

# **Target groups of the creative knowledge sector in the Poznan metropolitan region**

**A preparatory analysis for surveying the creative and knowledge economy**

ISBN 978-90-78862-01-7

Printed in the Netherlands by Xerox Service Center, Amsterdam

Edition: 2007

Cartography lay-out and cover: Puikang Chan, AMIDSt, University of Amsterdam

All publications in this series are published on the ACRE-website

**<http://www2.fmg.uva.nl/acre>**

and most are available on paper at:

Dr. Olga Gritsai, ACRE project manager

University of Amsterdam

Amsterdam institute for Metropolitan and International Development Studies (AMIDSt)

Department of Geography, Planning and International Development Studies

Nieuwe Prinsengracht 130

NL-1018 VZ Amsterdam

The Netherlands

Tel. +31 20 525 4044

+31 23 528 2955

Fax +31 20 525 4051

E-mail: [O.Gritsai@uva.nl](mailto:O.Gritsai@uva.nl)

Copyright © Amsterdam institute for Metropolitan and International Development Studies (AMIDSt), University of Amsterdam 2007. All rights reserved. No part of this publication can be reproduced in any form, by print or photo print, microfilm or any other means, without written permission from the publisher.

# **Target groups of the creative knowledge sector in the Poznan metropolitan region**

**A preparatory analysis for surveying the creative and knowledge economy**

**ACRE report [4.8]**

Tadeusz Strykiewicz

Emilia Grzywinska

Michal Meczynski

Krzysztof Stachowiak



Accommodating Creative Knowledge – Competitiveness of European Metropolitan Regions within the Enlarged Union

Amsterdam 2007

AMIDSt, University of Amsterdam

# ACRE

ACRE is the acronym for the international research project Accommodating Creative Knowledge – Competitiveness of European Metropolitan Regions within the enlarged Union.

The project is funded under the priority 7 ‘Citizens and Governance in a knowledge-based society within the Sixth Framework Programme of the EU (contract no. 028270).

Coordination:

## **Prof. Sako Musterd**

University of Amsterdam

Amsterdam institute for Metropolitan and International Development Studies (AMIDSt)

Department of Geography, Planning and International Development Studies

Nieuwe Prinsengracht 130

NL-1018 VZ Amsterdam

The Netherlands

Participants:

- **Amsterdam** (Amsterdam institute for Metropolitan and International Development Studies, University of Amsterdam, the Netherlands)  
Marco Bontje ~ Olga Gritsai ~ Heike Pethe ~ Bart Sleutjes ~ Wim Ostendorf ~ Puikang Chan
- **Barcelona** (Centre de Recerca en Economia del Benestar – Centre for Research in Welfare Economics, University of Barcelona, Spain)  
Montserrat Pareja Eastaway ~ Joaquin Turmo Garuz ~ Montserrat Simó Solsona ~ Lidia Garcia Ferrando ~ Marc Pradel i Miquel
- **Birmingham** (Centre for Urban and Regional Studies, University of Birmingham, UK)  
Alan Murie ~ Caroline Chapain ~ John Gibney ~ Austin Barber ~ Jane Lutz ~ Julie Brown
- **Budapest** (Institute of Geography, Hungarian Academy of Sciences, Hungary)  
Zoltán Kovács ~ Zoltán Dövényi ~ Tamas Egedy ~ Attila Csaba Kondor ~ Balázs Szabó
- **Helsinki** (Department of Geography, University of Helsinki, Finland)  
Mari Vaattovaara ~ Tommi Inkinen ~ Kaisa Kepsu
- **Leipzig** (Leibniz Institute of Regional Geography, Germany)  
Joachim Burdack ~ Günter Herfert ~ Bastian Lange
- **Munich** (Department of Geography, Ludwig-Maximilian University, Germany)  
Günter Heinritz ~ Sabine Hafner ~ Manfred Miosga ~ Anne von Streit
- **Poznan** (Institute of Socio-Economic Geography and Spatial Management, Adam Mickiewicz University, Poland)  
Tadeusz Stryjakiewicz ~ Jerzy J. Parysek ~ Tomasz Kaczmarek ~ Michal Meczynski
- **Riga** (Stockholm School of Economics in Riga, Latvia)  
Anders Paalzow ~ Diana Pauna ~ Vjacheslav Dombrovsky ~ Roberts Kilis ~ Arnis Sauka

- **Sofia** (Centre for Social Practices, New Bulgarian University, Bulgaria)  
Evgenii Dainov ~ Vassil Garnizov ~ Maria Pancheva ~ Ivan Nachev ~ Lilia Kolova
- **Toulouse** (Interdisciplinary Centre for Urban and Sociological Studies, University of Toulouse-II Le Mirail, Toulouse, France)  
Denis Eckert ~ Christiane Thouzellier ~ Elisabeth Peyroux ~ Michel Grossetti ~ Mariette Sibertin-Blanc  
~ Frédéric Leriche ~ Florence Laumière ~ Jean-Marc Zuliani ~ Corinne Siino ~ Martine Azam
- **Milan** (Department of Sociology and Social research, University degli Studi di Milan Bicocca, Italy)  
Enzo Mingione ~ Francesca Zajczyk ~ Elena dell’Agnese ~ Silvia Mugnano
- **Dublin** (School of Geography, Planning and Environmental Policy, University College Dublin, Ireland)  
Declan Redmond ~ Brendan Williams ~ Niamh Moore ~ Veronica Crossa ~ Martin Sokol

## TABLE OF CONTENTS

<b>1. Introduction .....</b>	<b>1</b>
<b>2. Creative and knowledge intensive workers (WP5).....</b>	<b>3</b>
2.1. Employees in creative industries .....	3
2.2. Employees in knowledge intensive industries .....	6
2.3. Selection of respondents .....	9
<b>3. Graduates (WP5).....</b>	<b>11</b>
3.1. General level of education of the active population .....	11
3.2. Graduates in Poland and the Poznan metropolitan region .....	12
3.3. Foreign students and graduates .....	14
3.4. Selection of respondents .....	16
<b>4. Managers .....</b>	<b>19</b>
4.1. Basic statistics .....	19
4.2. Selection of respondents .....	21
<b>5. Transnational immigrants (WP7) .....</b>	<b>23</b>
5.1. Problems with data on the foreign population in Poland .....	23
5.2. Foreigners in Poland and the Poznan metropolitan region according to the 2002 National Census .....	26
5.3. Selection of respondents .....	29

## 1. INTRODUCTION

The aim of the report is analysis of the creative knowledge sector in the Poznan metropolitan region in order to select respondents for the future survey (WP 5, 6 and 7). Following the decision of the ACRE project coordination team, six sub-sectors are going to be surveyed.

