics Service of Ukraine (SSSU) (2013a) *Secondary general education institutions of Ukraine at the beginning of 2012/2013 academic year: Statistical bulletin* (in Ukrainian: Загальноосвітні навчальні заклади України на початок 2012/13 навчального року: Статистичний бюлетень. – Київ: Державна служба статистики України, 2013).

State Statistics Service of Ukraine (SSSU) (2013b) *Main indicators of activity of higher education institutions of Ukraine at the beginning of 2012/2013 academic year: Statistical*

bulletin (in Ukrainian: Основні показники діяльності вищих навчальних закладів України на початок 2012/13 навчального року : Статистичний бюлетень. – Київ: Державна служба статистики України, 2013).

State Statistics Service of Ukraine (SSSU) (2013b) Main Indicators of Activity of Higher Education Institutions of Ukraine at the Beginning of 2012/2013 Academic Year: Statistical Bulletin (in Ukrainian: Основні показники діяльності вищих навчальних закладів України на початок 2012/13 навчального року : Статистичний бюлетень. – Київ: Державна служба статистики України, 2013).

State Statistics Service of Ukraine (SSSU) (2013c) Pursuing Studies and Acquiring Profession: Statistical Bulletin (in Ukrainian: Продовження навчання та здобуття професії: Статистичний бюлетень. – Київ: Державна служба статистики України, 2013).

State Statistics Service of Ukraine (SSSU) (2013d) Ukraine's Pre-primary Education in 2012: Statistical Bulletin (in Ukrainian: Дошкільна освіта України у 2012 році: Статистичний бюлетень. – Київ: Державна служба статистики України, 2013).

State Statistics Service of Ukraine (SSSU) (2013e) Training of Scientific Personnel in 2012: Statistical Bulletin (in Ukrainian: Підготовка наукових кадрів у 2012 році: Статистичний бюлетень. – Київ: Державна служба статистики України, 2013).

State Statistics Service of Ukraine (SSSU) (2013f) Labour in Ukraine in 2012: Statistical Book (in Ukrainian: Праця України у 2012 р.: Статистичний збірник. – Київ: Державна служба статистики України, 2012).

State Statistics Service of Ukraine (SSSU) (2013g) Scientific and Innovative Activity in Ukraine: Statistical Book (in Ukrainian: Наукова та інноваційна діяльність в Україні: Статистичний збірник. – Київ: Державна служба статистики України, 2013).

Tolstokorova, A. (2009) "Costs and benefits of labour migration for Ukrainian transnational families: Connection or consumption?", *Cahiers de l'Urmis*, No. 12. Available at: <http://urmis.revues.org/index868.html>

Ukrainian Centre for Social Reforms (UCSR), State Statistics Committee of Ukraine (2009) *International labour migration of the Ukrainian population* (in Ukrainian: *Зовнішня трудова міграція населення України*, Київ: Український центр соціальних реформ, Державний комітет статистики України, 2009).

UNICEF (2007) *Education for some more than others? A regional study on education in Central and Eastern Europe and the Commonwealth of Independent States* (Geneva, UNICEF Regional Office for CEE/CIS).

United Nations Development Program (2003) *Reform strategy for education in Ukraine: Educational policy recommendations* (Kyiv, K.I.S.).

United Nations Development Program (2004) *Education modernisation in Ukraine: An analytical overview. Results of a national survey of heads of comprehensive educational institutions in Ukraine* (Kiev: K.I.S.).

United Nations Development Program (2010) *Mobility and migration: A guidance note for human development report teams* (New York, Human Development Report Office).

Vashchenko, L., Kupets, O., Likarchuk, I., and Sydorenko, M. (2013) *General secondary education in Ukraine in the context of international indicators: Analytical report* (Kyiv, International Public Organization “The Center for Testing Technologies and Education Quality”; Kharkiv, Fact) (in Ukrainian: *Загальна середня освіта України в контексті міжнародних індикаторів: Аналітична доповідь / МБО «Центр тестових технологій і моніторингу якості освіти»*; [Ващенко Л., Купець О., Лікарчук І., Сидоренко М.]; за заг. ред. І. Лікарчука. – К.: МБО «Центр тестових технологій і моніторингу якості освіти»; Х.: Факт, 2013. – 256 с.)

Vakhitova, G., Coupe, T., and Sologoub, I. (2013) *The relations between education and migration in Ukraine* (Kyiv, ILO).

Verica, J. (2003) *Migration of highly educated and skilled persons from the Republic of Macedonia* (Skopje, Institute of Economics).

Voigt-Graf, C., Iredale, R. and Khoo, S.-E. (2009) *Teacher mobility in the Pacific region: Cook Islands, Fiji and Vanuatu, Australia and New Zealand*, Final project report funded by the Australian Research Council in 2004–2006.

World Bank (2006) *Global economic prospects 2006: Economic implications of remittances and migration* (Washington D.C., World Bank)

World Bank (2007) *Ukraine. Improving intergovernmental fiscal relations and public health and education expenditure policy: Selected issues*, Report No. 42450–UA (Washington, D.C., World Bank).

World Bank (2009) *Ukraine labour demand study* (Washington, D.C., World Bank).

World Bank (2011) *Harnessing the Diaspora for development in Europe and Central Asia*, Migration and Remittances Peer Assisted Learning (MIRPAL), Discussion Series (September).

World Bank (2012) *World Bank – Ukraine partnership: Country program snapshot*, April (Washington D.C., World Bank).

World Economic Forum (WEF) (2008) *The global competitiveness report 2008–2009* (Geneva, WEF).

World Economic Forum (WEF) (2012) *The global competitiveness report 2012–2013* (Geneva, WEF).

Zelloth, H. (2009) *In demand: Career guidance in EU neighbouring countries* (Turin, ETF).

