Discovering the Archaeologists of Poland 2012-14

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Published by Adam Mickiewicz University in Poznań


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ISBN 978-83-85872-09-4

This project acted as the Polish component of the transnational *Discovering the Archaeologists of Europe 2012-14* project, which was administered by York Archaeological Trust with financial support from the Lifelong Learning Programme of the European Commission. This report reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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1. Introduction

This national report has been produced as part of *Discovering the Archaeologists of Europe 2014* project, a transnational project carried out in twenty European countries to examine the state of the archaeological profession. *Discovering the Archaeologists of Europe 2014* is supported by the Lifelong Learning Programme of the European Union, and is a successor to the previous *Discovering the Archaeologists of Europe* project, which ran from 2006-2008. Poland did not participate in the previous *Discovering the Archaeologists of Europe* project, but it is not the first time that a survey about the archaeologists of Poland has been carried out. In 2010, an analysis of the situation of archaeology in the context of the global economic crisis was produced (Marciniak and Pawleta, 2010). Another relatively recent paper, *The archaeological profession in contemporary Poland*, written in 2011, summarises a rather wide-ranging systematic survey of the archaeological profession undertaken in 2009-2010 (Filipowicz 2011). While these two focused on slightly different issues, they will provide some perspective and context to the data published in this national report.

The aim of *Discovering the Archaeologists of Europe 2014* project was to research and assess the field of archaeology, in order to uncover the current composition of the archaeological profession and to gain a better understanding of the needs of the archaeological community. The key project objectives at European and national levels were the following:

- to develop a profile of the archaeological workforce;
- to identify labour market trends and issues;
- to identify skills shortages and training needs;
- to disseminate the results of this work, especially in order to provide archaeological employers with information to aid business planning and improve organisational performance;
- to inform the archaeological sector of the outcomes of this research.

In order to fulfil these objectives, the researchers have looked at who are the archaeologists, where the archaeologists work, what kind of work they undertake, how qualified they are, how they are rewarded, but also what are considered to be the archaeologists' skills shortages and training needs. Additionally, the researchers have also inquired about the predictions for the employment of archaeologists in the coming years. Based on the reports from each of the 20 national contexts, a transnational analysis will reveal the state of the archaeological community in a large section of Europe.

2. Methodology

2.1. Questionnaires

In the Polish context, a person can be identified as an archaeologist if they work with archaeological information and materials, and have a degree in archaeology (a degree of any level). This means, that in theory, a 3-year Bachelor's Degree in archaeology can be sufficient to employ someone as an archaeological employee in any institution (Filipowicz 2011). In practice, however, employers are rather reluctant to employ people with such limited qualifications – overwhelmingly, the minimum standard educational level in Poland is a Master's Degree for such a specialised workforce as archaeologists. The degree itself is not enough to conduct all archaeological operations, however. According to the current regulation, in order to get a permit to conduct fieldwork, one has to have at least 12 months of proved field experience (Filipowicz 2011).

In order to collect core data for the *Discovering the Archaeologists of Europe* project in the Polish context, a questionnaire was developed. This questionnaire is made up of two parts, with the first part focusing on the individuals working in archaeology and the second part focusing on the institutions employing the archaeologists. In designing the questionnaire, the Polish context and culture were taken into consideration. So, for example, the question of salaries had to be associated with roles within the institution, rather than the specific individuals working in the institution and their personal data.

In the first part of the questionnaire, the data collected about the individuals includes their gender, age (identified in ten-year bands: <20 years old, 20-29, 30-39, etc. and then '60 and over'), disability status, country of origin, their highest qualification and the country where the highest qualification was obtained. The questionnaire also asks for data about the employment status (permanent and full time, permanent and part time, permanent and on sabbatical or temporary), the type of the institution employing them, and also asks to determine the kind of work undertaken (archaeological fieldwork or research, provision of archaeological service, museum or visitors services, education or training, a managerial role – or any combination of these).

In the second part of the questionnaire, the questions were designed to reveal more about the institutions and employment in Polish archaeology. So, the questions involve determining the type of organisation, the number of archaeologists and support staff currently employed, but also in the past years and in the future years (1, 3 and 5 years apart). The questionnaire

also focuses on skills shortages, and average monthly gross salaries for different roles within the institution (the possible answers were 1000-2000PLN, 2000-3000PLN, etc. and then 'above 5000PLN', respectively equal to approximately 240-480EUR, 480-720EUR, etc. and then 'above 1200EUR').

2.2. Data collection

The data we have collected, analysed and presented in this report reflects the state of the art in Polish archaeology as of the end of 2013.

The survey was carried out by three research assistants, through various mediums. First of all, for archaeologists working in public institutions, the starting point was a list of public institutions that employ archaeologists. This list was, to some extent, based on similar lists produced for *The archaeological profession in contemporary Poland* project in 2011, and it was continuously improved and amended throughout the surveying period for the *Discovering the Archaeologists of Europe 2014* project. Using the list of public institutions, online research was conducted, revealing which institutions are in operation and employ archaeologists. A lot of data about these public institutions' employees for the first part of the questionnaire proved to be readily available online, on the institutions' web pages and in the database of Polish science ('Nauka Polska', can be found at http://www.nauka-polska.pl/). The gaps left after online research were then filled in through inquiries via email, and if there was no response, through phone calls. Due to the public nature of these institutions and the various levels of research, we are highly confident about the data we have for the first part of the questionnaire. For the second part of the questionnaire (institutional data), the surveying was done only through emails and phone calls.

The data collection for private companies and the archaeologists employed in these was done separately and with a different approach. First of all, a list of private companies was obtained from Alina Jaszewska, the President of the National Association of Private Archaeological Companies (*Ogólnopolskiego Stowarzyszenia Prywatnych Firm Archeologicznych*). Additionally, the Central Registration and Information on Business (*Centralnej Ewidencji i Informacji o Działalności Gospodarczej* or CEIDG) database was consulted to exclude archaeological firms that are not officially registered. Then, the companies were approached – first by sending the questionnaire via email and if there was no response, then by making phone calls.

2.2.1. Part 1 of the questionnaire: individuals

For the first part of the questionnaire, we managed to collect more or less complete data about a total of 866 archaeological positions in 133 different public institutions. Out of these 866 data sets, a little over half (450 entries out of 866, 52%), are entirely complete with data that we are confident about. The remaining 417 entries have some gaps in the data sets for different reasons (the reasons for some gaps are elaborated on under 2.4. Difficulties encountered in the data collection). From the research into the private sector, we have data sets for 91 archaeologists employed in 52 different private firms. Out of these 91 data sets, only 4 have a few gaps in the data provided, so 96.7% (87 out of 91) of the data sets are complete. So, in total, we collected 957 data sets for the first part of the questionnaire.

It is worth mentioning that some archaeologists in Poland work in two institutions simultaneously. However, this is generally a taboo issue and people often do not wish to reveal their involvement in more than one institution (for different reasons, e.g. as they may thus be perceived as less dedicated in one or the other position). In our research, we managed to determine 41 archaeologists working in two positions, and thus the number of data sets for the first part of the questionnaire is higher than the number of unique data sets. In other words, the number of positions in the institutions is higher than the actual number of individuals working as archaeologists (957 positions and 916 individuals). Tables 1 and 2 reflect these numbers, showing respectively the numbers of positions, by organisation type, and the number of unique data sets, reflecting the total number of archaeologists that we have identified.

Questionnaire – part 1	**Public institutions**		**Private firms**	**Total**
	Academia	**Museums, foundations, etc**		
Data sets	866		91	957
	458	408		
Complete data sets	450		87	537
	365	85		
% of complete data sets	52%		95.6%	56.1%
	79.7%	20.8%		

Table 1 - Number of data sets, i.e. reflecting the number of positions, and completeness of these data sets for part 1 of the questionnaire by organisation type

Questionnaire – part 1	Total
Data sets excluding duplicates (i.e. number of archaeologists)	916
Complete data sets excluding duplicates, i.e. number of archaeologists with complete data sets	516
% of unique complete data sets	56.3%

Table 2 - Number of unique data sets, i.e. reflecting the actual numbers of archaeologists reported to the survey, and completeness of these data sets for part 1 of the questionnaire

It should be noted that there are some people working on archaeological projects that have not been included in this survey – namely, Phd students and some other archaeologists who are employed temporarily in some NCN (*Narodowe Centrum Nauki*, i.e. National Science Centre) and European projects, or have grants from the Ministry of Culture and National Heritage. It would be impossible to get a realistic overview of their employment at any point in time, mainly due to the temporary nature of this form of employment and a lack of centralisation in this form of employment. These people that have thus been excluded are mostly connected to the academic institutions – universities and the Polish Academy of Sciences (IAE PAN).

2.2.2. Part 2 of the questionnaire: institutions

According to our estimations, there are a total of 242 institutions in Poland that employ archaeologists. 109 of these are private firms, and 133 are public institutions, including: 80 local museums, 14 university departments or institutes, 12 archaeological museums, 11 archaeological foundations, 6 regional branches of the Institute of Archaeology and Ethnology of the Polish Academy of Sciences* (*these regional branches are formally all part of the same one institute of the Academy of Sciences, but for the purposes of this project, they are analysed as separate – this is further explained under 3.2. Types of institutions), 4 national museums, and 6 other public institutions (monument protection services, the National Heritage Institute and the National Road Agency).

For the second part of the questionnaire, we have more or less complete data sets for 100 public institutions, while 2 public institutions refused to provide information and we were unable to get responses from the rest of the 31 public institutions (the problems with data collection are outlined under 2.4. Difficulties encountered in the data collection). Out of the 100 data sets of public institutions, only 26 are complete with responses to all of the questions in the questionnaire. So, the absolute response rate for the second part of the questionnaire among public institutions was 19.5% (26 out of 133), while the response rate including the data sets with some gaps was 75.2% (100 out of 133).

From surveying the private sector, we managed to collect data from 52 private archaeological firms. According to the official database of the Central Registration and Information on Business, there were an additional 76 archaeological firms that potentially existed in 2013. Although formally registered, some of the 76 firms may not have been in operation. We know that 21 of these firms definitely existed, as the owners explicitly refused to respond to the questionnaire. We can assume that out of these 76 firms, approximately 57 (ca. 75%) existed in practice. Taking this into consideration, we can infer that there were a total of 109 private archaeological firms in active operation in 2013 – the 52 that provided responses to our questionnaire, and the estimated 57 other firms in operation.

The 52 data sets of private firms for the second part of the questionnaire provide a solid empirical basis for the analysis of this sector – the response rate thus being 47.7% (52 out of 109). Out of these 52 private companies' data sets for part two of the questionnaire, only 4 had some gaps in them – so, the absolute response rate was just slightly lower, 44% (48 out of 109). It is worth mentioning that these relatively high response rates from private companies were probably achieved partially thanks to the personal networks of the researcher – having previously cooperated with a relatively high number of the archaeologists employed in the private sector, the researcher knew them personally and this facilitated the process of getting responses.

Table 3 provides an overview of the responses to the second part of the questionnaire.

Questionnaire – part 2	**Public institutions**		**Private firms**	**Total**
	Academia	**Museums & foundations**		
Responses	100		52	152
	17	83		

Total number of institutions/firms	133		109	242
	20	113		
% of responses	75.2%		47.7%	62.8%
	85%	73.5%		
Responses with complete data sets	26		48	74
	2	24		
% of responses with complete data sets	19.5%		44%	30.6%
	10%	21.2%		

Table 3 - Questionnaire responses for part 2 by organisation type

2.3. Methods for calculating the size of the workforce

As the data collected about the archaeological workforce is quite complex, in this section the approach taken to analyse the data is explained.

