

# There is more to life than money: PhD holders' satisfaction with their fringe benefits

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## FRINGE BENEFITS AND SALARY

Fringe benefits have become well-established in the compensation package of many PhD holders (Visterin, 2020). Employers can provide these benefits in addition to a salary to remunerate employees for their work. Popular benefits are meal vouchers, end-of-year bonuses, hospitalisation and group insurances and additional paid leave (SD Worx, 2018). Employers offer fringe benefits to (future) employees because it allows them to position themselves strongly in the labour market (Coetzee, Schreuder, & Tladinyane, 2007). In addition, the benefits are often tax-deductible and (almost) never subject to taxes and social security contributions. Fringe benefits therefore provide an extra on top of the fixed wage norm in the remuneration of PhD holders (Mertens, 2019). In ECOOM-brief 27 we already investigated the salary satisfaction of PhD holders who recently or less recently obtained their PhD at one of the Flemish universities. We saw that salary satisfaction varied by gender, career path and the science cluster in which the PhD was obtained. The share of (very) satisfied PhD holders appeared to be largest in the applied sciences and the share of (very) satisfied male *late switchers* was larger than the share of (very) satisfied female *late switchers* (i.e. PhD holders with a non-academic job, who have had an academic appointment after their PhD). Among women, a difference in salary satisfaction was observed according to the followed career path: the share of (very) satisfied female PhD holders was significantly smaller for both *early switchers* (i.e. PhD holders who left academia immediately after their PhD) and *late switchers*, than for the postdocs. It is important to note that salary satisfaction paints an incomplete picture of the remuneration satisfaction of PhD holders. Fringe benefits are often overlooked in this matter (Weathington & Reddock, 2011). Therefore, in this ECOOM-brief we will take a closer look at the satisfaction of PhD holders with their fringe benefits.

## SATISFACTION OF PHD HOLDERS

Until today, uncertainty regarding the satisfaction of PhD holders with their fringe benefits persists. In the non-academic world flexible remuneration plans show promise. In addition to a fixed salary, employees may choose a number of fringe benefits (Tudor et al., 1996). An annual survey by SD Worx (2020) shows that this flexible form of remuneration has a positive impact on employees' satisfaction with their employer. The academic world, on the other hand, makes use of a standard package of fringe benefits. Identical benefits are enjoyed by postdocs and principal investigators from the same university. Whether PhD holders with a career in academia are more or less satisfied than their colleagues in the non-academic world is unknown. Moreover, as with salary, there are differences in the degree of fringe benefits that are enjoyed by men and women. In addition to a lower salary, women also appear to receive fewer benefits than men (De Smet, 2019; Theunissen & Sels, 2006). In the following, we examine whether this realised difference in fringe benefits also translates into a difference in satisfaction between male and female PhD holders. Furthermore, we also investigate the relationship between the career path and the satisfaction with fringe benefits and look at the role of the science cluster in which the PhD was obtained.

More specifically, we answer the following questions:

1. *How satisfied are PhD holders with their fringe benefits?*
2. *Does this satisfaction differ according to gender?*
3. *Does this satisfaction differ according to science cluster?*
4. *Does this satisfaction differ according to career path?*

## ANSWERS BASED ON THE PHD CAREER SURVEY

We answer the questions above based on the PhD Career Survey conducted by ECOOM in 2017. For a detailed discussion we refer to ECOOM-brief 25. For a visual presentation we refer to the website <https://www.phdcareersflanders.com/en/>. In short: the PhD Career Survey maps the career paths of PhD holders who obtained their PhD at

one of the Flemish universities. In what follows we analyze the answers of 2982 PhD holders. The central question they answered concerning fringe benefits satisfaction was formulated as follows: "In your current job, please indicate how you feel about your fringe benefits (e.g. group insurance, vacation days, profit sharing, ...)". The answers offered could vary from "very dissatisfied" (=1) to "very satisfied" (=5).