Annex A

Table A.1: Key indicators of the Ukrainian education system by level of education

	1990	2000	2005	2010	2011	2012
Pre-primary education						
Number of institutions (thsd.)	24.5	16.3	15.1	15.6	16.1*	16.4*
Total number of children, (thsd.)	2,428	983	1,032	1,273	1,354	1,428
General secondary education						
Number of institutions, (thsd.)	21.8	22.2	21.6	20.3	19.9	19.7
Total number of students, (thsd.)	7,132	6,764	5,399	4,299	4,293	4,222
Number of graduates with basic secondary education, (thsd.)	696	720	649	566	480	441
Number of graduates with complete secondary education, (thsd.)	406	475	515	364	215	329
Vocational education						
Number of institutions	1246	970	1023	976	976	972
Total number of students, (thsd.)	643.4	524.6	496.6	433.5	409.4	423.3
Number of students enrolled, (thsd.)	380.5	307.3	314.2	282.9	241.7	241.8
Number of graduates, (thsd.)	376.7	266.8	286.6	247.4	240.1	202.1
Higher education (I–II level of accreditation)						
Number of institutions	742	664	606	505	501	489
Total number of students, (thsd.)	757	528	505.3	361.5	356.8	345.2
Number of students enrolled, (thsd.)	241	190.1	169.2	129.1	105.1	99.8
Number of graduates, (thsd.)	228.7	148.6	142.7	111	96.7	92.2

	1990	2000	2005	2010	2011	2012
Higher education (III–IV level of accreditation)						
Number of institutions	149	315	345	349	345	334
Total number of students, (thsd.)	881.3	1,402.9	2,203.8	2,129.8	1,954.8	1,824.9
Number of students enrolled, (thsd.)	174.5	346.4	503	392	314.5	341.3
Number of graduates, (thsd.)	136.9	273.6	372.4	543.7	529.8	520.7
Post-graduate education						
Number of students pursuing a candidate's degree (aspirants)	13,374	23,295	29,866	34,653	34,192	33,640
Number of students pursuing a doctor's degree (doctorants)	n.a.	1,131	1,315	1,561	1,631	1,814
Public expenditures on education (per cent of GDP)						
Pre-primary education	n.a.	0.5	0.7	0.9	0.9	1
General secondary education	n.a.	1.5	2.5	3.0	2.7	3
Vocational education	n.a.	0.3	0.4	0.5	0.4	0.4
Higher education	n.a.	1.3	1.8	2.3	2.0	2.1
Total	n.a.	4.2	6.1	7.4	6.6	7.2

Source: State Statistics Service of Ukraine (online statistics and statistical bulletins on education of the corresponding level: SSSU, 2013 a–e).

Note(s): Data on general secondary and higher education refers to the beginning of the corresponding academic year (i.e. September 1990, 2000, etc.). Data on pre-primary, vocational and postgraduate education refers to the end of the corresponding year (i.e. December 1990, 2000, etc.). *Including inactive pre-primary education institutions.

Table A.2: Average listed number of employees in the education sector and calculated students to staff ratio by level of education, 2002–2011

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Average listed number of employees										
Total	1,575,819	1,584,310	1,597,553	1,610,025	1,632,513	1,640,569	1,642,045	1,645,914	1,639,532	1,628,417
Primary education	281,909	288,479	296,944	300,871	311,597	316,383	302,268	310,759	314,451	315,939
Secondary education	939,267	929,465	925,581	923,442	925,839	925,267	938,192	931,717	916,920	911,231
Higher education	326,728	337,227	346,140	356,867	366,664	370,466	372,530	374,107	377,428	372,628
Adult and other education	27,915	29,139	28,888	28,845	28,413	28,453	29,055	29,331	30,733	28,619
Number of students (as of beginning of academic year)*										
Total	10,049,868	9,913,164	9,777,588	9,607,261	9,433,158	9,229,256	8,985,134	8,704,755	8,464,941	8,337,733
Primary education	2,934,047	2,827,515	2,942,196	2,785,390	2,728,729	2,710,946	2,726,489	2,754,172	2,836,141	2,938,776
Secondary education	4,819,600	4,620,575	4,230,517	4,081,529	3,885,181	3,670,597	3,459,952	3,315,579	3,101,298	3,051,577
Higher education	2,296,221	2,465,074	2,604,875	2,740,342	2,819,248	2,847,713	2,798,693	2,635,004	2,527,502	2,347,380
Student to staff ratio**										
Total	6.4	6.3	6.1	6.0	5.8	5.6	5.5	5.3	5.2	5.1
Primary education	10.4	9.8	9.9	9.3	8.8	8.6	9.0	8.9	9.0	9.3
Secondary education	5.1	5.0	4.6	4.4	4.2	4.0	3.7	3.6	3.4	3.3
Higher education	7.0	7.3	7.5	7.7	7.7	7.7	7.5	7.0	6.7	6.3

Source: State Statistics Service of Ukraine (hard copies of the tables on employment disaggregated by NACE sectors; table on the number of students by ISCED presented in SSSU, 2013a), own calculations. Employment numbers are based on headcounts, not full time equivalents.

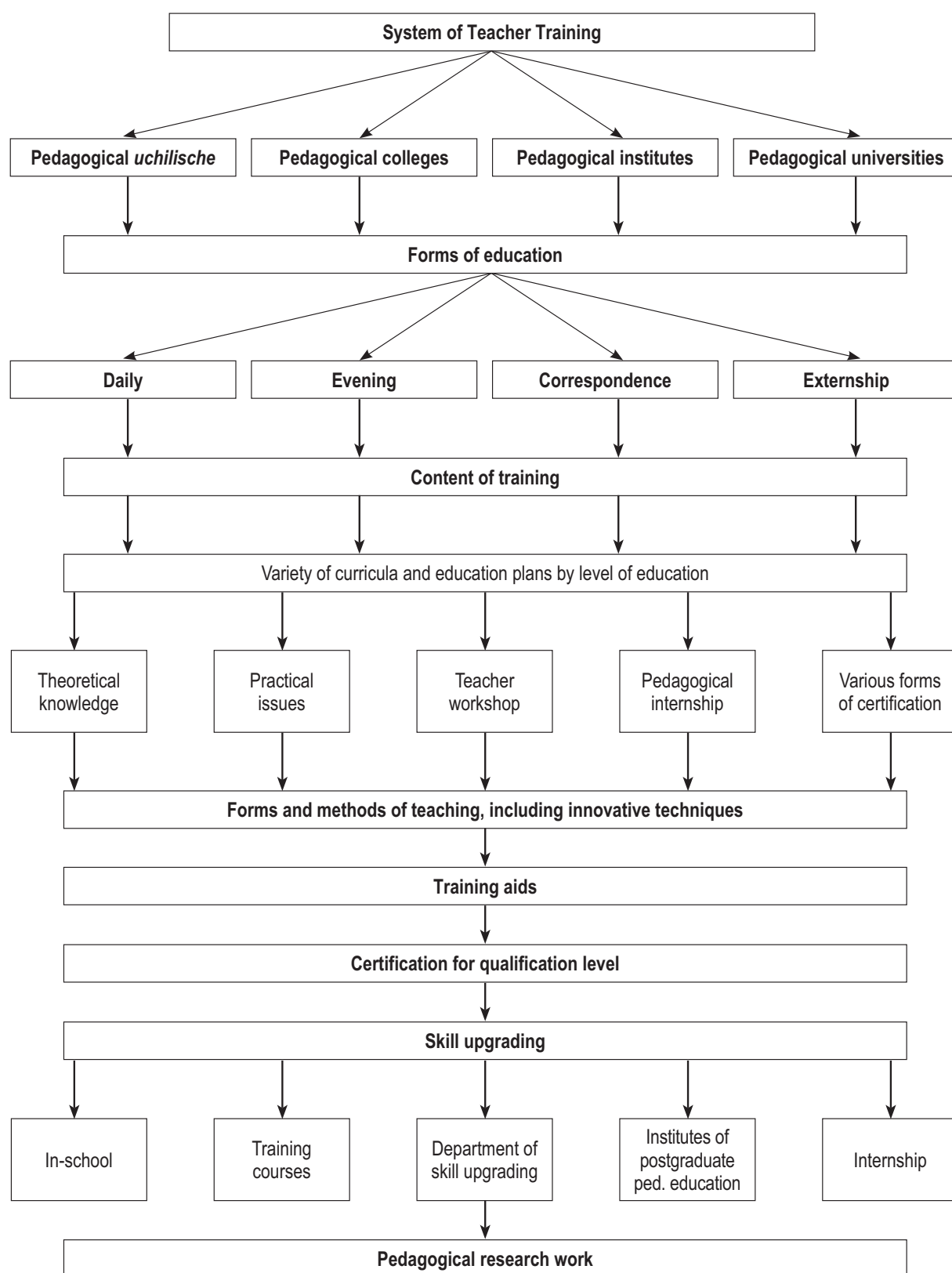
Note(s):* Students in primary education (NACE code 80.1) include students in pre-primary and primary education (ISCED codes 0 and 1); students in secondary education (NACE code 80.2) include students in lower secondary, upper secondary and post-secondary non-tertiary institutions (ISCED codes 2, 3, and 4); students in higher education (NACE code 80.3) include students of the first and second stages of tertiary education (ISCED codes 5A, 5B and 6). ** The student to staff ratio is calculated as the number of students divided by the average listed number of employees in the education sector.