2.3.1. Total number of archaeologists in Poland

The total number of archaeologists reported to the survey was 916. However, the total estimated number of archaeologists is 1004. This requires some elaboration. Firstly, we are confident that the numbers of archaeologists reported to our survey as working in public institutions reflect the reality as our approach allowed for data that is publicly available on the institutions' website and the database of Polish Science ('Nauka Polska') to be validated as much as possible through personal contacts via emails and phone calls. Thus, we are confident that the 787 archaeologists that we have identified as working in the public institutions reflect actual numbers. Additionally, we identified 41 archaeologists who work in two positions (either both in the public sector or one position in the public, and the second in the private sector), and these are counted separately from the 787 individuals here, to prevent double counting.

Secondly, due to the nature of the private sector we managed to obtain data about archaeologists employed only from about half of the companies in operation in 2013 (52 out of 109). So, some estimations had to be made to get at the more realistic number of people working in private firms. The total number of archaeologists reported as working in these 52

firms was 91, out of whom 3 we managed to identify as working in two positions – one position in the private firm and the other in a public institution. So, the number of archaeologists working in private firms reported to the survey is 88, as the 3 were counted among the people having 2 positions, in order to prevent double counting here. It is worth emphasising that the number archaeologists working in two positions, 41 (38 in the public sector and 3 having one job in the public sector and another in the private sector), is likely to be higher in practice – as mentioned earlier, the topic of holding two positions is a social taboo, and this is especially so with individuals holding one position in the private sector.

To get a more realistic number for the people working in private firms, the estimations were calculated based on the numbers of archaeologists reported for the 52 firms. For the purposes of simplicity, we have assumed that the total number of archaeologists working in the rest of the firms (that did not respond to our survey) is approximately the same as the total number that was reported to the survey of the private firms. We incorporated the factor of 3 people working in two positions into our calculations as well, as these three people held a position in a public institution and thus were already recorded. So, the total estimated number of archaeologists working in private firms adds up to 176 (the 88 reported plus the estimated 88 for the rest of the firms in operation). Although we may assume that the number of people working two positions may be the same for the archaeologists working in the private firms we did not get a response from, we have not added any estimated numbers to the category of people working in two positions, as this would also involve deducting them from the numbers of public institutions, and it is difficult to estimate how accurate this would be or at which public institutions these people could be working. Also, as mentioned, the number of people working in two positions is likely to be higher in practice than reflected in our data sets, and the estimations are not likely to make these numbers any more accurate.

So, we arrive at the estimated total number of archaeologists, 1004 (787 in public institutions, 176 in private institutions and 41 holding two positions).

2.3.2. Number of archaeologists reported vs number of data sets

It is worth noting that while the total number of archaeologists reported to the survey is 916, the number of data sets we have is 957, because there are two data sets for every one of the 41 archaeologists who work two positions – one for each position. As in most cases the positions are at two different types of institutions (e.g. at a museum and at a university), and analysis of the workforce is structured to look at each of the variables by institution type, in most cases both of the data sets of people working two positions will be included in the analysis in section ‘4. Archaeologists’. In other words, for most of the analysis of

archaeologists in Poland, the 41 individuals working in two positions will be counted twice, i.e. for both of the institutions – as employed archaeologists for both of the institutions – thus including all of the 957 data sets. In the cases where these individuals are only counted once, in other words, where the duplicates have been excluded from the analysis and thus the 916 unique data sets form the basis of analysis, this will be noted.

2.4. Difficulties encountered in the data collection

In general terms, there were no major difficulties in the process of data collection. For the first part of the questionnaire, a lot of the information for archaeologists working in public institutions was readily available online. Where people were contacted via email or by making phone calls, the rate of responses was relatively high and thus, the data samples collected are representative of the sector. However, it is worth highlighting the difficulties that the researchers did encounter when conducting the research.

2.4.1. Issues with research and surveying

First of all, while the web pages of the public institutions and the database of Polish science, 'Nauka Polska', did provide a lot of information, there were substantial gaps in this information. Most notably, there was relatively little information available about archaeologists who are less known, have less experience or only have a Master's level qualification (as opposed to professors, museum directors, etc). While some of the gaps were later filled by contacting the institutions directly, the data sets for more experienced and more qualified archaeologists working at public institutions tend to be more complete than those of less experienced and less qualified archaeologists.

Secondly, one of the main difficulties encountered in the surveying process was getting hold of the right people – this was especially a problem in the context of public institutions. So, initially, there were no replies to a lot of the emails. When making phone calls, the researcher would often be told to call a different number, only to be given yet another phone number, with no one providing answers to the questionnaire in the end. In other cases, it was difficult to get in contact with directors or people who would be in a position to respond to the questionnaire and disclose employees' personal information. While representatives from only two public institutions directly refused to participate in the survey, the data of many

institutions remained unattainable because such bureaucracy became an obstacle in contacting the right people within the institutions.

2.4.2. Issues with data completeness and confidence

Thirdly, in some cases, it was difficult to determine whether a person should be considered as an archaeologist or not. Although the definition of an archaeologist in Poland is rather specific, some museum or university employees can have various responsibilities in their workplace, some of which may be connected to archaeology or archaeological materials, data, etc., making it more difficult to decide whether to include them as archaeologists or regard them as support staff working with archaeologists. Generally, we tried to make sure our data was as accurate as possible, and we were rather more inclusive than exclusive in these ambiguous cases. If the individual or their manager would not consider them an archaeologist, we did not include them of course, but as we did not manage to get direct contact with all institutions, this kind of precision was not always possible.

Additionally, in some cases, people did not wish to disclose certain kinds of information, even when they were reassured that the data collection is confidential – and this was the main reason for incomplete data sets in both parts of the questionnaire. This issue is most relevant to those parts of the questionnaire that are considered taboo topics or very confidential information in Poland, such as age, disability and wages. So, people sometimes refused to disclose such information. Similarly, wages are considered a taboo subject in Poland, which is why many respondents were reluctant to reveal information about salaries in the second part of the questionnaire (this was especially an issue for the public institutions). The researchers noted that the issues of taboo were more easily overcome if the respondent knew the researcher prior to conducting the survey. This may also explain the significantly more complete data sets for the second part of the questionnaire for private institutions – as mentioned earlier, the researcher had previously cooperated with a relatively high number of these archaeologists.

3. Institutions

3.1. Introduction

The current situation and structure of the archaeology of Poland is the result of various developments. While the origins of these lie in the completely state-funded structure that was in place during the communist times, there have been some significant changes since the early 90s. As Marciniak and Pawleta have explained (2010), Polish archaeology used to be clearly structured and divided in the communist era, with the Institute of History of Material Culture of the Polish Academy of Sciences being in charge of pursuing research and setting academic standards, university departments being responsible for education, museums taking care of protecting archaeological collections and popularising archaeology, and Centres for Monument Protection being responsible for the protection of archaeological monuments and movable objects, and carrying out rescue excavations.

From the 90s onwards, there were dynamic changes in Polish archaeology. So, the Centres for Monument Protection dissolved; the Institute for the History of Material Culture of the Polish Academy of Sciences became the Institute of Archaeology and Ethnology of the Polish Academy of Sciences (IAE PAN), and its significance declined due to increasingly insufficient funds (Marciniak and Pawleta 2010). Another major change that has happened in Polish archaeology in the last few decades has been the rise and multiplying of private companies. The success of these can be, to a great extent, attributed to the growth in demand for preventive excavations due to many infrastructure projects. In recent years, as Marciniak and Pawleta explain (2010), the preparations for the European Football Championships of 2012 involved many major infrastructure projects, which invigorated Polish archaeology in the face of the global economic downturn – especially the private sector, as the small companies were often preferred in the context of preventive excavations, for various reasons (see Marciniak and Pawleta 2010). This is also reflected in Filipowicz's analysis on the archaeological profession (2011), where she points out that private companies seemed to be in a much better financial situation than public bodies in the context of Euro 2012 preparations and the global recession.

3.2. Types of institutions

With this background in mind, we can now take a closer look at the archaeological institutions of today's Poland. By and large, the archaeological institutions can be divided into two: public institutions and private firms. The latter is a rather unified category, while the category of

public institutions is very diverse, encompassing different organisations. The institutional division is thus the following:

- Private firms
- Public institutions:
    - Academia
        - Universities
        - Institute of Archaeology and Ethnology, Polish Academy of Sciences
    - Museums, foundations and other institutions
        - Archaeological museums
        - National museums
        - Local museums (incl. museums of archaeology, ethnology, art history etc.)
        - Foundations
        - Monument protection institutions, the National Heritage Institute and the National Road Agency

It should be noted that the Institute of Archaeology and Ethnology of the Polish Academy of Sciences (IAE PAN) has 6 regional branches, one in each of the following cities: Warsaw, Poznań, Wrocław, Kraków, Łódź and Szczecin. Although these are formally regarded as all part of the same institute, in this report they are analysed as separate institutions. This was decided as the regional branches provided information separately for the second part of the questionnaire, but also because the data from these branches affects the regional distribution of institutions' and individuals' data. Where relevant for data analysis, the total data for the whole of IAE PAN has been distinguished.

3.3. Numbers of institutions

The research undertaken revealed that there are 133 public institutions that employ archaeologists in Poland, 20 of those being academic (universities and the Polish Academy of Sciences), and the rest, 113, being museums, foundations and other public institutions. Research into the private sector resulted in respondents providing information about 52 private archaeological firms, but based on information from the National Association of Private Archaeological Companies the Central Registration and Information on Business database, it can be estimated that a total of 109 private firms were in operation in 2013 (see 2.2. Data Collection for a further explanation about this estimation). So, in total, there were 242 institutions employing archaeologists in 2013. Table 4 gives a more detailed overview of the numbers of these institutions in Polish archaeology.

	Public institutions							Private firms	TOTAL
	Academia		Museums, foundations and other						
	Universities	IAE PAN	Archaeological museums	National museums	Local museums	Foundations	Other		
Number of such institutions	20		113					109 (estim.)	242
	14	6*	12	4	80	11	6		
% of all institutions	8.3%		46.7%					45%	100%
	5.8%	2.5%	5%	1.7%	33.1%	4.5%	2.5%		

*Officially, IAE PAN is one institution, and not 6 separate ones, but for the purposes of this report, the regional branches have been counted separately. For more information, see 3.2. Types of institutions.

Table 4 - Institutional overview: numbers

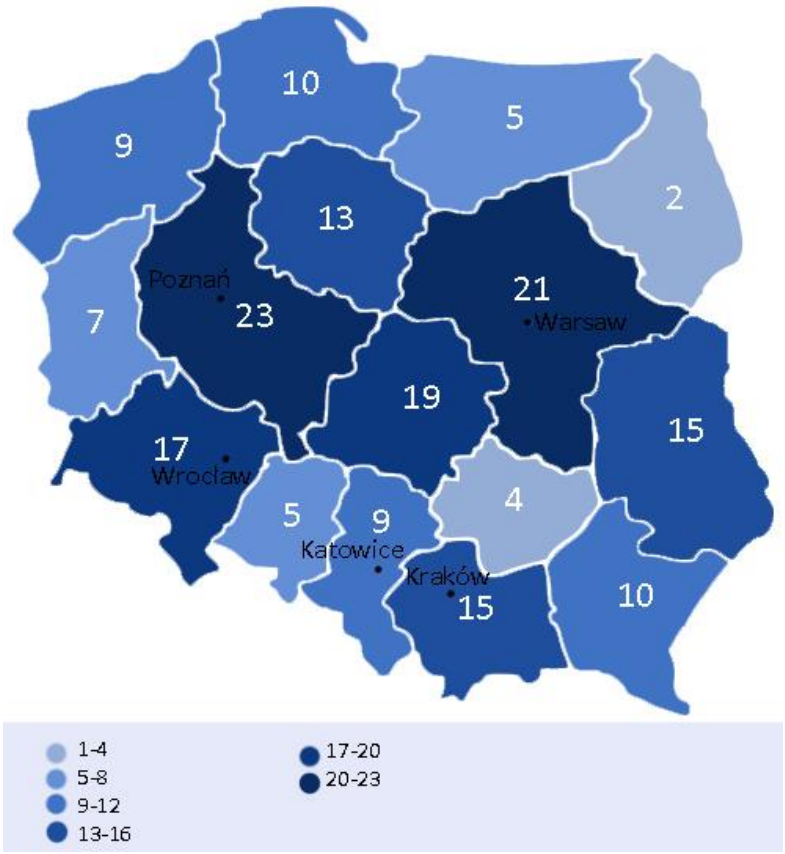

Figure 1 – Institutional overview: numbers of all institutions employing archaeologists by region

Figures 1 and 2 give an overview of the regional distribution of institutions employing archaeologists in Poland. The most populated provinces have been indicated by marking their biggest cities on the map.