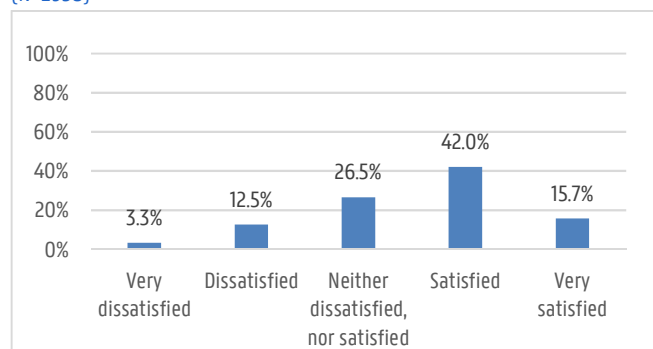
In the analyses we differentiated according to gender, science cluster and career path. We use the Chi square test and Cramer's V. Results are considered significant at  $p < .05$ . Both tests check whether the results differ significantly from each other. Cramer's V is less dependent on the sample size than Chi square. In science cluster and career path, post-hoc comparisons were made using Chi square and Cramer's V where each category is compared to one other. Because of an increased chance of a Type 1 error, a stricter significance level was used for the post hoc comparisons (namely  $p < .01$ ). These post-hoc comparisons provide insight into which categories differ significantly from each other.

### HOW SATISFIED ARE PHD HOLDERS WITH THEIR FRINGE BENEFITS?

Figure 1 shows that 57.7% of the PhD holders is (very) satisfied with their fringe benefits, while 15.8% indicated to be (very) dissatisfied. About 26.5% indicated that they were "neither dissatisfied nor satisfied".

In what follows, we disregard the group "neither dissatisfied nor satisfied" and look at who is most satisfied with their fringe benefits. We do this by grouping the PhD holders who indicated to be "very dissatisfied" or "dissatisfied" in the category "(very) dissatisfied" (N=468). The PhD holders who indicated to be "satisfied" or "very satisfied" were grouped in the category "(very) satisfied" (N=1704).

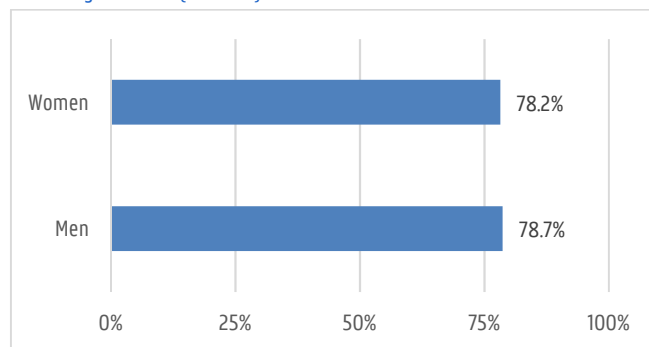
Figure 1: Distribution of fringe benefits satisfaction among PhD holders (N=2958)



### DOES SATISFACTION WITH FRINGE BENEFITS DIFFER ACCORDING TO GENDER?

Looking only at gender (N=2172), the share of (very) satisfied female PhD holders (78.2%) does not significantly differ from the share of (very) satisfied male PhD holders (78.7%) ( $\chi^2(1) = 0.10, p > .05$ ; Cramer's  $V = .01, p > .05$ ).

Figure 2: Share of male and female PhD holders who are (very) satisfied with their fringe benefits (N = 2172)

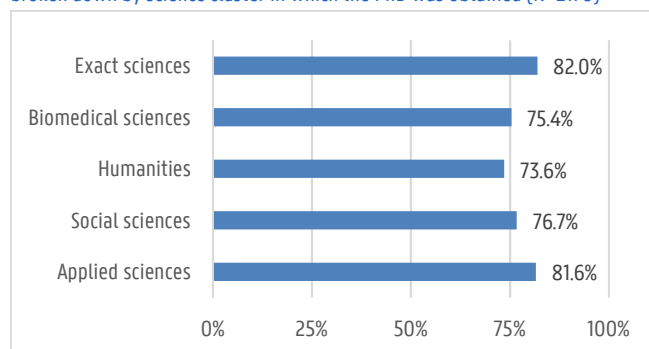


### DOES SATISFACTION WITH FRINGE BENEFITS DIFFER ACCORDING TO SCIENCE CLUSTER?

Figure 3 shows that the share of PhD holders who are (very) satisfied with their fringe benefits varies between 73.6% for holders of a PhD in humanities and 82% for PhD holders in exact sciences. If the PhD was successfully defended in applied sciences, 81.6% are (very) satisfied with the benefits, whereas 76.7% are satisfied with a PhD in social sciences, and 75.4% are with a PhD in biomedical sciences.

