

Cost comparison of salaried and freelance medical writers working in Europe

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Abstract

This is the first systematic comparison of the costs of salaried and freelance medical writers working in Europe. In the absence of official figures for the total costs of employment, we make reasoned assumptions, using mean base figures for salaried and freelance medical writers from published surveys conducted in Europe by the professional organisation for medical writers in Europe, EMWA. In this cost comparison, *annual freelancer earnings* amount to €98 175 and the *annual cost of a salaried writer* to €102 098.

Keywords: Freelance, Employee, Medical writer, Earnings, Cost comparison

Introduction

The European Medical Writers Association (EMWA) conducted surveys of earnings of salaried¹ and freelance members² in 2012. The salary survey reported on mean annual earnings for medical writers and the freelance business survey on mean hourly rates for medical writing. A comparison of these figures to establish whether the costs of the two types of employee are similar is not straightforward because the surveys were designed separately to collect different data and are not directly comparable. A comparison of the raw mean annual salary and the mean hourly rate multiplied by the number of hours in a working year would be distorted, because salaried staff incur costs in addition to their salary. Such costs must be added to an employee's salary to obtain the true cost of employment. This must be considered when comparing the cost of salaried staff and freelancers, because freelancers cover these additional costs in their hourly rate. One publication so far has compared the costs of freelance and salaried medical writers, but failed to take due account of additional costs.³

Comments on this comparison are the subject of a Letter to the Editor by us in this edition of *Medical Writing*.⁴ Our aim with this investigation was to arrive at reasonable estimates for the number of productive days worked, *incidental employment costs*, and *employee overhead* (see Box 1) to enable us to compare the costs of salaried and freelance medical writers based on annual earnings in each group.

Box 1: Salaried employee

Incidental employment costs include employer contributions for health insurance, unemployment insurance, state pension, maternity or paternity leave, and a range of other benefits depending on the country.

Employee overhead includes costs for everything required to keep the employee at work and working effectively, such as administrative support, supervision, human resources, payroll, travel and meal subsidies, provision of a workspace and equipment, IT licence fees, costs for training, liability and other insurances, and workplace service, maintenance, and cleaning costs.

Material and methods

Scope of our calculations

The 2012 EMWA Freelance Business Survey was conducted in EMWA members and non-members, and the 2012 EMWA Salary Survey was conducted in members only. Both surveys were open to individuals in Europe and beyond. However, only a few respondents in both surveys were not working in Europe, so we regarded the overall findings as representative of the situation in Europe.

The mean annual salary per country varied widely between countries in the 2012 survey

(€37 521–€111 578). The overall mean at the individual level was €61 505.¹ The mean freelance hourly rate per country is not calculated by EMWA for reasons of business ethics (possible differences could influence the placement of work based on cost alone and, for countries where EMWA has one or two members only, it would place survey respondent anonymity at risk), but the range and mean for the whole was €77 (€20–€135) in the 2012 survey.² We used the mean overall annual income and the mean hourly rate for our calculations.

We needed to arrive at reasonable estimates of the following:

- Number of productive days worked per year.
- Annual freelancer earnings based on number of productive days worked per year.
- Incidental employment costs expressed as a factor of employee earnings.
- Employee overhead expressed as a factor of employee earnings.
- Annual cost of a salaried writer calculated as gross salary plus incidental employment costs and employee overhead.

Number of productive days worked per year

Office-based salaried employees in Europe do not work an uninterrupted 7.5 hours per day for 365 days. Table 1 shows a typical calculation of the actual number of productive days worked in a year in the UK, adapted from an example published on the website of Techscribe,⁵ a company in the UK that employs technical writers to produce instruction manuals. It was developed together with the UK Business Forums⁶ and the Professionals Contractor Group (PCG),⁷ the largest association of independent professionals in the European Union (EU), representing freelancers, contractors, and consultants from every sector of the economy. After deducting weekends, holidays and public holidays, training, continuous professional development, sick days, and unproductive time,⁸ they conclude

Table 1: Productive working days in a year

Item	Number of days	Running total
Weekdays in a year	261	261
Holidays ^a	32	229
Formal training	5	224
Continuous professional development	5	219
Sick days	7	212
Wasted and unproductive time	42	170

Adapted from Techscribe.co.uk.⁵

^aHolidays include 25 days of annual leave and 7 public holidays. The total may be higher or lower by about 5 days depending on the country.

that employees spend 170.6 days per year working productively.