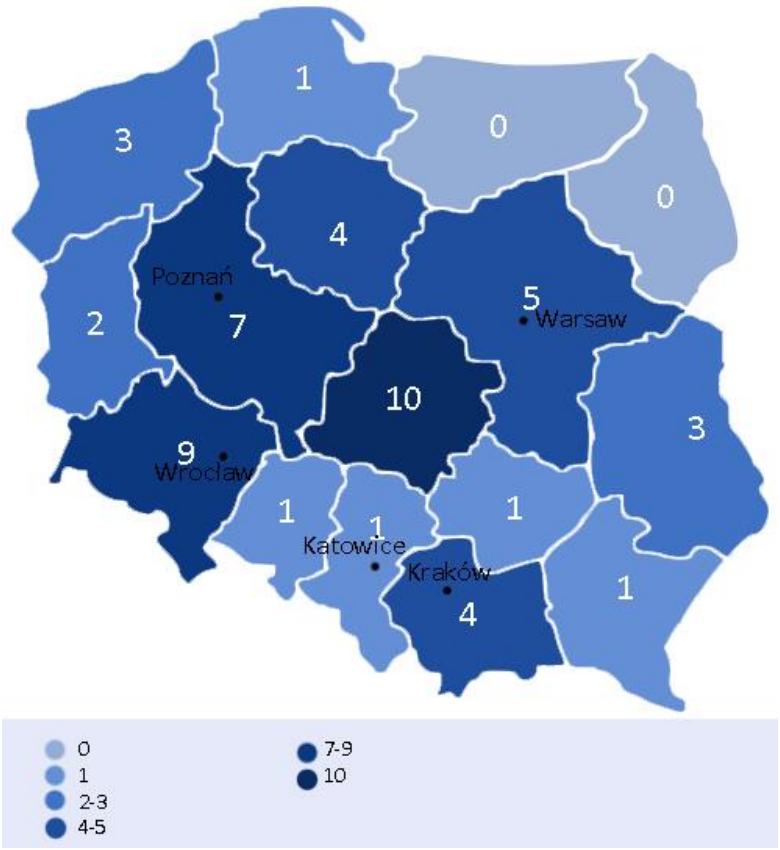

Figure 2 - Institutional overview: numbers of private firms by region

3.4. Numbers of archaeologists by institution type

In relation to the number of institutions, the majority of archaeologists in Poland, more than 78%, are employed in public institutions – with 41% working in academic institutions, and 37.4% in other public institutions (Table 5). Only 17.5% of all archaeologists work in private companies. According to our findings, about 4.1% of archaeologists work in two positions simultaneously, but this number is likely to be higher in practice (as explained earlier, this issue is a social taboo, as people often do not wish to reveal that they are employed in two different institutions at the same time). Table 5 presents the numbers of archaeologists working in the different institutions, along with the percentages they make up of the whole

archaeological workforce. The figures presented in Table 5 are based on data collected in the first part of the questionnaire.

Part 1	Public institutions							Private firms	People who work in 2 positions	TOTAL
	Academia		Museums, foundations and other							
	Universi-ties	IAE PAN	Archaeolo-gical museums	National museums	Local museums	Foundations	Other			
Number of archaeo-logists	412		375					176*	41	1004*
	309	103	177	12	144	27	15			
% of the whole profession	41%		37.4%					17.5%	4.1%	100%
	31%	10%	18%	1.2%	14%	2.7%	1.5%			

*Estimations. The number of archaeologists working in private firms is an estimation here – while we are confident about the total numbers of archaeologists working in public institutions, our research into private firms relied on the peoples' willingness to reveal data. So, as there were 91 individuals working in the 52 private firms that provided data, we have assumed that the rest of the 57 firms in operation employ approximately the same number of people. Since 3 out of the 91 individuals reported for the private firms work in 2 positions, this has been incorporated into the calculation, so the estimated total for private firms' employees is 176 [(91-3)x2]. For more information on the estimations, see 4.1. Size of the workforce.

Table 5 - Polish archaeological workforce, by type of organisation

3.5. Numbers of employees

The results of the survey indicated that the majority of the institutions employ relatively few archaeologists. As can be seen in Table 6, more than 70% of all institutions that responded employ only 1-3 archaeologists. Figure 1 presents the same data in the form of a graph. The numbers presented in Table 6 and Figure 1 are based on responses to the second part of the questionnaire, and include all types of institutions.

Number of archaeologists employed	Number of institutions	% of organisations providing data
1	56	36.6%
2-3	56	36.6%
4-10	21	13.7%
11-20	9	5.9%
21-77*	11	7.2%
Total organisations	**153**	**100%**

*If counted as a single institution, this number would be over 100 for IAE PAN. In this table, however, the employment numbers of regional branches of IAE PAN have been used.

Table 6 - The size of institutions employing archaeologists

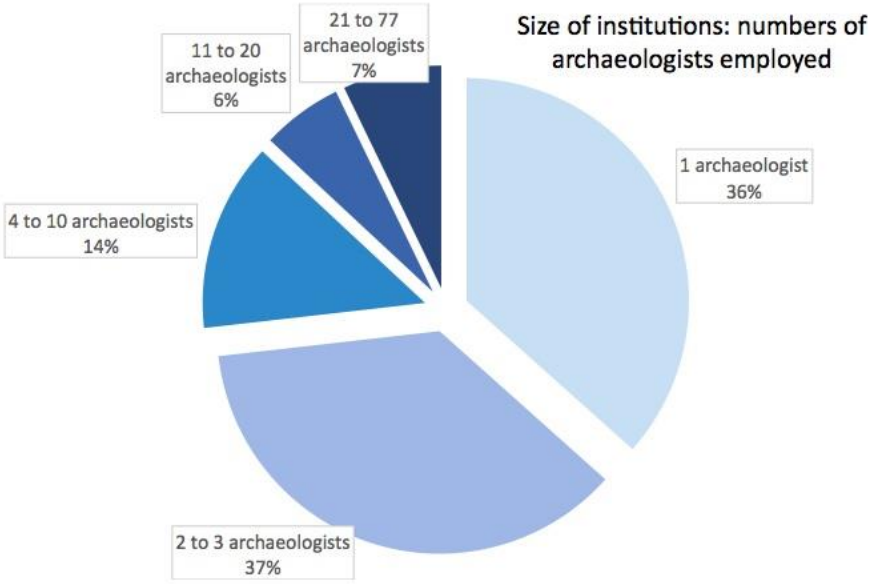

Figure 3 - Proportion of archaeologists working in different sizes of institutions

The size of institutions varies a lot by organisation type. Public institutions, especially academic ones (university departments and the Polish Academy of Sciences) tend to employ more archaeologists per institution than private firms. So, while all academic institutions and about one third of other public institutions employ more than 3 archaeologists, only 4% of private firms employ more than 3 archaeologists. Additionally, the category of institutions employing 21 to 77 archaeologists is made up of only public institutions – some bigger

museums and university departments. It is also worth mentioning that although here, the institution employing the most archaeologists (77) is a university department, if the numbers of archaeologists employed at the IAE PAN regional branches were added up as a single institution (which it formally is), it would add up to more than 100 employees. Figures 2 and 3 present percentages of public institutions by their size, based on numbers of archaeologists employed in them. Figure 4 presents the same data for private institutions.

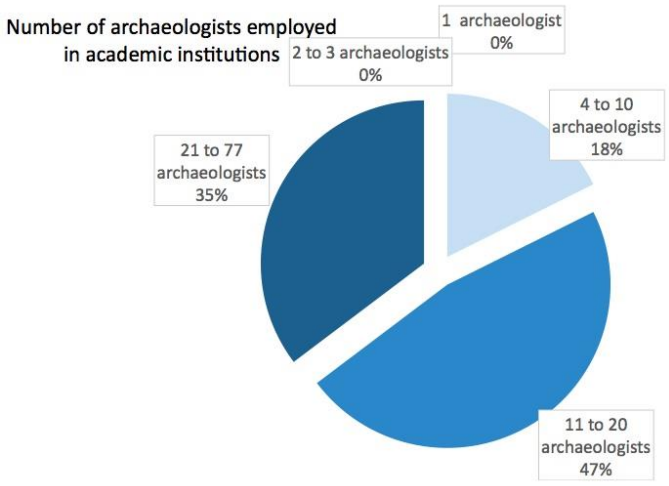

Figure 4 - Proportion of archaeologists working in different sizes of academic institutions.

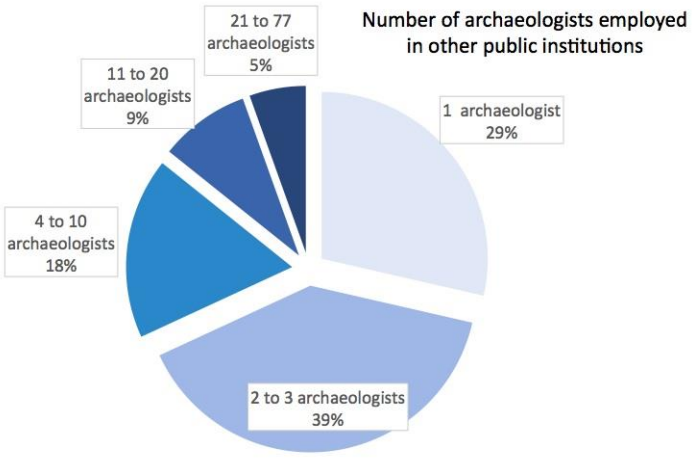

Figure 5 – Proportion of archaeologists working in different sizes of other public institutions.

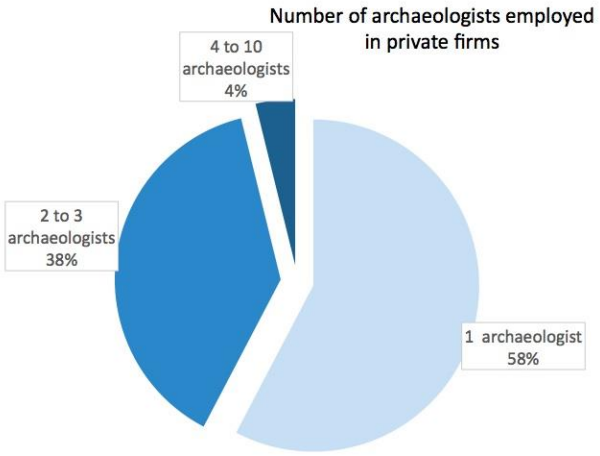

Figure 6 - Size of private firms by number of archaeologists employed

The average numbers of archaeological employees also reflect the variance in numbers of archaeologists employed in different types of organisations. The data in Table 7 shows that academic institutions employ the highest average number of archaeologists – 22.5 per institution, while this number is 4.5 for other public institutions and only 1.8 for private ones. The numbers of support staff working with archaeologists run parallel to this, being also higher in public institutions, with the highest average number of support staff employed academic institutions. It must be noted that the numbers of support staff are not as systematically represented as the numbers of archaeologists. It can be difficult to define who is support staff for archaeologists, e.g. if they work periodically, or work with all staff within the institution – the institutions surveyed may have interpreted the question of support staff in different ways. Thus, the numbers for support staff employed are not as representative as the numbers of archaeologists.