Statistical tests indicate that the satisfaction with fringe benefits significantly differs depending on the science cluster in which the PhD was obtained ( $\chi^2(4) = 13.94, p < .01$ ; Cramer's  $V = .08, p < .01$ ). Additional post-hoc comparisons with a stricter significance level ( $p < .01$ ) show that the share of (very) satisfied PhD holders in the humanities is significantly smaller than the share of (very) satisfied PhD holders in the exact sciences ( $\chi^2(1) = 7.54, p < .01$ ; Cramer's  $V = .10, p < .01$ ) and the applied sciences ( $\chi^2(1) = 7.26, p < .01$ ; Cramer's  $V = .09, p < .01$ ).

Figure 3: Share of PhD holders who are (very) satisfied with their fringe benefits broken down by science cluster in which the PhD was obtained (N=2170)



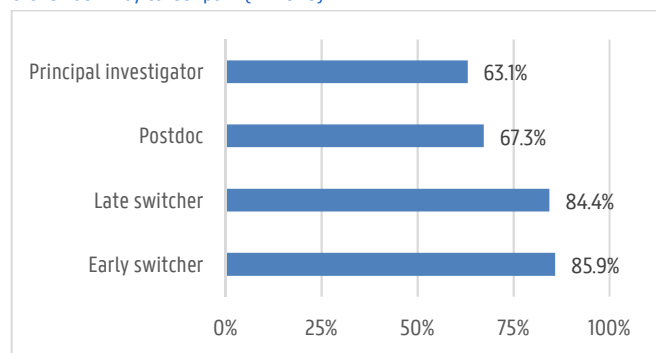
### DOES SATISFACTION WITH FRINGE BENEFITS DIFFER ACCORDING TO CAREER PATH?

In what follows, we examine whether there are differences in satisfaction with fringe benefits depending on the career path followed after the PhD defense. We distinguish four different career paths: (1) the "early switcher": PhD holders in a non-academic job who left academia immediately after their PhD (33%); (2) the "late switcher": PhD holders in a non-academic job who still had an academic appointment after their PhD (29%); (3) "postdoc": postdoctoral researchers (16%); (4) "principal investigator": Independent Academic Personnel or Professors

(ZAP) (22%). For more details on the different career paths we refer to ECOOM-brief 25.

Figure 4 shows the share of PhD holders who are (very) satisfied with their fringe benefits according to the followed career path. Statistical tests indicate a significant relationship between career path on the one hand and satisfaction with fringe benefits on the other ( $\chi^2(3) = 113.41$ ,  $p < .001$ ; Cramer's  $V = .24$ ,  $p < .001$ ). Additional post-hoc comparisons with a stricter significance level ( $p < .01$ ) show that the share of (very) satisfied early switchers is significantly larger than the share of (very) satisfied postdocs ( $\chi^2(1) = 47.10$ ,  $p < .001$ ; Cramer's  $V = .21$ ,  $p < .001$ ) and principal investigators ( $\chi^2(1) = 77.89$ ,  $p < .001$ ; Cramer's  $V = .26$ ,  $p < .001$ ). Likewise, the share of (very) satisfied late switchers appears to be significantly larger than the share of (very) satisfied postdocs ( $\chi^2(1) = 34.96$ ,  $p < .001$ ; Cramer's  $V = .20$ ,  $p < .001$ ) and principal investigators ( $\chi^2(1) = 59.50$ ,  $p < .001$ ; Cramer's  $V = .24$ ,  $p < .001$ ).

Figure 4: Share of PhD holders who are (very) satisfied with their fringe benefits broken down by career path (N=2046)



## DOES SATISFACTION WITH FRINGE BENEFITS DIFFER ACCORDING TO GENDER AND CAREER PATH?

Is it possible that the differences between the career paths depend on gender? For example, are there differences in satisfaction with fringe benefits between career paths among men, but not among women? And does a difference in satisfaction exist between male and female PhD holders in one career path, while there is no such thing in another career path?