Our comparison of the remuneration of salaried and freelance employees working full-time assumes that both groups work the same number of productive days. The actual number of days varies from country to country because, for example, some European countries have 30 days of annual leave as a standard, some have fewer, and the numbers of public holidays and average sick days differ.

We took 170 days as a reasonable estimate, aware that there are differences between countries, but assumed that the differences would not be large enough to have a significant effect on our estimates.

Annual freelancer earnings

We calculated this by multiplying the mean hourly rate of €77 by 170 productive days per year and 7.5 hours per day.

Incidental employment costs and employee overhead

Official estimates of incidental employment costs in the EU are published annually by the government

Table 2: Incidental employment cost factors in the EU in 2012

Country	Factor ^a
<i>EU average</i>	1.32
<i>Average for more expensive countries</i>	1.39
<i>Average for cheaper countries</i>	1.22
Sweden	1.52
France	1.50
Belgium	1.47
Italy	1.41
Lithuania	1.40
Czech Republic	1.37
Spain	1.37
Estonia	1.37
Austria	1.37
Slovakia	1.36
Hungary	1.34
Romania	1.31
Netherlands	1.30
Greece	1.29
Finland	1.28
Germany	1.28
Latvia	1.27
Portugal	1.26
Cyprus	1.21
Poland	1.20
Bulgaria	1.19
Ireland	1.18
Slovenia	1.17
United Kingdom	1.16
Luxembourg	1.15
Denmark	1.15
Malta	1.10

Adapted from Destatis.de.⁹

Note: More expensive countries: Sweden to Greece; cheaper countries: Greece to Malta; in terms of incidental employment costs.

^aThe cost of employing a person including incidental employment costs is obtained by multiplying the gross salary by the factor given.

offices responsible for statistics in each country. Table 2 is adapted from the 2012 statistics published by the German Federal Office for Statistics.⁹ It shows that the EU average is a factor of 1.32 for incidental employment costs alone, not including employee overhead. Estimates of incidental employment costs alone from academic and business sources abound on the Internet. Spot checks for different countries showed that the estimates were higher or lower than the country averages and the EU average. We therefore decided to use the EU information as the most reliable figures.

Estimates of the true full cost of employing someone, including incidental employment costs *plus* employee overhead, are difficult to find. Employee overhead differs by country and business sector, and we found no average calculations of employee overhead similar to those for incidental employment costs from official sources.

Table 3: Calculation of true employee cost including incidental employment costs and employee overhead

Item	€	
	Cost	Running total
Recruitment and salary		
Salary	42 000	42 000
Recruitment fee or advertising/selection costs	4200	46 200
National insurance (state health, pension, and unemployment insurance)	4710	50 910
Typical optional benefits		
Private healthcare	1000	51 910
Life insurance	100	52 010
Company pension	1000	53 010
Employee-specific costs		
Software licences	1200	54 210
Training, continuous professional development	1200	55 410
Workstation	9000	64 410
Apportionment of cost of business		
Share of other overheads, such as buildings, kitchen facilities, insurances (death-in-service, key worker, public liability, employer's liability)	1000	65 410
Depreciation on capital equipment (PC, desk, chair, filing cabinet, etc.)	100	65 510
Consumables (paper, toner, coffee, toilet paper)	100	65 610
Administrative overheads (non-project administration, HR, payroll, secretarial)	2400	68 010
Factor to obtain true cost (€68 010/42 000)	1.62	

Adapted from Techscribe.co.uk.⁵

Examples of other costs and overhead not taken into account in this model: maternity and paternity leave, unfair dismissal claims, redundancy, jury service, sick pay, and holiday pay.

We did find some references with estimates of the total cost:

- The Start in Business website¹⁰ says: 'Generally, as a rule, you can estimate the cost of employing a member of staff by taking their salary and doubling it!'
- The French business advice website En20lignes¹¹ says: 'For your provisional budget, take the gross salary and add 64% [...] (22% for salary-related costs and 42% for associated business expenses)'
- The business advice section of the Lexware website in Germany¹² says that an employee earning €40 000 per year costs a total of €68 000, 'which means that a factor of 1.7 should be applied'.

Techscribe publish a freely downloadable spreadsheet, also developed together with the UK Business Forums and PCG, for calculating the cost of employing someone.⁵ A similar 'True Cost of an Employee Calculator' can also be downloaded from the Accounting Services for Business website in the UK.¹³ The Techscribe spreadsheet, simplified by us and completed for a typical UK employee, arrives at a factor of 1.62 for true additional costs (Table 3).

