European Journal of Workplace Innovation

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The European Journal ofWorkplace Innovation (EJWI) is an open-access, net-based, peer reviewed and English-language journal. The Journal invites research-based empirical, theoretical or synoptic articles focusing on innovation and workplace development.

The aim of the journal is:
· To develop insights into workplace innovation
· Provide case studies from Europe as well as comparative studies from other continents
· Develop and present new theories in the field of workplace innovation
· To increase international publication within the field
· To become an important publication channel for workplace innovation researches as well as the international research community.

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Editorial

Richard Ennals
Editor in Chief, EJWI

"Optimism is more fun than pessimism."

We live in extraordinarily turbulent times. In order to cope with the future, we will have to cope with the past and the present. As I write this Editorial, the headlines in the UK today are that the national economy shrank by 20.4% in April 2020. OECD predicts a downturn of 11.5% in UK production in the coming year. This does not take account of the impact of Brexit, on which vital decisions are to be made this month. We would like to think that "things could only get better". However, with world-leading figures for deaths from Covid-19, and the likelihood of mass unemployment following the end of current support measures such as furloughs for 8.9 million workers, we must expect further problems before we see a return to sustainable growth in the UK.

The UK is no longer a member of the European Union. I want to argue that, despite this, much can be learned from the different experiences of EU member countries, starting with the papers in this General Issue of the European Journal of Workplace Innovation.

EJWI works closely with the European Workplace Innovation Network (EUWIN), where discussions have begun concerning the world post Covid-19. Workplace Innovation is seen as having an important role to play.

Our first paper, by Christopher Mathieu, Sally Wright, Susanne Boethius and Anne Green, addresses Workplace Innovation in care homes in Sweden and the UK. The paper, with lead authors from Lund and Warwick Universities, was written before Covid-19, but it offers remarkable insights into the institutional contexts where many thousands of vulnerable people have died in recent months. Efforts by professionals were conducted "on a shoestring", but it is clear that participation and engagement, rather than simply funding, can make a vital difference.

The second paper, by Anne Inga Hilsen and Tonny Kværne, reminds us of traditional Norwegian approaches to Industrial Action Research, taking the reader through the stages of an effective project. There are shared values and approaches, based on experience in Norway and beyond. The Norwegian Model can be exported.

From Finland, we have a paper by Arja Tuulikki Haapakorpi, on collaboration between professional groups, which is increasingly important in addressing problems which go beyond one traditional job or sector. The chosen case study is from new media industries, where Finland has played a leading role.

The Scandinavian States have provided a consistent model of successful innovation, from which other countries in Europe have sought to learn. From Lithuania we have a paper by Antanas Buracas of the Lithuanian Academy of Sciences, comparing the performance of the Baltic and Scandinavian States, using a variety of criteria. Could the Norwegian Model be successfully exported to Lithuania?

We have a paper from Portugal, by António Alberto Nifrário de Pinho Tavares, which won a recent national competition. The paper seeks to evaluate changes in the Portuguese social security system, discussing issues which are encountered in each country. It is all too easy to talk about reducing "red tape". What does this mean in practical terms? The paper addresses the technology, and takes views from civil servants, accountants and users.

From Hungary we have a newly written paper, by Csaba Makó, Miklós Illéssy and Saeed Nosratabadi, about the emerging "platform economy" in Europe. The paper discusses controversial cases, such as Uber in Budapest, and compares developments in different European countries. Workers do not have physical workplaces or conventional employment contracts. They are precarious in new and uncomfortable ways.

In the Discussion Forum section of this General Issue, we have two short papers which look ahead.

Frank Pot, Peter Totterdill and Steven Dhondt of EUWIN set out draft policy proposals for the European Commission, with a focus on the new European Social Pillar. A new generation of collaborative projects is in preparation. EUWIN, which is now a sustainable international network, have assembled thousands of company cases, to provide a starting point. Already we can identify case studies of companies which are looking ahead.

Finally, we have a report from the Quality Coffee Shop, by some of the "virtual coffee drinkers", which has been conducting virtual meetings on weekdays since the start of lockdown, sharing practical experience of Quality and Workplace Innovation. From wholly informal beginnings, it is taking shape as a sustainable and non-hierarchical partnership.

What can we conclude overall? It is hard, or even impossible, to make effective direct comparisons between experiences in different countries, where there are often particular circumstances. However, there is much that can be learned from different experiences, when they are described by people, including researchers, who are themselves engaged in processes of change. It requires decision makers, even in my own country, being prepared to listen, and to engage in processes of dialogue.

We are not the first to address these issues. I was a student of History at Cambridge University On graduation, I worked for John Bellers Ltd, whose work was based on the ideas of the seventeenth century Quaker economist, whose work was cited by both Adam Smith and Karl Marx. Bellers emphasised the dignity of work, and he argued that society needs to use the efforts of all of its members. In 1710 he published a draft European Constitution.

Innovations on a shoestring: Job quality causes and consequences of innovations in health and social care

Chris Mathieu
Sally Wright
Susanne Boethius
Anne Green

Abstract

The article examines the innovation-job quality-employment nexus in social and health care in the United Kingdom and Sweden, respectively. Through seven case studies carried out with a common methodological and analytical framework in the two countries, it shows how the constraining factors of fiscal strictures derived from budgetary regimes and chronic labour shortages have two key consequences for innovation. The first is that in the absence of room for manoeuvre with regard to extrinsic job quality, intrinsic job quality becomes the primary innovation arena. Here the activation of feelings and ideologies of empathy towards patients and clients and occupational/professional pride are central. The second is that most of the innovations found aimed at addressing labour shortages are ameliorative rather than solutions, leading to the development of the concept of "coping innovations." Both of these processes are symptomatic of "innovation on a shoestring" due to structural conditions. Certain, arguably beneficial, aspects of these constraints are identified, such as activities directed towards enhancing person-centred approaches to clients/patients and colleagues, less 'technologisation' of care contact, and opening up opportunities for non-traditional occupational and social groups in health and care work. Non-beneficial aspects of these constraints include heightened work intensity and employee turnover, an overtaxing of the Florence Nightingale ethos, and incomplete or unsatisfactory training and career development programmes.

Introduction

Innovation is often conceived as essential for, and driven by, economic competitiveness, where competitiveness is secured by innovation leading to the introduction of new or significantly improved products or services that increase market share, or the value and thereby price that can be commanded by these products or services. Additionally, process or organisational innovations can lead to reduction in production costs and increases in profit margins. A market context is the taken-for-granted foundation that underpins this mainstream approach to innovation.

However, innovation also takes place in organisations operating under different logics and with other dynamics. In this article we analyse innovation processes and outcomes in social and health care organisations in the United Kingdom (UK) and Sweden, where market mechanisms have less bearing than public-sector budgetary constraints. Djellal, Gallouj and Miles (2013: 98-99) explain that there has been a profound neglect of innovation in such organisations, largely on theoretical (or ideological) grounds. Djellal et al. (2013:99) argue that publicly funded non-market services are habitually ignored as having little to do with innovation because:

> "They (public service organizations) are under political influence, which puts them on the margin of the rationalistic economics of innovation. They often suffer from lack of resources, of resources that can be devoted to risky innovation projects, and of incentives for innovators and intrapreneurs. There is little pressure from consumers of the services, or else this pressure is dispersed by the rigid bureaucratic structures that induce inertia in the public sector..."

In picking apart the above assumptions as unsound, Djellal, et al. (2013: 99) note that innovations can be produced under conditions, and by mechanisms, contrary to those posited in the neo-classical-based conception of innovation processes.

In this article we pick up on several of the abovementioned themes. One concerns what is presented as a barrier to innovation: lack of resources or financial constraints. Yet rather than *inhibiting* innovation, financial constraints are found to function as an *influential parameter* spurring and influencing how and what types of innovations take place. Financial constraints do not, as we demonstrate below, take innovation off the agenda of public sector organisations, but for the reasons of the ideological blinders Djellal et al (2013) discuss, they are taken off the radar of mainstream innovation research.

Due to financial constraints and the general non-expansionary fiscal effects of innovation in public services, innovations in the cases studied targeted other problems, like labour shortages and employee retention, or goals like increasing intrinsic job quality, largely by facilitating improvements in quality of care. A second theme is that despite these organisations not operating in traditional product and service markets, they remain subject

to competitive pressures from other actors, especially with regard to labour. Thirdly, we show that while largely devoid of material "incentives for entrepreneurs and intrapreneurs," non-material incentives, driven by empathy, occupational pride and professional development spur innovation, especially towards improved treatment, care and contact outcomes.

Empirical Research Context

Financing and regulation

The UK cases focus on social care in client's homes (i.e. home care). Social care is separate to the National Health Service (NHS). In England, where the case organisations are located, publicly-funded social care is provided through local authorities acting as commissioners of care. There is a continuing downward pressure on social care budgets because of cuts to local government budgets. Results from a recent survey found 71% of local authorities anticipated making cuts to frontline services and 80 per cent considered adult social care the most pressing issue (Butler, 2017).

There has been a shift away from public service direct provision towards greater private provision, including commissioning home care providers in the private and voluntary sectors. Under this system, local authorities have discretion over what is paid to care providers. Despite an ageing population, real expenditure on social care in England fell by 7% between 2009-10 and 2013-14. One of the ways this was achieved was by tightening eligibility thresholds (i.e. means-testing and needs-testing) for publicly funded social care (UKHCA, 2016). Of particular relevance to job quality, there is a growing prevalence of very short duration visits commissioned by local authorities: for example, in January 2016, Unison reported that 74% of councils in England commissioned care visits that lasted 15 minutes or less (UNISON, 2016). Reduction in real expenditure on social care has also been achieved by local authorities passing the financial squeeze on to care providers, by negotiating lower prices for the care they publicly finance. In 2016, the UK Home Care Association (UKHCA) said that nine out of 10 councils in the UK were failing to pay realistic prices to support older and disabled people in their own homes (UKHCA, 2016). There has also been a rapid growth in personal budgets, and a shift towards self-directed support as the default model of delivery for the majority of people with care and support needs. In addition, a growing number of people fund their own care.

When taken altogether, the combination of policy reforms means that social care providers are trying to deliver high quality care for less and less money. Cumulatively, Humphries (2013:8) states these trends have resulted in 'a system that is crisscrossed with fault lines in how services are funded, commissioned, provided and regulated: between NHS and local authority social care, private and public funding, and private and public delivery.' In terms of the regulatory environment, home care providers in England are regulated under the *Health and Social Care Act 2008* by the Care Quality Commission (CQC).

The Swedish cases focus on hospitals, providing comprehensive specialist health care on an out- and in-patient basis. In the Swedish health care system, the Ministry of Health has the overarching political responsibility for health care, but the regulation of health care at the national level is carried out by state agencies, of which the National Board of Health and Welfare (*Socialstyrelsen*) and Health and Social Care Inspectorate (*Inspektionen för vård och omsorg: IVO*) are the most important. Health care provision itself is provided at the sub-national level by county or regional governments [*landsting* or *regioner*]. Aside from provision of health care, each county or region in Sweden finances its health care activities via direct taxation of the residents in the county or region (though some targeted financing comes from the state.). There are national directives dictating that certain medical procedures can only be carried out at specific hospitals, and in these cases the county which sends its patients to these facilities pay compensation to the county where the hospital in which the treatment is carried out is located. There are also national laws stipulating that health care in Sweden must be equivalent in all counties, meaning that it can be organised in different manners, but the treatment and care quality and effects must be equivalent.

Innovation

Innovation in social and health care is an area of increasing importance, yet there is a lack of academic literature about innovations, other than medical and technological innovations that are developed outside the workplace. Hospitals and care providers are this typically viewed as 'recipients' of innovations.

Departing from this misconception of hospitals exclusively as recipients of innovations, hospitals are increasingly recognised as important locations of innovation and entrepreneurial activity (do Carmo Caccia-Bavae, Guimaraes & Guimaraes, 2009; Rey-Rocha & López-Navarro, 2014; Lunt, Exworthy, Hanefield & Smith, 2015; Miller & French, 2016;). Rey-Rocha and López-Navarro (2014) argue that innovation is the fourth basic mission of hospitals, alongside the well-established trinity of clinical practice, research, and education/training. Yet Gallouj and Zanfei (2013:90) note that most studies on innovation in health care emphasise the role of science and technology-based innovation (see Thune and Mina 2016 for a review of medical innovation). Hence important non-technological innovations are overlooked. In contrast, Djellal and Gallouj (2007:190) take a wider perspective:

> "…. hospital innovation is a category much broader than medical innovation. It is thus necessary for the actors in hospitals, the public authorities and researchers in the social sciences to take into account these various reservoirs of innovation and the actors involved in them, both individually and in terms of the interactions between them (reciprocal effects, conflicts)."

From this expanded perspective, Djellal and Gallouj (2007) find the first domain of innovation in hospitals is concerned with process innovations (oriented towards efficiency) across all activities at the hospital. The second domain focuses on technical and processual aspects of medical treatment per se, with an emphasis on the use of products. The third also looks at technical aspects: information technology and techniques. The fourth domain looks at a relational, attitudinal dimension: the service perspective. This perspective foregrounds expectations and demands, often of a qualitative nature, beyond technical aspects of interactions at hospitals which may in turn affect efficiency and treatment effectiveness. We see this fourth area of innovation as an unacknowledged background factor to the first, regarding employment strategy and employee retention.

Much of the abovementioned emerging research from the health care sector should be transferable to social care. Yet technological innovation, such as the use of digital assistive technologies, have featured less in service-delivery in social care than in health care. In part, this is because technological innovations tend to be expensive to implement. It is also because there is some resistance to technology, because of an attitude that the human element of caring should not be replaced by technology. In terms of non-technological innovation, some interesting incremental rather than radical workplace or organisational innovations are underway, mostly concerned with ways to improve both the quality of care delivered to clients and improve the way work is organised and managed (see examples later in this article).

Crucially, part of the 'discovery' of innovation processes within both hospitals and care companies can be linked to a shift in conceptions of innovation from a focus on the linear Science, Technology and Innovation (STI) mode as the predominant perspective on innovation, to the Doing, Using and Interacting (DUI) mode (Jensen, Johnson, Lorenz & Lundvall, 2007, Consoli & Mina, 2009).

With the former perspective, innovation takes place through a research and development (R&D) process that is largely divorced from the everyday practice where the innovations are to be implemented. With the later perspective, the DUI approach (which is complementary rather than mutually exclusive to the STI approach), the role of practical experience is emphasised, and innovations are oriented towards altering workplace practice as the central dimension of innovation. Rather than innovations being remotely invented, developed and then diffused for implementation, the DUI practice-based approach emphasises proximate iterative approaches to innovation. This has led to an increasing focus on workplace innovation (Oeij, Rus & Pot, 2017).

This shift in approaches to innovation opens the way for studying a wider range of innovations in hospitals and social care. The vast majority of innovations discussed in this article are of the DUI, workplace innovation type (though hospitals are also deeply involved in STI type of innovations as both co-producers and recipients).

By expanding beyond a narrow focus on STI innovation, and in differentiating between the STI and DUI modes of innovation, our conception of innovative processes is broadened to encompass both more remote, linear, science-based processes and more proximate, recursive, practice-based processes of innovation.

Job quality and employment

The relatively low status society attaches to caring work has led to pay and conditions universally regarded as poor. The UK care workforce is dominated by women, with ethnic minorities and non-UK nationals disproportionately represented. Care workers are low-paid, with insecure employment, irregular hours, low employee benefits, low unionisation, little training and few opportunities for advancement (Qureshi & McNay, 2011; Gardener & Hussein, 2015).