Table 1 allows us to examine whether gender differences exist in the satisfaction with fringe benefits for each career path separately. We can also check for men and women separately whether there are satisfaction differences between career paths.

First we will focus on the difference between career paths for men and women separately. For male PhD holders, we see differences in satisfaction with fringe benefits according to the followed career path ( $\chi^2(3) = 104.88$ ,  $p < .001$ ; Cramer's  $V = .31$ ,  $p < .001$ ). The post-hoc comparisons among men show that the share of (very) satisfied early switchers is significantly larger than the share of (very) satisfied postdocs ( $\chi^2(1) = 35.54$ ,  $p < .001$ ; Cramer's  $V = .26$ ,  $p < .001$ ) and principal investigators ( $\chi^2(1) = 72.83$ ,  $p < .001$ ; Cramer's  $V = .34$ ,  $p < .001$ ). Moreover, the share of (very) satisfied PhD holders in the career path of late switcher appears to be significantly larger in comparison to the postdocs ( $\chi^2(1) = 28.34$ ,  $p < .001$ ; Cramer's  $V = .24$ ,  $p < .001$ ) and principal investigators ( $\chi^2(1) = 59.02$ ,  $p < .001$ ; Cramer's  $V = .32$ ,  $p < .001$ ). For

female PhD holders, statistical tests also point out differences in satisfaction with fringe benefits according to the followed career path ( $\chi^2(3) = 21.19$ ,  $p < .001$ ; Cramer's  $V = .15$ ,  $p < .001$ ). Again we see that the share of (very) satisfied PhD holders in the early switchers career path is significantly larger in comparison to the postdocs ( $\chi^2(1) = 13.75$ ,  $p < .001$ ; Cramer's  $V = .17$ ,  $p < .001$ ) and principal investigators ( $\chi^2(1) = 11.52$ ,  $p < .001$ ; Cramer's  $V = .16$ ,  $p < .001$ ). Likewise, the share of (very) satisfied late switchers appears to be significantly larger than the share of (very) satisfied postdocs ( $\chi^2(1) = 8.93$ ,  $p < .01$ ; Cramer's  $V = .14$ ,  $p < .01$ ) and principal investigators ( $\chi^2(1) = 7.30$ ,  $p < .01$ ; Cramer's  $V = .13$ ,  $p < .01$ ).

When we compare men and women within each career path, post-hoc comparisons ( $p < .01$ ) show no significant gender differences in satisfaction within each of the four career paths. Nonetheless, in Table 1 we see considerable differences between men and women within career paths. For example, in our sample the share of (very) satisfied PhD holders is about 10% larger among female than male principal investigators. If we were to use the  $p < .05$  significance level, we would conclude that there are significant gender differences among both late switchers and principal investigators. However, here we use the stricter  $p < .01$  criterion, which leads us to conclude that these gender differences are not statistically significant.

Table 1. Fringe benefits satisfaction among PhD holders broken down by career path and gender (N=2046)

	Early switcher	Late switcher	Postdoc	Principal investigator	Total
<b>Gender</b>					
Male	88.1%	87.0%	66.0%	59.2%	78.7%
Female	83.2%	81.2%	68.6%	69.6%	77.9%
<b>Total</b>	85.9%	84.4%	67.3%	63.1%	78.3%

## DISCUSSION

The findings show that roughly 6 out of 10 PhD holders who obtained a PhD from a Flemish university are satisfied or very satisfied with the fringe benefits they receive from their current employer. The share of (very) satisfied PhD holders is therefore smaller in comparison to the Belgian employee population, where 8 out of 10 appears to be satisfied (Robert Half, 2015). Moreover, the share of PhD holders who are (very) satisfied with their fringe benefits appears to be smaller than the share of PhD holders who are (very) satisfied with their salary (71%, see ECOOM-brief 27).

Furthermore, we see that the share of (very) satisfied PhD holders differs depending on the science cluster in which the PhD was obtained. In the exact and applied sciences we find the largest shares of (very) satisfied PhD holders and significantly more PhD holders who are satisfied with their benefits than in the humanities. In ECOOM-brief 27 on salary satisfaction we found that the share of (very) satisfied PhD holders is largest in the applied sciences and significantly differs from the share of (very) satisfied PhD holders in the biomedical sciences. There may be an interrelation between science cluster and the followed career path: the share of human scientists in the early switchers career path turns out to be smaller than in the other career paths. On the other hand, in the applied sciences we observe a larger share of PhD holders

in the career path of the early switchers than in the other paths (see ECOOM-brief 25).