The numbers presented in Table 7 are based on the responses to the second part of the questionnaire. The averages have been calculated based on employment numbers provided by the institutions themselves – adding up the employment numbers provided by institutions and dividing the sum by the number of institutions (of the specific type) providing information.

Part 1	Public institutions							Private firms	Overall average
	Academia		Museums, foundations and other						
	Universities	IAE PAN	Archaeological museums	National museums	Local museums	Foundations	Other		
Average number of archaeologists employed	22.5		4.5					1.8	5.6
	24.9	18*	18.1	3.5	2.2	N/A**	5		
Average number of support staff	3.4		1.3					1	1.25
	3	5	9.6	1	0.4	N/A*	0		

*This reflects the average number of archaeologists employed in the regional branches – if counted as a single institution, this number would be over 100 for IAE PAN.
** Since no foundations responded to the second part of the questionnaire, there is no data for the average numbers of employees.

Table 7 - Average numbers of archaeologists and support staff employed by organisation type

3.6. Past and future employment predictions

Based on the responses to the second part of the questionnaire, some conclusions can be drawn about the employment of archaeologists in the past, as well as about future predictions. The data analysis will be presented by institutional types, starting with the academia, then other public institutions, followed by the data about private firms.

Firstly, all academic institutions responding to this question reported a steady decline in the numbers of people employed for the years 2008-2013. According to the data reported, the average total decline of numbers of employment was 24%. For the time period of 2013-2018, half of the respondents from academic institutions expect no change in employment numbers, while the other half expect the decline to continue. The total change expected in numbers of archaeologists employed in academic institutions for the years 2013-2018 adds up to an average decline of 10%. Tables 8 and 9 present the employment changes and predictions for academic institutions. Figure 5 shows the proportions of predicted employment changes in academic institutions for 2013-2018.

2008-2013 employment changes: academic institutions	Increase	Decrease	No change
% of all private institutions reporting	0%	100%	0%
Average % of change reported	N/A	-24%	N/A
Total change %	-24%		

Table 8 - Employment changes in academic institutions in the years 2008-2013, as reported to the survey

2013-2018 employment change estimations: private institutions	Increase	Decrease	No change
% of all private institutions reporting	0%	50%	50%
Average % of change reported	N/A	-20%	N/A
Total change %	-10%		

Table 9 - Estimated changes in employment numbers in academic institutions for the years 2013-2018, as reported to the survey

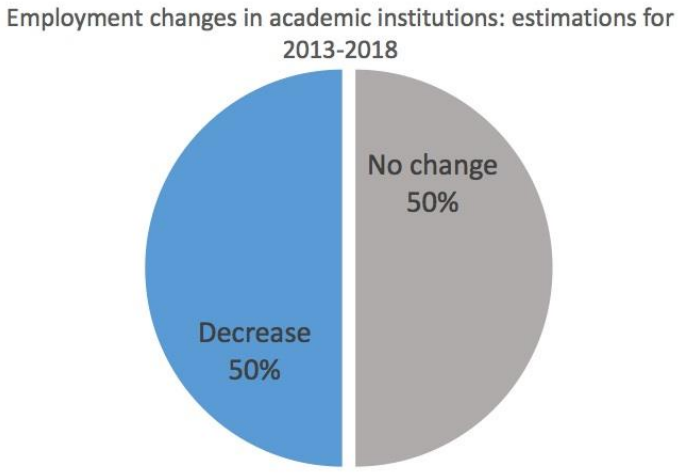

Figure 7 - Estimated changes in employment for 2013-2018: academic institutions

Secondly, in the category of all other public institutions, 41% of the respondents reported no change in employment numbers since 2008, while another 41% reported a decrease and 18% of respondents reported an increase in employment numbers for the years 2008-2013. Adding up all reported changes in employment numbers (including no change), the total change in employment numbers in the time period of 2008-2013 for these institutions was an average decrease by 6%. The employment numbers are generally not expected to change significantly in the years 2013-2018, as 65% of the other public institutions do not expect any change, while 25% expect a decline and only 10% expect an increase in employment. The average increase expected is by 28%, and among those who expect a decrease, the average decrease estimated is by 8.7% Thus, adding up all employment expectations for the upcoming years, the estimated change expected in other public institutions is an average increase of just by 0.5%. Tables 10 and 11 present the employment changes and predictions for the category of other public institutions. See figures 6 and 7 for proportions of employment changes in the category of other public institutions.

2008-2013 employment changes: other public institutions	**Increase**	**Decrease**	**No change**
% of all private institutions reporting	18%	41%	41%
Average % of change reported	+7%	-20%	N/A
Total change %	-6%		

Table 10 - Employment changes in other public institutions in the years 2008-2013, as reported to the survey

2013-2018 employment change estimations: other public institutions	**Increase**	**Decrease**	**No change**
% of all private institutions reporting	10%	25%	65%
Average % of change reported	+28%	-7%	N/A
Total change %	-6%		

Table 11 - Estimated changes in employment numbers in other public institutions for the years 2013-2018, as reported to the survey

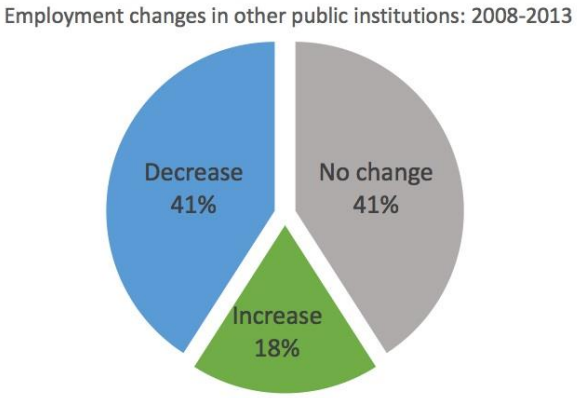

Figure 8 - Changes in employment in 2008-2013: other public institutions.

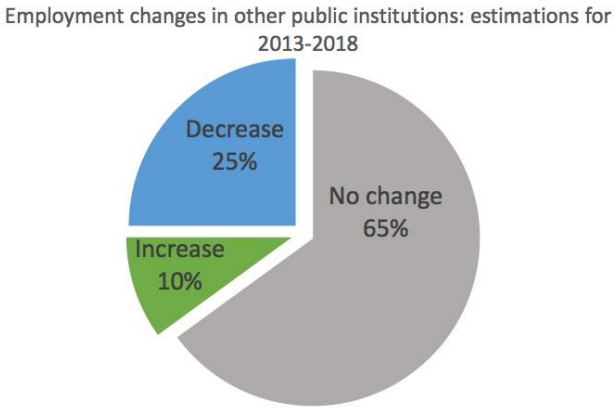

Figure 9 - Estimated changes in employment for 2013-2018: other public institutions.

The situation has proved to be rather different in private companies, as there has been a significant increase in the private sector of archaeology in the recent years. From the firms that provided relevant data, in 30% of the companies, there have been no changes to numbers of employment in the time period of 2008-2013. 28% of the companies have seen an average decline of 57.8% in the numbers of archaeologists employed. And in 42% of the companies, there were more archaeologists employed in 2013 than in 2008, with the increase in employment numbers averaging 119%. Thus, the total changes in employment numbers for the years 2008-2013 add up to an average increase by 34.5%. Out of the 47 companies responding about future predictions, 57% expect no changes in employment in the time period of 2013-2018, while 11% expect an average of 80% decline in employment, and 32% of the companies estimate they will employ more archaeologists in 5 years' time, expecting more than a twofold increase in archaeologists employed on average (employment to be up

by 252% on average). Tables 12 and 13 present the private institutions' reported changes in employment and predictions for future employment. Figures 6 and 7 show the proportions of employment changes reported for the private institutions.

2008-2013 employment changes: private institutions	**Increase**	**Decrease**	**No change**
% of all private institutions reporting	42%	28%	30%
Average % of change reported	+119%	-58%	N/A
Total change %	+34.5%		

Table 12 - Employment changes in private institutions in the years 2008-2013, as reported to the survey

2008-2013 employment change estimations: private institutions	**Increase**	**Decrease**	**No change**
% of all private institutions reporting	32%	11%	57%
Average % of change reported	+252%	-80%	N/A
Total change %	+72%		

Table 13 - Estimated changes in employment numbers in private institutions for the years 2013-2018, as reported to the survey

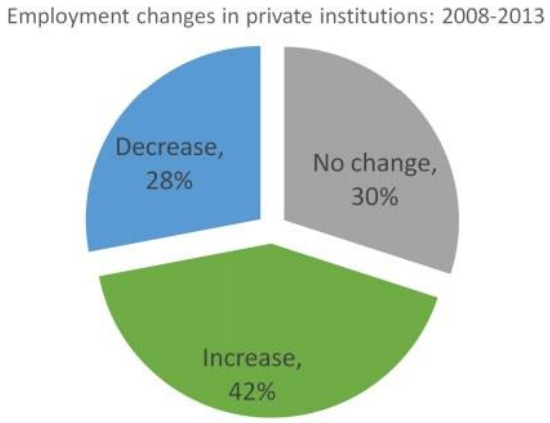

Figure 10 - Changes in employment in 2008-2013: private firms

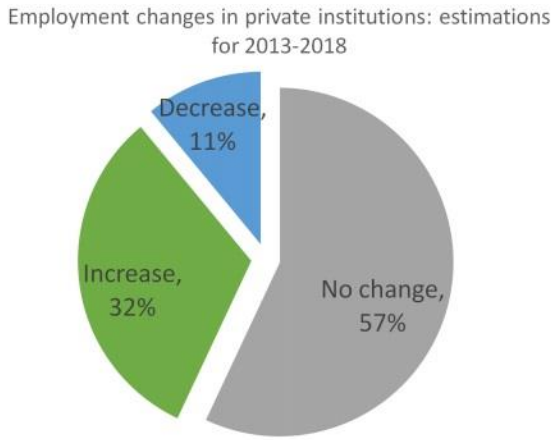

Figure 11 - Estimated changes in employment for 2013-2018: private firms

See Table 14 for an overview of employment trends in 2008-2013, by institution type, and compared with the national employment trends in the public and private sector. It should be noted that the calculations have been done in the following way: calculating the changes in each institution that provided data, and then calculating the average change in all institutions (of that category) by adding up the results and dividing by the number of such institutions. The changes for the whole time period of 2008-2013 have been calculated based on the data provided for 2008 and 2013, not taking into fluctuations in the years in between. Also, the time periods for interim years are not even (two years for 2008-2010 and 2010-2012, but only one year period from 2012-2013). For these reasons, the total change percentages for the whole time period of 2008-2013 are not equal to the sums of employment changes for the interim periods.