Given it has been estimated that wages make up around 60% of costs for care providers (Harmer 2015) and the commissioning process drives down the amount paid to home care providers, it is not surprising that home care workers continue to be among some of the lowest paid workers in the UK. In 2013 the median hourly wage was only 15% above the UK National Minimum Wage (Bessa, Forde, Moore & Stewart, 2013). For a small but significant minority of home care workers, the combination of low (and variable) hourly rates of pay and non-payment for travel time between clients results in hourly pay rates that reflect the actual time worked often falling below the legal minimum hourly rate of pay (Pennycook, 2013).

The nature of home care work in the UK (and elsewhere) has become more medicalized, incorporating work that was previously done by medical and associate professionals. While care work can be intrinsically rewarding, it can also be physically and emotionally demanding. Care workers are sometimes at risk from challenging behavior from clients. In terms of work intensity, care workers have to work at high speed and to tight deadlines. Because of the configuration of shift work and the physically and emotionally demanding nature of the work itself, there is often a significant spillover from work to home. In the UK, despite new regulations coming into force in 2015, including new standards covering the conduct and level of training of required by individual care workers, few formal qualifications are required for job entry (UKHCA, 2016).

Care companies in the UK find it increasingly difficult to attract, recruit and retain care workers. In 2016 the annual turnover rate in the independent and voluntary sector as a whole was 39% (up from 24.3% in 2015) (Unison 2016:36). Low pay rates, isolation resultant lone working, increasing medicalization of duties and work intensification as a result of short visit times are among the factors contributing to high turnover rates in the sector.

Shifting attention to hospitals, most attention has focused on nurses and other related occupations (Zangaro & Soeken, 2007; Lee & Cummings, 2008). Other occupations that are found in hospitals, including physicians and medical secretaries, but also managers,

administrators, cleaners, cooks, HR personnel, accountants, ICT technicians, etc., are less often the subject of attention in the literature. This leads to research on job quality in health care focusing primarily on nurses, and to a lesser extent on nursing assistants, orderlies and physicians (Misfeldt, Linder, Lait, Hepp et al., 2014).

Studies of physicians tend to show comparatively high degrees of well-being and job satisfaction, though burnout is taken to be an indicator of more problematic job quality issues (Montgomery, 2011). In a European study of physicians, Bovier and Preneger (2003) found aspects of job quality and work satisfaction, generally positive. The most problematic areas for physicians related to workload and stress, administrative tasks, work-life balance reconciliation, as well as unsatisfactory extrinsic factors such as income and prestige. Physician well-being is also a primary component in the quality of patient care (Scheepers, Boerebach, Onyebuchi, Heineman et al., 2015).

A great deal of the literature on job quality among nurses focuses on temporal issues, such as concerns about such as scheduling, length of shifts, shift work and temporal flexibility (Zangaro & Soeken, 2007; Lee & Cummings, 2008; Van Bogaert, Clarke, Willems & Mondelaers, 2013; Ball, Day, Murrells, Dall'Ora et al., 2017). Here a direct relationship to work life balance comes in, as both volume and timing and flexibility of work impinges upon reconciliation with non-work demands (Boama & Laschinger, 2016; Ghislieri et al., 2017). The combination of nursing being a female dominated profession and the mainstream gendered domestic labour regimes in contemporary societies makes this a generally acute and pervasive issue. Other central topics include rewards: wages and prestige; career progression opportunities; knowledge and skill development; the intensification of work; job composition (in terms of tasks); the relationship of nursing to other occupations: both in the workplace and in society at large; the forms and levels of occupational support available; and the myriad of issues around emotionally satisfying and taxing work in dealing with persons in high valence situations characterised by physical and emotional contact.

From the discussion above, two factors are of paramount significance. The first is associated with the temporal aspect of work in health and social care. Some treatment (acute, emergency treatment usually in emergency wards) and care (intensive care units) must be carried out immediately and with a high degree of attention. Other types of treatment (i.e. elective surgery) and home care can be planned and carried out in a more deliberate manner. The second issue relates to the fact that the expected (from the individual, colleagues, supervisors, patients, relatives, clients, etc.) level of treatment and care largely depends on the financial, organizational and social support provided by employers and colleagues (Laschinger, Finegan, Shamian & Almost, 2001; Ghislieri, Gatti, Molino & Cortes,e 2017) where facilitative factors such as training and discretion are often constrained financially (Freidson, 2001).

Methods and Data

A case study approach was adopted to investigate the innovation-job quality-employment nexus in social and health care in the UK and Sweden, respectively. This approach is the preferred method of empirical inquiry to investigate a contemporary phenomenon in-depth and within specific context (Eisenhardt, 1989; Piekkari Welch & Paavilainen, 2009; Yin, 2009). Case studies are useful for illuminating a set of decisions, why they were taken, how they were implemented, and with what result (Schramm, 1971 in Yin, 2009:17). This method is particularly relevant to our research questions, as it enables explanation of causal links in real-life innovations that are too complex for survey or experimental strategies (Yin, 2009).

While case study research can include both single and multiple case studies, multiple case design is often considered more robust. However, it is crucial to select cases using defensible and appropriate logic. This article draws upon empirical evidence from seven case studies which are a sub-set of larger number of case studies conducted in the qualitative component of the QuInne project (quinne.eu). A common theoretical, methodological and analytical framework was developed to investigate the relationship between innovation and job quality; to measure the mutually reinforcing effects of that relationship; and to enable analysis of the employment outcomes from the dynamism of that relationship (Jaehrling, 2017; Warhurst, Mathieu, Keune & Gallie 2018).

A common theoretical, methodological and analytical framework was used as the basis for selection of our cases, making it possible, and appropriate, to generalise our empirical findings more broadly than within the particular cases we analyse. Analysis and reporting of findings is undertaken both *within* and *between* cases, in order to help understand why certain innovations were adopted (or not) and to identify the presence of causal links between the innovations, job quality and employment outcomes.

Three of our seven case studies are on UK-based care companies, and four are on Swedish-based hospitals. While details about the financial and regulatory aspects in the UK and Sweden are outlined in the previous section, undertaking comparisons within and between two outwardly different branches and countries has revealed some noteworthy similarities and differences. The main unit of analysis is constant across our seven cases: innovation, where the decision about the unit of analysis was based on the most appropriate level for interpreting the innovations and placing them in context. In summary, four cases were primarily focused at the highest organisational level (i.e. hospitals, care company) while a further three cases were primarily focused at the work unit-level (i.e. ward, specialist centre, local franchise). This being so, there is some overlap between cases, for example, the hospital ward is the primary focus of analysis for one case (Case E) while its broader setting: the hospital per se is the focus of Case D. Along similar lines, while the unit of analysis for one of the social care cases (Case B) is the local franchise-level, this case is best understood in the context of the business model and philosophy of the UK head office. A summary of key characteristics for the seven case studies is set out in Table 1.

Table 1: Summary characteristics of cases

Case	Organization type & ownership forms	Mission	Country	No. of interviews
A	Privately-owned, family-run care company	Deliver publicly funded home care services	UK	6
B	Local franchises plus national office of international care company	Deliver privately funded home care services	UK	12
C	Privately-owned care company, part of a wider group	Deliver publicly funded home care services	UK	7
D	University hospital in Regional Government "A"	Health care, teaching and research	Sweden	19
E	Pediatric Surgical Unit** in Regional Government "A"	Pediatric surgical care	Sweden	17
F	Cancer center, State and 3½ Regional governments**	Develop and coordinate cancer care	Sweden	3
G	Clinical hospital in Regional government "B"	Full-service clinical hospital, training and some research	Sweden	4***

*The case on privately funded home care company (Case B) involved interviewing staff at the UK head office and two franchisees (Local Franchise 1 and Local Franchise 2).
**Three and a half county/regional governments fund this organization. One county government funds this organization in half of its county and a sister-organization that operates in the other half of the county.
***The case on the pediatric surgical unit (Case D) is a subsection of the larger Case C –university hospital. Therefore, there is some overlap with interviews between these case studies.

The case study fieldwork took place in 2016-17. The analysis draws on transcripts and contemporaneous notes arising from 68 in-depth, face-to-face or telephone interviews (or focus groups, in one instance) with employees, stakeholders and relevant experts; field visits, participation in workshops, desk-based industry research and material published on relevant websites. Triangulation of different data sources was used to take into account different viewpoints, and to ensure that the findings are credible and robust.

As a condition of being granted ethical clearance, participation in the case study research was voluntary, requiring written informed consent. If specific consent was given, interviews/focus groups were recorded and transcribed. The transcripts were subsequently anonymised including the assigning of pseudonyms to participants and organisations.

Despite one of the major strengths of the case study approach being its ability to deal with a variety of evidence (Piekkari et al., 2009; Yin, 2009), there is a risk that either too much, not enough or the wrong kind of data is collected. As one way to reduce the likelihood of data problems, common protocols were designed to guide the semi-structured interviews/focus groups and for subsequent thematic analysis. For each case, data was collected and then thematised for five key areas: the organisation itself; its employment profile; job quality and working conditions for its employees; its innovation processes; and any recent important innovations. Individual cases were written up, and then similarities and/or differences within and between cases were identified. Cross-national within-branch analyses (i.e. social care; health care in hospitals) based on these cases are presented in Jaehrling (2017). This article bridges two branches in different countries to explore commonalities within public service innovations over branch and national differences, based on the above common data gathering and analysis strategy.

Results

Adopting the expanded conceptualisation of innovation to include both the STI and DUI modes, a number of the innovations were identified in our seven cases in the UK and Swedish health and social care sectors. They are briefly outlined below.

An example of non-technical, organisational innovation, Case A created a number of 'champion' roles in the organisational structure. The new roles were created to improve the quality of care provided to clients, to empower staff and help them to work better as a team, and to provide additional organisational and social support to help reduce feelings of social isolation. The champions have specialist skills in their relevant areas, such as dementia care, where their role is to cascade their knowledge throughout the organisation (and externally in the community).

As part of a shift from time-and-task to more outcome and patient-focused care, another example of non-technological organisational innovation, Case C introduced a new type of practical training for its care workers. In part, this innovation was motivated by a necessity to improve medication management to conform with regulatory requirements. However, there was also an accompanying desire to improve the quality of care. The new approach to training focuses on the consequences of poor medication management, rather than on 'how to do it'. In addition to adopting a more practical learning style, a medication "lead" was introduced from amongst the care workers.

Secondly, Case C introduced 'narrative' record-keeping where care workers are encouraged to note down things like the alertness, responsiveness and abilities of the recipients, as well as what and how they eat rather than recording such information as 'all care given'. This places higher demands on care workers, both in terms of requiring them to expand their documentation, in addition to practical tasks, but also requires the care workers to use

written English language skills, where English is a second language for many care workers in this company.

In Case B, a number of innovations are connected to the company's decision that it could not operate under the UK's financial model of publicly funded care. Instead its business model is one of offering flexible care packages to clients with private funding. Because they can charge higher hourly rates for care than those available for publicly funded care, the local franchises are afforded greater discretion in their activities.

Illustrating the local discretion that is possible in a business model based on privately funded care, Local Franchise 1 at Case B insists that all new recruits, regardless of whether they have previous care experience, undertake a one week, classroom-based training course. This induction training exceeds the required minimum standard of training. In part reflecting the particular emphasis this particular franchise owner placed on care for this 'specialism', all new recruits are also required to undertake training in Alzheimer's and dementia care. When care workers have been with the franchise for six months, they are offered the opportunity to take further qualifications in Health and Social Care (funded by the company) and senior management are all offered the chance to undertake degrees: with no requirement that the subject of the degree is health-related.

In another innovative development, Local Franchise 2 in Case B invested in a Learning Development Manager and Learning Development Officer to develop the franchise's people management functions. They have developed more interactive and people-oriented induction training; 'refresher' courses on topics such as dementia, challenging behaviours, and medication; and one-to-one coaching. Close attention is also paid to succession planning to identify staff who are potentially suitable for management roles.

Close working with one local commissioning authority may be regarded as an organisational innovation in Case C, where the local commissioning authority works closely with the private care company to shift towards delivering an 'outcome-focused contract'. Under the contract, individual care plans are prepared and delivered for each client, aimed at promoting the client's independence as much as possible. Rather than care plans being fixed for a year, they are reviewed: and where necessary adjusted every 12 weeks. While this innovation was considered good in principle, it proved difficult to operationalise in practice. While there were expectations that Case C should incorporate various community services to help support the individual clients, in reality, support services/charities are stretched, and so they find it difficult to offer the desired for additional client support.

Working more collaboratively with the local authority may open up opportunities for progression within care, and also into social work and nursing, however both supervisors and care workers requiring new skills are a result of the introduction of new individualised care plans, hence training is required so workers can execute their more varied roles. While Case C was working closely with the local authority to try to address some of the operational issues,

this case exemplifies how external constraints associated with public financing arrangements and additional skill requirements for workers can impede innovation.

While the UK care companies had all: to a greater or lesser extent, recognised the importance of training in preparing care workers for the demands of their job, it was also recognised that training alone might be insufficient, hence a number of other innovations centred around provision of additional social and psychological support for care workers. For example, Local Franchise 1 in Case B introduced 'Area Meetings' with fewer rather than larger groups, Case A organised a summer excursion to the seaside for staff, clients and their families in order to provide an opportunity for everyone to come together and also as a token of appreciation for the care workers' hard work. In Case C, a fortnightly newsletter was introduced. While the main purpose was to provide work-related reminders to staff, the newsletter also provided a mechanism to thank staff for their efforts.

In the case of Case D, a university teaching hospital, a number of incremental workplace innovations centered on continuous improvement were identified. These innovations resulted, in part, from the strategic introduction of Lean Management, but in a manner focused on generating and developing bottom-up innovation, and improvement suggestions for improving work processes and delivering quality health care. The innovations involved the creation of forums for employees to make suggestions and work on implementation of their suggestions. A central forum was "pulse meetings," brief staff meetings used to take the pulse of the unit and document and follow up suggestions. These became a widespread activity at ward-level across the hospital: and are an innovation to promote further innovation. The pulse meetings led to an extreme reduction in time spent on rounds and care planning activities, where the improvement in efficiency was directly felt by employees without the need for statistical measurement. Members of each occupational group need to have the necessary competence and skill level to have a qualified opinion to be able to effectively feed into the improvement process. Consistent with the interpretation of Lean Management at the hospital, the aim to make decisions at the lowest possible level in the organisation has the potential to confer a high level of group/ward collective autonomy in specific realms. These incremental innovations rarely lead to direct changes in employment levels but delivered more efficient routines and quality of care.

In order to deal with the shortage of nurses, two wards studied at Case D have implemented task-shifting innovations. Both examples are oriented towards the same employment issue: a general shortage of nursing staff leads to wards and units to try to alleviate tasks previously carried out by nurses and transfer them to other occupational groups for which there is a greater labour supply. These organisational innovations do not just shift tasks among existing staff, they also create new jobs and bring new occupational groups into the workplace. On a neo-natal ward, there is a "milk kitchen" where nurses mixed milk formula for the infants in their care. After visiting a neo-natal ward at another hospital where a designated person who was not a trained nurse had fulltime responsibility for preparing the milk for all the infants on the ward, this model was introduced at the case hospital. Nurses said this new system allowed

them to focus on their core activities and relieved them from having to leave the room at regular intervals and find someone to cover for them. By stripping out the task of preparing milk, the nursing job became less rich, as a task and its encompassing social opportunities were reduced, with an increase in bedside care time.

The other example of task-shifting is the introduction of pharmacists to apportion and allocate medicine on a ward. Like work in the milk-kitchen, apportioning medicines was a nursing task. One ward introduced a full-time pharmacist to take over this role. While this innovation was originally introduced on a voluntary basis (nurses who wanted to continue apportioning medications to their own patients could continue to do so) but over time fewer and fewer did this on their own because nurses reported having more time to concentrate on "core" nursing activities. Patient safety was also given as another reason why nurses adopted this new process, as pharmacists are specialist in measuring and preparing medications. The role of the pharmacist was accepted, despite transferring a skilled activity that was previously performed by nurses to an adjacent profession (Abbott, 1998). While these changes could have been interpreted by nurses as de-skilling and taking away alternative means of engaging in care, they were interpreted as relief from more peripheral tasks affording the opportunity to concentrate on "core" nursing practices.