These are:

### 1. Creative industries:

- Architecture,
- ICT services (software branch),
- Video, film, music and photography,

### 2. Knowledge intensive industries:

- Law and other business services,
- R&D and higher education,
- Finance.

The analysis includes the following target groups:

- Employees in creative industries,
- Employees in knowledge intensive industries,
- Graduates,
- Managers,
- Transnational immigrants.

The report presents the principles of a selection of respondents in each of those groups and identifies existing and potential difficulties (e.g. with obtaining the reliable data on transnational migrants). Each chapter concludes with a selection scheme.





## **2. CREATIVE AND KNOWLEDGE INTENSIVE WORKERS (WP5)**

### **2.1. Employees in creative industries**

In 2001 there were 6,924 creative entities in the Poznan metropolitan region. They constituted 1.4 per cent of all businesses in the region. By 2005 the figure grew to 9,313, i.e. by 25 per cent, while the proportion of the creative units increased to 1.7 per cent. The proportion of those firms was higher in the city than in the poviát, although the difference had narrowed over the study period.

In 2005 the highest proportion of creative entities was contributed by architectural micro-firms employing a staff of up to 10 (27.5 per cent, Table 1). They were largely located in Poznan (more than 80 per cent). The concentration of this type of activity in the city was due to a substantial upswing on the Poznan housing market in the years 2001-2005. The appearance of new housing estates and an expanding real-estate trade boosted the growth of firms connected with the building industry, including architectural ones. Among other establishments important for creative industries were also those engaged in arts/antiques trade. However, a detailed analysis revealed that most of them dealt with trade only, hence not all can be considered creative. A small group of creative entities in the sectors of music and the visual and performing arts (641 units) as well as video, film, music and photography (413 units) undoubtedly influences the city's social development, but it is not strong enough to play a significant role in determining Poznan's chief functions.

**Table 1. Creative firms in the Poznan metropolitan region in 2005 by sub-sectors and spatial units**

(a) Number of firms

Sub-sector	Poznan city	Poznan powiat	PMR total
Advertising	1,122	294	1,416
Architecture	2,052	509	2,561
Arts/antiques trade	1,688	669	2,357
Crafts	535	879	1,414
Music and the visual and performing arts	486	155	641
Publishing	429	82	511
Video, film, music and photography	317	96	413
Total	6,629	2,684	9,313

(b) Share of spatial units, in per cent

Sub-sector	Poznan city	Poznan powiat	PMR total
Advertising	79.2	20.8	100.0
Architecture	80.1	19.9	100.0
Arts/antiques trade	71.6	28.4	100.0
Crafts	37.8	62.2	100.0
Music and the visual and performing arts	75.8	24.2	100.0
Publishing	84.0	16.0	100.0
Video, film, music and photography	76.8	23.2	100.0
Total	71.2	28.8	100.0

(c) Share of sub-sectors, in per cent

Sub-sector	Poznan city	Poznan powiat	PMR total
Advertising	16.9	11.0	15.2
Architecture	31.0	19.0	27.5
Arts/antiques trade	25.5	24.9	25.3
Crafts	8.1	32.7	15.2
Music and the visual and performing arts	7.3	5.8	6.9
Publishing	6.5	3.1	5.5
Video, film, music and photography	4.8	3.6	4.4
Total	100.0	100.0	100.0

*Source: own calculations based on data provided by the Statistical Office in Poznan*

**Table 2. Employment in creative industries in the Poznan metropolitan region by sub-sectors and spatial units, 2001-2005**

(a) Number of employees

Sub-sector	Poznan city		Poznan powiat		PMR total	
	2001	2005	2001	2005	2001	2005
Advertising	2,506	3,511	394	460	2,900	3,971
Architecture	5,484	5,487	475	776	5,959	6,263
Arts/antiques trade	4,603	5,686	1,515	2,117	6,118	7,803
Crafts	3,110	3,868	4,665	5,092	7,775	8,960
Music and the visual and performing arts	3,540	3,814	742	929	4,282	4,743
Publishing	2,195	2,466	140	178	2,335	2,644
Video, film, music and photography	684	749	135	164	819	913
Total	22,122	25,581	8,066	9,716	30,188	35,297

(b) Share of total employment, in per cent

Sub-sector	Poznan city		Poznan powiat		PMR total	
	2001	2005	2001	2005	2001	2005
Advertising	0.7	0.9	0.4	0.3	0.6	0.7
Architecture	1.5	1.4	0.4	0.6	1.2	1.2
Arts/antiques trade	1.2	1.4	1.3	1.6	1.3	1.5
Crafts	0.8	1.0	4.1	3.8	1.6	1.7
Music and the visual and performing arts	1.0	0.9	0.7	0.7	0.9	0.9
Publishing	0.6	0.6	0.1	0.1	0.5	0.5
Video, film, music and photography	0.2	0.2	0.1	0.1	0.2	0.2
Total	5.9	6.4	7.2	7.3	6.2	6.6

(c) Change 2001-2005, in per cent

Sub-sector	Poznan city	Poznan powiat	PMR total
Advertising	40.1	16.8	36.9
Architecture	0.1	63.4	5.1
Arts/antiques trade	23.5	39.7	27.5
Crafts	24.4	9.2	15.2
Music and the visual and performing arts	7.7	25.2	10.8
Publishing	12.3	27.1	13.2
Video, film, music and photography	9.5	21.5	11.5
Total	15.6	20.5	16.9

*Source: own calculations based on data provided by the Statistical Office in Poznan*

In the years 2001-2005, the growth in the number of firms of creative industries in the PMR was accompanied by an increase in their employment by nearly 15 per cent (from 30,188 in 2001 to 35,297 in 2005; Table 2). In a spatial approach, the dominant role in this development was played by Poznan city, which accounted for the largest number of creative workers (72.5 per cent). A substantial proportion of them were employed in handicraft micro-firms (25 per cent), this time mostly located in Poznan powiat (more than 30 per cent), mainly in Swarzedz with its furniture handicraft. Another sector contributing a high percentage to creative

employment was arts/antiques trade (1.5 per cent). The small group of people working in the video, film, music and photography sector was not enough to develop Poznan's cultural functions in such a way as to allow the city to compete with the chief centres of artistic life in Poland, like Warsaw or Cracow.

## **2.2. Employees in knowledge intensive industries**

In 2001 there were 8,376 knowledge intensive entities in the Poznan metropolitan region. They constituted 1.7 per cent of all businesses in the region. By 2005 the figure grew to 12,924 and the proportion of the knowledge intensive units increased to 2.4 per cent of all businesses. It shows this group of entities to have a higher growth dynamics (32 per cent) than creative firms (25 per cent) over the same period. In spatial terms, there was a striking similarity in location preferences of the two sectors: both tended to locate in Poznan city.