Table A.3: Registered unemployment, vacancies and job placements for teaching professionals, 2006--2012

	ISCO code	Indicator	2006	2007	2008	2009	2010	2011	2012
Teaching professionals	23	Unemployed	26,629	24,470	23,859	20,808	21,254	24,847	26,469
		Vacancies	16,448	16,831	15,749	12,340	12,152	15,364	15,509
		Job placements	10,365	10,476	10,267	6,646	7,881	9,472	11,200
College, university and higher education teaching professionals	231	Unemployed	1,471	1,576	1,739	1,839	2,004	2,427	2,762
		Vacancies	1,584	1,971	1,960	1,462	1,367	1,520	1,577
		Job placements	599	639	674	480	674	762	951
Secondary education teaching professionals	232	Unemployed	13,581	12,807	12,649	10,459	10,832	12,407	13,044
		Vacancies	8,662	7,971	7,425	5,764	5,805	7,438	7,596
		Job placements	5,232	5,631	5,670	3,502	4,195	4,890	5,672
Primary and pre-primary education teaching professionals	233	Unemployed	7,435	6,504	5,967	4,733	4,427	5,282	5,708
		Vacancies	2,988	4,015	3,485	2,255	2,421	3,291	3,111
		Job placements	2,881	2,741	2,494	1,499	1,679	2,170	2,563
Special education teaching professionals	234	Unemployed	539	498	551	533	596	826	1,035
		Vacancies	690	599	598	472	525	710	910
		Job placements	195	209	234	168	208	324	474
Other teaching professionals	235	Unemployed	3,603	3,085	2,953	3,244	3,395	3,905	3,920
		Vacancies	2,524	2,275	2,281	2,387	2,034	2,405	2,315
		Job placements	1,458	1,256	1,195	997	1,125	1,326	1,540
Teaching associate professionals	33	Unemployed	16,321	14,246	13,793	10,682	10,507	11,501	11,500
		Vacancies	11,997	11,672	12,257	8,311	7,737	8,233	8,365
		Job placements	6,185	6,066	5,846	3,415	3,939	4,320	4,717
Primary education teaching associate professionals	331	Unemployed	2,465	1,892	1,661	1,308	1,281	1,294	1,029
		Vacancies	532	550	504	368	421	430	380
		Job placements	1,044	831	725	459	514	522	476
Pre-primary education teaching associate professionals	332	Unemployed	343	213	182	120	110	115	115
		Vacancies	52	51	120	73	44	48	48
		Job placements	150	100	89	41	51	57	57
Special education teaching associate professionals	333	Unemployed	32	36	39	14	19	20	18
		Vacancies	36	42	53	8	9	7	17
		Job placements	14	14	13	2	4	5	5
Other teaching associate professionals	334	Unemployed	13,481	12,105	11,911	9,240	9,097	10,072	10,338
		Vacancies	11,377	11,029	11,580	7,862	7,263	7,748	7,920
		Job placements	4,977	5,121	5,019	2,913	3,370	3,736	4,179

Source: Public Employment Service (online statistics on the occupational structure of the registered unemployed and vacancies).

Figure A.1: Schematic presentation of the system of teacher training in Ukraine



Source: Oliynyk et al. (2001) *System of pedagogical education and pedagogical innovations*, available (in Ukrainian) at: http://www.irf.ua/files/ukr/programs_edu_ep_334_ua_sttp.doc.

Annex B

Table B.1: List of participants of in-depth interviews

Category	Location	Name of the company/ organization	Name of interviewee, position
Authorities in education at the national and local levels	Kyiv	Ministry of Education, Science, Youth and Sports of Ukraine	Oleg Eresko, Head of Department for General Secondary and Preschool Education
			Sergiy Bondarenko, Head of sub-Department for Pedagogical and Postgraduate Education in the Department for Higher Education
	Ivano-Frankivsk	Department of Education and Science of Ivano-Frankivsk City Council	Lubomyr Romanovych, Head of HR Department
	Balakleya (Kharkiv oblast)	Department of Education of Balakleya Raion State Administration	Tetiana Shubeiko, specialist-methodist on staff issues
	Cherkasy	Department of Education and Humanitarian Policy of Cherkassy City Council	Olena Anatoliivna, specialist of HR Department
Universities and colleges	Cherkasy	Cherkasy National University named after B. Khmelnytsky	Nina Tarasenkova, Professor, Vice-chancellor on Scientific Work, Head of Department of Geometry and Mathematics Teaching Methodology
			Lyudmila Klyatska, Associate Professor, ex-Dean of the Mathematics Department
			Lyudmila Rudakova, Associate Professor, Deputy Director of the Institute of Foreign Languages
			Svitlana Viktorivna, Head of Department for International Cooperation
	Ivano-Frankivsk	Precarpathian National University named after V. Stefanyk	Yaroslava, Head of Department for Graduates' Employment
			Olena, specialist of HR Department
	Kharkiv	Kharkiv National Pedagogical University named after G. Skovoroda	Tetiana Radchenko, Head of Department for Graduates' Employment
	Balakleya (Kharkiv oblast)	Balakleya Pedagogical College	Specialist of HR Department

