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## Non-creative tasks: a turn off for creative R&D employees

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# **Non-creative tasks: a turn off for creative R&D employees**

AARO HAZAK\*

## *Abstract*

Reports, applications, formalities and administrative tasks – these are common elements in the work of R&D employees. We performed a study among Estonian creative R&D employees to identify what the link is between the share of creative work in total working time, and the results of the work, as well as the sleepiness, tiredness and wellbeing of the employee. We find that the more creative the R&D employee's work, the more satisfied the person is with his/her work results, while more routine tasks also decrease creative content in work outcomes. Furthermore, the more creative the work, the happier the employee appears to be. We also find that non-creative tasks increase the daytime sleepiness and tiredness of creative R&D employees. It is important that employers as well as R&D governance bodies consider carefully the adverse effects that extensive non-creative work tasks may have on both the R&D work results as well as individual wellbeing.

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# Mittelloomingulised tööülesanded – kaikad loomingulise T&A töö kodaratesse

AARO HAZAK\*

## *Kokkuvõte*

Aruanded, taotlused, formaalarid, kooskõlastused, vormistused – see on märgatav osa enamus loominguliste teadus- ja arendustöötajate argipäevast. Enamgi veel, nii mõnigi kord pakutakse tublidele loovtöötajatele justkui tunnustuseks juhtimisalaseid jm administratiivülesandeid. Viisime läbi uuringu Eesti loovate T&A töötajate hulgas, et muude uurimisküsimuste hulgas tuvastada, millised seosed esinevad loova töö osakaalu ning töö tulemuslikkuse ja töötaja unisuse, väsimuse ning heaolu vahel. Uurimuse tulemustest on selgelt näha, et suuremal loovtöö osakaalul on positiivne seos töö tunnetatava tulemuslikkusega, samas kui rutiinsed tegevused käivad koos madalama rahuloluga töö tulemustega. Samuti näitavad meie uurimuse tulemused, et mida kõrgem on teadustöötajate töö loomingulisus, seda õnnelikumad nad on. Mittelloominguliste tööülesannete suur osakaal tööajas on seotud ka T&A töötajate kõrgema päevase unisuse ning väsimusega. Lisaks ilmneb, et loovtöö osatähtsus kogutööajas võib määrata ka seda, mis tüüpi töötaja vastavale ametikohale satub – need töötajad, kes on pühendanud rohkem aastaid hariduse omandamisele, valivad ametikohti, kus loova töö osakaal on suurem. Seega tuleks tööandjatel põhjalikult kaaluda, kas ja mis ulatuses tasub loomingulistele töötajatele mittelloomingulisi tööülesandeid anda. Samuti peaksid meie uurimuse tulemused andma mõtteainet T&A süsteemi administreerijatele ja poliitikakujundajatele seoses bürokraatlike tegevustega, mis T&A ülesannete täitmisega tihti kaasas käivaks osutuvad.

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## Creative work and comparative advantage

People are different. Your friend may run faster than you but you may be better at maths. This suggests that when both need to be done, you would do the maths and your friend will run. But what about if you are better at both running and maths – should you be doing both and your friend just standing by? The concept of comparative advantage, introduced by David Ricardo at the beginning of the 19th century is well known, and it stands as the cornerstone of international trade. If we imagine a world with just Portugal and Estonia, and wine and tomatoes as the only goods, and Portugal is better than Estonia at both growing tomatoes and producing wine, it does not mean that Estonia should do nothing. It is more beneficial for both Portugal and Estonia if both countries engage in the production so that each of the countries produces the good that it is able to make at a lower relative opportunity cost. And if the countries trade with each other, both will be better off.

What does this have to do with creative research and development employees? More or less literally, the R&D work comprises creative tasks – generating new ideas and innovation, and non-creative tasks – reports, applications, formalities and various administrative tasks. A researcher may be good at doing the research and be equally good at producing time use reports. This does not mean that the researcher should specialise in filling in time reports as his talents or “factor endowment” in doing creative research work is much more beneficial for both himself and society than producing the time use reports, which an assistant could fill in, even if he or she does it at a lower efficiency. When a creative R&D employee, say a product developer at a technology company, is good at applying his creative skills in creating new technological solutions, and he is not good at financial budgeting, it is

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even easier to realise that it would not be a good idea to let the product developer do the budgeting.

