

TUT Economic Research Series
Department of Economics and Finance
Tallinn University of Technology

tutecon.eu

Fixed-term contracts – a turnoff for R&D employees

Aaro Hazak

TUTECON Research Brief No. RB-2017/13

Fixed-term contracts – a turnoff for R&D employees

AARO HAZAK*

Abstract

Fixed-term employment contracts are very common in the current project-based era. Our research group has been seeking to find out how fixed versus permanent contracts link to how Estonian R&D employee perceive their wellbeing, tiredness and sleepiness. We found that the happiness of those working with fixed-term contracts is significantly lower – both in terms of current happiness and potential happiness looking forward. Moreover, employees with fixed-term contracts appeared to be considerably more tired and experience greater levels of daytime sleepiness. We did not find, however, any significant differences in the perceived work results of R&D employees with fixed-term contracts compared to those with permanent contracts. Employers as well as R&D governance bodies should keep in mind the adverse effects that fixed-term contracts may have on individual wellbeing.

* Department of Economics and Finance, Tallinn University of Technology
Corresponding author: Aaro Hazak, aaro.hazak@ttu.ee

Tähtajalised lepingud – noahoop T&A loovtöötajatele

AARO HAZAK*

Kokkuvõte

Tänapäeva projektipõhises ühiskonnas on väga levinud töötajate palkamine tähtajaliste lepingutega. Seda ka loovate teadus- ja arendusvaldkonna töötajate puhul – konkreetse arendustöö elluviimiseks, grandiprojektis osalemiseks või rakendusuringu teostamiseks. Aastatel 2015-2016 viis meie uurimisrühm läbi uurimuse Eesti teadus- ja arendusvaldkonna loovtöötajate hulgas, et muude uurimisküsimuste hulgas välja selgitada, millised on tähtajaliste ja tähtajatute lepingutega töötavate T&A töötajate erinevused töötaja tunnetatavas heaolus, väsimuses ja unisuses. Uurimusest ilmnest, et tähtajaliste lepingutega töötajate õnnelikkus on oluliselt madalam ning seda nii õnnelikkuse lühiajalises kui tulevikku vaatavas perspektiivis. Ka väsimus on tähtajalise töölepinguga T&A töötajate puhul oluliselt kõrgem kui tähtajatult töötavate kollegide puhul. Samuti ilmnest, et tähtajalise lepinguga töötajate päevane unisus on oluliselt kõrgem. Töö tulemuslikkuses samas olulist erinevust tähtajaliste ja tähtajatute lepingutega töötajate vahel ei ilmnenu. Kokkuvõtvalt võib oletada, et töölepingu lühiajaline perspektiiv on üheks põhjuseks, miks töötajad end piisavalt õnnelikuna ei tunne ning tähtajalisele tööle iseloomulik töökoormus ja ebakindlusega kaasnev ärevus võivad olla väsimuse ja unisuse allikaks. Seetõttu tasub nii tööandjatel kui T&A süsteemi kujundajatel pidada aru, kas tähtajalised töölepingud heaoluühiskonda liikumisele kaasa aitavad.

* Majandusanalüüsi ja rahanduse instituut, Tallinna Tehnikaülikool
Autorite kontaktisik: Aaro Hazak, aaro.hazak@ttu.ee

Fixed-term contracts – a turnoff for R&D employees

AARO HAZAK*

Fixed-term contracts – not just the time effect

Work in modern society is increasingly project based, and this applies in research and development too, as employees are hired for a fixed term to work on a defined project, carry out a specific development, or conduct applied research on a particular topic. Such work arrangements are fundamentally different from the permanent contracts that used to dominate labour markets in the past.

The duration of an employment contract may have far reaching consequences beyond just the time frame. There is a growing body of research evidence, with admittedly mixed results, on the health effects that different forms of employment contract may have (see Nätti, 1993; Benavides et al., 2000; Aronsson et al., 2002; the literature review by Virtanen et al., 2005; and the review of experimental studies by Joyce et al., 2009). Rodriguez (2002) finds from a sample of German employees that the probability of those with full-time fixed-term contracts having poor health is as much as 42% higher than the probability for those with a permanent contract. O'Reilly & Schmid (1999) find that fixed-term employees exhibit higher psychological distress than permanent employees do. Many of the previous studies highlight the concerns about reduced career perspectives and lower employment protection that come together with fixed-term contracts, as well as the vicious circle effect of those with worse psychological or physical health often being given fixed-term jobs that in turn have adverse effects on their health. Burchell et al. (2005) demonstrate a strong link between perceived job insecurity and stress that also applies over a longer term, while Ferrie et al. (2001) found that job insecurity is associated with adverse physiological changes.

* Department of Economics and Finance, Tallinn University of Technology
Corresponding author: Aaro Hazak, aaro.hazak@ttu.ee

The reduced well-being of fixed-term creative R&D employees

Our research team combines economists and medical researchers from Tallinn University of Technology in collaboration with colleagues from our partner universities, and it has been investigating work arrangements in creative research and development work. The jobs concerned include applied and other researchers, engineers, product and IT developers, and other knowledge employees working in R&D. Our research interest is the field of R&D in the broader context of the efficiency of R&D and its deployment in knowledge intensive economies.