In 2005 the largest group among knowledge intensive firms were micro-units belonging to the sectors of Law and other business services (6,394) and Financial intermediation (3,951; Table 3). Those businesses were mostly located in Poznan. Their operation was associated with the many public administration offices and financial institutions based in the city. The smallest group among knowledge intensive industries was composed of entities of the R&D and higher education sector (186), and ICT manufacturing (493). However, the number of economic entities does not fully reflect the role of those sectors in the PMR; of greater significance is their employment.

**Table 3. Knowledge intensive firms in the Poznan metropolitan region in 2005 by sub-sectors and spatial units**

(a) Number of firms

Sub-sector	Poznan city	Poznan powiat	PMR total
Financial intermediation	3,020	931	3,951
ICT manufacturing	398	95	493
ICT services	1,513	390	1,903
Law and other business services	4,835	1,559	6,394
R&D and higher education	156	30	186
Total	9,922	3,005	12,927

(b) Share of spatial units, in per cent

Sub-sector	Poznan city	Poznan powiat	PMR total
Financial intermediation	76.4	23.6	100.0
ICT manufacturing	80.7	19.3	100.0
ICT services	79.5	20.5	100.0
Law and other business services	75.6	24.4	100.0
R&D and higher education	83.9	16.1	100.0
Total	76.8	23.2	100.0

(c) Share of knowledge intensive sub-sectors, in per cent

Sub-sector	Poznan city	Poznan powiat	PMR total
Financial intermediation	30.4	31.0	30.6
ICT manufacturing	4.0	3.2	3.8
ICT services	15.2	13.0	14.7
Law and other business services	48.7	51.9	49.5
R&D and higher education	1.6	1.0	1.4
Total	100.0	100.0	100.0

*Source: own calculations based on data provided by the Statistical Office in Poznan*

In the years 2001-2005 the increase in the number of knowledge intensive entities was accompanied by a rise in their employment (41,292 and 58,963 respectively). The most dynamic growth in terms of employment - 37 per cent - was registered in ICT services (Table 4). Even so, the highest employment in 2005 was recorded in the sectors of Law and other business services, and R&D and higher education. The high employment in the latter section is due to the fact that there are many higher schools and R&D units based in Poznan. The large group of scholars and scientists working in them determine the nature and principal functions of the city.

**Table 4. Employment in knowledge intensive sectors in the Poznan metropolitan region by sub-sectors and spatial units, 2001-2005**

(a) Number of employees

Sub-sector	Poznan city		Poznan powiat		PMR total	
	2001	2005	2001	2005	2001	2005
Financial intermediation	7,176	7,733	1,013	1,270	8,189	9,003
ICT manufacturing	3,026	2,090	301	603	3,327	2,693
ICT services	1,958	4,595	262	673	2,220	5,268
Law and other business services	11,456	20,534	1,373	3,155	12,829	23,689
R&D and higher education	14,552	18,125	175	185	14,727	18,310
Total	38,168	53,077	3,124	5,886	41,292	58,963

(b) Share of total employment, in per cent

Sub-sector	Poznan city		Poznan powiat		PMR total	
	2001	2005	2001	2005	2001	2005
Financial intermediation	1.9	1.9	0.9	1.0	1.7	1.7
ICT manufacturing	0.8	0.5	0.3	0.5	0.7	0.5
ICT services	0.5	1.1	0.2	0.5	0.5	1.0
Law and other business services	3.1	5.1	1.2	2.4	2.6	4.4
R&D and higher education	3.9	4.5	0.2	0.1	3.0	3.4
Total	10.3	13.2	2.8	4.4	8.5	11.0

(c) Change 2001-2005, in per cent

Sub-sector	Poznan city	Poznan powiat	PMR total
Financial intermediation	7.8	25.4	9.9
ICT manufacturing	-30.9	100.3	-19.1
ICT services	134.7	156.9	137.3
Law and other business services	79.2	129.8	84.7
R&D and higher education	24.6	5.7	24.3
Total	39.1	88.4	42.8

*Source: own calculations based on data provided by the Statistical Office in Poznan*

In 2005 the knowledge intensive industries with the lowest employment levels in the PMR included ICT manufacturing and ICT services (2,693 and 5,268 workers, respectively). Moreover, the sector of ICT manufacturing registered a drop. This concerned the core city and resulted from structural changes of enterprises. For instance, Alcatel-Teletra, which had a staff of more than 250 in 2001, had moved its headquarters to Warsaw and cut employment down to about 50 people, which was a serious reduction affecting the statistics. Those modest figures notwithstanding, the ICT services sector as such displayed the highest growth dynamics, which resulted from the high rate of informatisation of PMR inhabitants. This seems to be the beginning of the future direction of development of the region's economy; an economy based on free information exchange owing to the use of ICT.

### 2.3. Selection of respondents

Chapters 2.2 and 2.3 characterised the creative sectors in the PMR as divided into (1) creative and (2) knowledge intensive industries. This helped to establish which of them were the largest in terms of number of entities and employment.

The survey research methodology adopted in the ACRE project assumes the choice of the same employment-strong creative sectors by all the project participants. In the case of the PMR, the sectors listed in the project methodology were not always those with the highest employment, which is largely due to the generally lower level of socio-economic development in the metropolises of the new UE members. Still, the tendencies observed in some of the PMR sectors selected for the project seem to indicate that in the future they, too, are going to perform a dominant role in the region (e.g. the high growth dynamics of employment in ICT services). Therefore, also the newcomers are justified in including them in the survey.

**Table 5. Selection of interviewees by sector and spatial distribution**

Group	Sector	Employees	Inter- viewees	Spatial distribution of interviewees			
				Inner city	Rest of city	Suburban sub-centres	Other localities of suburban region
Creative industries	Architecture	6,263	37	19	9	6	3
	ICT services*	5,268	31	16	9	4	3
	Video, film, music and photography	913	7	2	1	2	1
Knowledg e intensive industries	Law and other business services	23,689	35	18	9	5	3
	R&D and higher education	18,310	27	14	7	4	2
	Financial intermediation	9,003	13	7	3	2	1

\*Interviewees will be selected from the software branch only (a part of ICT services)

In Table 5 the number of interviewees in each sector is identified by its size (employment) and location. Since there were spatial differences in the number of employees among the selected sectors, the survey will also reflect them.