Table B.1: List of participants of in-depth interviews (continued)

Category	Location	Name of the company/ organization	Name of interviewee, position
General and vocational secondary schools	Cherkasy	School #2	Vitaliy Melnik, Principal
	Korsun-Shevchenkivskii (Cherkasy oblast)	School #1	Ludmila Moroziuk, Principal
	Kharkiv	Vocational school (PTU) #3	Sergiy Viktorovych, Principal
	Balakleya (Kharkiv oblast)	School #5	Viktor Dmitrovych, Principal
	Ivano-Frankivsk	School #21	Stepan Korchynskiy, Principal
	Kolomya (Ivano-Frankivsk oblast)	School #2	Galyna Petrivna, Principal
Private recruiting agencies	Uman (Cherkasy oblast)	“Uman Personal”	Lidia, recruiting manager
	Cherkasy	“Lider”	Olga, recruiting manager
	Kharkiv	“Profi Consulting”	Natalia Klimova, owner and director
		“Alfa Personal” (employment abroad)	Ivan, recruiting manager
	Ivano-Frankivsk	“Top Choice”	Viktoria, recruiting manager
		“Elite Personnel”	Svitlana, recruiting manager
	Kyiv	“Almaco” (recruiting of domestic staff)	Elena, recruiting manager
		“Dorbye ruki” (recruiting of domestic staff)	Katerina, recruiting manager
“Mira” (employment abroad)		Natalia, recruiting manager	
Public employment centres	Kharkiv	City employment centre	Galyna Sergiivna, frontline official working with job seekers
	Korsun-Shevchenkivskii (Cherkasy oblast)	Raion employment centre	Valentyna Petrivna, frontline official working with job seekers
Trade union and teacher programs	Kyiv	Exchange program “Teachers’ program”	Alena Anatoliivna, director
		Trade union of employees of the education and science sectors, Federation of Trade Unions of Ukraine	Georgiy Trukhanov, Head
Experts	Kyiv	Institute for Economics and Forecasting, National Academy of Sciences of Ukraine	Viktoria Blyzniuk, Head of Department of Socio-Economic Labour Problems
		Institute of Demography and Social Studies, National Academy of Sciences of Ukraine	Oleksiy Pozniak, Head of Department of Migration Studies

Annex C

Table C.1: Composition of the sample of surveyed teachers – potential migration (N=300)

Category		N	Per cent
Age	20–29 years	54	18.0
	30–39 years	77	25.7
	40–55 years	140	46.7
	Over 55 years	27	9.0
	Not stated	2	0.7
Gender	Male	69	23.0
	Female	231	77.0
Marital status	Single	44	14.7
	Married	207	69.0
	Divorced/widowed	48	16.0
	Not stated	1	0.3
Education (highest degree)	Junior specialist	14	4.7
	Bachelor	15	5.0
	Specialist/ master	270	90.0
	Candidate of sciences	1	0.3
Possess teaching qualification	Yes	286	95.3
	No	14	4.7
Teaching category	Specialist	73	24.3
	Specialist of the 2 nd category	41	13.7
	Specialist of the 1 st category	61	20.3
	Specialist of the highest category	122	40.7
	Other	3	1.0

Table C.1: Composition of the sample of surveyed teachers – potential migration (N=300)
(continued)

Category		N	Per cent
Subject field	Primary school	58	19.3
	Natural and mathematical sciences	88	29.3
	Humanities and social sciences	85	28.3
	Arts and health	56	18.7
	Technical subjects (PTU)	13	4.3
Teaching experience	Up to 10 years	88	29.3
	11–20 years	101	33.7
	21 years and more	107	35.7
	Not stated	4	1.3
Settlement type	City	149	49.7
	Town	90	30.0
	Village	61	20.3
Region	Cherkasy oblast	101	33.7
	Kharkiv oblast	100	33.3
	Ivano-Frankivsk oblast	99	33.0
Type of school	Primary school (I level)	5	1.6
	Basic and senior sec. school (II–III level)	27	7.3
	General secondary school (I–II or I–III level)	221	73.7
	Gymnasium, specialized school	22	7.3
	Vocational school	30	10.0
Ownership	State/municipal	275	91.7
	Private	25	8.3
Net wage in the last month	Less than 1,000 UAH	22	7.3
	1,000–1,999 UAH	140	46.7
	2,000–2,999 UAH	112	37.3
	3,000–3,999 UAH	18	6.0

Category		N	Per cent
Job satisfaction	Not stated	8	2.7
	Very dissatisfied	5	1.7
	Rather dissatisfied	16	5.3
	Neither satisfied nor dissatisfied	51	17.0
	Rather satisfied	188	62.7
	Very satisfied	40	13.3
Secondary job	Yes	56	18.7
	No	244	81.3
Financial status	Insufficient	16	5.3
	Barely sufficient	146	48.7
	Almost sufficient	99	33.0
	Sufficient	36	12.0
	More than sufficient	2	0.7
	Not stated	1	0.3

Table C.2: Main characteristics of the unemployed teachers who participated in in-depth interviews – potential migration (N=7)

Category		N
Age	20–29 years	3
	30–39 years	1
	40–55 years	3
Gender	Female	7
Education	Complete higher (specialist/master)	7
Type of school (previous employment)	General secondary school	7
Teaching experience	Up to 10 years	4
	11–20 years	2
	21 years and more	1
Subject field	Primary school	2
	Natural and mathematical sciences	2
	Humanities	3
Region	West (Lviv)	2
	East (Kharkiv, Donetsk, Makeevka)	4
	South (Simferopol)	1

Category		N
Duration of unemployment	About 1 month	1
	6–9 months	2
	Over a year	4
Reason for unemployment	End of contract (temporary replacement of a teacher on parental leave)	1
	Quit job because of low salary (often associated with reduced workload) and worsening relationships with administration and colleagues	5
	Quit job because of inconvenient location of school (far from the place of residence)	1
Searching a job abroad	Yes	4
	No	3