The followed career path appears to be associated as well: the share of (very) satisfied PhD holders working in academia is smaller in comparison to the share of (very) satisfied PhD holders in the non-academic sector. Especially the academic sector is characterised by a standard package of fringe benefits and no room for negotiation. This may result in lower satisfaction in academia regarding the fringe benefits (Baeten, De Ruyck, & Vanoost, 2019). An additional consequence is that employees in the academic sector may be less informed about the available fringe benefits, which again leads to lower satisfaction (Baeten, 2016).

Another explanation can be found in reference group thinking (Festinger, 1954): employees do not only compare their salaries (see ECOOM-brief 27), but their fringe benefits as well. In line with reference group thinking, PhD holders in academia may be less satisfied when they compare their fringe benefits to those of PhD holders in the non-academic sector. When the comparison is made within the academic world (i.e. between postdoctoral researchers and principal investigators), no difference is found as all enjoy the same benefits. In ECOOM-brief 27 differences in salary satisfaction were found in the academic world, given that salaries may differ between postdocs and principal investigators. There we reported that the share of (very) satisfied postdocs was significantly larger than the share of (very) satisfied early switchers, late switchers and principal investigators.

In the same brief, we saw that the share of women who are (very) satisfied with their salary was significantly smaller than the share of (very) satisfied men and that this difference was caused by a gender difference among late switchers. In contrast, no gender differences are found in satisfaction with fringe benefits among PhD holders, irrespective of the followed career path. The share of (very) satisfied female PhD holders does not significantly differ from the share of (very) satisfied male PhD holders. In the non-academic world a possible explanation is found in the popularity of a flexible remuneration plan. Since PhD holders may choose which fringe benefits they add to their remuneration package, they have the opportunity to meet their own needs. Flemish research shows that highly educated women still play the leading role in households, although men tend to take on more family responsibilities as their educational level rises (Audenaert, 2018). In line with this finding, we see that women are more inclined to choose additional vacation days or another benefit that improves their work-life balance, whereas men are more likely to opt for profit sharing or a salary bonus (SD Worx, 2017).

No gender differences were found in the academic world, where a flexible remuneration package is not established in compensation policies. As mentioned above, Flemish universities provide their employees with a standard package of fringe benefits. An emerging question is to which degree these standard benefits are utilised. Well-known benefits such as hospitalisation and group insurances are automatically granted to both male and female PhD holders in academia, whereas information regarding the adoption of other benefits such as free childcare and cheap meals is absent at a number

of Flemish universities (personal communication, October 15, 2020). In other words, it remains difficult to estimate the degree to which the provided fringe benefits meet the needs of both male and female PhD holders and whether this is related to their satisfaction.