### 3. GRADUATES (WP5)

#### 3.1. General level of education of the active population

Education is increasingly being seen in Poland as a kind of investment assuring a better job and more money, preventing unemployment, and boosting one's social prestige. This statement is corroborated by the growing proportions of the population with higher education and that starting higher studies. In 1999 higher education was declared by 8.5 per cent of the working population, i.e. aged 15 and over. In 2002 this figure increased to 10.2 per cent, while in 2006 it reached 14.1 per cent.

As to the Poznan metropolitan region, according to the 2002 National Census data, 17.3 per cent of its inhabitants had higher education. Characteristically enough, the proportion was much higher in the city than in the poviats: 20.1 per cent in the city as against a mere 10.7 per cent in the poviats (Table 6).

**Table 6. Economically active population aged 15 and over in the Poznan metropolitan region by education, 2002**

Education level	Poznan city	Poznan poviats	PMR total
(a) Number of economically active population			
Higher	100,360	22,915	123,275
Post-secondary and secondary	206,725	64,124	270,849
Vocational	97,287	68,608	165,895
Primary completed and incomplete; no schooling	85,827	57,391	143,218
Total	499,548	213,661	713,209
(b) In per cent			
Higher	20.1	10.7	17.3
Post-secondary and secondary	41.4	30.0	38.0
Vocational	19.5	32.1	23.3
Primary completed and incomplete; no schooling	17.2	26.9	20.1
Total	100	100	100

*Source: own compilation based on "Poznan city in the light of 2002 National Census results", Statistical Office, Poznan 2005*

**Table 7. Employment in Poznan by education, 2002 (in per cent)**

	Total	higher	post-secondary and secondary	vocational	primary completed and incomplete; no schooling
Total employment	100	32.1	42.2	21.0	4.7
Females	100	33.8	46.2	14.8	5.2
Males	100	30.5	38.5	26.8	4.2

*Source: own compilation based on "Poznan city in the light of 2002 National Census results", Statistical Office, Poznan 2005*

The economically active population is a fairly broad category taken to include those who are employed, those out of work, and those who do not actively seek work. Taking into consideration only the working group, the ratio of people with higher education in Poznan rises to 32.1 per cent of total employment (Table 7). Among working females this figure was 33.8 per cent, as against 30.5 per cent for males.

### **3.2. Graduates in Poland and the Poznan metropolitan region**

In 2005, 391,500 students graduated from higher schools in Poland, including 129,200 from non-public schools. Master's studies were completed by 109,800 graduates (i.e. 28.0 per cent of the total), and professional schools by 177,800 graduates (45.4 per cent), including 33,100 with an engineering degree and 144,700 with a licentiate.

The largest proportion of graduates (58.3 per cent) were those of the Social science, economics and law group. In Engineering and computer science their proportion was 10.8 per cent, in Arts and humanities - 7.9 per cent, and in Services, transport and environment - 5.1 per cent (Table 8).

**Table 8. Higher school graduates in Poland in 2005 by direction of study and type of school**

(a) By direction

Direction	Graduates			
	Number	%	of which immigrants	
			Number	% graduates
Social science, economics and law	227,930	58.3	627	0.3
Engineering and computer science	42,355	10.8	73	0.2
Arts and humanities	30,956	7.9	300	1.0
Services, transport, environment	20,059	5.1	35	0.2
Medicine	12,935	3.3	242	1.9
Science	11,434	2.9	13	0.1
Other	45,534	11.6	36	0.1
Total	391,203	100.0	1,326	0.3

(b) By type of school

Type of school	Graduates			
	Number	%	of which immigrants	
			Number	% graduates
Universities	116,811	29.8	629	0.5
Economic	94,867	24.2	215	0.2
Technical	56,298	14.4	93	0.2
Agricultural	18,376	4.7	66	0.4
Medical	7,759	2.0	183	2.4
Fine Arts	2,671	0.7	26	1.0
Other schools of higher learning	94,683	24.2	114	0.1
Total	391,465	100.0	1,326	0.3

Source: own calculations based on "Higher schools and their finance in 2005", GUS, Warszawa 2006

When analysing the graduates by type of school, worth noting is the fact that the biggest group studied at universities - 29.8 per cent. A further 24.2 per cent graduated from economic schools and 14.4 per cent from technical schools. Graduates of arts schools constituted 0.7 per cent.

As to the Arts type of studies, the number of their graduates in 2005 was 3,236, or 0.8 per cent of the total. The largest proportion among them, 73.4 per cent, graduated from fine arts schools (Table 9). Architecture was studied by 7,328 graduates, or 1.9 per cent. Most of them, 73.8 per cent, graduated from technical schools.

**Table 9. Graduates of fine arts and architecture in Poland, 2005**

Type of school	Direction					
	Arts			Architecture		
	Number	%	of which number of immigrants	Number	%	of which number of immigrants
Fine Arts	2,376	73.4	24	0	0.0	0
Universities	724	22.4	8	756	10.3	0
Technical	74	2.3	0	5,409	73.8	14
Economic	62	1.9	0	374	5.1	1
Agricultural	0	0.0	0	652	8.9	0
Other schools of higher learning	0	0.0	0	137	1.9	0
Total	3,236	100.0	32	7,328	100.0	15

Source: own calculations based on "Higher schools and their finance in 2005", GUS, Warszawa 2006

In Poznan there were 29,468 graduates in 2005, 65.4 per cent of them female. The largest proportion, 35.6 per cent, left economic schools (of which 37.6 per cent studied at the University of Economics). Female graduates of economic schools contributed 68.9 per cent. The proportion of Adam Mickiewicz University graduates was 30.1 per cent (74.4 per cent of them being female), of the Poznan Technical University - 11.1 per cent (24.7 per cent females), the Agricultural University - 7.8 per cent (58.0 per cent females), and the Medical University - 3.8 per cent (84.6 per cent females). The percentage of those who completed arts schools was 1.5 (64.5 per cent females), nearly half of whom were graduates of the region's largest arts school.

### 3.3. Foreign students and graduates

There is an ever growing group of foreigners interested in studying in Poland. While in 1992 there were a total of 4,976 foreign students at Polish higher schools, in 2006 their number increased to 10,092 (Table 10).

**Table 10. Immigrants - students and graduates of higher schools in Poland by type of school in 2005**

Type of school	Total		In per cent	
	Students	Graduates	Students	Graduates
Universities	3,703	629	36.7	47.4
Technical	780	93	7.7	7.0
Agricultural	239	66	2.4	5.0
Economic	1,793	215	17.8	16.2
Medical	2,466	183	24.4	13.8
Fine arts	204	26	2.0	2.0
Other	907	114	9.0	8.6
Total	10,092	1,326	100	100

Source: Central Statistical Office

According to Central Statistical Office data, in 2006 most foreigners were enrolled at universities - 3,700 (36.7 per cent), medical schools - 2,500 (24.4 per cent), and economic schools - 1,800 (17.8 per cent). The types of study most popular with foreign students were medical - 2,900 persons, economic and administrative - 1,700, social - 1,500, and the humanities - 1,400. This was a change from 1991 when most foreigners were enrolled in technical studies - 1,400 persons, medical studies - 1,200, and the humanities - 600.