Why do we see so many creative employees engaged in administrative and bureaucratic tasks then? Are the work arrangements so bad that the easy concept of comparative advantage that is two centuries old (yet somewhat counterintuitive) is ignored? Or maybe creative talents like the bureaucratic tasks so much that they are really happy doing admin?

### **Non-creative tasks and work results**

Our research group in the Department of Economics and Finance at Tallinn University of Technology, in collaboration with our partners, studied the effects of differences in the creative intensity of R&D work on both work results and employee individual wellbeing. By creative intensity we mean the share of creative tasks in total working time for the employee, as opposed to administrative and other non-creative tasks that make up the rest of the working day. Our study covers 153 creative R&D employees in Estonia, and the survey among them was carried out in two phases in 2015 and 2016.

We find that a higher share of non-creative work results in increases in dissatisfaction with one's work. Moreover, the less creative tasks in total working time, the lower the perceived productivity at work (Hazak et al., 2017). Disturbing creative knowledge employees with too many administrative burdens could therefore have an adverse effect on their productivity.

We find that there is a selection mechanism in getting positions with different levels of creative intensity. R&D employees with a higher educational level appear to have a significantly higher probability in getting jobs where the share of creative work is higher. This refers to the existence of the comparative advantage concept in the allocation of jobs with different creative intensities among employees with different skills, or at least educational levels. Excessive non-creative tasks are, however, seen as a considerable problem among the creative knowledge employees covered by our survey.

These findings are in line with previous international research results in the job autonomy area. A relatively high share of creative tasks in total working time as well as the

possibility to choose the distribution of working time between creative and non-creative tasks is valued by employees (see for example Kelliher and Anderson, 2008; Clark, 2005). Furthermore, the creative intensity of work appears to enhance innovative activities (see Shalley et al., 2000; Deci and Ryan, 1987). Considering that R&D employees tend to work for companies in the service sector, which is more open to survival risks in comparison to businesses with high physical capital intensity (also in the Estonian case; refer to Männasoo, 2008), the optimal use of the creative capacities of R&D employees for better work results is important for company survival and knowledge-based economic development in general.

### **Non creative tasks and employee wellbeing**

Our study shows that more creatively intense work goes along with increased happiness, while allocating creative R&D employees non-creative work reduces their joy. Another important finding that we had is the higher daytime sleepiness as well as tiredness in the employees having a larger share of non-creative activities as part of their work. A further stimulating result arising from our study is that R&D employees who spend relatively less time on administrative or other non-creative tasks, or whose work has a higher creative intensity, felt that their sleep in general is less limited by work. Administrative and other non-creative work assignments are usually not the principal work tasks of creative R&D employees nor are these tasks highly valued or preferred by the employees. They can nevertheless require a lot of time and effort. For this reason, less time and energy may remain for creative assignments – and likely also for sleep. Previous research has shown that in addition to lower productivity of work, high daytime sleepiness may increase the probability of absenteeism and errors in work, as well as harm the balance of personal and professional life (Doi and Minowa, 2003).

It is important that employers as well as R&D governance bodies consider carefully the adverse effects that extensive non-creative work tasks may have on both the R&D work results as well as individual wellbeing. Bureaucratic tasks appear to be a prevalent component of creative R&D work. Moreover, administrative roles are often offered to top researchers. Our study shows that this comes at a price, and potentially a high one.

This research brief is one of many in a series on the effects of working time arrangements on work results, perceived health effects and individual wellbeing among Estonian creative R&D employees (see [www.ttu.ee/ta2](http://www.ttu.ee/ta2)). Moreover, it is part of a larger effort by the research group to investigate the individual, institutional, financial and market driven aspects of development in R&D and knowledge intensive societies. It remains our hope that the studies of our research group, investigating the yet relatively unexplored links between the economic and health aspects of R&D activities can contribute to a better recognition of the related managerial issues among employers and governance issues in society in general.

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