Employment trends	Public institutions		*National trends: the public sector**	Private firms	*National trends: the private sector**	Overall average (archae-logy)
	Academic institutions	Museums, foundations and other institutions				
2008-2010	+0.02%		*-1.3%*	+53.1%	*-0.3%*	+32.1%
	-7.7%	+0.9%				
2010-2012	-5%		*-4.5%*	+26.8%	*+8.4%*	+14.7%
	-9.8%	-4.5%				
2012-2013	-5.5%		*-0.5%*	-5.3%	*+4.4%*	-5.4%
	-9.9%	-4.9%				
Total: 2008-2013	-8.7%		*-6.3%*	+34.5%	*+12.7%*	+19.1%
	-24.4%	-6%				

*The national employment trends are based on data from the Central Statistical Office (Główny Urząd Statystyczny), available at: http://www.stat.gov.pl/gus/5840_685_PLK_HTML.htm?action=show_archive.

Table 14 - Trends for numbers of archaeologists employed, by institution type, alongside national employment trends for the public and private sector: 2008-2013

We can see that the employment trends of the public and private institutions do correlate, to some extent, with the national employment trends in the public and private sectors. Both the numbers of archaeologists employed in public institutions and general employment in the public sector declined in the time period of 2008-2013 – although the decline percentages do not correlate for every time period, the total decline percentages are very close, 8.7% and 6.3% respectively. The trends in the archaeological private firms and the national private sector seem to correlate less, as the growth was remarkably steeper in the archaeological private companies up until 2012, and then declining (unlike the national trend after 2012). Nevertheless, both data sets overwhelmingly show growth in the numbers of people employed. It is worth noting that the slight decline in the national employment trends for the private sector in 2008-2010 probably had to do with the global economic downturn, while the infrastructure projects in preparation of the European Football Championships of 2012 provided a lot of work for the archaeologists and thus averted the effects of the economic downturn on the sector(see Marciniak and Pawleta 2010). In fact, the growth in employment rates in private firms clearly lasts until 2012, followed by a decline post-Euro 2012.

Table 15 provides an overview of expected employment trends in Polish archaeology for 2013-2018. Once again, the total trends for 2013-2018 have been calculated on estimations provided for 2013 and 2018, excluding the interim changes and again, the time periods of 2013-2016 and 2016-2018 are uneven (3 and 2 years respectively). Thus, the total percentages are not equal to the sum of the changes in the two periods that have been presented.

Table 15. Expected trends for numbers of archaeologists employed, by institution type: 2013-2018.

Employment expectations	**Public institutions**		**Private firms**	**Overall average**
	Academic institutions	Museums, foundations and other institutions		
2013-2016	+0.6%		+41.5%	+27.7%
	0%	+0.6%		
2016-2018	-0.9%		+13.9%	+8.9%
	-10%	-0.1%		
Total: 2013-2018	-0.4%		+72%	+47.5%
	-10%	+0.5%		

Table 15 - Expected trends for numbers of archaeologists employed, by institution type: 2013-2018

It is clear that the private firms are most optimistic about future estimations for employment. While more than half of the private companies expect no changes in employment for the years 2013-2018, the 32% who expect a growth, expect it to be rather significant. Another factor that creates the rather high percentage rates for the private companies is that most of these companies employ very few people, so e.g. for companies currently employing 1 person and expecting to employ 2 people in 2018, the growth rate is 100%. Nevertheless, these expectations of higher numbers of employment in the private sector are rather significant, and it is difficult to tell whether they are overly optimistic, given the private sector has been shrinking post-Euro 2012 cup. When researching the private sector, we found that 22 archaeological firms were closed down in the year 2013 only – and this is rather significant, when compared to the estimated number of companies in operation, 109.

The response rate for questions regarding past and future employment trends was significantly higher for the private sector than the public sector – only a little over 20 data sets for the public institutions and nearly 50 for the private companies. Because of this, and also as the size of the private companies creates rather high percentage numbers for changes in employment, the overall average employment changes presented (in both Table 14 and Table 15) are thus not that informative. In other words, the overall averages are strongly influenced by the employment changes in the private sector.

4. Archaeologists

4.1. Size of the workforce

The total number of archaeologists reported to the survey was 916. However, the total estimated number of archaeologists is 1004 (the methods of calculation and analysis of these numbers are explained in the '2.3. Methods for calculating the size of the workforce' section). Table 16 gives an overview of the numbers of archaeologists reported to the survey, and the estimated total numbers.

	Public institutions							**Private firms**	**People who work in 2 positions**	**T O T A L**
	Academia		Museums, foundations and other							
	Universi-ties	IAE PAN	Archaeolo-gical museums	National museums	Local museums	Foundations	Other			
Archaeolo-gists reported	412		375					88	41	**916**
	309	103	177	12	144	27	15			
Archaeolo-gists, incl, estimations	412		375					176*	41	**1004***
	309	103	177	12	144	27	15			

*Estimated.

Table 16 - Number of archaeologists in Poland

Figure 12 gives an overview of the regional distribution of archaeologists in Poland, as reported to the survey. The most populated provinces have been indicated by marking their biggest cities on the map.

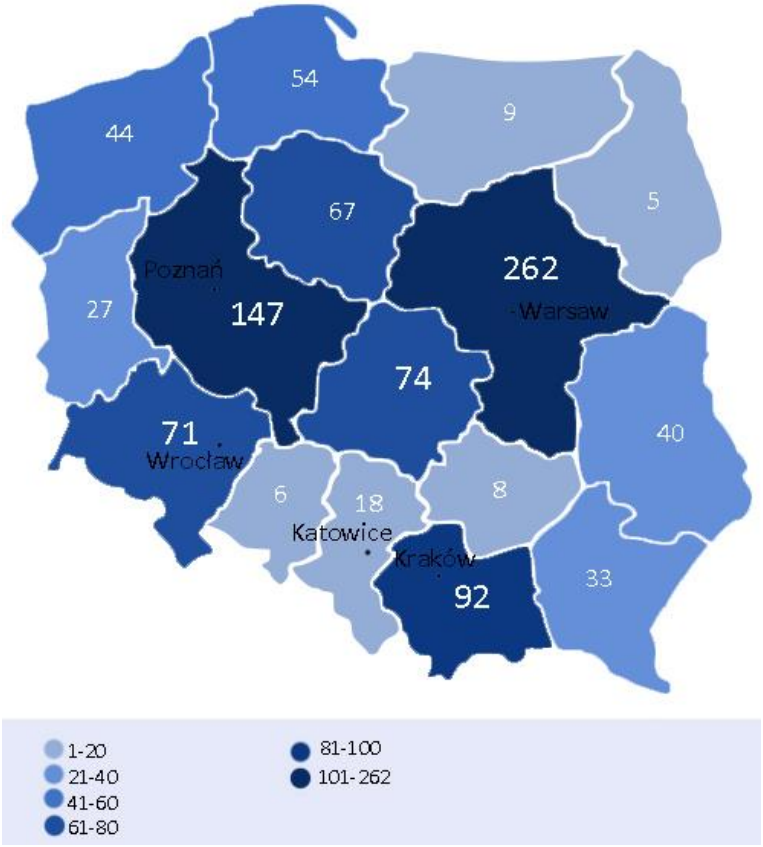

Figure 12 - Numbers of archaeologists by region

It is worth noting that while the total number of archaeologists reported to the survey is 916, the number of data sets we have is 957, as there are two data sets for every one of the 41 archaeologists who work two positions – one for each position (refer to '2.3. Methods for calculating the size of the workforce' for more information).

All of the figures presented in sections 4.1.-4.4. are based on data from the first part of the questionnaire, unless noted otherwise.

4.2. Employment and qualifications

4.2.1. Employment status

The employment status of archaeologists was reported for 892 out of the total 957 data sets of archaeologists employed. Based on this data, 95% (847 out of 892) of the archaeologists in Poland are employed permanently and work full time. About 2.7% (24 out of 892) are employed permanently and work part time, and less than 1% (2 out of 892) are employed permanently and were on sabbatical in 2013. About 2.1% of all archaeologists (19 out of 892) are on temporary contracts, and most of these individuals work in private firms. Table 17 provides an overview of the employment status of the archaeological workforce in Poland.

Employment status		**Public institutions**				**Private institutions**		**Total**	
		Academia		**Other public institutions**					
Permanent	**Full time**	447	97.6%	332	96.2%	68	76.4%	**847**	**95%**
	Part time	9	2%	13	3.8%	2	2.2%	**24**	**2.7%**
	On sabbatical	1	<1%	0	0%	1	1.1%	**2**	**<1%**
Temporary		1	<1%	0	0%	18	20.2%	**19**	**2.1%**
Number of data sets		**458**	**100%**	**345**	**100%**	**89**	**100%**	**892**	**100%**

Table 17 - Employment status overview, by institution type

4.2.2. Qualifications

In the context of Poland, all archaeologists have to have a degree in archaeology. The questionnaire enquired about the archaeologists' highest levels of qualifications obtained, to be selected from 6 options: school level, BA, MA, Phd, Habilitation or Professor. It is important to note that in the Polish academic context, it is rather rare that individuals would have a Bachelor of Arts degree without a Master's level degree (this was also reflected in the results of our research, with only 2 archaeologists holding a BA as their highest qualification, compared to 472 archaeologists with a MA degree). Archaeologists who have completed doctoral studies will have a Phd as their highest qualification, and those who have important academic achievements and have completed the Habilitation procedure, will have Habilitation as their highest qualification. The highest qualification in the Polish academic system is Professor, and this does not reflect the working position at a university, but is an academic degree awarded by the President of the Republic of Poland.

We have 910 data sets complete with information about the highest qualification, which provide an overview of the institutional distribution of highest qualifications in Table 18. As these include the 41 individuals holding 2 positions, the number of unique data sets is 869, reflecting the actual numbers of archaeologists for whom we have data about their highest qualification. Table 18 gives an overview of the institutional distribution of the archaeologists holding positions in each type of institution. The actual numbers of archaeologists are presented in the last column of Table 12.

Highest qualification	**Public institutions**				**Private institutions**		**Total**		***Total excluding duplicates***	
	Academia		**Other public institutions**							
High school	1	<1%	0	0%	0	**0%**	**1**	**<1%**	***1***	***<1%***
BA	2	<1%	0	0%	0	**0%**	**2**	**<1%**	***2***	***<1%***
MA	99	22%	288	80%	85	**94%**	**472**	**52%**	***466***	***54%***
Phd	200	44%	59	16%	5	**6%**	**264**	**29%**	***247***	***28%***
Habilitation	80	17%	5	1%	0	**0%**	**85**	**9%**	***80***	***9%***
Professor	76	16.5%	10	3%	0	**0%**	**86**	**9.5%**	***73***	***8%***
Number of data sets	**458**	**100%**	**362**	**100%**	**90**	**100%**	**910**	**100%**	***869***	***100%***

Table 18 - Highest qualifications of archaeologists, by institution type

The overwhelming majority of Polish archaeologists have obtained their highest qualification in Poland – out of the 733 data sets with information about where the highest qualification was obtained, 724 indicated this was Poland, and in only 9 cases was the highest qualification obtained outside of Poland. Table 19 provides an overview of the countries where archaeologists have obtained their highest qualification, by institution. The actual numbers of archaeologists reported to the survey are presented in the last column of Table 19.