As many as 66.3 per cent of foreign students came from European countries, most of them from Ukraine (29.1 per cent) and Belarus (19.9 per cent). There was also a sizeable group of students from Norway, Lithuania, Russia, and Germany. Among non-European nationals enrolled at Polish universities 18.7 per cent came from Asia, 10.1 per cent from North and Central America, 4.1 from Africa, and 0.2 from Australia and Oceania.

At 1,326, foreign graduates in Poland constituted a mere 0.3 per cent of all the graduates who completed their studies in 2005. Out of this number the largest group (47.4 per cent) studied at universities (0.5 per cent of total university graduates). Technical schools accounted for 16.2 per cent and medical schools for 13.2 per cent of foreign graduates. In the case of medical schools, the proportion of foreigners in the total number of graduates by school was the highest and equaled 2.4 per cent. In turn, arts schools released 26 foreign graduates, or 1.0 per cent of the total.

Graduates of economic-administrative studies were the largest group among foreigners - 269 persons (20.3 per cent), followed by those of the humanities - 268 (20.2 per cent), medical studies - 241 (18.2 per cent), and social science - 213 (16.1 per cent). By comparison, in 1991 out of the total number of 248 foreign graduates most - 54.0 per cent - completed technical studies.

European countries were the homes of 77.7 per cent of graduates, of which 66.3 per cent came from Ukraine, Belarus and Lithuania combined. The other continents contributed the following figures: Asia, 12.2 per cent; North and Central America, 7.7 per cent; Africa, 1.5 per cent; and Australia and Oceania, 0.5 per cent.

As to Poznan, there is a growing number of foreign students seeking education in the city. In 2005 there were 937 foreigners from a total of 64 countries of the world enrolled in Poznan schools. This is 9.3 per cent of foreigner studying in Poland. Every second foreign student came from a European country, every fourth from North America, and every fifth from Asia. By country of origin, the largest groups came from the United States - 19.0 per cent (178), Norway - 14.4 per cent (135), Germany - 10.0 per cent (94), Taiwan - 8.6 per cent (81), Ukraine - 8.5 per cent (80), Belarus - 8.1 per cent (76), and Canada - 7.5 per cent (70). The school most popular with foreigners was the Poznan Medical University, which accounted for nearly half of the foreign enrolment (48.0 per cent). Medical studies were predominantly the choice of young Americans, Canadians, Norwegians and the Taiwanese. The next 20 per cent studied at Adam Mickiewicz University, 14.6 per cent at the University of Economics, and 11.2 per cent at the Poznan Technical University.

**Table 11. Immigrants - students and graduates of higher schools in Poznan by type of school in 2005**

Type of school	Students		Graduates	
	total	of which females	total	of which females
(a) Total				
Universities (Adam Mickiewicz University)	187	113	17	11
Technical	105	8	7	1
Agricultural	6	3	–	–
Economic	137	76	16	10
Medical	450	224	44	10
Fine arts	13	7	1	–
Other	39	14	2	1
Total	937	445	87	33

(b) In per cent

Universities (Adam Mickiewicz University)	20.0	25.4	19.5	33.3
Technical	11.2	1.8	8.0	3.0
Agricultural	0.6	0.7	–	–
Economic	14.6	17.1	18.4	30.3
Medical	48.0	50.3	50.6	30.3
Fine arts	1.4	1.6	1.1	–
Other	4.2	3.1	2.3	3.0
Total	100	100	100	100

*Source: Central Statistical Office*

There were 87 foreign graduates in Poznan in 2005. Most, 50.4 per cent, left the Medical University. Only one foreign student graduated from a fine arts academy (Table 11).

### **3.4. Selection of respondents**

The number of graduates to be interviewed was defined on the basis of the total number of students graduating from higher schools by direction of study (Table 12). Because the ACRE project methodology excludes medical studies, their graduates were not taken into account. Since all higher schools of the Poznan metropolitan region are situated in Poznan itself, the spatial scope of the survey will be limited to the city. The choice of interviewees will be based on the data supplied by Graduate Clubs operating in the individual schools and, wherever possible, lists of graduates of the various university faculties.

**Table. 12. Selection of graduate interviewees**

University graduates (25 interviewees)

Direction	Interviewees
Social science, economics and law	15
Engineering and computer science	3
Arts and humanities	2
Services, transport, environment	1
Science	1
Others	3
Total	25

Art/media school graduates (25 interviewees)

Direction	Interviewees
Arts	8
Architecture	17
Total	25





## **4. MANAGERS**

### **4.1. Basic statistics**

Owing to the ISCO-88 statistics on occupational groups collected in Poland, it is possible to determine the number of persons in managerial positions in the PMR. It is also possible to define spatial differences in their distribution in terms of the city/poviat location of their firms.

**Table 13. Structure of employment in the Poznan metropolitan region in 2005 by occupation and spatial units**

(a) Number of employees

Occupation group by ISCO-88	Poznan city	Poznan poviat	PMR total
Legislators, senior officials and managers	9,755	3,319	13,074
Professionals	50,942	8,680	59,622
Technicians and associate professionals	27,975	5,163	33,138
Clerks	27,426	5,916	33,342
Service workers and shop and market sales workers	13,184	12,749	25,933
Skilled agricultural and fishery workers	397	450	847
Craft and related trades workers	22,947	9,003	31,950
Plant and machine operators and assemblers	14,657	6,941	21,598
Elementary occupations	17,030	5,433	22,463
Total	184,313	57,654	241,967

(b) Share of spatial units, in per cent

Occupation group by ISCO-88	Poznan city	Poznan poviat	PMR total
Legislators, senior officials and managers	74.6	25.4	100.0
Professionals	85.4	14.6	100.0
Technicians and associate professionals	84.4	15.6	100.0
Clerks	82.3	17.7	100.0
Service workers and shop and market sales workers	50.8	49.2	100.0
Skilled agricultural and fishery workers	46.9	53.1	100.0
Craft and related trades workers	71.8	28.2	100.0
Plant and machine operators and assemblers	67.9	32.1	100.0
Elementary occupations	75.8	24.2	100.0
Total	76.2	23.8	100.0

(c) Proportion of occupation groups, in per cent

Occupation group by ISCO-88	Poznan city	Poznan poviat	PMR total
Legislators, senior officials and managers	5.3	5.8	5.4
Professionals	27.6	15.1	24.6
Technicians and associate professionals	15.2	9.0	13.7
Clerks	14.9	10.3	13.8
Service workers and shop and market sales workers	7.2	22.1	10.7
Skilled agricultural and fishery workers	0.2	0.8	0.4
Craft and related trades workers	12.5	15.6	13.2
Plant and machine operators and assemblers	8.0	12.0	8.9
Elementary occupations	9.2	9.4	9.3
Total	100.0	100.0	100.0

*Source: own calculations based on data provided by the Statistical Office in Poznan*

In 2005 the number of people holding managerial jobs in the PMR defined in the statistics as legislators, senior officials and managers amounted to 13,074 (Table 13), being one of the smallest occupational groups (5.4 per cent). Because establishments offering this kind of jobs are mostly located in Poznan, the managers also concentrated in the city (74.6 per cent).