An illustration of the variation in perspectives on empathy and commitment can be found in the example of the *internal staffing agency* in Case D. In an effort to try to eliminate the use of hiring health care staff and professionals from costly commercial temporary staffing agencies, the hospital set up its own internal staffing agency, mimicking the conditions offered to external temps. While these conditions are partially about pay (higher), and time (control over scheduling), another significant factor behind preferring temporary over permanent placement was concern about being "embroiled" in workplace engagement. The staffing innovation, being a full-time employee of the hospital, but being hired out to different wards or departments affords short durations at each particular workplace, affording variety and change to the employee, as well as being able to avoid dimensions of organisational, social, and emotional commitment due to structural temporal regulation. Under such parameters, the internal staffing agency, if not promoting commitment, secures durable association of health care workers to the university hospital.

The recent increase in the number of refugees and immigrants to Sweden, a general shortage of health care staff in all occupational categories bar physicians, and a general political mandate to improve employment prospects for vulnerable groups, have all contributed to another workplace innovation where Case D introduced an innovation involving the development of a more systematic way of dealing with internships for occupations below the physician level. Training, and internships more specifically, are now seen as strategic dimensions of recruitment, which have become increasingly important in the context of staff shortages across almost all occupational groups. While interns were previously recruited from the National Labour Exchange (*Arbetsförmedlingen*), the hospital now develops relationships directly with educational institutions.

In Case E, a pediatric surgical ward, a physician-led organisational innovation involved applying to become a National Specialised Medical Centre to provide specialist care for three diagnoses. At the time of application, it was not known if the financial resources accompanying the new patients that would be referred to the ward through this programme would cover all costs or not, but it was envisaged that the benefits of attaining this status would outweigh any disadvantages. The task of preparing the application for the specialist center was a one-off, large scale innovation activity that, regardless of its success, had significant repercussions for how the ward operates. It led to a complete inventorying of procedures and routines at the ward.

Having attained the status of national specialist centre, the ward has become one of two wards in the country mandated to perform these operations. While a marginal impact on the number of surgeons is foreseen, an increase in the number of nursing staff to both care for patients and liaise with other hospitals is anticipated. Becoming a National Specialised Medical Centrr entails both a quantitative and qualitative change in the organisational structure of the ward, as opposed to merely a change in the volume of patients and work.

This impacts job quality in a number of ways. Task variety increases for both the ward's medical and para-medical staff; it will increase prestige; and it will open up new opportunities for education, training, development, innovation and research in the specialist fields. Of particular significance, the opportunity to deliver an unbroken chain of treatment is likely to result in symbolic, motivational and practical repercussions for ward staff in terms of knowledge development and transfer. The ability of the ward to attract and retain staff is likely to improve, because the ward will be able to offer the entire range of activities to potential recruits.

A wide range of occupational categories were involved in preparing the application and developing and implementing the innovations found relevant during this process. These activities were not specifically budgeted for, nor were staff directly compensated for their involvement. Rather, there was a reliance on a great deal of voluntary or 'discretionary effort' on the part of the ward and wider hospital staff that displays a high degree of employee commitment. While collaboration across the hospital increased, virtually all of the practices on the ward needed to be scrutinised which set in motion an examination of: and in many cases, changes to, existing procedures.

In Case F, while not carrying out any clinical activities, the network-organisation was identified as an organisational innovation in and of itself. The network develops and co-ordinates the treatment of a specific but broad illness across four different counties in southern Sweden. The network was established to both complement and replace existing structures, where its role is to both encourage new innovations in treatment of this illness in the region, as well as to disseminate innovations across a wider national network.

The network operates in Case F via collegial influence rather than a hierarchical directive approach, and this is the primary innovation utilised in this case. Much of the work of the network is project-based and inter-occupational, combining research in medical/clinical domains with research and implementation along service, delivery and administrative dimensions. Diffusion is based on best-practice, collaborative and persuasive processes rather than a top-down, command and control models so there are opportunities for employee influence.

In Case G, located in a provincial hospital with facilities in four towns, a wide-ranging organisational innovation was undertaken during an acute shortage of skilled health care professionals, causing some wards to be closed and others merged. The hospital began a step-by-step introduction of person-centred health care, where a focus on the patient as the object of care was replaced with the needs of the patient. This shift transforms relationships in a profound way and led to new work procedures. The patient's needs rather than the patient him/herself is placed at the centre of the process, and all other actors (i.e. doctors, nurses, administrators) engage with the patient to collectively plan and carry out the patient's health care. Similar to findings by Burns, et al. (2016), the introduction of person-centred care here was also interpreted and applied collegially.

An example of a more radical technological innovation was also identified in Case E, where robot-assisted surgery has been introduced for some pediatric surgical cases. Case D is one of the few hospitals in the world that uses robot-assisted surgery on children. The hospital can be characterised as an innovation leader, because it was one of the first hospitals in Sweden to adopt this technology, and then apply it in an innovative way (i.e. extending its use to children). While most of the reasons for adopting robot-assisted surgery are surgical, the care dimensions are also of great significance, as the less invasive surgery tends to result in shorter hospitalisation durations and reduced post-operative pain. While the shorter periods of hospitalisation should yield financial savings, robot surgery also renders increased quality of work for surgeons as one of the surgeons is seated comfortably behind a monitor rather than having to stand over the patient for hours while surgery is performed. Notwithstanding these aforementioned benefits, a number of drawbacks exist including the high purchase price (approximately €1.5 million per robot) and high ongoing maintenance costs, the fact that the robots are installed in a fixed physical location, and (as with all medical machinery) while vision is greatly improved, what is absent is the surgeon's traditional sense of touch.

The impact of this innovation on job quality is primarily in terms of work variety, as staff are engaged in something novel. As the work requires specialist skills, there is skill acquisition and development, where these skills are typically transferable to other hospitals or departments where robots are used. As the technology is novel, and the robot team contains lead surgeons, the teams have a higher degree of autonomy and discretion in its use. While those who are part of the robot team enjoy very high job security already, in theory, the highly specialised skills acquired as a result of the innovation being implemented should further increase their job security.

As the robot is only used for a restricted number of applicable and planned, elective surgeries, the pediatric unit has access to the robot once a fortnight. During the remaining time, all members of the robot team are involved in conventional surgery. Interestingly, different processes are followed for recruitment into the robot team for doctors compared to nurses and nursing assistant. Surgeons seem to have been recruited into the robot team based on expressing an interest as well as them possessing relevant similar skills (i.e. laparoscopic skills). In contrast, nurses did not tend to have specialist skills prior to moving into the robot team. While surgeons are typically provided with specialist training (often abroad), nurses are mainly trained on-the-job.

Another example of a technological innovation found at Case A was shifting from a paper-based to a digitalised system for care plans. With the new digitalised system, all care plans are recorded in the new system where all data is 'live'. An app will be installed on every care worker's smart phone where they electronically check in and out of visits, and the entire recording and monitoring of individual care plans will be digitalised. This represents a more radical type of technological innovation than merely introducing an electronic monitoring system to schedule and track visits. There are two main reasons why this innovation will be adopted. First, the local commissioning authority has an expectation that all contracted care providers have electronic monitoring systems in place. Secondly, after the initial migration of data over to the new system, the company will have real time access to details on the care that has been delivered to all of its clients and the staff involved in delivering this care. At any time, after necessary permissions have been granted, family members will be able to view details of the care that has been provided to their relative. So, this innovation has the potential to improve communication channels between the care company, clients and their families.

Introduction of the new digital technology in Case A aligns with a shift away from task-focused to outcome-focused care plans and is expected to make rostering and monitoring more efficient. While entering details via the app may limit discretion and autonomy, it may also mean that the care workers will have more time to actually care for their clients; resulting in a more rewarding or fulfilling job. As younger workers tend to be more familiar with smart phones and apps; it may mean that care work becomes more attractive to them. In contrast, older workers may find this innovation more challenging. Clicking on tasks rather than having to hand write notes may mean care work is more inclusive of migrant workers, however good literacy and numeracy skills will continue to be required.

Discussion

Though home-based social care and hospital-based health care operate at different ends of the care spectrum, and the organisation of work and skill levels are vastly different, we find a fundamental similarity in some underlying mechanisms between the UK and Swedish cases of innovation, largely deriving from similar interconnected structural challenges. Though the

innovations themselves mirror the differences in the size, complexity, and skill-demands of the different case organisations, we find several similar processes at the innovation-job quality-employment nexus.

Leveraging intrinsic job quality

Professions and occupations in social and health care are often analysed in terms of subjective dimensions of work experience rooted in the very nature of the activities carried out. Treatment and care entail intimate contact with individuals, most of whom are in vulnerable states. It also entails direct intervention in the fundamental and universal human situations of health and illness, life and death, and quality of life. These factors evoke strong emotions, both in terms of specific experiences and more durable attachments. This leads to an interest in the origins and roles of subjective sentiments of empathy and commitment in health and care occupations, as both cause and effect (Zurmehly, Martin & Fitzpatrick, 2009; O'Brien-Pallas, Murphy, Tomblin, Xiaoqiang et al., 2010; Folbre, 2012).

Empathy is often treated as a stable and measurable personality trait that is possessed by individuals to greater or lesser extents (Nesje, 2016). An alternative to the trait perspective is developed by Leana, Meuris & Lamberton, (2018) who take a more sociological, as opposed to psychological, approach to empathy. This involves two steps. The first is transforming empathy from a trait to a state that is impacted by contextual factors. The second is by adjoining empathy to an activity: care. Their operative concept, *empathetic care* is defined as what one feels and does at work out of concern for the well-being of the recipient. They find that empathetic care is a vital factor in the quality of care a recipient receives, but this is mitigated by working conditions: especially high patient-load and overtime hours worked.

Organisational and managerial practices are of central importance in promoting or constraining opportunities for empathic care. In addition to the factors identified by Leana, Meuris & Lamberton (2018), other aspects of job quality such as discretion, training, supervisor and peer support can impact opportunities for empathetic care. These aspects of job quality have further spillover effects, in this case effecting the opportunity to do work in a satisfying way (Meyer & Allen, 1991; Meyer, Stanley, Herscovich & Topolnytsk, 2002).
The cases above underscore the central role of empathetic care opportunities. This dynamic lies behind the generation of some innovations: i.e. the primary impetus, and the acceptance of others, where different beneficial and detrimental job quality aspects weigh in the balance. In the absence of especially financial, but also other types of resources, social care companies in the UK have based several innovations on social and symbolic rewards leveraging and promoting the practice of empathetic behaviours and commitment. As outlined earlier in this article, all innovations in the case organisations should be seen against the backdrop of profound retention problems for care workers and nurses.

The examples of the introduction of the "champion" and "lead" employee roles to promote peer-to-peer learning from front-running employees display this dynamic. As these are

voluntary roles, and did not bring wage increases, they operate on other social and commitment-based mechanisms. Being given one of these roles functions as a form of recognition, with increased status as well as additional training. It is predicated upon engagement and commitment, reinforces the same, and being collegially based, it promotes interaction between staff members (collegial care) with the ultimate objective of increasing the quality of care.

Another innovation introduced without material incentives, despite requiring higher skills, is narrative record-keeping. The motivation to carry out the narrative record-keeping is predicated on the idea that it is good for the recipient (and their family), and that these actions link the care worker's activities to the health system, as such notes may be vital in future care assessments and/or medical treatment. So, this innovation simultaneously increases the workload and need for higher skills, goes materially uncompensated, but is accepted as it may improve the well-being of the recipient, as well as heighten the care worker's self-esteem by coupling their work activities to medical activities of potentially great consequence. Because the care workers are entrusted to make their own observations, use their own discretion and judgment and report in their own words their observations of what is significant, rather than a tick-the-box checklist, this stimulates the empathetic encounter. Also working via the empathy mechanism, an alternative approach to training led to an improvement in learning. Instead of merely teaching care workers how to do things in a purely cognitive manner, the new training in medication management was based on a "what happens [to the recipient] if I do not do it" training approach, spelling out the consequences of poor medication management. This alternative approach starts by creating receptivity for knowledge and skill development by appealing directly to empathy: the consequences for the care recipient of insufficient incorrect care.

Objectively, these innovations run counter to the material interests of the care workers, as they increase demands without due compensation, but they are very much in line with empathetic and commitment concerns of the employees towards the recipients of their care. The Swedish cases show possibly not more profound but more complex innovations, due to the greater organisational complexity of hospitals.

The processes around the application to become a "National Specialised Medical Care Centre" entailed a tremendous work burden in addition to the normal work undertaken at the ward. While the previously outlined need for meticulous documentation of procedures and routines was an obligatory part of the application process, this process generated another extensive layer of "voluntary" innovation work, as when it was discovered that routines could be improved, these additional activities were simultaneously undertaken. Professional and occupational prestige can be seen as a major animating element behind the application, but this cannot explain the vast undertaking of innovation work based on a desire to improve routines found wanting during the inventorying process. Furthermore, a recurrent explanation for the application was being able to maintain an "unbroken care chain" for *their*

patients. Thus, the direct empathetic concern for the ward's patients was shared across occupational categories.

Thus, two aspects of empathetic commitment manifested themselves in the application work. First, the vast majority of the work required to write the application was voluntary (uncompensated) effort on part of the staff. Secondly, the review of procedures generated even more work as established routines and procedures were found outdated and revised and updated. Rather than just allowing these things to persist, they were altered, or revised. Without the high degree of engagement at all levels throughout the ward, such an undertaking would not have been possible, and definitely not self-initiated.

In both a Swedish hospital and one UK social care case, person-centered approaches were introduced. This ideational change, in brief, marks a shift from seeing the patient as comprising a set of objectively discernable needs for which there are set courses of treatment or care, to seeing the "patient" as a whole person with unique needs, desires, values and capabilities that should be drawn upon in the mutual formulation of courses of treatment and care. The major challenge facing the hospital was not so much financial, but rather recruitment and retention of skilled staff, in part due to its provincial location. The person-centric innovation was part of a wider programme to make the hospital a more attractive place of employment. The primary objective is to improve both service quality and efficiency at the hospital, as well as job quality, by focusing on and developing the empathetic meeting between patients and staff. In addition to focusing solely on staff-patient relations, other relations, such as staff-staff (collegial as well as hierarchical) and the relations between staff and the patient's relatives were also brought in focus. Thus, the shift to person-centred care not only brought in a new set of considerations, with the objective of deepening the empathetic practice in relation to the patient/person, but also extended this to a wider range of relationships in care and the workplace, and thus placing new qualitative but enriching demands, and extension of these to a wider circle.

In the cases of task-shifting, we probably see the most apparent examples of an interest in more extensive empathetic care opportunities surpassing other considerations, such as job enrichment/task retention, and the opportunity to "leave one's station" for other tasks and encounters with colleagues.

What can we learn from comparing innovations in home-based social care in the UK with hospital treatment and care in Sweden?

The innovations above have divergent impacts upon different aspects of job quality but generally the same foundation in promoting empathetic care opportunities. Most of the examples show how factors such as work intensification in terms of adding new tasks, engaging in more complex or demanding tasks, working overtime, accepting leadership roles, all without material compensation are initiated or accepted by employees if these activities are interpreted as promoting the empathetic relationship with recipients and colleagues.

Empathy and commitment are the lynchpins of what innovations are initiated and accepted in the cases above. If not providing the impetus for these innovations, empathy tips the job quality equation, from a burden in several respects, to things some feel inspired or compelled to do.

Comparatively, what we see across national regimes, at different ends of the care spectrum, and in organisations of vastly different size and complexity, is that the aspects of job quality which are worsening are precisely those that impact workload, stress and burnout, which in turn are identified as central factors in voluntary turnover among nurses (Hayes, O'Brien-Pallas, Duffield, Shamian et al., 2012).