Where highest qualification obtained	Public institutions				Private institutions		Total		*Total excluding duplicates**	
	Academia		Other public institutions							
Poland	426	98%	208	100%	90	**100%**	**724**	**98.8%**	***687***	***98.7%***
Germany	2	<1%	0	0%	0	0%	**2**	<1%	**2**	<1%
Czech Republic	1	<1%	0	0%	0	0%	**1**	<1%	**1**	<1%
France	1	<1%	0	0%	0	0%	**1**	<1%	**1**	<1%
Ireland	1	<1%	0	0%	0	0%	**1**	<1%	**1**	<1%
Spain	1	<1%	0	0%	0	0%	**1**	<1%	**1**	<1%
Sweden	1	<1%	0	0%	0	0%	**1**	<1%	**1**	<1%
Switzerland	1	<1%	0	0%	0	0%	**1**	<1%	**1**	<1%
Romania	1	<1%	0	0%	0	0%	**1**	<1%	**1**	<1%
Number of data sets	**435**	**100%**	**208**	**100%**	**90**	**100%**	**733**	**100%**	***696***	***100%***

*All of the individuals holding 2 positions have obtained their highest qualification from Poland, so the only difference between the total numbers and the total numbers excluding duplicates is in this category.

Table 19 - Overview of where the highest qualifications were obtained, by institution type

4.3. Diversity

4.3.1. Age range

Table 20 shows the age range of archaeologists reported to the survey. Analysis of survey results showed that the age distribution of archaeologists working in academic and other public institutions is very similar, while the workforce of private archaeological institutions is remarkably younger.

Age group	Public institutions				Private institutions		Total		*Total excluding duplicates*	
	Academia		Other public institutions							
<20	0	0%	0	0%	0	0%	**0**	**0%**	***0***	***0%***
20-29	9	2%	13	7%	14	15%	**36**	**6%**	***35***	***6%***
30-39	99	26.5%	45	26%	45	49%	**189**	**30%**	***184***	***30.5%***
40-49	89	24%	43	25%	21	23%	**153**	**24%**	***145***	***24%***
50-59	77	21%	44	25%	9	10%	**130**	**20%**	***121***	***20%***
60 and over	99	26.5%	29	17%	2	2%	**130**	**20%**	***118***	***19.5%***
Total numbers	**373**	**100%**	**174**	**100%**	**91**	**100%**	**638**	**100%**	***603***	***100%***

Table 20 - Age range of archaeologists reported to the survey, by institution and in total

Gender / Age group	Female		Male		Total	
<20	0	0%	0	0%	0	0%
20-29	21	9%	14	4%	35	6%
30-39	76	33%	107	29%	183	30%
40-49	67	29%	78	21%	145	24%
50-59	35	15%	86	23%	121	20%
60 and over	33	14%	85	23%	118	20%
Total	**232**	**100%**	**370**	**100%**	**602**	***100%***

Table 21 - Age and gender of archaeologists reported to the survey

Table 21 shows the age range and gender of archaeologists reported to the survey. Male archaeologists outnumbered female in all age bands except for 20-29. In the rest of the age bands, the numbers of female archaeologists are significantly lower than those of male archaeologists, especially in the oldest age bands, 50-59 and 60 and over.

4.3.2. Gender balance

We managed to obtain information about the gender of 913 archaeologists, of whom 385 (42%) were female and 528 (58%) were male (Table 16). Of the whole Polish working population, 45% were female and 55% were male in 2013 (according to data from the Polish Central Statistical Office/ Główny Urząd Statystyczny). Thus, it can be said that women are under-represented in the archaeological profession, but not to a substantial degree if compared to the whole working population of Poland.

Out of the 913 archaeologists for whom gender was determined, 41 work in two positions, so the total number of data sets adds up to 954 with the duplicates, allowing for an analysis of the gender distribution in different types of institutions. Based on our data, it can be said that women are under-represented in the academic and private institutions, while there is an equal number of women and men employed in the category of other public institutions (museums, foundations etc). Table 22 provides an overview of the gender balance in different types of institutions and Polish archaeology in general, alongside data about the gender balance of the whole Polish working population.

	Public institutions				**Private institutions**		**Total**		***Total excluding duplicates***		**Polish working population**
	Academia		**Other public institutions**								
Female	159	35%	203	50%	35	39%	**397**	**42%**	***385***	***42%***	**45%**
Male	299	65%	203	50%	55	61%	**557**	**58%**	***528***	***58%***	**55%**
Number of data sets	**458**	**100%**	**406**	**100%**	**90**	**100%**	**954**	**100%**	***913***	***100%***	**100%**

Table 22 - Gender balance in archaeology, by institutional basis, and in total, compared with the Polish working population

For a total of 868 archaeologists, we have information about both their gender and their highest qualification, allowing for multivariate analysis. Table 23 shows the highest qualifications of male and female archaeologists, revealing that men tend to be more highly

qualified – about 35% of the female and 55% of the male archaeologists have a Phd or higher qualification. Also, only 4% of female archaeologists and as many as 12% of male archaeologists have the highest qualification possible, Professor.

Gender / Qualification	Female		Male		Total	
High school	0	0%	1	<1%	1	<1%
BA	1	<1%	1	<1%	2	<1%
MA	233	65%	232	45%	465	54%
Phd	89	25%	158	31%	247	28%
Habilitation	20	6%	60	12%	80	9%
Professor	14	4%	59	12%	73	8%
Total	**357**	**100%**	**511**	**100%**	**868**	***100%***

Table 23 - Archaeologists' gender and highest qualifications obtained

4.3.3. Disability status

According to the Act of 27 August 1997 on vocational rehabilitation, social and employment of people with disabilities, there are three established degrees of disability in Poland – substantial, moderate and light. People with substantial disability are unable to take up employment, while people with a moderate degree of disability require a suitably adapted workplace and some assistance from other people, and people with a light degree of disability are capable of performing work without assistance.

In our survey, information about the disability status was provided for 910 archaeologists. For 907 of these, the status was indicated as no disability, and 3 archaeologists were reported as disabled. So, only 0.33% of the archaeologists were reported as disabled. This proportion of disabled archaeologists reported to the survey is relatively low compared to the national statistics. According to the Polish Central Statistical Office (Główny Urząd Statystyczny), the number of disabled people in employment was 437 000 in 2013, which is 2.8% of the whole workforce of 15.7 million people. Thus, the proportion of disabled people in the

archaeological workforce reported to our survey was almost ten times lower than the national proportion – 0.33% and 2.8% respectively. Table 24 provides an overview of the disability status of archaeologists in Poland, as reported to the survey.

Disability status	**Public institutions**		**Private institutions**	**Total**		***Total excluding duplicates****	
	Academia	**Other public institutions**					
Yes	0	0	3	**3**	**<1%**	***3***	***<1%***
No	458	406	84	**948**	**99.1%**	***907***	***99%***
No answer provided	0	2	4	**6**	**<1%**	***6***	***<1%***
Number of data sets	**458**	**408**	**91**	**957**	**100%**	***916***	***100%***

*All of the individuals holding 2 positions were in the category of no disability, so the only difference between the total numbers and the total numbers excluding duplicates is in this category.

Table 24 - Disability status of archaeologists reported to the survey

4.3.4. Country of origin

Based on the data sets with information about the country of origin, only about 1% of the archaeologists working in Poland are from abroad – from Germany, Czech Republic, Spain, Ukraine and USA (1 respondent did not specify what foreign country they were from). Table 25 summarises the responses about country of origin.

Country of origin	**Total**	**% of reported archaeologists**	**Specific country of origin**
Poland	904	99.2%	
Non-Poland European Union	4	<1%	**Germany – 2**

			Czech Republic – 1 **Spain – 1**
Non-EU Europe	1	<1%	**Ukraine – 1**
Rest of the world or not specified	2	<1%	**USA – 1** **Not specified - 1**
Total	911	100%	

Table 25 - Country of origin of archaeologists working in Poland

Table 26 presents the data about the country of origin by institution type, revealing that almost all foreigners reported to the survey are working in the academic institutions

Country of origin	**Public institutions**				**Private institutions**		**Total**		***Total excluding duplicates***	
	Academia		**Other public institutions**							
Poland	450	98.7%	405	100%	90	**98.9%**	**945**	**99.3%**	***904***	***99.2%***
Germany	2	<1%	0	0%	0	0%	**2**	<1%	***2***	*<1%*
Czech Republic	1	<1%	0	0%	0	0%	**1**	<1%	***1***	*<1%*
Spain	1	<1%	0	0%	0	0%	**1**	<1%	***1***	*<1%*
Ukraine	1	<1%	0	0%	0	0%	**1**	<1%	***1***	*<1%*
USA	1	<1%	0	0%	0	0%	**1**	<1%	***1***	*<1%*
Abroad – not specified	0	<1%	0	0%	1	1.1%	**1**	<1%	***1***	*<1%*
Number of data sets	**456**	**100%**	**405**	**100%**	**91**	**100%**	**952**	**100%**	***911***	***100%***

Table 26 - Archaeologists' country of origin, by institution

The National Census of Population and Housing from 2011 (Narodowy Spis Powszechny Ludności i Mieszkań 2011) is the most recent source about foreigners in Poland. According to this report, a foreigner is someone who lives in Poland and does not have a Polish citizenship

(regardless of what they consider their nationality to be). The census of 2011 revealed that more than 99.8% of permanent residents are Polish citizens, while more than 0.1% are foreigners (with non-Polish citizenship or identified as stateless persons). Thus, the percentages of archaeologists' country of origin are more or less comparable to the national statistics on citizenship, as 99.2% of the archaeologists reported to the survey are from Poland, compared to the >99.8% of permanent residents that have Polish citizenship. The percentages of foreigners are thus approximately 0.8% for the archaeological workforce and 'more than 0.1%' for the whole nation.

It is worth noting that the regional distribution of foreigners is not even, as according to the census of 2011, 31% of the foreigners live in the province of Mazovia (where the capital Warsaw is also situated), and the second largest foreign population living in the province of Lower Silesia (largest and capital city: Wrocław). The foreigners reported to our survey of archaeologists live in the following provinces: Mazovia (2), Łódź (2), West Pomeranian (1), Lublin (1), Greater Poland (1).

Out of the 7 foreigners reported to our survey, 6 are men. 5 out of the 7 have a Habilitation as their highest qualification, 1 has a Phd and 1 an MA as their highest qualification. All of the 7 foreign origin archaeologists were more than 40 years old, with the ages reported as follows: 50-59 (3 foreign archaeologists), 40-49 (2 foreign archaeologists) and 60+ (1 foreign archaeologist).

4.4. Work undertaken and skills shortages

4.4.1. Work undertaken

We have obtained information about the types of work undertaken for a total of 887 data sets. Table 27 provides an overview of the work archaeologists undertake in their positions, and the percentages of how many archaeologists were reported as undertaking each type of work. In many cases, a position involves several types of work to be undertaken, so the total numbers reflect how many times each type of work was mentioned. The most commonly undertaken type of work is archaeological fieldwork or research, which was mentioned 643 times, meaning that 72.5% (643 out of 887 reported) of the positions involve archaeological fieldwork or research. The percentages for each category of institution have been calculated based on the number of data sets for which work undertaken was reported within that category - private institutions: 91, academia: 446 data sets, other public institutions: 350. It should be noted that among the 350 data sets for other public institutions, there are 138 data

sets with specified types of work undertaken, and the rest, 212 data sets, definitely involve 'museum or visitors services', but may also involve 'archaeological fieldwork or research' – these 212 have thus only been counted for 'museum or visitors services'.