Taking together the incidental employment cost factor of 1.32 in the EU, estimates on the websites given above for the true additional total costs of 2.00, 1.64, and 1.70, and the factor of 1.62 for total costs using the Techscribe spreadsheet, we decided that the midpoint between the EU incidental employment cost factor of 1.32 and the highest estimate we found of 2.0, i.e. 1.66, for total costs would be a reasonable – if perhaps conservative – approximation of incidental employment costs plus employee overhead.

We also calculated the true costs for 'cheaper' and 'more expensive' EU countries in terms of the incidental employment cost factor per country. We did this by calculating the mean for the top 14 countries and the mean for the bottom 14 countries in Table 2. Since there were 27 countries, Greece, at rank position 14, was included in both calculations. The mean factor for incidental employment costs was 1.22 for the cheaper countries and 1.39 for the more expensive countries. To this we added 0.34, the difference between 1.32 (EU incidental employment cost factor) and 1.66 (midpoint between EU incidental employment cost factor and the highest true cost factor of 2.00) for our overall calculation, to obtain a total factor of 1.56 for the cheaper countries and 1.73 for the more expensive countries.

Table 4: Total costs in all EU countries, and cheaper and more expensive EU countries

EU country group	€				
	1 Mean annual salary in EMWA survey	2 Incidental employment and employee overhead factor	3 Total cost of employee	4 Mean freelance earnings	5 Difference between cost of employee and freelance earnings
Cheaper	61 505	1.56	95 948	98 175	-2227
All	61 505	1.66	102 098	98 175	3923
More expensive	61 505	1.73	106 404	98 175	8229

Note: The 27 EU countries were classified into 'cheaper' and 'more expensive' based on incidental employment costs (see Table 2).

Total cost of employee (3) is obtained by multiplying 1 by 2; mean freelance earnings (4) were calculated as €77 × 7.5 hours × 170 days; difference between the cost of employee and freelance earnings (5) is obtained by subtracting 4 from 3.

Annual cost of a salaried writer

This was calculated by taking the mean salary from the EMWA 2012 survey of €61 505 and including the incidental employment costs and employee overhead with a factor of 1.66 for the overall calculation, 1.56 for the cheaper countries, and 1.73 for the more expensive countries.

Results

Annual freelancer earnings amounted to €98 175 and the *annual cost of a salaried writer* to €102 098 for all EU countries.

Table 4 shows these results and those for the cheaper and more expensive EU countries.

Discussion

Based on reasonable estimates of the number of productive days worked per year,⁵ mean annual freelancer earnings² adjusted for this, mean annual salary,¹ incidental employment costs,⁴ and employee overhead,^{5,10-12} we show that the mean earnings of freelance medical writers and the mean cost of salaried medical writers in full-time employment in Europe are very similar. As would be expected, greater differences were seen for the same calculations for cheaper and more expensive EU countries in terms of incidental employment costs, slightly in favour of salaried staff for cheaper countries, and slightly in favour of freelancers for more expensive countries. The mean freelance earnings in this comparison were, however, not country-specific as this information was not available due to business ethics (see above).

As far as we are aware, this is the first direct comparison of the costs of salaried and freelance medical writers that has attempted to take into account the true costs of both groups. In the absence of official figures for the total costs of employment, we inevitably had to make assumptions, and our base figures for salaried and freelance medical writers were taken from mean

values calculated in published surveys among these two groups conducted in Europe by the professional organisation for medical writers in Europe, EMWA. We feel that our assumptions regarding total costs were therefore reasonable and that our approximations show that there are no appreciable differences between the costs of employing salaried staff and freelancers.

These results were very different from those reported by Marriott,³ who concluded that freelance writers cost very much more than their salaried colleagues. This was, however, based on calculations not taking due account of the number of productive days, incidental employment costs, and employee overhead. The latter two factors vary widely throughout the EU, and according to one UK estimate¹⁰ may account for as much as 100% of the employee's annual salary. Incidental employment costs alone range from 10 to 55% of the employee's salary in the EU.⁹ Unlike incidental employment costs, there are no official EU figures for employee overhead or the total cost of employment. In the absence of such figures, we had to make assumptions to arrive at a factor for the calculation of true cost. We did this by adding a reasonable estimate of employee overhead to the official EU factor for the calculation of incidental employment costs,⁹ arriving at a factor of 1.66.