Our findings come from a study of 153 Estonian creative R&D employees from 11 different private sector R&D organisations, IT and technology companies, banks, and research institutes. We found that the happiness of those working on fixed-term contracts is significantly lower, both in terms of their current happiness and their potential happiness looking forward. Earlier studies have shown that job insecurity has a negative effect on happiness (Niimi, 2016; Krause, 2014), and as employees with fixed-term contracts are likely to have a higher risk of becoming unemployed, our results generally agree with the earlier research.

Moreover, we find that creative R&D employees with fixed-term contracts are considerably more tired and experience greater levels of daytime sleepiness. These effects may be related to the job insecurity already noted, and to the time pressure that may arise from fixed-term projects with relatively short deadlines.

We did not find, however, any significant differences between the perceived work results of R&D employees with fixed-term contracts and the results of those with permanent contracts (Hazak et al., 2017). This suggests that the fixed-term employees are achieving – at least in their own view – similar results to those of their permanently employed colleagues, though this is accompanied by greater job insecurity.

Employers and R&D governance bodies should be aware of the adverse effects that fixed-term contracts may have on individual health and well-being. Project-driven financing and employment may have far-reaching health effects, which can spill over into inefficiencies in the use of the creative potential of R&D employees for the benefit of society.

Fixed-term contracting is one of several issues in working arrangements that we are interested in as part of our research project (see www.ttu.ee/ta2). Working time flexibility, workplace flexibility and the creative intensity of work, and pay gaps are among the other important issues in the design of R&D work that warrant rethinking. This study is part of an effort by the research group to investigate the institutional, individual, financial and market-related features of knowledge intensive development. We want to help encourage a public discussion of these topical issues of R&D efficiency that may have considerable implications for socio-economic development.

Acknowledgments

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 734712 “Institutions for Knowledge Intensive Development” (IKID). Support from the Estonian Research Agency grant PUT315 “Towards the Knowledge Economy: Incentives, Regulation and Capital Allocation” is gratefully acknowledged.

References

- Aronsson, G., Gustafsson, K., & Dallner, M. (2002). Work environment and health in different types of temporary jobs. *European journal of work and organizational psychology*, 11(2), 151-175.
- Benavides, F. G., Benach, J., Diez-Roux, A. V., & Roman, C. (2000). How do types of employment relate to health indicators? Findings from the Second European Survey on Working Conditions. *Journal of Epidemiology & Community Health*, 54(7), 494-501.
- Burchell, B., Ladipo, D., & Wilkinson, F. (Eds.). (2005). *Job insecurity and work intensification*. Routledge.
- Ferrie, J. E., Shipley, M. J., Marmot, M. G., Martikainen, P., Stansfeld, S. A., & Smith, G. D. (2001). Job insecurity in white-collar workers: Toward an explanation of association with health. *Journal of Occupational Health Psychology*, 6(1), 26.
- Hazak, A., Männasoo, K., Virkebau, M. (2017). Effects of work arrangements on creative R&D work outcomes. *Eastern European Economics*. Forthcoming.
<http://dx.doi.org/10.1080/00128775.2017.1381567>.
- Joyce, K., Pabayo, R., Critchley, J. A., & Bambra, C. (2009). Flexible working conditions and their effects on employee health and wellbeing. *Cochrane Database Syst Rev*, 2.
- Krause, A. (2014). Happiness and Work (No. 8435). *IZA Discussion Papers*.
- Niimi, Y. (2016). What Affects Happiness Inequality? Evidence from Japan. *Journal of Happiness Studies*, 1-23.
- Nätti, J. (1993). Temporary Employment in the Nordic Countries: A ‘Trap’ or a ‘Bridge’?. *Work, employment and society*, 7(3), 451-464.

O'Reilly, J., & Schmid, G. (1999). The future of welfare and work in Germany and the UK: Prospects for transitional labour markets. *Social Policy Review*, 11, 264-285.

Rodriguez, E. (2002). Marginal employment and health in Britain and Germany: does unstable employment predict health?. *Social science & medicine*, 55(6), 963-979.

Virtanen, M., Kivimäki, M., Joensuu, M., Virtanen, P., Elovainio, M., & Vahtera, J. (2005). Temporary employment and health: a review. *International journal of epidemiology*, 34(3), 610-622.

TUT Economic Research Series publishes working papers and research briefs based on the research undertaken at the Department of Economics and Finance at Tallinn University of Technology. Working papers represent preliminary versions of full papers with the aim of disseminating and seeking feedback on research at the pre-publication stage. Research briefs are short papers in either the English or Estonian language (with an abstract in both of these languages) on policy issues and early findings of research. For further information and for access to the papers, please visit our website at tutecon.eu.

TUT Economic Research Series
[Department of Economics and Finance](http://tutecon.eu)
Tallinn University of Technology

tutecon.eu

ISSN 2346-6146