#### 4.2. Selection of respondents

It was established, in accordance with the ACRE project methodology, that interviews would be conducted with 20 people occupying managerial positions in units of the creative sector (Table 14). The number of planned interviews is proportional to the number of those units. A similar division of interviews was made in terms of their city/poviat location.

**Table 14. Selection of managers**

Group	Sector	Firms	Inter-viewees	Spatial distribution of interviewees			
				Inner city	Rest of city	Suburban sub-centres	Other localities of suburban region
Creative industries	Architecture	2,561	3	1	1	1	0
	ICT services*	1,903	2	1	1	0	0
	Video, film, music and photography	413	2	1	1	0	0
Knowledge intensive industries	Law and other business services	6,394	6	3	2	1	0
	Financial intermediation	3,951	5	3	1	1	0
	R&D and higher education	186	2	1	1	0	0

\*Interviewees will be selected from the software branch only (a part of ICT services)



## 5. TRANSNATIONAL IMMIGRANTS (WP7)

### 5.1. Problems with data on the foreign population in Poland

Official data supplied by such international institutions as the World Bank (Migration and Remittances, [www.worldbank.org/prospects/migrationandremittances](http://www.worldbank.org/prospects/migrationandremittances)), the OECD (International Migration Data 2006, [www.oecd.org/migration](http://www.oecd.org/migration)), and the United Nations (UN Population Division, 2006. Trends in Total Migrant Stock: The 2005 Revision. POP/DB/MIG/ Rev. 2005, <http://esa.un.org/migration/index.asp?panel=2>), as well as data coming from other sources, e.g. the Migration Information Source (<http://www.migrationinformation.org/wmm/europe.cfm#>) report, after the crude, wrongly interpreted data of the 2002 National Census of the Population and Housing (NCPH), that there were more than 700,000 immigrants in Poland, or 1.8 per cent of the population. This figure is in striking contrast to the ultimate NCPH data and those of the Office for Repatriation and Aliens, which state their number at about 40,000. The gross overestimation made by the international institutions results from an erroneous interpretation of the Census results which can spring from two sources:

(1) The group of immigrants was treated by them as embracing people with citizenship other than Polish, and their number was calculated as the difference between total population and that with Polish citizenship. However, the group might have included people with unknown citizenship or those who simply did not report it to the census taker. Nearly 95 per cent of the alleged 700,000 immigrants were people of non-specified citizenship (cf. Foreign migrations of the population, 2002, Table 74, p. 288). They were simply mostly Poles who were absent during the census taking.

(2) The group of respondents treated as immigrants could include those born abroad. The above-mentioned sources report that there are 770,000 foreign-born residents in Poland - implied immigrants. They rest on the data published in "Foreign migrations of the population: The 2002 National Census of the Population and Housing" (see Table 15). What they fail to explain, however, is that this group is mostly composed of older people who were born in formerly Polish areas now belonging to Ukraine or Belarus (hence the estimate of more than 300,000 Ukrainians living in Poland). Thus, in this case those classed as immigrants were Poles who found themselves outside the Polish state as a result of the eastern boundary moving westward in 1945 and who then moved to its newly demarcated territory. The statistics categorise them as foreign-born because the reference system is the present-day division of the world. Thus, for example, among the people who were 55 or older at the census moment (i.e. born before 1947), 294,000 were born in Ukraine, which accounted for 95 per cent of all those born in today's Ukraine and living in Poland (Table 15).

**Table 15. Poland's population by country of birth, 2002**

Country of birth	Total	Age							
		0-14	15-24	25-34	35-44	45-54	55-64	65 and over	unspecified
Total	38,230,080	6,941,652	6,440,675	5,356,006	5,353,622	5,881,689	3,399,317	4,852,600	4,519
Polish-born	36,871,281	6,837,037	6,339,677	5,239,471	5,232,054	5,741,786	3,110,136	4,369,134	1,986
Foreign-born	775,282	37,543	12,073	13,036	15,754	39,503	238,490	418,836	47
of which:									
Ukraine	309,131	853	1,174	2,271	2,670	8,269	88,563	205,319	12
Belarus	104,463	286	371	840	1,496	9,098	29,536	62,835	1
Germany	101,633	11,401	1,444	655	403	1,099	53,490	33,136	5
Lithuania	79,769	128	147	437	813	6,875	25,083	46,283	3
Russia	54,226	579	819	1,072	1,851	5,633	15,847	28,423	2
France	34,634	2,092	409	335	211	656	9,664	21,267	-
USA	9,004	3,667	734	311	276	126	56	3,834	-
Czech Republic	6,200	240	447	636	306	547	1,802	2,222	-
Austria	4,312	1,466	227	36	35	33	2,075	439	1
Italy	4,292	3,293	170	102	119	133	251	224	-
Other countries	42,491	9,531	3,142	3,021	3,833	3,657	8,886	10,412	9
Unspecified country	18,390	2,896	2,126	2,196	2,206	2,613	2,542	3,802	9
Unspecified place of birth	583,517	67,072	88,925	103,499	105,814	100,400	50,691	64,630	2,486

*Source: Foreign migrations of the population, 2002, GUS, Warszawa 2003, p. 312*

The above problems with the interpretation of the Polish data presented by the international institutions make their information radically different from that of the 2002 Census, as opposed to the results of other studies conducted in Poland. For instance, according to the Labour Force Survey carried out by the Central Statistical Office, approximately 31,258,000 people aged 15 and above lived in Poland in 2005. Foreigners (non-Polish nationals) accounted for 0.13 per cent of the total (41,500). Their number was the lowest in the third quarter of 2005 (36,000), while as many as 45,000 foreigners stayed in Poland in the second quarter of 2005.