Simple 'multiplication up' of the freelance hourly rate for a working year appears to result in freelancers receiving more money than salaried staff. We have shown, however, that this is too simplistic an approach. One aspect we did not include in our calculation was whether freelancers invoice clients for all the work they do. A recent study from FreeAgent, a leading online accounting system provider in the UK, shows that UK freelancers and small businesses do not charge for one-third of the time that they actually spend working for clients.¹⁴ In the context of our calculations, a more modest – and arguably more realistic – estimate for the average number of unbilled

hours of 10% would result in freelancers being appreciably cheaper than salaried staff.

Freelancers therefore not only represent value for money, but companies realise that the true cost to them of using a freelancer corresponds to the work they supply for a limited period, including the additional element of rapid availability at times of peak workload, without the obligations of incidental employment costs and hardly any employee overhead. Some organisations have done calculations that put freelancer fees into perspective^{5,13} and show that very much more has to be considered than just the annual salary of the writer and the hourly rate of the freelancer. This is reflected by the Techscribe website,⁵ which states that ‘freelancers and employees solve different problems for customers and employers’. Market value is also a factor in such considerations, and this applies to industry across the board: usually, the more urgently you are required – often the case in IT or legal services for example – the more you can charge.

To our knowledge, the earnings of salaried and freelance medical writers have not yet been systematically compared, until now. We based our calculations on official figures as far as these are available, and we made reasoned and conservative assumptions where they were not available. Not all EU countries were represented in the mean annual salary from the EMWA survey, but the major EU countries and economic areas for our business sector (UK, Germany, France, Benelux, Spain, and Scandinavia) were included. In the absence of a mean salary for all EU countries, we decided that it was reasonable to use the figure from the EMWA survey as the best available. The figures we used for incidental employment costs and employee overhead were not available specifically for medical writing. However, these are unlikely to differ greatly in a given country for different types of office employee. Employers may also have some employee overhead for freelancers (e.g. provision of a workplace for regular visits to the office), but we felt that we could not make a reasonable estimate of these costs, and that they are small and would not have significantly influenced our calculations. A country-specific analysis would be desirable, but EMWA does not calculate mean freelance hourly rates per country from its surveys for reasons of business ethics (see above). We decided not to weight the factor for employee overhead for EU countries with cheaper and more expensive incidental employment costs. This was because Denmark and the UK – where high employee overhead would be expected – were

among the countries with low incidental employment costs, so reasoned assumptions could not be made. Despite these limitations, our calculations make a useful initial contribution to comparing the costs of salaried and freelance medical writers in Europe.

Conclusion

If the number of productive days, incidental employment costs, and employee overhead are taken into account, the cost of employing a freelance medical writer in the EU is similar to that of a salaried writer in full-time employment.

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Alistair Reeves has worked in the pharmaceutical industry for almost 40 years as a translator, writer, editor, and trainer, and for the last 12 years as a freelance trainer and editor. He is a regular contributor on language issues to *Medical Writing*, co-edits the English Grammar and Style column, is an honorary member of EMWA, and has presented more than 50 workshops as part of the EMWA Professional Development Programme.

AIDS researcher charged with fraud

A 2010 article in *PLoS Medicine* called for guest authors of ghostwritten articles to face fraud charges.¹ While it is uncertain whether that will ever happen, the summer of 2014 did see the arrest and prosecution of a US-based researcher for scientific fraud.²

Korean-born Dong-Pyou Han is alleged to have faked experiments on a new HIV vaccine at Iowa State University.³ The experiments, which seemed to show a strong antibody response to part of an HIV glycoprotein, raised hopes of a breakthrough in the fight against HIV infection. Though Han resigned from his university post in autumn 2013 and entered into a voluntary exclusion agreement barring him from receiving federal funding for 3 years, he denies the charges against him.

The case has provoked debate as to whether scientific fraudsters should face legal proceedings. It also raises other interesting questions. Should perpetrators be banned from research? Should they repay any funding awarded based on fake findings? Should their institutes be held financially liable?

The answer to some of these questions would appear to be 'Yes'. The NIH paid out a total of \$5 million based on a grant application and progress reports that partly relied on data Han is alleged to have falsified. Of this amount, Iowa State University has agreed to repay nearly \$500 000 that went towards Han's salary.⁴

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