Table C.3: Composition of the sample of surveyed students – potential migration (N=419)

Category		N	Per cent
Age	18–21 years	138	32.9
	22–25 years	281	67.1
Gender	Male	73	17.4
	Female	346	82.6
Marital status	Single	343	81.9
	Married	71	16.9
	Divorced/widowed	5	1.2
Education (expected degree)	Junior specialist	131	31.3
	Bachelor	8	1.9
	Specialist/Master	280	66.8
Field of studies	Pre-primary and primary education	148	35.3
	Natural and mathematical sciences	93	22.2
	Humanities and social sciences	131	31.3
	Arts and health	36	8.6
Settlement type (origin)	City	120	28.6
	Town	135	32.2
	Village	161	38.4
Moved to study (education migration)	Yes	258	61.6
	No	161	38.4
Settlement type (education)	City	289	69.0
	Town	130	31.0

Category		N	Per cent
Region (education)	Cherkasy oblast	208	49.6
	Kharkiv oblast	97	23.2
	Ivano-Frankivsk oblast	114	27.2
Teaching experience	Yes	28	6.7
	No	390	93.1
Other job/income-generating activity	Yes	119	28.4
	No	296	70.6
Financial status	Insufficient	6	1.4
	Barely sufficient	68	16.2
	Almost sufficient	185	44.2
	Sufficient	140	33.4
	More than sufficient	16	3.8
	Not stated	4	1.0

Table C.4: Composition of the sample of surveyed university professors and researchers – potential migration (N=109)

Category		N	Per cent
Age	20–29 years	27	24.8
	30–39 years	32	29.4
	40–55 years	36	33.0
	Over 55 years	14	12.8
Gender	Male	53	48.6
	Female	56	51.4
Marital status	Single	26	23.9
	Married	72	66.1
	Divorced/widowed	11	10.1
Education (highest degree)	Specialist/master	54	49.5
	Candidate of sciences	47	43.1
	Doctor of sciences	8	7.3
Academic title	Professor	6	5.5
	Associate professor	31	28.4
	Leading researcher	7	6.4
	No title	65	59.6
Research field	Natural and mathematical sciences	37	33.9
	Humanities and social sciences	35	32.1
	Engineering	37	33.9

Category		N	Per cent
Teaching/ research experience	Up to 10 years	50	45.9
	11–20 years	26	23.9
	21 years and more	27	24.8
	Not stated	6	5.5
International cooperation	Have publications in international journals	43	39.5
	Took part in scientific events abroad	38	34.9
	Involved in joint research projects	31	28.4
	No cooperation	51	46.8
Settlement type	City	98	89.9
	Town	11	10.1
Region	Cherkasy oblast	28	25.7
	Kharkiv oblast	27	24.8
	Ivano-Frankivsk oblast	25	22.9
	Kyiv City	29	26.6
Type of institution	College	13	11.9
	University	77	70.6
	Research institute	19	17.4
Net wage in the last month	Less than 1,000 UAH	11	10.1
	1,000–1,999 UAH	22	20.2
	2,000–3,999 UAH	48	44.0
	4,000–5,999 UAH	18	16.5
	6,000 UAH and more	7	6.4
	Not stated	3	2.8
Job satisfaction	Rather dissatisfied	2	1.8
	Neither satisfied nor dissatisfied	17	15.6
	Rather satisfied	62	56.9
	Very satisfied	28	25.7
Secondary job	Yes	40	36.7
	No	68	62.4
Financial status	Insufficient	2	1.8
	Barely sufficient	31	28.4
	Almost sufficient	51	46.8
	Sufficient	21	19.3
	More than sufficient	3	2.8
	Not stated	1	0.9

Table C.5: Composition of the sample of surveyed teachers – current migration (N=92)

	Category	N	Per cent
Age	20–29 years	11	12.0
	30–39 years	20	21.7
	40–55 years	53	57.6
	Over 55 years	8	8.7
Gender	Male	5	5.4
	Female	87	94.6
Marital status	Single	11	12.0
	Married	45	48.9
Education (highest degree)	Divorced/widowed	36	39.1
	Junior specialist	8	8.7
	Bachelor	12	13.0
	Specialist/master	71	77.2
	Candidate of sciences	1	1.1
Possess teaching qualification	Yes	86	93.5
	No	5	5.4
Teaching category before (last) migration	Specialist	31	33.7
	Specialist of the 2 nd category	15	16.3
	Specialist of the 1 st category	12	13.0
	Specialist of the highest category	19	20.7
	Other	4	4.4
	Not stated	11	12.0
Subject field (according to diploma)	Primary school	19	20.7
	Natural and mathematical sciences	20	21.7
	Humanities and social sciences	39	42.4
	Arts and health	6	6.5
	Technical subjects (PTU)	5	5.4
	Not stated	3	3.3
Teaching experience before (last) migration	Up to 10 years	53	57.6
	11–20 years	21	22.8
	21 years and more	12	13.0
	Not stated	6	6.5
Type of school before (last) migration	Primary school (I level)	13	14.1
	Basic and senior sec. school (II–III level)	24	26.1
	General secondary school (I–II or I–III level)	25	27.2
	Gymnasium, specialized school	17	18.5
	Vocational school	3	3.3
	Other	8	8.7

	Category	N	Per cent
Region before (last) migration	North	8	8.7
	Centre	7	7.6
	South	11	12.0
	East	16	17.4
	West	50	54.4
Number of migration periods since 2002	1	57	62.0
	2	13	14.1
	3–4	8	8.7
	5–20	6	6.5
	Not stated	8	8.7
Duration of last migration period	up to 1 year	13	14.1
	1–2 years	11	12.0
	2–5 years	29	31.5
	5–10 years	23	25.0
	10 years and more	13	14.1
	Not stated	3	3.3
Host country (last migration period)	Italy	51	55.4
	Russia	24	26.1
	Czech Republic	7	7.6
	Spain	3	3.3
	Poland	2	2.2
	Other*	5	5.5
Family abroad or in Ukraine	Alone (single)	16	17.4
	Alone, left family in Ukraine	50	54.4
	With a spouse OR children	17	18.5
	With a spouse AND children	7	7.6
	Not stated	2	2.2
Legal status abroad	Have residence permit	17	18.5
	Have both residence and work permits	39	42.4
	Have temporary registration (including automatic short-term registration as in Russia)	20	21.7
	Do not have any legal status (stay in the country irregularly)	15	16.3
	Citizen	1	1.1
Labour market status abroad	Wage earner employed by a legal entity	16	17.4
	Wage earner employed by a physical person/household	53	57.6
	Casual worker	8	8.7
	Self-employed/employer	4	4.3
	Unemployed/inactive	10	10.9