Paradoxically, one can say that the innovations that are facilitated by empathy and commitment lead to increased subjective job quality (such as job satisfaction) but declining or stagnant objective job quality. This study adds evidence to the operation of a Florence Nightingale mechanism: what we term *Nightingale trade-offs*, whereby declining job quality in certain parameters is embraced, due to the opportunity to practice empathy and commitment. The opportunity to express and develop empathy and commitment is essential to meaningful and fulfilling workplaces, and even when such opportunities are mitigated by organisations, employees often find ways to achieve these in everyday work through things like "job crafting" (Wrzesniewski & Dutton, 2001). However, as we have seen in the cases above what employees gain in terms of meaningfulness in their work in some cases comes at the expense of other vital aspects of job quality. Recalling the two factors Leana, Meuris and Lamberton (2018) find adverse to empathetic care – heavy workload and overtime, the situations most of the innovations discussed above are premised on might, in the longer term, even be self-eroding of empathy.

Ameliorative or 'coping' innovations

Under the financial constraints experienced by the case organizations, the innovation-job quality-employment nexus takes on a specific configuration. Instead of innovation being an activity expected to bring expansive financial returns, many of the innovations outlined above deal with either ameliorating the effects of financial constraints or seek to improve care and job quality "on a shoestring." In distinction to "frugal health care innovations" (Arshad, Radic & Radic 2018), the innovations above are largely non-technological, and arise from and seek to address local conditions. While some can be (or actually have been) diffused to other locations, the innovations are predominantly for local consumption.

The financial constraints faced by both social care companies in the UK and by Swedish hospitals impact the innovation landscape in three main ways. First, financial constraints play a large role in labour shortages, at least by exacerbating employee turnover, especially in key occupational categories such as nurses and frontline care givers. Particularly for nurses in the Swedish cases and care workers in the UK cases, lack of career development opportunities, but especially work intensification and deterioration of working conditions, has led to a vicious

circle of employee turnover, leading to a further erosion of working conditions. In the case of nurses in Sweden, it has also led to higher expenditures for hiring in nurses from external temporary agencies. As a consequence, innovations emerge to deal with labour shortages through activities like task-shifting, and as in Case D where the hospital introduced an internal temporary work agency.

Across cases we see a variety of efforts directed towards employee retention using dimensions of intrinsic job quality as levers. In Figure 1 we can see this operating in the left-hand and right-hand columns. In the left-hand column we see coping innovations such as task-shifting, the internal temporary staffing agency and arguably also the expanded internship programme which positively impacts recruitment opportunities, but not retention. The latter may even exacerbate retention problems as training interns may be personally rewarding for existing staff, but it may also diversify and intensify their work beyond existing core tasks (yet another Nightingale trade-off found in the right-hand column).
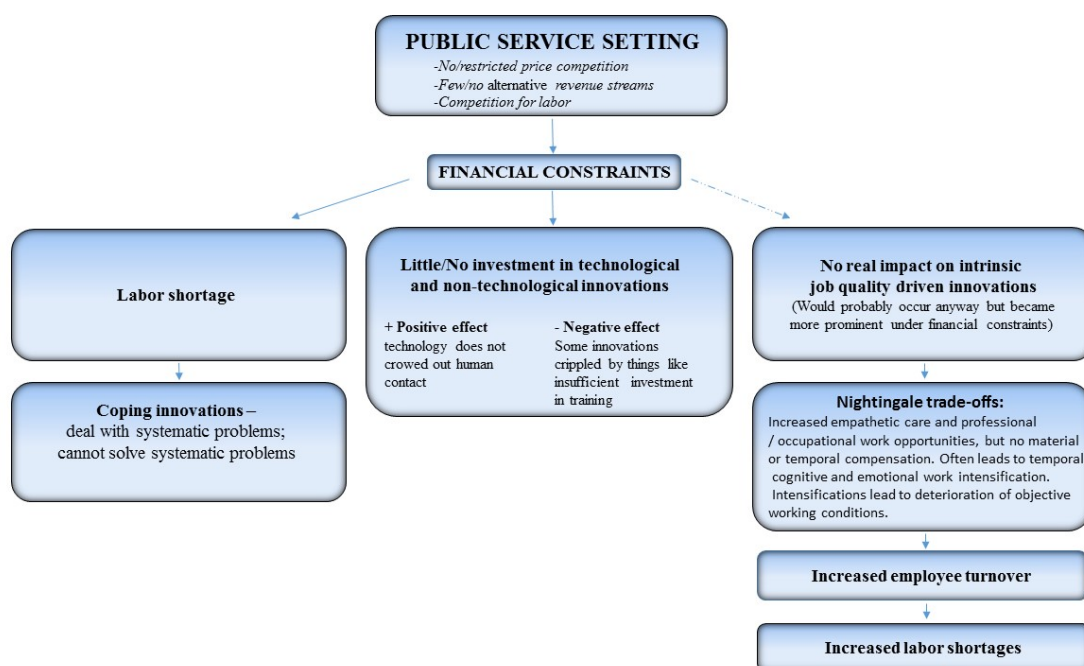
Figure 1: Innovation in public service cases, financial constraints and intrinsic job quality

Rather than the expansionary effects of innovation we expect to see under market conditions, a range of ameliorative, *coping innovations* that deal with conditions that cannot be resolved within specific workplaces emerge. As the problems (and thereby also *solutions*) exist at a higher or systemic level, what is possible at the local level is restricted to alleviating effects rather than addressing root causes. However, these innovations, by improving intrinsic job quality and working conditions at the local level, can mitigate competitive pressures from

other employers: be they similar or alternative occupational opportunities, or things like commercial temporary work agencies offering better conditions.

Secondly, the focus is on less expensive intrinsic job quality factors, most obviously, improving empathetic care opportunities (the centre and right-hand columns in Figure 1). Here we see innovation activities that were either initiated or promoted by employees themselves to improve care quality and opportunities, often on a shoestring. While some innovations can be more or less realised unfettered, as they are not reliant upon large economic resources, we also find other innovations that have curtailed effectiveness due to insufficient resources. To the former we have Case G, the Swedish hospital person-centred care programme, whereas in the latter category the inability to expand training to a satisfactory level in Case A.

Finally, the lack of financial capital available for investment in innovation has meant that there has been little recent technologisation of these workplaces (the central column in Figure 1.). With the exception of the use once a fortnight of a surgical robot in one of the clinics, the innovations that were developed in the case organisations centred around the organisation and use of staff, and interaction with patients and clients. Some of the innovations are seen as creating more human interaction and expression by diminished or altered use of technology, for example in the adoption of narrative descriptions of the recipients' condition, rather than merely ticking boxes. In this sense, the lack of financial resources plays a causal role in which innovations are, or are not, promoted.

Conclusion

Returning to Djellal et al. (2013: 114) with whom we opened this article, some steps have been made in this article to broaden understanding of a neglected range of innovation processes through comparative analysis of social and health care in the UK and Sweden:

> "It is remarkable that the public services have been neglected for so long by the bulk of innovation scholars. Taking them into account will extend our understanding of the diversity of innovation processes: not least across the different public services and even across organisations within the same nominal bloc of services and of the institutional settings that shape them."

One of the primary contributions of this article has been in extending our appreciation of innovative processes beyond those produced under conditions, and by mechanisms, posited by the neo-classical-based conception of innovation processes. In doing so, we illustrate how other factors come to the fore in innovation processes. By escaping the confines of the market paradigm and broadening our conceptions of innovations from an exclusive focus on the STI mode to include the DUI mode, it could be said that we have adopted an innovative approach to the study of innovation. In doing so, we identified innovations in health and social care that emphasised the role of practical experience and that altered workplace practice.

We have also shown how the constraints derived from public budgetary regimes and chronic labour shortages have two key consequences for innovation.

First, focusing primarily on the dimensions of intrinsic job quality in terms of empathy and care, a reversed order between material and ideal, emotional or normative interests has been documented, where material interests were seen to be sacrificed for other interests. The consequences of these in terms of *Nightingale trade-offs* have been elaborated.

As people live longer, their medical and care needs become increasingly complex. This means that publicly financed health and social care are likely to face ever-increasing funding pressures. While technological innovation will remain important in developing new and better ways to treat and care for patients, in the absence of room for manoeuvre with regard to extrinsic job quality, developing a better understanding of how less radical workplace innovations can lead to improvements in intrinsic aspects of job quality, and sometimes result in improved retention and other cost savings, is paramount. Activation of feelings and ideologies of empathy towards patients and clients, and occupational or professional pride, take on great importance.

Secondly, symptomatic of 'innovation on a shoestring', most of the innovations identified in our case organisations were ameliorative or 'coping' innovations aimed at addressing labour shortage problems. Certain, arguably beneficial, aspects of these constraints are identified, such as activities directed towards enhancing person-centered approaches to clients, patients and colleagues, keeping technologisation of care contact down, and creating opportunities for non-traditional occupational and social groups in treatment and care work. A number of non-beneficial aspects of these constraints were also identified such as heightened work intensity and employee turnover, and incomplete or unsatisfactory training and career development programmes.

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Industrial Action Research:
AR the Norwegian way

Anne Inga Hilsen
Tonny Kværne

Abstract

This article explores how to promote inter-professional collaboration between health professionals and welfare professionals in a project organisation (the Inter-professional collaboration project IPC-project) aimed at work life inclusion for people with reduced work ability. Through a participative research design centred on a series of three workshops during a 6-month period, the project members explored how they could improve their practice and better support the users of the services. We frame this participatory research project in the Norwegian tradition of industrial action research (Kemmis & McTaggart, 2003), which focuses on broad participation and researcher supported organisational development including all members of the organisation in joint explorations of existing and desired practice, and where there is an intent of the organisation to implement the new practice. The article is based on the empirical work in a Masters´ degree thesis submitted at the University of South-Eastern Norway.

Keywords: Action research, Industrial action research, Inter-professional collaboration, participatory research design

Industrial action research: the Norwegian tradition

Action research can be defined in many ways. One generally accepted definition state that "Action research is a participatory, democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes, grounded in a participatory worldview" (Reason & Bradbury, 2001: 1).

The type of action research we present in this chapter is more specifically an organisational development project, such as described by Eden and Huxham: "Action research involves the researcher in working with members of an organisation over a matter which is of genuine

concern to them and in which there is an intent by the organisation members to take action based on the interventions." (Eden & Huxham, 1996: 527).

The Norwegian tradition of enterprise development through action research stems back to the Industrial Democracy Programme (IDP) of the 1960s and 70s. IDP was a collaboration between the main Employers' Organisation and the Labour Union, in collaboration with researchers, aimed at developing better and more democratic workplaces through AR interventions (Emery & Thorsrud, 1969, 1976; Qvale, 1976, 2002; Falkum et al., 1999; Gustavsen & Hunnius, 1981; Pålshaugen & Qvale, 2000). This use of an action research strategy to develop good and productive workplaces is very much the same approach Kemmis and McTaggart (2003) call *Industrial AR*. In spite of the background from the industrial sector, the approach from the IDP was transferred to public sector enterprises (Hilsen, 2008) and today we find such projects in both the private and public sector, as demonstrated by the project in this chapter. This focus on work life and improvement of workplaces to further both a good work environment and productivity through involving researchers in collaboration with the local participants, is at the centre of this Norwegian approach. Enterprise development through broad participation in this Norwegian tradition is based on tripartism (the formalised cooperation between employers, employees and the Government) and broad participation. The social partners at a national and strategic level initiated broad development programs (Gustavsen et al., 1998) that continued the industrial action research tradition from the IDP up to today.

This chapter describes an organisational development project based on broad participation and supported by action research. Our project is inspired by the industrial action research tradition. Even if our project lacks the framework of social partners, the research strategy, techniques and work forms are strongly related to this Norwegian tradition. Our insistence on the importance of broad participation, where all concerned participated in the workshops, is based on learning from this tradition. If you want to create real change in an organisation, you need to involve all those whose practice will change. Collaboration on developing new and better practice together sets aside different interests that participants may have. "Better practice" may be better for some while others would have like different results, or even things to stay as they were. It could have happened if, for example, the different participants had conflicting values and norms for their work, which fortunately did not happen in our case.

The national context for the development project

Norway has high labour force participation and low unemployment. Since 1970, labour force participation has increased substantially through women's increased engagement in paid work. According to the Norwegian Government "Participation in the labour market gives individuals financial independence. Nothing is more effective in reducing poverty, raising living standards and improving quality of life. High labour supply also improves the ability to meet future welfare challenges" (The Norwegian Economy – Key Facts - Regjeringen.no).

Both the political parties and the social partners (employers' and employee's organisations) agree on labour market participation as an essential part of the Nordic Model and necessary for the continuation of the Norwegian welfare state model. By the Nordic Model, we refer to the economic and social policies common to the Nordic countries (Norway, Sweden, Denmark, Finland and Iceland). This includes institutionalised cooperation between the labour market parties (the social partners) through collective agreements and national programmes for enterprise development on a national level. Norway, as one of the Nordic countries, has a strong tradition of co-operation between the social partners and the Government, and is one of the few countries in the world that have explicit agreements on workplace development on a national level (Gustavsen, 1992).

In March 2016 the Norwegian Directorate of Health and the Labour and Welfare Directorate launched a joint strategy for closer cooperation between the field of work (department of Labour and Welfare (NAV)) and the field of health (health services) to support increased labour market participation. *Work for all* ("Arbeidslinja") is a Norwegian policy aimed at designing and coordinating welfare schemes to support work for all (Stortingsmelding nr. 35 (1994-1995)). Inter-professional cooperation between the health services and the public welfare agency (The Norwegian Labour and Welfare Administration (NAV)) was considered by the designers of "Work for all" to be the most important aspect for a comprehensive service enabling labour market participation for people with reduced health. Inter-professional collaboration (IPC) between health professionals and the welfare professionals can support better practice by better coordination between services provided. We understand inter-professional collaboration (IPC) to mean the collaboration between professionals within and across different agencies and organisations.

Presentation of the IPC-project: Developing better practice through action research

The case presented in this chapter is built on a Masters´ degree project conducted from august 2017 until February 2018. Three workshops were conducted from September to November 2017, one each month.

The case emerged from a project starting in 2015 to develop a new model for collaboration between the hospital, community health service and the public welfare agency (NAV). The project aimed at work life inclusion for people with reduced health. A project group consisting of professionals from each service developed a model for collaboration and tested the model in action. The project group consists of six persons from the different services representing different professions, such as social worker, physiotherapist, occupational therapist, nurse and organizational adviser (IA-rådgiver). The project group can be seen as an organisation, consisting of a permanent set of professionals from different companies involved (i.e. hospital, community health service and NAV) working together over time in a stable project organisation.

The function of the project organisation was to enable work life inclusion for people with reduced health through an initial individual coaching session between one of the professionals and the client to clarify goals and possibilities. Based on this the client next met the other involved professionals to discuss possible actions. The client and the involved professionals then decided on what actions were needed and initiated those actions.

The project group had been working together for nearly two years when the study started. Tonny Kværne was one of the professionals participating in the project group. The project group wanted to find out what their common perception of the collaboration was and through an increased understanding and joint perception be able to develop this collaboration further. Kværne's Master of Health Promotion opened the possibility to investigate this question. This led to Kværne's formulation of the research question: How does a group of professionals from the health services and NAV perceive the synergy of their collaboration, and how can shared understanding of inter-professional collaboration improve practice? Action research was chosen as the research strategy. Through the three workshops, as described in figure 1, data was generated using different work forms and methods.