Similarly, the statistics of the Office for Repatriation and Aliens concerning Polish residence permits back up those of the Census. The overall number of permits (both for settlement and temporary) granted in Poland in 2005 was equal to 38,512, 4.5 per cent up from the previous year (Table 16). Approximately one-third of all permits in 2005 were granted to EU nationals and their family members, while the remaining two-thirds were issued to third-country nationals.

**Table 16. Residence permits by type of permit 1998-2005**

Year	Settlement permit	Temporary permit	EU temporary permit	EU permit	EU long-term residence permit	Total
1998	288	4,893	-	-	-	5,181
1999	512	16,811	-	-	-	17,323
2000	858	15,039	-	-	-	15,897
2001	679	20,787	-	-	-	21,466
2002	602	29,641	-	-	-	30,243
2003	1,735	28,590	-	-	-	30,325
2004	4,365	25,461	1,154	5,871	-	36,851
2005	3,589	22,626	2,183	10,077	37	38,512
2006*	2,548	17,434	954	6,714	**	27,650

\* January – August.

\*\* Preliminary data indicate that in 2006 (January – December) approximately 990 EU long-term residence permits were granted.

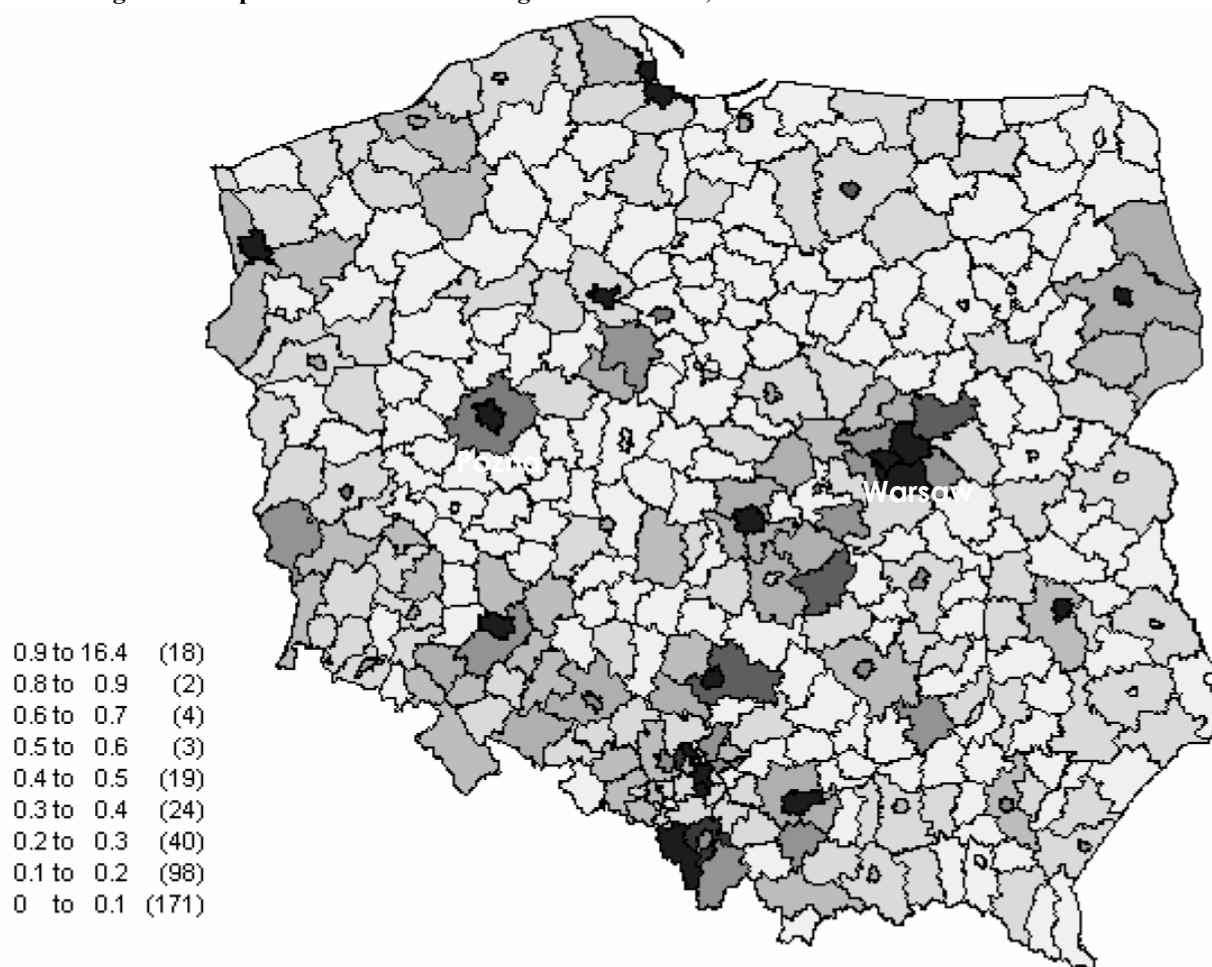
*Source: Office for Repatriation and Aliens*

That is why in the analysis of the foreign population in both Poland and the Poznan metropolitan region use will be made of the 2002 Census data. The methodology adopted there defines an immigrant as any person not holding Polish citizenship, irrespective of whether or not they are citizens of another country (other countries). Foreigners who have come to Poland to take up residence there are treated as a permanent population while the rest, depending on the length of their stay, are classed as: (a) short-term immigrants if they have been in Poland for less than a year, or (b) long-term immigrants and residents if they have lived here for at least 12 months (Foreign migrations of the population, 2002, GUS, Warszawa 2003, p. 29).

## 5.2. Foreigners in Poland and the Poznan metropolitan region according to the 2002 National Census

At the 2002 National Census 40,661 immigrants were registered as residing in Poland permanently and 24,078 as staying in the country temporarily, which accounted for 0.11 and 0.06 per cent, respectively, of the total population. In the group of resident immigrants 3,634 were away from Poland at the census moment. Ukrainian nationals contributed the highest proportion (22.6 per cent), followed by Russians (13.5 per cent), Belarusians (6.8 per cent), the Vietnamese (5.6 per cent) and Germans (5.2 per cent). Ukrainians also predominated in the temporary immigrant group (28.7 per cent), again followed by Russians (8.3 per cent), Belarusians (7.9 per cent), Germans (4.8 per cent), Armenians (4.8 per cent), and the Vietnamese (3.5 per cent). The immigrants usually lived in towns (73 per cent), mostly big regional capitals, especially Warsaw, the national capital (Figure 1).