Note(s): *Other host countries include Austria, Bulgaria, UK, Cyprus and Kazakhstan. Geographical macro-regions are grouped as follows: *North* includes Zhytomyr, Kyiv, Sumy and Chernihiv oblasts; *Centre* stands for Vinnytsia, Kirovohrad, Poltava and Cherkasy oblasts; *South* includes the Crimean AR and Sevastopol, Mykolayiv, Odesa and Kherson oblasts; *East* includes Dnipropetrovsk, Donetsk, Zaporizhia, Luhansk and Kharkiv oblasts; *West* includes Volyn, Zakarpattia, Ivano-Frankivsk, Lviv, Rivne, Ternopil, Khmelnytskyi and Chernivtsi oblasts. Kyiv City is not included because there are no migrants from Kyiv.

Table C.6: Reasons for leaving Ukraine for the last time – teachers – current migration (number of answers, N=92))

	Reason 1	Reason 2	Reason 3	Total
To take advantage of higher income abroad	41	8	4	53
To improve standard of living of my family staying in Ukraine	18	20	3	41
To buy a house/apartment for my family/children	8	10	8	26
To take advantage of better opportunities for professional development and advancement by gaining work experience, training and access to the best facilities and technologies	6	8	2	16
To finance children's education	5	4	7	16
To accompany/follow spouse or parent	5	3	3	11
Don't like social, economic or political situation in Ukraine	1	5	5	11
To repay debts	1	5	4	10
To escape family problems (conflict with parent/divorce)	1	4	4	9
No future in Ukraine for myself and my children	3	1	5	9
To get education abroad	1	1	2	4
Other	1	1	2	4
Don't like climate/ecological environment in Ukraine	0	0	3	3

Note(s): Answers to the question: "Please give me the reasons for leaving Ukraine *for the last time*. Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)". Alternative "To invest in or start a business in Ukraine" is not shown as it has not been chosen by any respondent.

Table C.7: Reasons for choosing a particular country of destination – teachers – current migration (number of answers, N=92)

	Reason 1	Reason 2	Reason 3	Total
Have relatives/friends here	31	12	4	47
Better employment and/or income opportunities compared to other countries	20	8	5	33
Knowledge of language of this country	5	6	6	17
Geographical/cultural proximity of this country to Ukraine	3	9	3	15
Relatively low living costs compared to other countries	7	1	3	11
Not difficult to gain visa and work/residence permit	5	5	1	11
People are friendly to foreigners here	1	6	3	10
Not so difficult to enter this country irregularly	3	1	5	9
Other	7		2	9
Better educational opportunities compared to other countries	3	4		7
Had lived/worked here before	3	1	2	6
Professional qualifications of Ukrainian teachers are recognized here so it was possible to find a job in my field	1	1	2	4

Note(s): Answers to the question: "Why did you move to this particular country? Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)".

Table C.8: Composition of the sample of surveyed professors and researchers – current migration (N=57)

Category		N	Per cent
Age	20–29 years	11	19.3
	30–39 years	39	68.4
	40–55 years	7	12.3
Gender	Male	28	49.1
	Female	29	50.9
Marital status	Single	7	12.3
	Married	44	77.2
	Divorced/widowed	6	10.5
Education (highest degree)	Specialist/Master	12	21.1
	Candidate of sciences	11	19.3
	Doctor of sciences (including Ph.D.)	34	59.7

Category		N	Per cent
Country of last education	Ukraine	24	42.1
	USA	15	26.3
	Other	18	31.6
Field of studies	Mathematical sciences and engineering	10	17.5
	Natural sciences (including biotechnology)	7	12.3
	Languages	4	7.0
	Sociology and political science	8	14.0
	Economics	20	35.1
	Other social sciences	7	12.3
Academic title before (last) migration	Professor	1	1.8
	Associate professor	6	10.5
	Leading researcher	2	3.5
	No title	48	84.2
Teaching/research experience before (last) migration	No experience	22	38.6
	Up to 10 years	32	56.1
	15 years	2	3.5
	22 years	1	1.8
International cooperation	Have publications in international journals	14	24.6
	Took part in scientific events abroad	25	43.9
	Involved in joint research projects	18	31.6
	No cooperation	27	47.4
Region before (last) migration	North	2	3.5
	Centre	4	7.0
	South	3	5.3
	East	10	17.5
	West	8	14.0
	Kyiv City	30	52.6
Number of migration periods since 2002	1	39	68.4
	2	13	22.8
	3	3	5.3
	9–10	2	3.5

Category		N	Per cent
Duration of last migration period	up to 1 year	7	12.3
	1–2 years	4	7.0
	2–5 years	11	19.3
	5–10 years	24	42.1
	10 years and more	11	19.3
Host country (last migration period)	USA	18	31.6
	UK	9	15.8
	Canada	5	8.8
	Netherlands	4	7.0
	Germany	4	7.0
	Poland	3	5.3
	Spain	3	5.3
	Australia	2	3.5
	France	2	3.5
	Other*	7	12.3
Legal status abroad	Have residence permit	3	5.3
	Have both residence and work permits	38	66.7
	Have temporary registration	4	7.0
	Citizen	10	17.6
	Student visa	2	3.5
Labour market status abroad	Wage earner employed by a legal entity	45	79
	Other	4	7
	Unemployed/inactive	8	14

Note(s): *Other host countries include Italy, Portugal, Czech Republic, Switzerland, Slovenia, Sweden and Finland. Geographical macro-regions are grouped as follows: *North* includes Zhytomyr, Kyiv, Sumy and Chernihiv oblasts; *Centre* stands for Vinnytsia, Kirovohrad, Poltava and Cherkasy oblasts; *South* includes the Crimean AR and Sevastopol, Mykolayiv, Odesa and Kherson oblasts; *East* includes Dnipropetrovsk, Donetsk, Zaporizhia, Luhansk and Kharkiv oblasts; *West* includes Volyn, Zakarpattia, Ivano-Frankivsk, Lviv, Rivne, Ternopil, Khmelnytskyi and Chernivtsi oblasts.