At the beginning of Workshop 1 the group defined a set of rules based on principles for good dialogue (Hannevig & Parker, 2012). Further the "now situation" was explored in terms of what, according to the participants, they were satisfied with and what challenges they experience for inter-professional collaboration. The discussions also used input from a questionnaire on collaboration (PINCOM) that the all the professionals in the project group had filled out prior to the workshop. The reason for using this questionnaire is described under Workshop 1. The results from the survey were presented and discussed by the group. Workshop 1 ended by prioritising areas for further work.

Four weeks later in Workshop 2 the professionals discussed the prioritised areas and new questions based on analysis of data from Workshop 1.

After another four weeks, the third workshop summed up learning from the process and discussed the need for further action.

The project group did their ordinary work in the between the workshops. As the workshops progressed, they referred to their work with clients as it came up, but the focus in the workshops were on the development of better inter-professional collaboration.

Data from each workshop was presented to the group and became the basis for the following workshops. The analyses of the data were used to choose methods and work-forms for the following workshop.

There are some clear limitations on the described action research process because it was part of a master program at a university. Tonny Kværne started the work early autumn and

submitted his master thesis the following February with Anne Inga Hilsen as his adviser. The organisation of the three workshops within a three-month period might not be ideal, but these were the time constraints we had to plan for. Also, ideally this work should be the result of a team of researchers, not a single person, but as a master student he had to do the actual work on his own. With more researchers involved, there would also obviously be a more extensive set of notes and documentation on what went on. These are constraints we sometimes have to accept, and, as this chapter shows, it is still possible to do worthwhile change work with limited time and other resources.

Workshop 1

What we did

The first workshop had two themes: a joint exploration of the "now situation", what works and what are the challenges for inter-professional collaboration; and a discussion of direction for improvement (focus on further work). The discussions used input from a questionnaire, introduced by the researcher, on collaboration (PINCOM-Q) that the professionals in the project group had filled out prior to the workshop.

Perception of Inter-Professional Collaboration Model Questionnaire (PINCOM-Q) is a questionnaire based on three sets of measures; *Individual measures* (Motivation, Role expectations, Personality style and Professional power), *Group measures* (Group Leadership, Communication, Coping and Social support) and *Organisational measures* (Organisational culture, Organisational aims, Organisational domain and Organisational environment). The Perception of Inter-Professional Collaboration Modell (PINCOM) and the questionnaire (PINCOM-Q) were developed by A. Ødegård to investigate how different professions perceive inter-professional collaboration (https://nexusipe.org/informing/resource-center/pincom-q-perception-interprofessional-collaboration-model-questionnaire).

The participants in the IPC-project filled out PINCOM-Q and the result were presented and discussed. The following discussion focused on where the participants agrees and where the individual answers vary. Variation in answers is an indicator of questions that need to be discussed further. This led to a discussion about what an organisation is, how someone can answer on the behalf of an organisation and how a single person can make a difference in an organisation. These following dialogues illustrates these questions:

"It was difficult to score the questions related to organisation." (NAV representative 2).
"What was in your thoughts when answering the questions about organisation?" (Researcher/facilitator).
"It was difficult. Organisation. Thought about something outside the project, but it may have varied." (NAV representative 2).
"It was confusing. The whole community?" (Community health service (CHS) representative).

"Inter-professional. Not sure if I thought about our group or in general." (Hospital representative).
"It was difficult answering the organisation part. Individual measures were easy. I thought of organisation as the organisation I represent (NAV)." (NAV representative 2)

The survey showed that the group members had difficulties answering the questions on the organisational level. It turned out that there were different understandings of which organisation to relate the questions to, their home organisation where they were formally employed, and their department/section within that organisation or the project group as an IPC-organisation. This caused a relevant and necessary discussion of roles and mandate for the project group. Without the survey results this discussion might not have happened, or at least not at this point in time.

The workshop ended by prioritising areas for further work, using stick it notes on wall posters in an open process where they all participated, first in putting up their suggestions and then grouping the suggestions under themes or headlines for further work. The themes identified were: Structure for collaboration, client focus, professions vs individuals, micro/macro level and what do we do when we collaborate (collaborative practice). The participants then selected one question as the most important: "What do we do when we collaborate?" The discussion identified three themes connected to collaborative practice: Individual or professional qualifications; User involvement in daily work; and Structures of collaboration (leadership, mandate).

Research design: why did we do it this way?

The first workshop used a survey-feedback method to open up the exploration of what a good inter-professional collaboration could entail. Surveys can be used in a positivist tradition, but surveys can also be part of a *survey feedback method* as in the OD tradition (Organisational development). Organisational Development (OD) "is a field of research, theory, and practice dedicated to expanding the knowledge and effectiveness of people to accomplish more successful organizational change and performance." ("Organizational Development Theory", Retrieved 2019-09-25.). OD emerged out of human relations studies from the 1930s and is often credited to Kurt Lewin and his work at Tavistock Institute of Human Relations.

Survey feedback methods have long been used as part of action research projects in Norway, where the intention is to facilitate organisational change (e.g. Skogstad & Bang, 1993). "Survey feedback is a process of collecting and feeding back data from an organization or department through the use of a questionnaire or survey. The data are analysed, fed back to organization members, and used by them to diagnose the organization and to develop interventions to improve it" (Cummings & Worley, 2009: 142). Within this use of surveys, it is a central understanding that the survey does not measure an "objective reality" but may be used to discover commonalities or discrepancies between the participants that need further

discussions. The survey can also introduce themes none of the participants considered beforehand and may thus create new dialogues.

As we discovered during workshop 1, the participants had overlooked the challenge of coming from separate "home-organisations" with varying mandates and decision-making latitude when it came to the work in the IPC-project. Without the survey, this might not have come up so early in the work and thus could have caused problems later. Realising that the organisation was an unclear concept allowed us to explore this question: did they speak on behalf on their "home-organisation" or the project organisation? And if they were speaking on behalf of their job in the project organisation, how could what they learned be transferred to the home-organisation?

Workshop 2

What we did

The second workshop took place about a month later and included all (the same) participants from the project group.

Following up on the themes from the first workshop, workshop 2 focused largely on user (client) involvement in the daily work of the health and work-related services provided by the project group. User-orientation of public services has long been on the agenda in Norway, and user-involvement is considered a means to promote user-adapted services. The users of these particular services are patients with non-specific diagnoses (mainly muscular-skeletal and psychiatric conditions) with absenteeism of more than one month where return to work is the main objective.

User involvement became one of the main themes in all workshops, as exemplified by these comments:

"The intention has been to take care of the clients' needs through the structure and organisation of the collaboration."
 "The clients' autonomy is important. He/she decides if or how much he/or she should be involved."
"We have not asked the clients about their experience. We have to evaluate it."
"Should we involve the clients even more? In the development of the collaboration? We want to evaluate if we are acting the way we say we are acting."

These comments express a wish to involve the clients more but is also reflects a delayed insight that the clients probably should have been involved from the beginning. There seems to be an existing understanding in the different organisations (health and welfare) that inter-professional collaboration is something the professionals do, and the clients are not involved. The group agreed that the user is strongly involved in the daily work and the process involving each individual, but this is not the case when investigating inter-professional collaboration in

general. Is there a lack of knowledge on how to involve the users among the professionals, especially on the organisational level and when creating new services?

Tellingly, no users were invited to the workshops, and in hindsight, it is easy to see that the users should be involved in the whole process.

The second part of the workshop focused on the three research questions formulated by the researcher as part of his Masters´ thesis. The main question was: *What does a group of professionals from the health service and NAV see as the benefits of their collaboration*? This main question can be broken down in three sub questions: How can the inter-professional collaboration support creativity, holistic approach and good practice; How can the needs of the clients best be served through IPC; and what are the societal benefits of IPC?

These questions had to some extent been answered in the first part of the workshop, but the researcher led a focused discussion of the three sub questions, partly summing up what had already been said and partly adding new arguments and conclusions.

Research design: why did we do it this way?

Action research can be described as cycles of action and reflection (Coghlan & Brannick, 2014). Each cycle consists of *Diagnosing*, *Planning action*, *Taking action* and *Evaluating action*, and each cycle forms the basis for the next cycle following the same pattern. Central to action research are the three elements of "action, research and participation" (Greenwood & Levin, 2007: 5). The participation of the different professionals working together in the inter-professional project included everybody who worked there except the project manager (who was unable to participate from practical reasons). As she could not be part of the workshops, the researcher discussed the results from the workshops with her between workshops. In this way, her input was also included in the process although she was not available during the actual workshops.

To explore and develop better collaborative practice, participation from the professionals were necessary. They are the people who does the practical collaboration and they know what promotes or hinders the collaboration. By being fully partners in the research process they contribute with their knowledge, they explore new ideas together and decide on which direction to follow.

Through the three workshops we explored the problem ("how can we promote inter-professional collaboration?") (diagnosing), selected themes as a basis for action (planning action) and evaluated the results (evaluating action). The actual action took place between workshops and consisted of their daily practice improved by the results of the workshops. As they were gaining insight and a better understanding of what inter-professional collaboration entailed, their daily collaboration improved as they came to a better understanding of the value of the collaboration to improve services to the clients. This resulted in better coordination of services and improved collaboration around the needs of the clients. The

participative research method contributed to their understanding of the importance of not solving problems on behalf of others, but rather the necessity of involving them in the problem solving.

A quote from workshop 2 illustrates this:

> "We are meeting the clients individually and he/she participates in the team meetings. The client decides how much he wants to participate. The client is always on our minds and participates in action".

Organisational development in this tradition, as presented initially, is based on the principles of broad participation, - the members of the organisation must be involved in the development work. Broad participation is essential to develop new local practises based on local knowledge and competencies. There is a Scandinavian expression saying, "only the wearer knows where the shoe pinches", meaning that you have to experience the situation to know what the problem is. In action research, this local knowledge is vital to the development of better practice. Broad participation is important to problem solving in organisations because it broadens the pool of knowledge and competencies behind decision-making, and also because it ensures broad support of the measures and initiatives taken. Participation is both a democratic value, and as such is a good in and of itself and is a practical means to develop good practice.

Secondly organisational development needs to be organised, that is it needs structures for cooperation outside the demands of daily work tasks. Work organisations have structures for planning the work and performing it. Organisational development requires time and space outside the everyday tasks. Pålshaugen (1998) talks about the *development organisation* as an "internal public sphere", i.e. a forum within the organisation that allow local participants to explore their problem situation outside everyday roles and responsibilities. The distinction between tasks belonging to the work organisation and the development organisation can be described as follows:

> "Operational tasks, all of which are tasks that are carried out in the enterprises' chain of value creation. That is to say, all those tasks that - however indirectly - have to be carried out to get the enterprises' products out to the customer/market. Developmental tasks, all of which are tasks that must be carried out in order to improve the conditions for the tasks that have to be carried out in the chain of value creation, that is to say, the operational tasks" (Pålshaugen,1998: 58).

This "internal public sphere" is not exempt from power differentials, but cooperation is agreed within mutually accepted boundaries. In the IPC-project the power differential is not between management and labour, as it was in the Industrial Democracy Programme, but between the different professionals and their different home organisations (health services and public welfare agency/NAV). For example, health service professionals might be more concerned

with individual health issues while the main goal of the welfare agency professionals were on the client's ability to return to work in spite of health problems. To explore how a group of professionals from the health service and NAV can improve inter-professional collaboration, each participant much be willing to meet the others on an equal standing, not pulling rank on the basis of profession or place in the mother organisations.

Through dialogue in the workshops the participants had come to a wider understanding of their own role and that of the others. As one participant said: "The dynamic in the group has changed. At the beginning each of us wanted to promote their own profession, it is not like that now." Another said: "When I started in the collaboration, I was someone working for NAV, now I am John (myself)."

Workshop 3

What we did
The third (and last) workshop had three themes: What have we learned from this process; How to develop better practice; and Plans for further action.

Reflection on action is an essential element of action research, and joint exploration of lessons learned from the project was a useful and necessary part of workshop three. Each participant reflected individually first and then shared with the group. Through this two-steps dialogue (first individual reflection, then sharing with the other participants in a group), the participants ended up deciding on the shared values of meeting the clients with friendliness, openness and respect. Given these shared values, inter-professional collaboration was made easier. Collaboration creates knowledge. The specific knowledge of each professional and knowledge through sharing are combined in the collaboration. As one participant said: "Knowledge about each other's profession is useful". Unless they actually come together and share knowledge, the participants had only vague ideas of on what knowledge base the other professions acted.

This collaboration is necessary to help the clients and is a clear improvement on former practice, where the clients had to visit the professionals individually in each of their offices. The group is very clear that this improved collaboration only happens when the professionals meet in new joint forums and with the full participation of the clients in developing solutions. Although fruitful, both these discussions lacked some of the engagement from workshop 2. The participants were more eager to discuss further action. Several of the participants reported that they were finished discussing values and would rather be discussing what to do now.
During discussions in the workshop, the participants agreed on the following actions:

- The home organisations (health service and public welfare agency/NAV) needed more and better information on what the IPC-project actually did and how.

- The IPC-project needed to reach more potential clients and inform about the services offered
- The IPC-project needed a more formalised organisation with a defined leader.

Although they had a project manager, the longer the project organisation existed, the more important they found it to have a confirmed employed manager with managerial responsibilities and power. This was especially important in the relationship between the project organisation and the home-organisations where the professionals were employed. If conflicts of interest appeared, such as on time-use in the project, the project manager needed to have the same formal standing as the line managers to not be overrun. These suggestions defined the direction for further work. A plan for action was created and written down.

The main question of the inquiry was:" How can we develop better IPC between Health service and NAV?" A culture of dialogue was developed in collaboration between the professionals. As described previously, the participants agreed on "rules" for dialogue. These rules are inspired by Gustavsen's definition of democratic dialogue (Gustavsen, 1990). According to Hilsen and Brøgger (2005: 18): "Democratic dialogue is a set of principles that ensures that all participants have a voice in the joint development process. Democratic dialogue does not eradicate power differences but sets out rules that make cooperation between different partners with different interests and power bases possible". This new culture of dialogue allowed a joint development of a new understanding of the importance of also including the clients in the dialogue as the next step.

Acting on this new understanding of inter-professional collaboration, the participants had already began meeting the clients as a group (instead of sequentially). Most of the clients managed to develop a plan for return to work together with both the professionals from health services and public welfare agency at the same time. Several clients have changed jobs after being in such joint meetings with the professionals. This model for collaboration is now a part of the follow-up procedure for people on sick leave in the municipalities.

These results demonstrate the possibility of developing new and better practice through dialogue and joint explorations within an action research design.

Research design: why did we do it this way

This workshop used the same techniques and work forms as the previous workshops, which is two-step dialogues and open prioritising processes through use of sticky notes and open discussions. This ensured that all conclusions and results were shared during the workshop, rather than something the researcher arrived at after leaving the group. The conventional social scientist is exclusively responsible for analysis and conclusions based on data gathered. For the action researcher the principles of broad participation and cogeneration of knowledge are central. In this project, this happened in the dialogical settings of the workshops.

At the same time the researcher and the local participants may have varying interests in the different phases of the process. While the researcher may be more interested in documenting the new knowledge generated through the process, the local participants may be more interested in the improved practice or new action resulting from the process. Action research often has an ideal of joint writing, although few seem actually to achieve it. Some examples of co-written reports are Trist and Bamforth's coal-mine study (Trist & Bamforth, 1951) and Greenwood and Gonzalez' Mondragon study (Greenwood et al., 1990), while others have unsuccessfully tried to invite the local participants to contribute in the writing up of the project (as discussed in Hauge, 2011).

As the researcher in the IPC-project was using the project as the basis for his Masters´ thesis (Kværne, 2018), it was accepted from the beginning that he would be the one to write about the project. To be true to the ideal of action research it was therefore even more important that all results and conclusions were discussed with the participants during the workshops, as they were.