## REFERENCES

- Audenaert, V. (2018). *Gezinsenquête 2016: De taakverdeling in het gezin [Family survey 2016: The distribution of tasks in families]*. Retrieved from <https://gezinsenquête.be/artikels/de-taakverdeling-het-gezin>
- Baeten, X. (2016, 16 november). *Employers want to make better use of strategic potential of group and hospitalisation insurance plans*. Retrieved from <https://www.vlerick.com/en/research-and-faculty/knowledge-items/knowledge/better-use-of-potential-of-group-and-hospitalisation-insurance-plans>
- Baeten, X., De Ruyck, b. & Vanoost, H. (2019). *The great remuneration survey. Study of remuneration preferences among salaried employees and civil servants*. Retrieved from <https://www.vlerick.com/~media/Corporate/Pdf-knowledge/The-Great-Remuneration-Study-With-Vacature-Research-Reportpdf.pdf>
- Coetzee, M., Schreuder, D., & Tladinyane, R. (2007). Organizational Commitment and its Relation to career anchors. *Southern African Business Review*, 1(1), 65-86.
- De Smet, D. (2019, 16 juli). *Salariswagen is mannenzaak. [Salary is men's business]*. De Standaard. Retrieved from [www.destandaard.be](http://www.destandaard.be)
- ECOOM-brief 25 – Mortier, A., Levecque, K., & Debacker, N. (2020). You have a PhD! What's next? The career paths of PhD holders. ECOOM UGent.
- ECOOM-brief 27 – Mortier, A., Van Parijs, J., & Levecque, K. (2020). The salary of PhD holders inside and outside academia: something to be satisfied with? ECOOM UGent.
- Festinger, L. (1954). A theory of social comparison processes. *Human relations*, 7(2), 117-140. <https://doi.org/10.1177/001872675400700202>
- KU Leuven (n.d.). Management and professionals: information. Retrieved September 23, 2020, from <https://www.kuleuven.be/personeel/jobsite/en/management-and-professionals/management-and-professionals-information>
- Mertens, L. (2019, 19 juli). Kan ik mijn werknemers iets extra geven ondanks de loonnorm? [Can I give my employees something extra despite the wage norm?]. Retrieved from <https://legalworld.wolterskluwer.be/nl/nieuws/domein/sociaal-recht-en-hr/kan-ik-mijn-werknemers-iets-extra-geven-ondanks-de-loonnorm/>
- Robert Half (2015). *Meer dan acht op de tien Belgische werknemers zijn tevreden over hun loon. [More than eight out of ten Belgian employees are satisfied with their salary]*. Retrieved from <https://www.roberthalf.be/nl/pers/meer-dan-acht-op-de-tien-belgische-werknemers-zijn-tevreden-over-hun-loon>

- SD Worx (2017). *Werknemers kiezen voor auto, bijkomend verlof en pensioensparen als extralegale voordelen*. [Employees choose car, additional leave and pension saving as fringe benefits]. Retrieved from <https://www.sdworx.be/nl-be/pers/2017/2017-02-09-werknemers-extralegale-voordelen>
- SD Worx (2018). *Pas op voor de rewardkloof! [Watch out for the reward gap!]*. Retrieved from <https://www.sdworx.be/nl-be/pers/2018/2018-10-17-rewardkloof-flexibel-rewardpakket-belgie-reward>
- SD Worx (2020). *Flexibele verloning meer dan verdubbeld in twee jaar tijd*. [Flexible remuneration more than doubled in two years time]. Retrieved from <https://www.sdworx.be/nl-be/pers/2020/2020-05-14-flexibele-verloning-meer-dan-verdubbeld>
- Theunissen, G., & Sels, L. (2006). *Waarom vrouwen beter verdienen (maar mannen meer krijgen): een kritische essay over de sekseloonkloof*. [Why women earn better (but men get more): a critical essay on the gender pay gap]. Leuven: Acco.
- Universiteit Antwerpen (n.d.). Extralegal benefits. Retrieved September 23, 2020 from <https://www.uantwerpen.be/en/jobs/what-do-we-offer/extralegal-benefits/>
- Universiteit Gent (n.d.). Personeelsvoordelen. [Personnel advantages]. Retrieved September 23, 2020 from <https://www.ugent.be/nl/vacatures/personeelsvoordelen.htm>
- Universiteit Hasselt (n.d.). Staff benefits. Retrieved September 23, 2020 from <https://www.uhasselt.be/UH/human-resources/HR-policy/Staff-benefits.html>
- Tudor, T. R., Trumble, R. R., & Flowers, L. (1996). Strategic compensation management: the changing pattern of pay and benefits. *Journal of Compensation and Benefits*, 12, 34-38.
- Visterin, W. (2020, 3 juni). *De 10 populairste extralegale voordelen*. [The 10 most popular fringe benefits]. Jobat.be. Retrieved from <https://www.jobat.be/nl/art/de-10-populairste-extralegale-voordelen>
- Vrije Universiteit Brussel (n.d.). Benefits. Retrieved September 23, 2020 from [https://jobs.vub.be/content/Benefits?locale=en\\_GB](https://jobs.vub.be/content/Benefits?locale=en_GB)
- Weathington, B. L., & Reddock, C. M. (2011). Equity Sensitivity in "Fringe" Benefit Value and Satisfaction. *Journal of Behavioral & Applied Management*, 13(1), 44-59.

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