Table C.9: Reasons for leaving Ukraine for the last time – professors and researchers – current migration (number of answers, N=57)

	Reason 1	Reason 2	Reason 3	Total
To take advantage of better opportunities for professional development and advancement by gaining work experience, training and access to the best facilities and technologies	22	6	0	28
To get education abroad	18	0	0	18
To take advantage of higher income abroad	7	1	1	9
Don't like social, economic or political situation in Ukraine	2	0	4	6
To accompany/follow spouse or parent	3	0	0	3
No future in Ukraine for myself and my children	3	0	0	3
Other*	2	1	0	3
To buy a house/apartment for my family/children	0	0	1	1

Note(s): Answers to the question: "Please give me the reasons for leaving Ukraine *for the last time*. Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)". * *Other* includes answers suggested by respondents, namely "got job at the university", "non-recognition of a Ph.D. degree and my academic skills in Ukraine", "no Ph.D. program in my field in Ukraine". The other alternatives presented in similar tables above have zero results.

Table C.10: Reasons for choosing a particular country of destination – professors and researchers – current migration (number of answers, N=57)

	Reason 1	Reason 2	Reason 3	Total
There are more acknowledged universities/research centres in my field compared to other countries	12	2	0	14
Better employment and/or income opportunities compared to other countries	12	0	1	13
Other	10	0	0	10
Knowledge of language of this country	5	1	2	8
Better educational opportunities compared to other countries	7	0	0	7
People are friendly to foreigners here	1	3	0	4
Have relatives/friends here	2	1	0	3
Not difficult to gain visa and work/residence permit	2	0	1	3
Had lived/worked here before	3	0	0	3
Geographical/cultural proximity of this country to Ukraine	1	0	1	2
Professional qualifications of Ukrainian researchers are recognized here so it was possible to find a job in my field	1	0	0	1

Note(s): Answers to the question: "Why did you move to this particular country? Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)". Alternatives "Relatively low living costs compared to other countries" and "Not so difficult to enter this country irregularly" are not shown as they were not chosen by any respondent.

Table C.11: Composition of the sample of surveyed teachers – return migration (N=200)

Category		N	Per cent
Age	20–29 years	25	12.5
	30–39 years	59	29.5
	40–55 years	109	54.5
	Over 55 years	7	3.5
Gender	Male	42	21.0
	Female	158	79.0
Marital status	Single	32	16.0
	Married	117	58.5
	Divorced/widowed	51	25.5
Education (highest degree)	Junior specialist	19	9.5
	Bachelor	17	8.5
	Specialist/Master	161	80.5
	Candidate of sciences	2	1.0
Possess teaching qualification	Yes	195	97.5
	No	3	1.5
Teaching category before (last) migration	Specialist	92	46.0
	Specialist of the 2 nd category	17	8.5
	Specialist of the 1 st category	55	27.5
	Specialist of the highest category	34	17.0
	Not stated	2	1.0
Subject field (according to diploma)	Primary school	44	22.0
	Natural and mathematical sciences	33	16.5
	Humanities and social sciences	76	38.0
	Arts and health	36	18.0
	Technical subjects (PTU)	6	3.0
	Not stated	5	2.5
Teaching experience before (last) migration	Up to 10 years	104	52.0
	11–20 years	58	29.0
	21 years and more	32	16.0
	Not stated	6	3.0
Type of school before (last) migration	Primary school (I level)	15	7.5
	Basic and senior sec. school (II–III level)	62	31.0
	General secondary school (I–II or I–III level)	80	40.0
	Gymnasium, specialized school	24	12.0
	Vocational school	11	5.5
	Other	7	3.5

Category		N	Per cent
Region before (last) migration	North	42	21.0
	Centre	33	16.5
	South	45	22.5
	East	20	10.0
	West	59	29.5
Number of migration periods since 2002	1	157	78.5
	2	21	10.5
	3–4	12	6.0
	5–20	4	2.0
	Not stated	6	3
Duration of last migration period	Up to 3 months	40	20.0
	4–11 months	52	26.0
	1–2 years	37	18.5
	2–5 years	54	27.0
	5–10 years	16	8.0
	10 years and more	1	0.5
Host country (last migration period)	Russia	54	27.0
	Poland	26	13.0
	Italy	26	13.0
	Germany	21	10.5
	USA	13	6.5
	Portugal	12	6.0
	Spain	10	5.0
	Czech Republic	8	4.0
	Israel	5	2.5
	Other*	24	12.0
Legal status abroad	Had residence permit	15	7.5
	Had both residence and work permits	73	36.5
	Had temporary registration	76	38.0
	Did not have any legal status (stayed in the country irregularly)	33	16.5
	Had short-term visa	2	1.0
Labour market status abroad	Wage earner employed by a legal entity	40	20.0
	Wage earner employed by a physical person/household	105	52.5
	Casual worker	33	16.5
	Self-employed	1	0.5
	Inactive	21	10.5

Note(s): *Other host countries include Belarus, Greece, Turkey, France, Bulgaria, Canada, China, Cyprus, UK, UAE, Slovakia, Denmark, Ireland, Cuba, Moldova and Finland. Geographical macro-regions are grouped as follows: *North* includes Zhytomyr, Kyiv, Sumy and Chernihiv oblasts; *Centre* stands for Vinnytsia, Kirovohrad, Poltava and Cherkasy oblasts; *South* includes the Crimean AR and Sevastopol, Mykolayiv, Odesa and Kherson oblasts; *East* includes Dnipropetrovsk, Donetsk, Zaporizhia, Luhansk and Kharkiv oblasts; *West* includes Volyn, Zakarpattia, Ivano-Frankivsk, Lviv, Rivne, Ternopil, Khmelnytskyi and Chernivtsi oblasts. Kyiv City is not included because there are no migrants from Kyiv.

Table C.12: Reasons for leaving Ukraine for the last time – teachers – return migration (number of answers, N=200)

	Reason 1	Reason 2	Reason 3	Total
To take advantage of higher income abroad	114	21	18	153
To improve standard of living of my family staying in Ukraine	32	79	16	127
To buy a house/apartment for my family/children	4	10	25	39
Didn't like social, economic or political situation in Ukraine	3	16	16	35
To take advantage of better opportunities for professional development and advancement by gaining work experience, training and access to the best facilities and technologies	18	11	3	32
To repay debts	5	9	18	32
To finance children's education	6	8	15	29
Other	5	6	7	18
Didn't see future in Ukraine for myself and my children	1	4	9	14
To accompany/follow spouse or parent	7	2	2	11
To get education abroad	1	4	2	7
To escape family problems (conflict with parent/divorce)	2	2	1	5
To invest in or start a business in Ukraine	0	0	5	5
Unemployment (layoff)	2	1		3

Note(s): Answers to the question: "Please give me the reasons for leaving Ukraine *for the last time*. Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)". Alternative "Didn't like climate/ecological environment in Ukraine" is not shown as it was not chosen by any respondent.