Changing practice by changing the dialogue

How can we claim that the project changed practice? What kind of new practice emerged during the six months of this fairly short action research project? There are mainly two types of results, one type concerning practical outcomes from the project and one type concerning methodology. What happened to the IPC team and what did we learn from the research strategy, work forms and techniques used?

From the practical outcome perspective, a result is changed practice vis-à-vis the clients. Instead of letting the client meet each professional sequentially, the clients would now meet a group of professionals who collaborating on developing solutions and plans for return to work for and with the client. As each profession has different knowledge, different approaches and access to different services, by collaborating closely around the client, they were better able to develop functional plans to help the client to return to work. Also, this joint collaboration around the client requires a well-functioning inter-professional collaboration between the professionals from the health service and the public welfare agency/NAV. Through joint explorations during the workshops, the participants had arrived at a better understanding of the contribution of each profession, and of how they could collaborate on helping the clients to return to work.

Action research is a research approach based on bringing participants together in dialogical processes. By changing the way they talk about collaboration and their joint goals for the IPC-project, they have changed the premises for the same collaboration. Whatever changes the dialogue changes practice. As a participant summed it up: "Sounds like we have to change "me" to "us"."

From the methodological perspective, the research strategy, work forms and techniques used, proved their usefulness in bringing about this changed dialogue. Participants were able to explore mutually defined themes in a process where everybody were heard and participated. Broad participation promotes local ownership of results and actions decided on, and as such is one of the advantages of action research.

In spite of these positive results, there were some obvious shortcomings to this approach given by the requirements of a Masters´ degree. The time restraints made this a very "compressed" project. Under other conditions we would have preferred to space the workshops over (at least) a full year. This type of action research projects would normally give the participants time to try out and establish new solutions and practices before the next cycle of action and reflection. In our project the whole process was confined to one semester, and this obviously posed some challenges. At the same time the project was a valuable demonstration that action research projects *can* be done as part of a Masters´ degree.

A Master's degree is a learning experience and students try out methods and research approaches to learn from it. Action research should be one of these options if the project lends itself to it. When an organisation or group wants to participate in developing new knowledge and new practice "in the pursuit of worthwhile human purposes" (Reason & Bradbury, 2001: 1), action research is a valid and valuable research strategy, and should also be so for students aiming for a Masters´ degree.

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Organisation of multi-professional teamwork in technology-mediated environments

Arja Tuulikki Haapakorpi

Abstract

Multi-professional collaboration is assumed to tackle ambiguous and difficult challenges with innovative teamwork. First, expertise from many fields is needed for solving difficult problems in society and organisations, which emerge from a complicated reality. Second, tasks in working life encompass many fields, meaning that multi-professional expertise is needed. Third, the expertise has to be organised as interactive teamwork for approaching ambiguous questions. However, multi-professional collaboration is challenging, due to different knowledge bases and related working methods of each professional grouping involved, but, with digitalisation, multi-professional collaboration could become more commonplace, as the technology-mediated work environment is shared by all professional groupings in the workplace. Technology tends to mainstream working patterns and practices, which could be assumed to reshape professional work and multi-professional collaboration. The article studies how multi-professional teamwork is organised in firms with an advanced technology-mediated work environment in the new media and high-technology industry. The methodological approach is qualitative, and three case studies are presented. The outcome of the analysis reveals variations in the patterns of organising multi-professional teamwork, which is related to the function and position of the teams and the rationality of the firm.

Keywords: multi-professional teamwork, technology and work, work organisation, management, innovative teamwork

Introduction

Multi-professional collaboration has attracted the attention of academics and practitioners interested in working life. First, expertise from many fields is needed for solving difficult problems in society and organisations, which emerge from a complicated reality. Second,

tasks in working life encompass many fields, meaning that multi-professional expertise is needed. Third, this kind of teamwork is considered as challenging by management.

According to previous studies, multi-professional collaboration is compromised by different epistemologies, knowledge bodies, and related social and cultural working patterns and practices (Abbott, 2018; Ackroyd, 1996). Professions approach tasks or problems from particular perspectives and apply knowledge and working methods which are profession-specific. Understanding and adjusting to other professional approaches requires extra time and efforts, but profession-specific social and cultural hierarchies may impose obstacles on open communication (Haapakorpi, 2009). However, the studies in this field also report positive outcomes from multi-professional collaborative work.

Technology-mediated work environments can be assumed to shape multi-professional teamwork, as there is evidence that working methods and practices are mainstreamed with shared technology (Björn & Österlund, 2014). However, work organisation is not determined by technology; rather, technology is designed and implemented by humans in line with their interests and circumstances. The introduction of new technology is related to managerial strategies, institutional and market environments, and sometimes the contribution of employees. Thus, the introduction of a technology-mediated work environment is interrelated with work organisation, with the utilization of technology being social by nature (Orlikowski, 2007).

A common target for business firms is profit-making, which is promoted by efficiency and economy when organising work and implementing technology (see Lengwiler, 2006). Other interests and objectives may be applied, such that rationality overall exceeds the most basic economic motives (Holtgrewe, 2007, 2014). For example, the interests of professional employees may be considered when participatory management strategies are applied.

This study focuses on the work organisation of professional employees in the new media industry and engineering professionals in high-technology industry with different disciplinary backgrounds. Working in these firms has been exposed to the markets, the introduction of new technologies, and firm-specific particularities.

The study contributes to the discussion on multi-professional teamwork, new technology and work organisation by asking, how is multi-professional collaborative work organised, considering the different epistemologies, working methods and practices of professions? To answer this question, a case study approach is applied. The case studies come from firms with technology-mediated work environments whose business takes place in highly competitive market environments. The case studies are a new media firm and two high-technology firms.

The study starts with a theoretical discussion, first, on professions and multi-professional relations and, second, on technology and work organisation. The research design includes

the research problem and questions, the setting of the research subject, and the data and methodology. The conclusions and discussion follow the results section.

Theoretical background

Professions and multi-professional collaboration

Professional specialisation is based on particular knowledge bodies, epistemological approaches, and related working methods and practices, which are institutionalised. Institutionalisation refers to higher education systems, self-referring activities, such as publications, and institutionalised networks. (Abbott, 1989; Haapakorpi, 2009). Higher education institutions are structured according to a disciplinary system, whose education programmes are discipline- or profession-based, while the students are socialised into the profession during their studies. Despite the differences in epistemologies and related working methods and practices, professions are interrelated in labour markets and in workplaces (Evetts, 2006; Abbott, 1988). Labour division and job descriptions are related to professional qualifications, but the boundaries may be blurred.

With the specialisation of professions, knowledge bodies and related epistemologies, working methods and practices are developed and adopted. Specialisation often promotes enhancement of the quality of knowledge, but the differentiation may be an obstacle for multi-professional collaborative work. It requires extra work and time, for the differences of professions may complicate mutual understanding, particularly those related to epistemologies (Karn, 2008). In addition, hierarchies in relation to professions may impose obstacles on (equal) collaboration (Haapakorpi, 2009).

The studies dealing with multi-professional work highlight challenges and problems; for example, Buch and Andersen report that multi-professional work organisation does not take into account professional traditions (2013). One explanation for this is that, too often, there is a tight schedule for economic reasons. According to Lengwiler (2006), a multi-professional teamwork pattern is related to organisational and institutional conditions and goals, while professional status impacts on the design of work organisation. When the collaborative work pattern is adapted to market requirements, efficiency and economy are emphasised. Timesaving working methods and simple problem-solving are means to organise work under time and budget pressures: profound multi-professional interaction focusing on epistemological questions would require too much time. Multi-professional collaborative work can also be positive, innovative and successful. The positive outcomes are related, for example, to an appropriate work organisation and sufficient time resources (van der Vegt & Bunderson, 2005).

The study deals with firms in business industries, which have to work on functional but innovative patterns of work organisation for coping in the highly competitive environment.

The study focuses on professions in digitalised environments, which are assumed to have an influence on multi-professional teamwork, given that the relationship between human action and technology is interactive (Orlikowski, 2007; Björn & Österlund, 2014). In a technology-mediated work environment, employees are interconnected with technology, and the working patterns and practices tend to become mainstreamed (Björn & Österlund, 2014), which is supposed to support technology-mediated interaction and networking. In addition, computing, with its communal mind and memory, enhances the human capacity for social organisation (Hayler, 2015), which may promote efficient multi-professional collaborative work.

Technology and work organisation

Technology is related to work organisation; for management, the design of equipment and work organisation is crucial in terms of economy and efficiency (Grimshaw et al., 2012). However, rationality overall is not limited to these motives, for business is also related to other spheres of human action, such as values and beliefs (see Holtgrewe, 2014). Technology is social by nature, as it is developed, introduced and utilised by humans in social interaction (Orlikowski, 2007; Holtgrewe, 2014). According to Holtgrewe (2014), managers usually follow a shared pattern in the business field when introducing new technology and a related work organisation pattern. Institutional theory explains the similarities as follows: organisations in the same institutional field apply similar patterns and practices of work organisation, which is related to the institutional logic based on coercion, meanings and norms (Scott 2008a; Scott 2008b). Coercion in the business field mostly refers to laws and economic reasons, while the "soft" elements of meanings and norms imply the interaction and communication of human beings in organisational environments. In firms whose goal is profit-making, the economic terms are embedded in the ways of thinking (meanings) and acting (norms), although they may not totally dominate them.

Within the institutionalised business field, the similarities in work are promoted with the shared environment, professional networks and relations in the organisations (Powell & DiMaggio, 1991). Institutional theory emphasises path dependency, the cumulation of repeated patterns and practices, in order to explain the mainstreamed working patterns and practices in the institutional field (Scott, 2008b). However, the similarity is not linear and mechanical for various reasons. First, working patterns and practices, although generally applied in organisations in the institutional field, are reshaped for particular organisational contexts and strategies (Scott, 2008a; Czarniawska & Joerges, 1996). Second, the more mature the institutional field, in terms of the growth of its sub-fields, the more there are alternatives for organising work (Reay & Hinings , 2005). Third, the actors who are connected to many fields in the institution recognise conflicts in institutional logic and may promote reforms (Greenwood & Suddaby, 2006). The actors promoting reforms may be organisations or individuals, for institutionalisation takes place at different levels of institutions and organisations and involves those individuals who interact with them (see Greenwood & Suddaby, 2006).

The studies on work organisation in technology-specific firms also reveal variations in HR strategies despite the similarities in management. For example, manual work can be replaced with technology by simplifying the tasks into monitoring automated production (Wall, Jackson, & Davids, 1992); conversely, the tasks and work organisation can be reshaped in a way which promotes learning new demanding competences, such as problem-solving skills (Bayo, Bello-Pintado, & Merino-Díaz-de-Cerio, 2010). These variations may be related to different values or terms set by the environment of the firm, such as markets and labour force supply (see Holtgrewe, 2014). For example, the markets of high-technology products may apply the latter alternative, particularly when the labour force is qualified.

This article applies the concept of "technology-mediated work environment" to emphasize the all-encompassing nature of a newly digitalised work environment, which is interrelated with the work organisation. It is assumed that the patterns for organising multi-professional teamwork are designed to combine different work processes or outcomes into products or promote multi-professional collaborative work.

Research design

Industry 4.0 builds on the state-of-the-art research which acknowledges that Industry 4.0 technologies will have a deep and disruptive impact on society. However, there is an increasing number of contradicting studies about the exact impact, especially with regards to quality of working life, organisational performance and employment relationships. It is yet unclear how Industry 4.0 technology could foster societal aims, while at the same time cradle high performance organisations.

Research problem and questions

The research problem focuses on multi-professional teamwork in advanced technology-mediated work environments by determining: i) what kinds of work organisation patterns are applied in order to promote multi-professional collaborative work in advanced technology-mediated work environments and in rapidly changing market-based firms; and ii) what kinds of rationalities motivate the patterns.

The degree of multi-professional collaborative work varies, and two rough ideal types are applied for the purpose of this analysis. First, the outcome of collaborative work may be a simple combination of many single professional groupings' work performance, which is here referred to as "the combination pattern". Second, the collaborative work may result in the integration of knowledge, working methods and/or practices, which is here referred to as "the integrated pattern".

The pattern of organising work may vary and is related to a particular rationality. In addition to the institutionalised targets of profit-making, the rationality refers to meanings and social

values related to industrial relations and the institutional and market environment. The rationality cannot be reduced to a solid collection of official decisions and targets, but a changing set of decisions and patterns of thinking and action.

Work organisation implies the patterns of organising employees, functions and their relations. The elements of work organisation are the following:
- job descriptions and roles, and expertise
- labour division by functions
- interrelatedness and interaction between functions and employees
- position of the unit (team) in the firm (value chain/work process)

The research questions are as follows:
1. What is the pattern for organising multi-professional teamwork?
2. What is the rationality behind the work organisation pattern?

Research setting

The new media industry and the case-study firm

During the time of data collection, in the 2000s, new media as an industry and as a profession combined information and communication technology (ICT) with a new field of communication and art. The common definition for new media was "computer-based and interactive communication". New media, as art, was used for profit or non-profit purposes, and new media professionals worked in the fields of business and the arts (Tarkka, 2002a; Tarkka, 2002b). New media professionals were not part of an institutionalised profession, because their educational backgrounds and tasks were ambiguous. In a fast-changing industry with firm-specific, undefined tasks, strengthening the position was a challenge for professional employees (Christopherson, 2002; Pratt, Gill & Spelthann, 2007).

The professional employees in the new media industry were programmers and content providers in the audiovisual field, while, in the writing field, the content providers were graphic designers, audiovisual designers and scriptwriters. Their professional background varied regarding knowledge bodies and epistemologies and related social and cultural practices, but they shared a technology-mediated environment, with its computer-based and interactive communication.

Before 2000, professional job descriptions and professional qualifications were rather loose. The expertise was defined as being in-between institutionalised disciplines and regarded as an integration outcome of media and content (Haapakorpi, 2012). New media productions in business and the arts were interlinked, and the professionals worked in both areas. The new media culture was expanded in the market, which in turn took advantage of this media culture (Tarkka, 2002a, Tarkka, 2002b). Since 2000, the business and the arts in this industry differentiated, and the interconnection became weaker. In the business field, effectiveness

and economy were implemented in the work organisation, whereas artistic production followed a less strict schedule (Tarkka, 2002a).

In the 2000s, there were 330 firms in the business sector, with most of them being small or medium-sized and typically having a short history. With the institutionalisation of business-style management and work organisation, the firms started to make profit (Pohto & Wiren 2001). Since the time of collecting data, the new media industry has undergone a profound change as the functions are dispersed across different industries, with programming taking place in software houses and the content design taking place on social media.

The high-technology metals industry

In Finland, the number of employees in the high-technology industry sector was 295,000 in 2012, with an equal number abroad (Federation of Finnish Technology Industry 2014). In Finland, the proportion of R&D employees was 35%, the proportion of production employees 32% and the rest were in client support and services, management, administration and marketing. Roughly 56% of personnel held a degree from a higher education institution (Federation of Finnish Technology Industry 2014). The high-technology metals industry is globally distributed, and its activities are technologically mediated. The global division of labour is motivated by cost-effectiveness and the highest value-adding factors accrued from high-technology innovations, products and services.

The business strategy for high-technology industry firms is R&D-based and the goal is to produce high-quality and expensive systems of production for the markets of advanced technology. Simple production is often outsourced to countries with low labour costs, while planning, testing, support activities (marketing etc.) and services take place in Finland or in another European country. The case studies followed this business strategy.

The development and growth of high-technology industry are related to the reshaping of the engineering profession. With the commercialisation of science (Barley & Orr, 1997) and technologised science (Alvargonzález, 2011), professional fields in engineering have increased (Barley & Orr, 1997). The specialisation of engineering professionals is regarded as important, because of the automated systems. In general, the engineering profession is independent and knowledge-intensive, with a high status and employee position within the business environment, where engineering professionals have operational, but not strategic, autonomy (Gleadle, Hodgson & Storey, 2012).