Figure 1. Proportion of resident immigrants in Poland, 2002



Source: E. Jazwinska, 2006. *Imigracja do Polski w świetle wyników Narodowego Spisu Powszechnego*, CMR Working Papers, 13/71, Warsaw, p. 9

Both immigrant groups are very well educated (Table 17). As many as 30 per cent have higher education, including 2 per cent with at least a doctoral degree. Better educated immigrants are slightly more inclined to settle in Mazovia, mainly in the Warsaw metropolitan region. This is connected with the location there of many foreign firms. There are no regional differences in terms of education in the group of temporary immigrants. For both groups the commonest reason for staying in Poland is family matters (30 per cent), while



work only comes second (26 per cent). 21 per cent of temporary immigrants and 12 per cent of resident ones listed education and studies as the cause of their arrival. For the latter group a migration cause was also housing conditions (17 per cent).

**Table 17. Level of education of Poland's resident and temporary immigrants aged 15 and over, 2002**

	Total population of Poland aged 15 and over	Resident immigrants		Immigrants staying in Poland temporarily for 2 or more months	
		total	of which post-1988 arrivals	total	of which staying longer than 1 year

(a) Number of immigrants

Total	31,288,428	34,328	12,567	23,422	15,878
Holding doctoral or post-doctoral degree	107,658	779	344	520	422
Holding master's degree*	2,277,370	6497	3310	4769	3647
Holding licentiate or engineering degree	818,538	2387	1345	2261	1698
Post-secondary	1,023,894	989	439	729	529
Secondary	16,134,116	10277	4885	9256	6376
Vocational	7,539,786	3997	921	1428	1053
Primary	8,808,487	4,128	1,066	1,725	1,116
No school completed	877,557	440	79	148	102
Unspecified	650,642	5,024	178	2,586	935

(b) In per cent

Total	100.0	100.0	100.0	100.0	100.0
Holding doctoral or post-doctoral degree	0.3	2.3	2.7	2.2	2.7
Holding master's degree*	7.3	18.9	26.3	20.4	23.0
Holding licentiate or engineering degree	2.6	7.0	10.7	9.7	10.7
Post-secondary	3.3	2.9	3.5	3.1	3.3
Secondary	51.6	29.9	38.9	39.5	40.2
Vocational	24.1	11.6	7.3	6.1	6.6
Primary	28.2	12.0	8.5	7.4	7.0
No school completed	2.8	1.3	0.6	0.6	0.6
Unspecified	2.1	14.6	1.4	11.0	5.9

\* or equivalent, e.g. medical

Source: 2002 National Census of the Population and Housing, GUS

Immigrants of both groups usually worked as teachers (11 per cent of resident immigrants and 20 per cent of temporary ones). The second most popular occupation was the management of small and medium-sized businesses (12 and 15 per cent, respectively). It often happens, as corroborated by research (cf. UN 2006, p. 23), that immigrants set up more firms in the host

country than the indigenous population. They can give employment to host-country nationals, but their entrepreneurship often paves the way for an inflow of other compatriots. The immigrants in Poland also found jobs as shop assistants (10 and 14 per cent, respectively). About 4 per cent in both groups worked in agriculture, and 3 per cent in household and restaurant services. 4 per cent of resident immigrants were employed as health-care specialists, while about 2.4 per cent of temporary immigrants declared work as architects and engineers.

Since Poland was a relatively closed country until 1989, foreign migrations appeared as a noticeable phenomenon only after the collapse of communism. Before 1989 the largest group of immigrants were Soviet citizens, mostly soldiers stationed in Poland. Hence nearly 49 per cent of immigrants registered in the 2002 Census were those who moved to Poland after that year, half of them coming only after 1996. The same holds for immigrants staying in Poland temporarily: 80 per cent of them came after 1996. As can be seen, foreign migrations are a relatively new development and the number of foreigners, while growing yearly, is still very small in comparison with the West European figures.

**Table 18. Population by declared nationality in the Poznan metropolitan region, 2002**

(a) Number of people

Nationality	Poznan city	Poznan poviat	PMR	Poland
Polish	561,702	265,164	826,866	36,983,720
Non-Polish	1,180	414	1,594	471,475
Unspecified	16,004	851	16,855	774,885
Total	578,886	266,429	845,315	38,230,080

(b) In per cent

Nationality	Poznan city	Poznan poviat	PMR	Poland
Polish	97.0	99.5	97.8	96.7
Non-Polish	0.2	0.2	0.2	1.2
Unspecified	2.8	0.3	2.0	2.0
Total	100.0	100.0	100.0	100.0

*Source: 2002 National Census of the Population and Housing, Central Statistical Office*

The situation will look a bit different if examined in terms of the somewhat broader category of nationality. To start with, we have to look at the methodology of obtaining data on this issue. The census question was: "What is the nationality you declare?", while the term itself was defined in the following way: nationality is a declarative (subjectively felt) individual feature of each human being expressing his emotional, cultural or genealogical (parental origin-dependent) connection with a specified nation. The formulation of the question and the definition of nationality were broad enough to allow the respondents their own understanding of this notion, but some answers went even farther and included ethnic categories. The Census showed that 36,983,700 people, or 96.7 per cent of the total population, declared their nationality Polish while 471,500 (1.2 per cent) reported it as non-Polish. There was a group of 774,900 people (2.0 per cent) for whom no determination was made, mostly because they

chose not to answer this question. Out of the respondents declaring their nationality other than Polish, 444,600 (94.3 per cent) were holders of Polish citizenship and 25,700 (5.5 per cent) were not. Among those declaring themselves Polish nationals the respective figures were 99.8 per cent and 0.04 per cent. The most popular nationalities reported included German - 152,900 respondents, followed by Belarusian - 48,700 and Ukrainian - 31,000 (Report on the 2002 National Census of the Population and Housing, GUS, Warszawa, 2003, p. 39-40). In the Poznan metropolitan region the proportion of non-Polish nationals was lower than the national average, at 0.2 per cent (Table 18). There were nearly 1,600 persons of non-Polish nationality in the region, with 74 per cent of them living in the city itself.

### **5.3. Selection of respondents**

As can be seen from the analysis presented above, foreign migrations are a relatively new development in Poland. Even assuming the official data to be underestimated because of unregistered immigrants working in the informal economy, their proportion is much lower than in other European countries. Still, foreigners in Poland are fairly well educated and follow occupations which require a creative use of knowledge (e.g. teachers).

A substantial majority of non-Polish nationals in the Poznan metropolitan region are engaged in educational activity. They include both academic workers and their students. They can be estimated to account for some 75 per cent of all immigrants in the region; the rest are largely employees of foreign firms. That is why the choice of the PMR interviewees will of necessity be limited to those two groups. Use will be made of the employee databases of the Poznan higher schools to prepare a list of foreigners to be interviewed in them. In the case of foreign firms, the survey will rely on contacts established to date in research projects carried out by the AMU Institute of Socio-Economic Geography and Spatial Management.