Table C.13: Reasons for return to Ukraine for the last time – teachers – return migration (number of answers, N=200)

	Reason 1	Reason 2	Reason 3	Total
Parents/spouse/children wanted me to return	42	29	6	77
Other family problems	20	21	27	68
Work permit/residence permit/visa expired	36	18	7	61
Homesickness	10	19	21	50
Employment contract expired and was not extended, end of season	34	9	3	46
I had no future in the destination country	10	12	20	42
I did not like the way of life there	11	6	11	28
Health problems	7	12	6	25

	Reason 1	Reason 2	Reason 3	Total
Problems with raising children left behind in Ukraine	5	12	8	25
Saved enough money	6	9	6	21
I did not like work abroad (unsatisfactory work conditions and/or low payment)	6	5	2	13
End of education or training	5	0	1	6
Retirement age, want to spend the rest of my life in my home country	1	4	1	6
Other	1	4	1	6
Wanted to start a business in Ukraine as soon as possible	0	5	0	5
Was laid off by employer because of economic crisis	2	0	1	3
I was needed in the family business/farm here	1	1	1	3
Was sent away by the authorities of the destination country	1	0	1	2
Fear of war/civil conflict/persecution in the destination country	1	1	0	2

Note(s): Answers to the question: "Talking about your (last) return to Ukraine, please give me the main reasons for it? Mark *no more than three major* reasons, starting from the most important reason (Reason 1) to the least important one (Reason 3)".

Annex D

*Findings from a similar research in Moldova*³¹

The project on “Effective Governance of Labour Migration and its Skill Dimensions” aimed at supporting migration management in Moldova and Ukraine. Therefore, the studies and researches carried out within the project were conducted in parallel in both countries. Even if it is not possible to make a direct comparison due to the different conditions in the countries of reference, it could be interesting to have an idea of what is happening in the same sector in the neighbouring country.

The challenges of the education system in Moldova include the following:

- decrease (by 39.6 per cent) in the total number of school pupils attending primary and general secondary education in the last decade; the number of schools decreased by 7.2 per cent; and the number of teachers was reduced by 11.8 per cent;
- demographic aging of the teaching staff: the share of teachers reaching the retirement age increased from 6.6 per cent in the 2001/2002 to 19.6 per cent in 2010/2011;
- difficulties in filling in teaching vacancies in rural areas;
- the number of pupils attending vocational schools decreased by 11 per cent, the number of schools by 12.5 per cent, whereas the number of teachers was reduced by no more than 5.6 per cent.

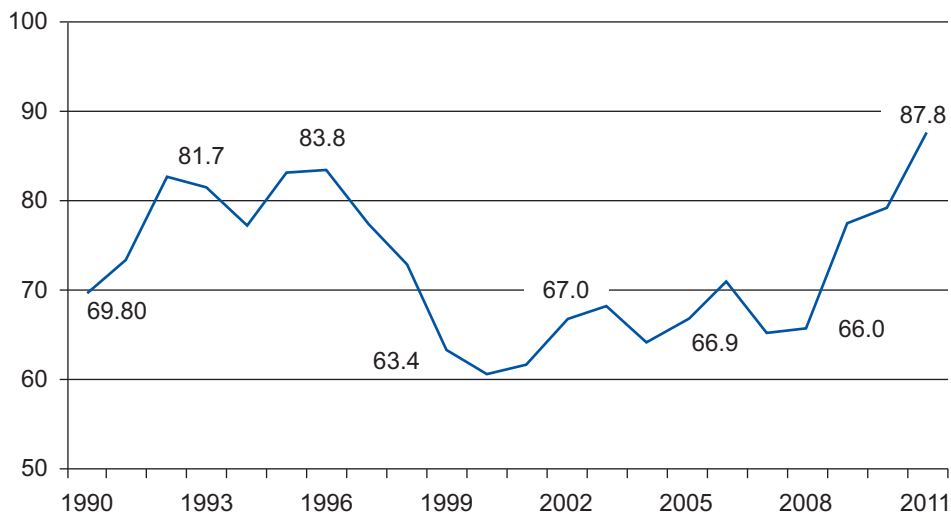
In this challenging environment, it is not surprising that 53.6 per cent of respondents have expressed the intention to migrate (40,3 per cent for temporary emigration for work, 7.9 per cent for permanent residence abroad and just over five per cent for study).

The higher migration intentions are expressed by: men of the 25–29 age group (67 per cent), single or divorced persons and teaching staff and researchers without teaching qualification and/or scientific degrees.

31. This section has been written by Francesco Panzica, international consultant on migration and employment, who provided expert support during implementation of the project in Moldova and Ukraine. The similar study in Moldova has been conducted in 2012. Cheianu-Andrei, D. (2013). *The impact of migration of teaching staff and researchers in Moldova* (ILO, Background Paper).

The main pushing factor for migration is the low level of wages/salaries: “*What could young graduates do with the salary they get? They cannot afford to start a family and to support it...*”. In fact, as shown in the figure below, the level of teachers wages, despite the sensible improvement in the last few years, are still far below the country average.

Figure 12: Ratio of teaching staff salary in relation to the average wage in Moldova (per cent)



Source: National Statistical Service of Moldova.

Other reasons indicated for justifying the intention to move were:

- lack of a dwelling place (25 per cent of teachers from pre-university level and 28 per cent of university teachers and researchers live in their friends/relatives’ house/flat, rent the house/flat or live in residence halls);
- lack of new lab supplies, especially for those working in the fields of physics, chemistry and informatics;
- lack of career development: “*There are high school principals that do not give their employees the possibility to progress and thus create ‘artificial obstacles’.*”

Mirroring the above pushing factors, the following act as pulling factors:

- possibility to improve family’s living conditions;
- better remuneration expected in the destination country; friends and relatives living abroad;
- opportunities for professional/career development by gaining experience, training and access to improved services;
- possibility to provide better educational opportunities to children.

Teachers and researchers who returned to Moldova have the following profile:

- the majority is 46–55 years old, married and some with children;
- most migrants returned from Italy and the Russian Federation, and a few from Greece, Spain, Portugal, Israel, Romania, Canada, USA and Turkey;
- the large majority of returnees have never looked for a job abroad in line with their profession, their main purpose being to improve the financial condition of their family: *“I knew where I was going to and I was well aware what job I was going to do abroad so I didn’t consider any other options. I did my job, got the money and came home”*.



ISBN 978-92-2-128091-0



9 789221 280910