The technology-mediated work environments in the case-study firms were built in such a way that engineers and expertise from many different branches. Convergence is the basis of the whole value chain, from R&D and planning to the services that refer to multi-professional teamwork. In high-technology industry, high-technology equipment becomes the environment and condition for the development of products, while computer-aided and interactive technologies are adopted. With this systematisation, engineering professionals from different branches synthetised their knowledge in new ways, which was supposed to be

converted into products and processes that fulfilled the needs of client (see also Hansen 2010). The technological system is structured when the branches of industry converge: Integrated mechanics and electronics and hydraulics with embedded computing systems which consist of various sub-systems (Curran, Bröring & Leker, 2010).

The converged automated system in high-technology industry is a special technology-mediated work environment, with its embedded computing. Engineering professionals with different disciplinary backgrounds are needed for planning and remote services (Haapakorpi, 2018). Given the embedded nature of computing, engineering professionals with a specialisation in programming were the largest professional group in the industry, while engineers with different backgrounds acquired sufficient expertise in ICT and computing. The technology-mediated work environment in high-technology industry is interrelated with the knowledge body of engineering, for the engineering discipline is 'technologised' (Alvargonzález, 2011). In other words, the engineering discipline and technology are prerequisites for each other.

Data and methodology

The analysis is based on two studies, which have been reported in three articles (Haapakorpi, 2012, 2017, 2018). The first study (Haapakorpi , 2012) focused on a new media firm and the study was carried out in the 2000s, which was a turning point in the business field from small informal workshops to institutionalized firms. The second study focused on high-technology metals industry, and the study was carried out with two case studies from 2013 to 2015 (Haapakorpi, 2017, 2018).

Case study: New Media Firm– data and methods

The new media firm was a medium-sized organisation and, according to the information available on its webpages and brochures, it provided "multimedia and Internet-based service solutions supporting customer's business activities". The firm employed 100 professional employees with various disciplinary backgrounds: management, programming and content-providing study fields.

The data consisted of 10 interviews and complementary texts (brochures, customer magazines, the annual report from 2000). Interviews were carried out with one personnel manager, two graphic designers, one audiovisual designer, two programmers, two scriptwriters and two project managers. The content providers were found in the groups of the graphic designers, the audiovisual designer and the scriptwriters. The length of each interview was approximately one hour.

The interview with the personnel manager focused on the firm's vision, as well as her perspective, given her position as the representative of management. The remaining interviewees focused mainly on their own work. The ages ranged from 25 to 47 years; the

programmers and the audiovisual designer were male, and the personnel manager was female. In the groups of graphic designers, scriptwriters and project managers, the share of men and women was equal. The themes in the interviews were work and career motives, work orientation, management of the company, work culture, work organisation, and the balance between work and family life. Most of the interviewed persons were university and polytechnic students, but only some of them had completed their degrees. The study fields were media studies, data processing, literature and the arts, social sciences, administration and philosophy.

The interviews with the personnel manager, the project managers, and the programmers and content providers were analysed in separate units, as the content of these interviews was profession-specific to some degree. The professional groupings' positions reflected the division of labour, while their relation to customers and management was dissimilar. The programmers and content providers carried out their tasks somewhat independently, relying on their half-institutionalised professional competence. The project managers assumed responsibility for the teams and co-ordinated with other teams and customer relations, while the personnel manager focused on managerial duties.

The data were analysed by applying grounded theory (Strauss and Corbin 1998). The analysis for this research article is based on the analysis and results presented by Haapakorpi (2012), but the focus is different. This article (Haapakorpi, 2012) dealt with professionalisation and work organisation. On the basis of the data analysis, the main category was the tension between business-related efficiency and professional creativity-based identity. The categories of causal, structural, and intermediate conditions were combined into one category representing the relation to the organisational environment as it was not meaningful to separate them in the analysis. The category was "from hype to profit-making". The theme of multi-professional collaborative work came out in cases where there were problems related to a lack of or insufficient multi-professional collaboration and job description redesigns.

Case studies 2 and 3: the high-technology metals industry

This study is based on a research project (2014-2015) and its data sources (Haapakorpi, 2017, 2018). The data collection process was as follows:

First, two leading experts from employee and employer trade unions were interviewed in order to obtain information and views on the business, markets, labour force and work organisation in the metals industry. The interviews were semi-structured. The experts also provided information concerning high-technology firms, which was utilized in order to search for research subjects. Two functions were considered important in the choice of the firms to be included in the research: R&D and remote services. On the basis of this information, firms with these functions were contacted for data collection.

The interviews were conducted with six members of staff from two firms, which were both large transnational corporations. Firm 1 was a large firm in the cargo-handling and related

services industry. At the time of the interviews, it employed 11,000 people in 100 countries and its production mostly took place in Asia. Three managers in R&D and the management of client projects, all male and aged between 40 and 60 years, were interviewed.

Firm 2 was a transnational firm providing the following services and products: manufacturing and supplying flexible manufacturing systems (FMS) and robot cells to the metal-cutting industries to automate the manufacturing and finishing processes. The staff from firm 2 comprised 530 employees worldwide at the time the data collection took place. The three interviewees hailed from the remote services team, which, in total, consisted of six engineering professionals. The ages of the three interviewees ranged from 25 to 35 years and one was female. The remote service employees helped clients to find faults in their automated production systems by applying ICT-aided methods, in particular, with a specialised computer programme. The remote services experts examined clients' computer-aided production system by investigating the different parts of the system and reading the information, which, for example, dealt with the components.

All of the interviewees from the firms were engineering professionals but their disciplinary background varied. Most had studied computing, while the rest were specialized in automatised systems, mechanics and electronics.

The interviews were semi-structured, and the themes were as follows:
- Industry: trends and prospects, management strategy, and HR policy and recruitment
- Firms and professional employees: work organisation, professional work and related changes

The interview questions and interaction were adjusted to reflect the interviewees; thus, they were semi-structured. The data were analysed by applying content analysis (Silverman, 2006). The main categories were, first, work organisation and, second, professional work and competences. The category of work organisation comprised the sub-categories of the division of labour and work, functions and their relations, and management. The category of professional work and competence consisted of the following sub-categories: working methods and knowledge body, and disciplinary/professional background and competence. In this article, the multi-professional collaboration theme is studied by employing a special approach when analysing the main categories. The approach focuses on the tension between the specialisation of engineering professionals and multi-professional teamwork when striving for a common outcome in the same technology-mediated work environment.

Results: Case studies

New Media Firm: simple combination pattern

In the new media firm, there was a strong tendency toward the traditional and hierarchical organisation of work, with a clear division between labour and professional areas. With the

changing market environment and differentiation in the arts and business, the company was transformed from a small workshop to a medium-sized company in a few years. A business-like pattern for organising production was adopted in an environment of increasing competition, along with strategies for profit-making. Organising schedules, space, and activities were aimed at commensurable and controlled work. Economy and efficiency were applied to the work organisation.

For streamlining functions, employees and work, a matrix methodological approach to work organisation was applied in the company (for more on matrix-based organisation, see Scott and Davis 2007). The employees and work were organised into professionally specialised departments; but, for the work assignments from customers, teams consisting of professionals representing different competence areas were established. The team members were experts in content provision and programming.

The job descriptions for professional employees were defined and related to each other. The establishment of the new organisational pattern changed the previous work division, which was loose, as the employees also carried out some minor tasks belonging to the neighbouring profession, such as graphic design and programming. With the new pattern of labour division, the job descriptions for professional groupings were clearly and tightly prescribed, while the work organisation became more transparent and controllable. The working methods and practices were standardised, with project management following a prescribed pattern, which was applied to all projects. One interviewee described the change as follows:

> "This job is totally different from the previous work I had, with the constant budgeting and calculating. Everything is estimated. These hours for this project and these for that. Processes are prescribed. All the activities are calculated." (Male, scriptwriter)

In a way, the division of labour promoted the professionalization of personnel as they were recognised as experts in their specialised niches, while their organisational units (departments) were profession-specific. Collegial and intra-organisational learning was promoted for enhancing the professional profile of the firm and establishing a quality system for production. The improvement in professional competence was related to organisational competence and particular firm-specific technology. The standardisation of competences promoted efficiency and economy, given that, with insufficient competence, there was a risk of uneven work quality.

The technological environment was shared by professionals with different competences, which determined their contribution to each project. Team members worked together only at the beginning of projects, while the professional employees on the team carried out their duties independently and without interaction, which reinforced profession-specific work areas and the boundaries between them.

With goals centred on efficiency and economy, the opportunity for fulfilling professional ambitions in work was in fact decreased. The strict time schedules and the requirements from customers standardized the work:

"I'd like to say that my work demands creativity, but it does not. This is just a job. There are standardised solutions and professional competence means that you can do proper work. A very small proportion of the total work provides an opportunity for creativity. Most often, it is about updating Internet sites." (Male, graphic designer)

The work organisation pattern, based on strict professional tasks and boundaries, divided the personnel regarding the need for collaborative work and the quality of work. According to a female graphic designer, the strict work division improved efficiency. She commented: 'We all have our own duties and tasks, and I think this makes it work. You take care of your own business and there's no conflict.' However, most of the other interviewed professionals disagreed with this view and reported conflicts between employees with different professional approaches. 'Conflicts are common, for example, between scriptwriters and programmers. The content and technology do not match' (female, scriptwriter). The interpretation of the different views regarding the strict division of work is based on variations in work-related interests and ambitions.

The conflicts due to combining different professional performance standards were related to a lack of collaboration, as it was stated that there was not enough time for planning and discussing the assignment and the methods for integrating the contributions of team members. In addition, the poor resources available for multi-professional collaborative work did not provide them with learning opportunities, a finding which is in line with that of other studies, for example, Pratt, Gill and Spelthann (2007).

The work organisation pattern for multi-professional work was a simple combination of the outcomes of professionals with different backgrounds. There were only minor multi-professional activities due to the strict division of professional labour.

High-technology Firm 1: two-tier integration pattern

The project teams developed and designed automated cargo-handling systems for customers. The project managers were responsible for conducting the projects and the teams consisted of engineering professionals with different disciplinary backgrounds, such as mechanics, electronics, hydraulics and computing. The experts had higher education degrees in subjects relevant to the industrial branches concerned, while the integration of knowledge from different professional fields was the working method.

The engineering professionals focused on their own specialist areas, despite having some knowledge of associate engineering professions. Teamwork was assumed to result in

integrated systems or products, and the team members had to adapt their work to reflect the shared technological environment and the limits and conditions set by other team members.

Teamwork followed the combination pattern of multi-professional collaborative work, but not in the simplest way, as there was some integration with associate engineers' contribution. They had to design their performance in such a way that it took account of other team members' contribution and the expected outcome. The project managers were assumed to have a basic knowledge of all the branches of engineering on the team: basic concepts and epistemologies and some basic understanding of the content of the branches. To some extent, they were expected to display competence in working according to the integration pattern of multi-professional teamwork. The competence of integrating the outcome of team members with different disciplinary backgrounds varied substantially, and in turn the quality of the outcome, i.e., the automated system.

The project managers carried out their responsibilities by promoting smooth work processes and monitoring the professional employees on the teams. This monitoring was motivated by economy and efficiency, as reflected in the following quote from one of the R&D and project managers.

> "Most important for the integrating person (project manager) and his [or] her role, is not so much related to planning but to interaction and leadership of the teams, by which I mean engineers with different backgrounds: mechanics, programming, electronics and so on. So how do the project managers know, for example, when a programmer exaggerates his workload? [For this reason, they must know] how much [work] there really is to do (High Tech Firm 2, senior R&D manager)."

High-technology Firm 2: integrated pattern based on a mixture of profession- and firm-specific competence

The remote services team was established in order to promote profit-making, as the team was expected to expand the range of services. As the new service also supported economy and efficiency, planning engineers, with their higher salaries, were released from service work. The increase in less competent, but qualified assistant engineers is typical for high-technology firms with a specialisation in R&D-based technologies (Barley & Orr, 1997). The team comprised six professional employees, one of whom was the head. The division of labour was small as the head functioned as one of the team members.

The remote services experts examined clients' computer-aided production systems by investigating their different parts and reading system information, for example, on components. The firm-specific program was incorporated into other computer programs, and the unified system was embedded in clients' automated factory systems. The engineers

of the team interpreted and solved complex and abstract problems derived from interdependent software, hardware and user-interface factors. They worked individually but utilised intra-team interactive learning, which is common for this type of work (see also Hansen 2010). With the intra-team interactive learning, they learnt together how to use the computer programs and the clients' automated systems.

Although the educational careers of the remote service team employees were rooted in different engineering branches, their expertise was supposed to focus on the expertise of the remoted service. The remote team worked on this kind of contextual knowledge, while the work of the professionals in Firm 1 was specialised into the niches related to their educational background (see Gleadle, Hodgson & Storey, 2012).

> "Although I don't have knowledge of all the systems and programs, I can conceptualise how machines function, what automation is, and how to utilise, for example, basic computer systems [and the] structures of folders. That's way I am able to search for jams. When a client calls me, I have to map the [entire] system, to know something about every part of the system. Sometimes, they need help from an expert who is specialised in one particular part, for example, [the] computing system. But nobody is [an] expert on everything (High Tech Firm 2, team member) ."

The remote services team followed the integration pattern of multi-professional teamwork, as they had knowledge to a small extent of every industrial branch and the converged automated system. However, the integration was a mixture of professional and firm-specific knowledge, as the subject of work was limited to the faults in automated systems and only a narrow range of core professional knowledge was applied to the work. The contextual knowledge was derived from overlapping professional and firm-specific knowledge. The contextual knowledge could not rely on professional knowledge bodies. The special integration pattern, based on multi-professional and firm-specific knowledge, was related to the target of expanding the profit-making business and applying economy and efficiency to the work organisation.

Conclusions and discussion

All the work organisation patterns followed the idea of multi-professional teamwork, although the applications and team organisation in the frame of the whole firm (matrix organisation or stable teams) varied. The teamwork organisation pattern was related to a technology-mediated work environment, while the multi-professional work was carried out in shared technology-mediated work environments. The teamwork organisation patterns varied with the position and function of the multi-professional team and the business strategy. The professional profile of the firms emphasised services and products, which were professional by nature and produced by professional experts. To conclude, the work organisation patterns followed specific rationalities of the firms, which were mixtures of i) formal managerial targets

for profit-making by applying economy and efficiency to the work organisation, ii) the design of the professional profile of the firm and iii) the function and position of the multi-professional team.

New Media Firm: The division of labour was strict and clear: every member of the multi-professional team independently carried out his/her duties and collaborative teamwork was minimised in order to save working hours. The simple combination pattern of multi-professional teamwork was managerially, not professionally, coordinated. However, more multi-professional collaboration would have been necessary for an acceptable collaborative outcome, as the shared technology-mediated work environment set terms and conditions for the outcomes of individual and profession-specific work.

The new media firm followed the target of profit-making, with a non-specified strategy regarding the quality of services. The strategy was not explicitly expressed in interviews and in other data, but implicitly reflected in the tight schedules and simplified working patterns. The competence in new media was becoming more commonplace among the lay public during the year of data collection, and there was a diminishing demand for the services provided by the new media firm. The lay public learned how to design Internet pages themselves, and the firm did not systematically develop new products with high professional quality. The management of the new media firm pursued a form of rationality which emphasised economy and efficiency by producing simple standardised products with relatively low prices.

Immediately after the year of data collection, the new media industry was spread across differing branches, and it may be that there were actually no options for developing the business in a sustainable and professional way. With this history, one might ask, would R&D and Internet-based, high-quality products with a proper multi-professional teamwork have saved the firm? That may be possible; however, new media firms no longer exist in the very same shape, which implies the restructuring of the whole industry.