Work undertaken	Public institutions				Private institutions		Total	
	Academia		Other public institutions					
Archaeological fieldwork or research	440	99%	124	35%	79	87%	**643**	**72.5 %**
Education or training	335	75%	1	<1%	11	12%	**347**	**39%**
Museum or visitors services	2	<1%	341	97%	4	4%	**347**	**39%**
Managerial role	35	8%	34	10%	48	53%	**117**	**13%**
Provision of archaeological service	1	<1%	5	1%	88	97%	**94**	**11%**

Table 27 - Work undertaken and % of respondents mentioning each type of work, by institution

Table 28 reveals how many positions involve the undertaking of 1 type of work, of 2 types of work etc. along with the percentages of positions involving that many types of work. The percentages for each category of institution have been calculated based on the number of data sets for which work undertaken was specified within that category - private institutions: 91, academia: 446 data sets, other public institutions: 138. The number of data sets for the public institutions differs here from the one used for Table 27, as in addition to the 138, there were 212 data sets for which we are confident about 1 type of work undertaken, but are unsure whether those 212 positions also involve a second type of work as well. So, for the percentage calculations in Table 28, these 212 data sets have been excluded. Thus, the total number of data sets in this case is 675. Based on our data, more than two thirds (68%) of positions in Polish archaeology require 2 types of work to be undertaken, while some positions even involve the undertaking of as many as 3 or 4 types of work.

How many types of work undertaken	Public institutions				Private institutions		Total	
	Academia		Other public institutions					
1	103	23%	14	10%	9	**10%**	**126**	**19%**
2	319	72%	104	75%	33	**36%**	**456**	**68%**
3	24	5%	19	14%	41	**45%**	**84**	**12%**
4	0	0%	1	<1%	8	**9%**	**9**	**1%**

Table 28 - Positions involving the undertaking of 1, 2, 3 or 4 types of work, by institution

4.4.2. Skills shortages

The issue of skills shortages was covered in the second, institutional part of the questionnaire. There were a total of 64 responses to the question of skills shortages, each reporting one or more skills as lacking. The most often mentioned skills shortages were specialist analytical skills (mentioned 48 times), followed by IT competence (17 times), knowledge of material culture (11 times), foreign language skills (10 times) and multimedia skills (7 times). Table 29 provides an overview of the responses about skills shortages.

Archaeological skills	Number of times skill mentioned as lacking	% of respondents mentioning this lack
Specialist analytical skills	48	75%
IT competence	17	27%
Knowledge of material culture	11	17%
Foreign language skills	10	16%
Multimedia skills	7	11%
Other skills (please specify)	10	16%

Table 29 - Archaeological skills which employees lack, number of responses mentioning them and % of respondents mentioning this lack

The other skills shortages (each mentioned once) were:

- field experience
- documentation techniques
- conservation skills
- basic excavation techniques
- architectural research/study
- modern methods of research
- thorough knowledge of the chosen specialisation
- archaeological ability to think logically
- ability to plan field activities and the cabinet
- archaeological methods (not specified).

In general terms, the skills shortages reported by the public and private institutions were more or less the same. This can be seen in Figure 13.

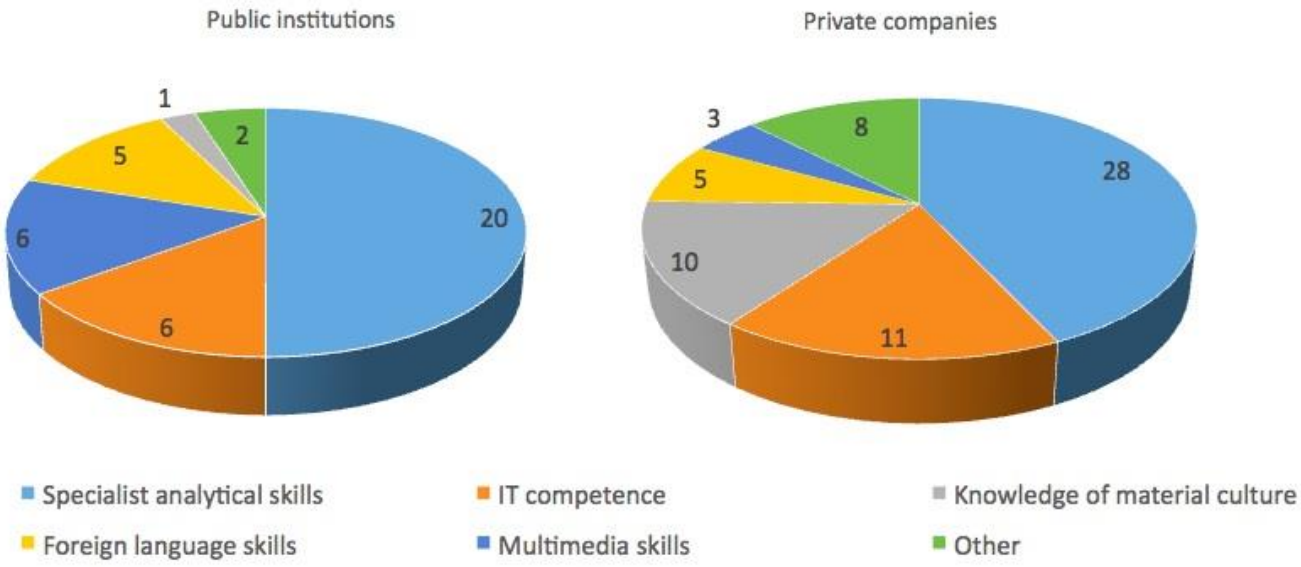

Figure 13 - Skills shortages in public and private institutions

The key differences in the skills shortages reported for the public institutions and the private institutions lie in how many times knowledge of material culture is highlighted as a skills shortage (10 times in private institutions and only once among public ones), and in the 'other skills' mentioned. Among the public institutions, the latter included conservation skills and documentation techniques (both mentioned once). Among the private firms, the other skills

shortages mentioned, each of them once, were: field experience, basic techniques of excavation, thorough knowledge of the chosen specialisation, archaeological ability to think logically, but also the ability to plan field activities and the cabinet, architectural research/study, archaeological methods (not specified), and modern methods of research. Interestingly, one respondent from a private company commented under the 'Other skills (please specify)' as follows: 'There is no lack in the staff, but there is a lack in orders' (originally: 'nie brak pracowników jest problemem, tylko brak zleceń'), reflecting the decline in the amount of work available to the private institutions.

5. Wages in Polish archaeology

5.1. Wages in the Polish archaeological sector – an overview

As salaries are a very confidential topic in Polish culture and could not be associated with specific persons in the context of this survey, the question of salaries was raised in the second part of the questionnaire. Thus, the data we have about salaries are for certain positions held in different types of institutions. These positions are: fieldworker, archaeologist, technician and researcher. It should be noted that not all of these positions would be directly applicable to the actual positions held in academic institutions. So, for example, there is no position of 'archaeologist' in universities, and the position of researcher would most likely involve both research and teaching. The categories of researcher, archaeologist and fieldworker are thus not exclusive in this context, and this complicated data collection to some extent, resulting in rather low response rate from the academic institutions. However, the use of these job categories was necessary to allow for analysis across the different institutions in Polish archaeology, and also for transnational analysis.

The respondents were asked to report the monthly gross wages of these positions, indicating one of the possible answers – these were the wage bands of 1000-2000PLN, 2000-3000PLN, etc. and then 'above 5000PLN', respectively equal to approximately 240-480EUR, 480-720EUR, etc. and then 'above 1200EUR' (exchange rate as of December 2013). It should be noted that the average monthly gross wages in Poland were 890 euros for the public sector and 905 euros for the private sector in 2013 (source: Central Statistical Office/ Główny Urząd Statystyczny).

Table 30 presents the overall data about salaries, as reported to the survey. The numbers reflect the number of institutions that have reported the respective positions as earning the sum within the wages band.

Overall	Fieldworker		Archaeologist		Technician		Researcher		Total	
240 – 480 EUR	41	82%	22	28.6%	21	42%	1	2%	85	38%
480 -720 EUR	8	16%	39	50.6%	27	64%	19	39%	93	41%
720-960 EUR	1	2%	12	15.6%	2	4%	19	39%	34	15%
960-1200 EUR	0	0%	4	5.2%	0	0%	5	10%	9	4%
>1200 EUR	0	0%	0	0%	0	0%	5	10%	5	2%

Table 30 - Wages – overall data reported to the survey

Collected data made it possible calculate the mean monthly wages for archaeological work for different sectors in employed in Polish archaeology. As mentioned in the introduction, collecting these data was very troublesome. People did not wish to disclose information about their wages, even when they were reassured that the data collection is confidential. Wages are considered a taboo subject in Poland and the survey has to take this habit into consideration. Hence, the calculation of the average wages for archaeological work was calculated based upon information provided by institutions that have reported the respective positions as earning the sum within the wages band.

The average salaries in for different categories of work force in Polish archaeologists different considerably as presented in Table 31.

Category of employee	Average monthly gross wages (in EUR)	N
Fieldworker	408	50
Archaeologist	594	77
Technician	509	50
Researcher	811	49

Table 31 – The average monthly gross wages (in EUR) for different categories of employees in archaeological sector in Poland

5.2. Wages in different institutions in the Polish archaeological sector

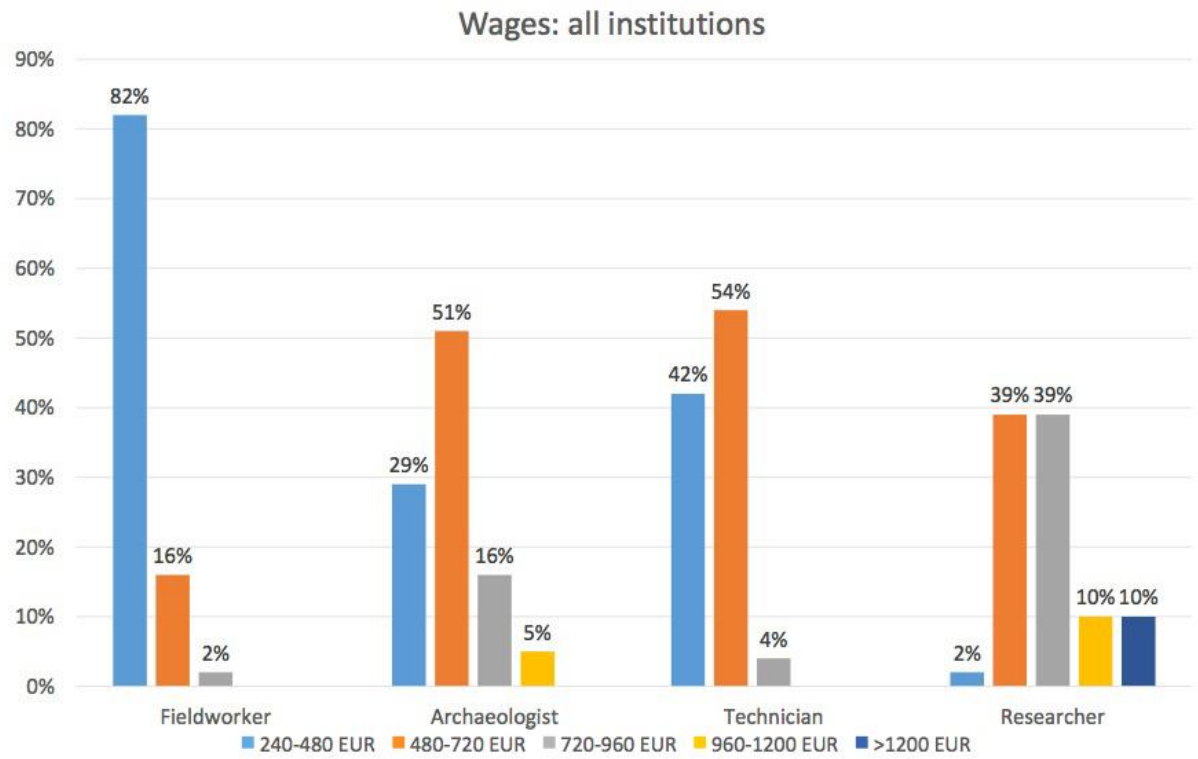

Figure 14 - Overview of monthly gross wages by position type.

Figure 14 provides an overview of the proportions of wages in all institutions, by position type. It becomes clear that the position of fieldworker is paid the least, followed by the position of technician and then that of archaeologist. The wages of researchers tend to be highest, with most of them earning over 720EUR per month. The position of researcher is also the only one for which wages over 1200EUR have been reported (in 5 institutions, all of them being private firms).

Figures 15-18 present the proportional data about the salaries of different positions in different institutions, alongside the overall data for all institutions (in grey) for comparison.

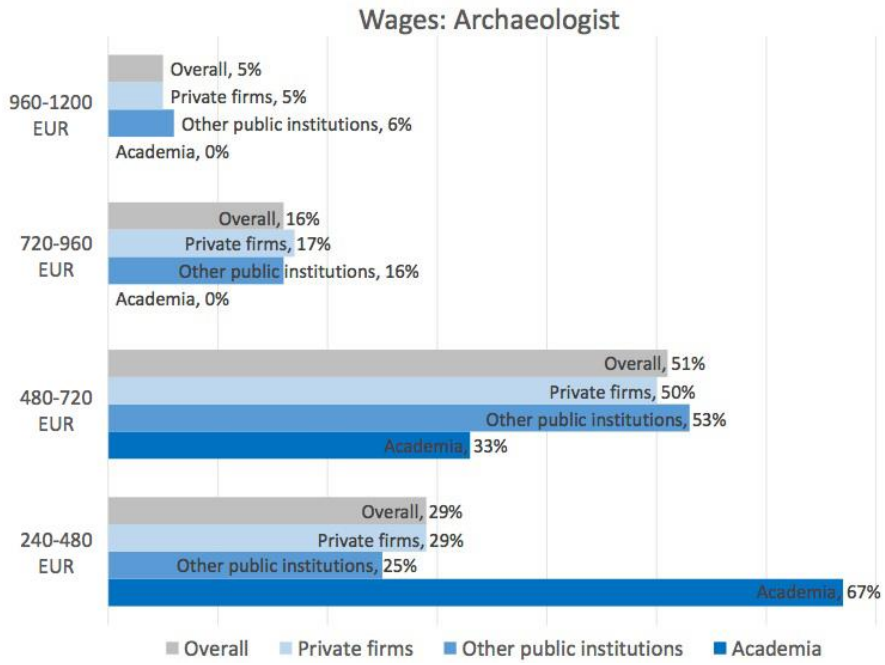

Figure 15 - Gross monthly wages of archaeologists, by institution

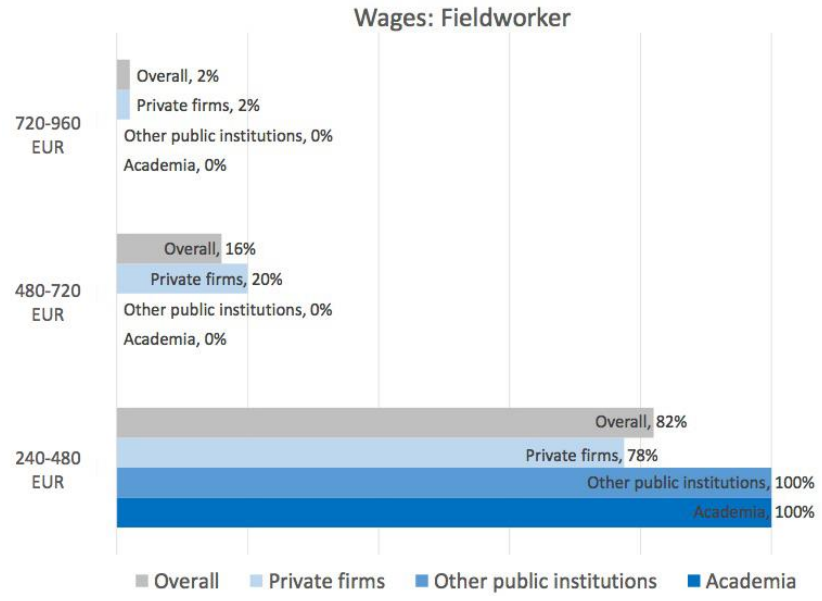

Figure 16 - Gross monthly wages of fieldworkers, by institution

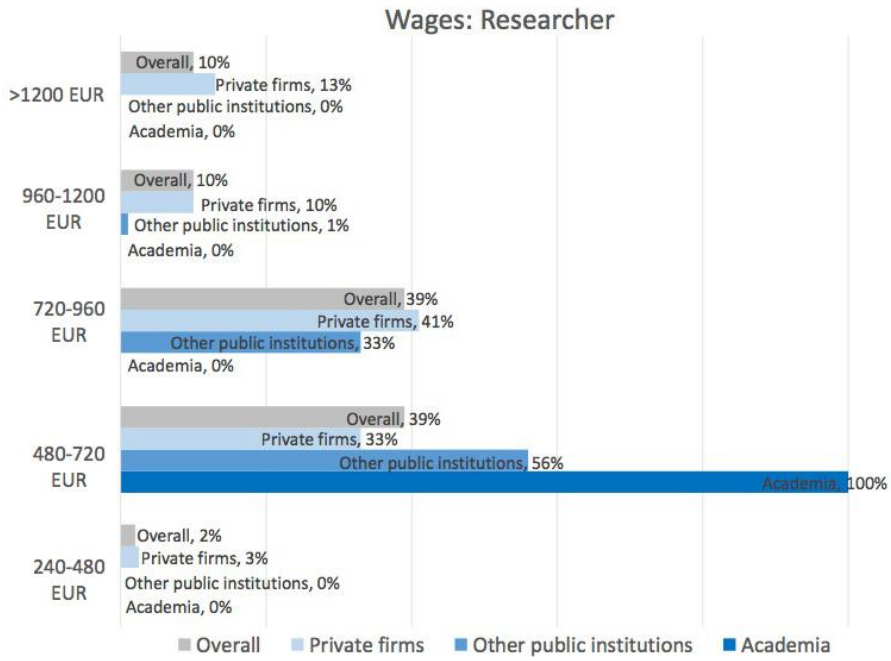

Figure 17 - Gross monthly wages of researchers, by institution

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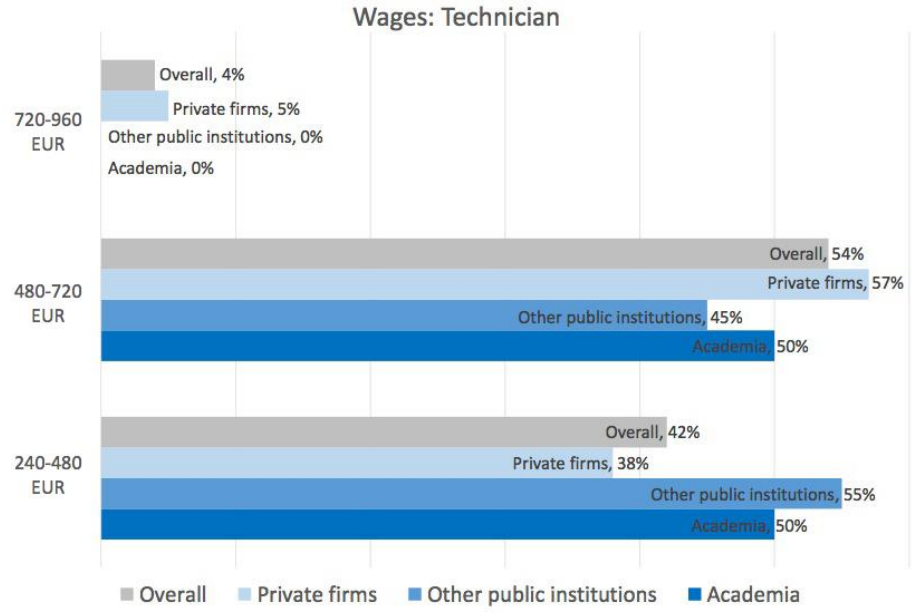

Figure 18 - Gross monthly wages of technicians, by institution

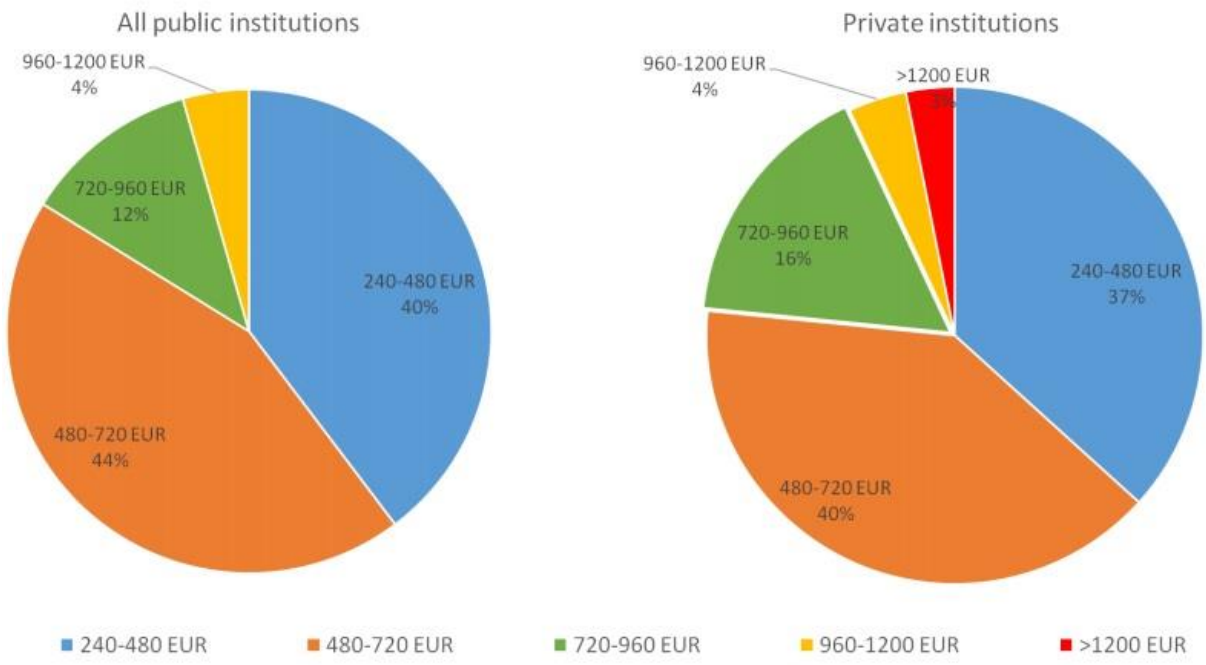

Figure 19 - Distribution of monthly gross wage bands in public and private institutions

As becomes clear, most salaries in archaeology are below the national averages of 890EUR and 905EUR for the public and private sector respectively. As Figure 19 shows, the wages in the private institutions are slightly higher than in the public ones in archaeology, which correlates with the national average wage being a little bit higher in the private sector.

6. Final Remarks

Results of systematic survey carried out within the project *Discovering the Archaeologists of Europe 2014* made it possible to collect and thoroughly analyse a number of important variables that could contribute to recognition of the current composition of the archaeological profession in Poland as well as better definition of the needs of the archaeological community. As this is the first survey of this complexity ever completed in Polish archaeology and considering large transformations of the discipline today, there is no doubt that detailed results of this analysis will be commonly referred to in any discussion pertaining to the future of archaeological workforce and more general developments of archaeology in Poland in the years to come.

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