High-technology Firms 1 and 2: Both based their rationality on economy and efficiency in profit-making, but the actualisation method produced innovative, R&D-based products and services. The markets were transnational, and the opportunities for profit-making were new innovative products and life cycle professional services, given that the market for simple products did not promise a bright future for the business. This strategy was related to the high professional profile of the firms and qualified professional labour force.

High-technology firm 1 applied a two-tier pattern for organising multi-professional teamwork, which promoted the combination and integration of profession-specific outcomes. The engineers with different disciplinary backgrounds carried out their contribution in their own niches when planning the products, while the teamwork was coordinated by a project manager with an engineering competence. The integration pattern was as follows. First, the engineering professionals of the team had some basic knowledge of the associate

professionals who adapted their performance to the technological environment, which was a converged automatic system. Second, the project manager integrated the outcomes of the team-members' work. The project manager had basic knowledge of all branches of engineering and, in addition, knowledge of how to integrate them.

The project manager followed two rationalities, profit-making and innovation-based business, which were interrelated in a specific way. The innovation-based professional work made profit-making possible, with the innovation-based working methods shaped by profit-related goals.

In High-technology Firm 2, the rationality behind the work organisation pattern was based on economy and efficiency, as the remote services had been established for expanding the business services. The remote services team in High-technology Firm 2 applied an integrative pattern of organising teamwork, which was based on professional and firm-specific knowledge. The engineering professionals came from different engineering disciplines but shared the same tasks. They had some knowledge of all the branches of industries, but the ICT competence and problem-solving competence were of primary importance. The knowledge was a mixture of interrelated professional and firm-specific knowledge. However, from a professional perspective, the pattern did not strengthen professional competence, as the applied contextual knowledge could not revert to professional knowledge.

The organisational pattern was related to the function and position of the team which came after the production. As the production system was already converged, excellent integrated professional knowledge interrelated with firm-specific expertise, rather than branch-specific expertise, was needed.

Although integrated and firm-specific multi-professional work does not revert to its disciplinary root, it may be linked to a professional knowledge system as follows. In high-technology R&D, professional, discipline-specific knowledge and industry-/firm-specific knowledge are interrelated and are prerequisites for each other. It may be that the pattern applied in high-technology firm 2 may be absorbed by the study programmes of higher education institutions to some extent, particularly because where there is collaborative work involving the firm and the local higher education institution specialising in technology.

Table 1. Multi-professional collaboration: the degree of integration, the patterns of work organisation, the position of the team and the rationality of the firm

Pattern	Simple combination pattern	Two-tier combination-integration pattern	Integrated professional and interrelated to firm-specific expertise - pattern
Organisation of teamwork	Minor multi-prof. interaction, team members' independency, non-professional project management	Specialised niches of team members and some inter-professional approach, integration by the professional manager	Small team, similar job descriptions, peer learning and low hierarchy
Position of the team	Matrix organisation and project-based teams	Stable team, the position of the team at the beginning in value chain	Stable team, the position of the team after the planning and production in value chain
Rationality of the firm	Efficiency with simple and relatively cheap services with qualified professional labour force	Efficiency with high profile and expensive products and highly qualified professional employees	Efficiency with new and relatively expensive services, qualified professional labour force

The organisation of multi-professional collaborative work varied from the simple combination pattern to the integrated pattern. In addition, the integrated pattern included two sub-patterns: the integration of different outcomes of team members and the inter-professional competence interrelated with firm-specific expertise.

The shared technology-mediated work environment dominated the work and performance of the multi-professional teams in the case-study firms, which resulted in fluent, but also uneven and conflicting, teamwork. The patterns of organising the work either took into account the challenges included in multi-professional work, with respect to the shared technology-mediated work environment or did not pay attention to them for economic reasons.

The patterns for organising multi-professional work were motivated by the rationality in the firms. The rationality of the firms followed the logic of the business field, i.e., profit-making with efficiency and economy in the work organisation. However, the rationalities for

organising multi-professional teamwork in the case studies were different regarding the design of the professional profiles of the firms and the specialisation of professional teams' functions and position.

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The Influence of Professional Competencies on Social Sustainability

Antanas Buracas

Abstract

The universal sustainability approach becomes the main direction when outlining the UN World in 2050 policy tasks. Within this approach, the competencies and skills for front-end innovation are becoming decisive sustainability factors in the future developing society. The simplified multiple criteria assessment methodology based on cobweb diagrams was applied to the regional expert evaluations of innovative HR potential a/o factors determining sustainable modern knowledge development, also comparative interdependencies of education–knowledge- innovation components within the Baltic and Scandinavian States. The task was to evaluate innovative potential of the Nordic countries and reveal how global innovation indicators could be applied as drivers determining their universal sustainability. The practice of Scandinavian countries as innovation leaders could be useful in developing sustainable HR potential for competitive efficiency.

Keywords: Human resource sustainability, innovative competencies, multiple criteria assessment, Scandinavian and Baltic States

Introductory remarks and presumptions

The innovative approach to sustainability of society consists in including not only in the green economy and protection of limited natural resources but also rational balancing of all disposable, especially human, resources in the development. The competencies as a cluster of knowledge, skills, abilities and motivation (Boyd et al., 2017) become those decisive sustainability factors for innovation in the developing society. Not only the frictional unemployment but all required HR potential adequate to innovative technologies and e-management strongly depends on rational social innovation within sustainable economic growth. As different from professional competencies in narrow sense, innovative education development anticipates the special importance of creativity and enterprising, perceiving forecasting and managing effective output changes within universal sustainability concept.

Both sides of the problem are important: innovations impact on sustainability as well as sustainability-driven innovations. Below the first aspect of review, more exactly: the role of innovations on the universal sustainability of development, is prevailing, with accent on education and talents, not on the innovative green economics (waste and emission management) as sustainability factors. It supposes the sophisticated approach to innovative life cycle of human beings as well as products, technologies, services life cycles, their management. The expert evaluations of competency and skills impact on innovation aims to be arranged on basis of multiple criteria and multiparametric assessment methodology for concluding how suitable it is for the regional comparative evaluations of education quality determining sustainable development of modern knowledge society. The criteria of sustainability in HR development are different depending on the scale of approach: the EU level, or one of the countries under review, or firms level, local or international, especially if to evaluate the 4 movement freedoms within the EU, impact and limits of brain drain, dynamic balancing of HR and their skills quality for the future development, also stability of the social pension systems etc.

The attention in this review is given to interdependencies in HR education and knowledge with innovation components within multiple criteria evaluations of the Baltic and some Scandinavia States, incl. SMEs dates. The task is to evaluate how much approbated indicator metrics used by experts for global evaluations and academic ratings could be applied for evaluations of the competencies determining competitive innovativeness of the countries under review, also to detail some rational intersectorial distributing of limited resources for sustainable development of labour and vocational skills. The definition of the global innovation identifies its index (GII) as integrated determinant energizing the world (OECD, 2018) aiming to universal sustainability.

The UN sustainable development goals (SDG) characterise the integrated situation of the universal sustainability by internationally comparative indicators for all 193 UN member states. Their indicators are based on data selected for 169 SDG targets underlying 17 integrated SDG sectors and represent the most reliable situation of universal sustainability at the moment. For the comparison of the Nordic countries, we selected 10 most specific (peculiar) SDG sectors revealing that indicators for some of them are within a narrow interval but for some, as reduced inequalities and innovation infrastructure, they have rather wide differences (Table 1).

Table 1. The SDG Index and its components for selected countries, 2018

Selected indicators from basic sectors*, by countries	Denmark	Finland	Norway	Sweden	Estonia	Latvia	Lithuania
The SDG aggregated index	85.2	82.8	80.7	85	80.2	77.1	75.1
End poverty (after taxes and transfers, population)	99.6	99.8	99.5	99	99.7	98.7	98.4
Good health and well-being	96.1	96.2	97.9	97.8	88.8	84.5	84.6
Quality education (%)	98.3	98.9	99.9	99.3	95.3	95.7	98.7
Affordable and clean energy**	93.6	96.4	98.6	98.7	88.9	91.2	83.5
Decent work, employment, training (%)	83.9	82.5	78.5	83.5	84.8	83.3	80.5
Gap in innovation infrastructure***	88.1	83.7	80	91.7	61.5	49.3	45.4
Reduced inequalities****	96.5	97.9	100	100	72.2	76.5	49.6
Peace, justice, freedom*****	92.8	92.9	84.9	83.8	87.8	77	80.5
Partnerships for the goals******	89.8	74	99.6	98.2	55.5	50.4	51.6

Selected from: Sustainable Development Report 2019, p.49-57, 67-69. *As a basis, compound annual growth rates used. For selected indicators, expert evaluations from the adequate group, 2010-2018. So, End poverty rate included poverty line 50%, also % of population living under the poverty thresholds; Good health included Life expectancy at birth, various fertility, births, mortality and death rates. **incl. renewable, in total final energy consumption (%). *** Internet access, education, R&D expenditures (%)****Gini Coefficient adjusted for top income (1-100). *****Incl. homicides, property rights, corruption perception, press freedom (0-100). ****** Incl. government health and education spending (% GDP).

The Scandinavian States are leading within all UN member states (193) by most of socio-economic surrounding parameters characterising the transformations aiming to the UN SDG (Denmark - 1, Sweden -2, Finland – 3, Norway - 8) and the Baltic States (Estonia – 10, Latvia – 24, and Lithuania - 32) are in comparatively high positions (*Sustainable, 2019,* p. 16-17, 20-21). The most wide differences between both groups of countries are in Reduced inequalities (from 49.6 in Lithuania till 100 points for Norway and Sweden), Innovation infrastructure (from 45.4 in Lithuania till 91.7 points for Sweden) and Partnership for the goals (from 50.4 in Latvia till 99.6 points for Norway) reveal these problematic sectors blocking a move to the universal sustainability aims by the Baltic States (Figure 1). Less relief differences mostly determined by ethnic tensions are fixed in Peace, justice, freedom (Latvia – 77 points, Denmark and Finland – 92.8-92.9).
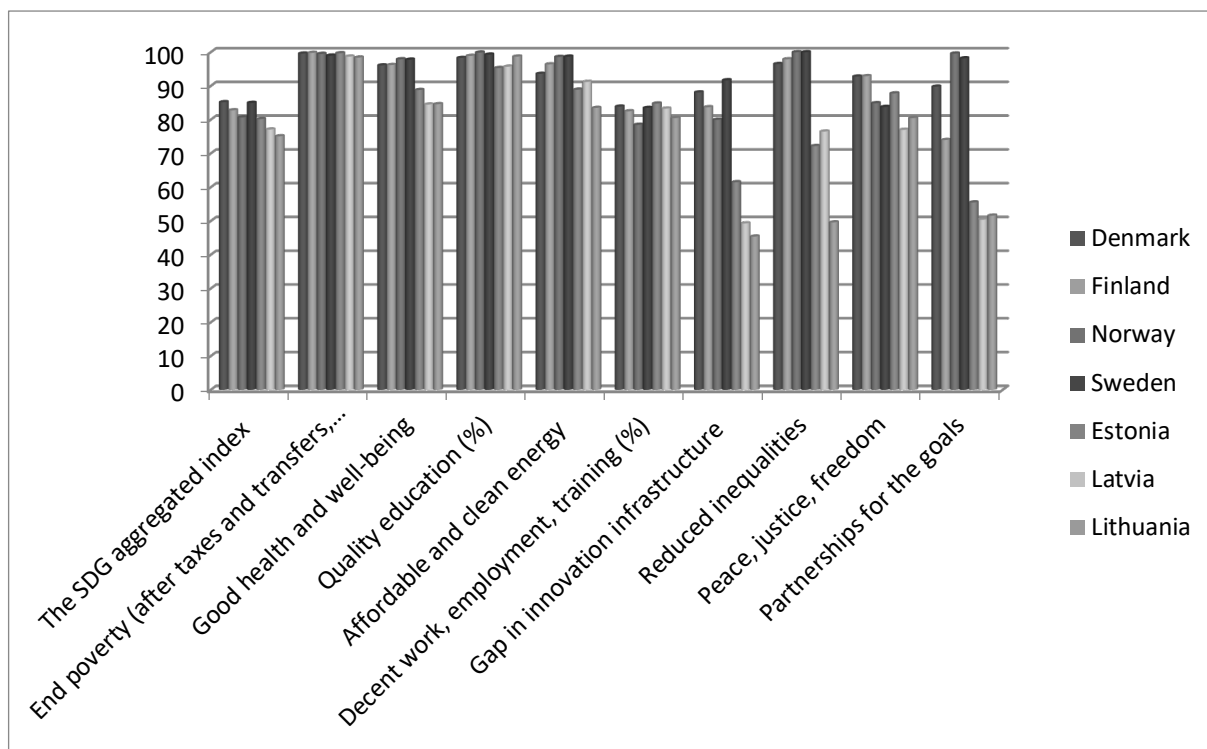
Figure 1. SDG basic sectors by selected Nordic countries

There are specific educational or managerial competencies encouraging sustainable innovations, as preservation of new ideas, broadening of knowledge and skills, stimulating and managing creativity (its resources etc.: Epstein, 2010). The international data on core competencies of the INSEAD experts included the determinants interconnected with professional abilities, learning quality and innovativeness of both education and product, services or process innovations, with leadership, abilities to improve performance etc. (UNDP, 2016). The factors determining the competencies and innovative activity are interconnected. Competitive globalisation generated the core competency orientation to permanent learning abilities of the employees participating in their direct activity, their initiative and "soft" skills such as communication and teamwork, also entrepreneurship skills and readiness to evaluate the risk (OECD, 2017). At the same time, the innovation-oriented institution managing competitive HR policy usually evaluates its real and perspective learning needs and abilities to enlarge the professional competencies, provide adequate information, use ICT nets and smart AI opportunities, evaluate expected financial benefits a/o determinants of universal sustainability. Together with the INSEAD (2018) and WIPO experts, we will try to ask - How should one better measure innovation and intangible assets in the services sector? How can linkages between innovation actors be better quantified and assessed?

The prevailing innovation indicators are substantially determined by entrepreneurship competencies and productive innovativeness, determined by quality of education and special professional practice, development of innovative business incubators, also promoting start-ups, tertiary enrollment rate, etc. At the same time, the range of comparative indicators of EU innovation performance presented by/for expert evaluations, is clearly insufficient. So, HR are

characterised just by completed education, incl. tertiary, also *Lifelong learning*, by *New doctorate graduates*, and any other professional competencies are not measured statistically. Besides, some additional qualifications of HR are added when presenting intellectual assets and research systems indicators, such as *PCT patent and trademark applications*, *International scientific co-publications*, *Most-cited publications*, but they are attributable only to narrow group of scientists. The methodology applied for estimating expected change, just linear regression on basis of 2011-2017 (EIS, 2019, p. 38), is also rather primitive solution determined by insufficient disposable data of expert evaluations. It is difficult to imagine, how evaluation of Human resources in Scandinavian countries can surpass the EU-28 level 1.5-1.8 time. Intellectual assets are characterised just by PCT (Patent Co-operation Treaty) applications, Trademark and Design applications, not including such assets as widely used international Data basis and ICT nets.

The key emerging bottleneck for the development of a knowledge-intensive business sector is the employment impact characterised by the availability of skilled human resources for innovation creation. It is interesting to find that employment in high- and medium high-technology manufacturing sectors in EU-28 as share of total employment was much higher (5.8 %) than in any selected Scandinavian or Baltic state (Table 2). Besides, the respective employment share in Estonia (4.1 %) was higher than in Norway (2.5 %). Respectively, employment in knowledge-intensive service sectors in EU-28 was 4 %, i.e. lower than in most selected Scandinavian countries (except Norway) and Estonia (5.4 %). The surpassing development strategy of HR activities into knowledge-intensive service has added a positive impact when creating the favorable conditions and competitive environment to Northern European countries.

Table 2. Employment rates in high-technology manufacturing and knowledge-intensive service, 2018, %.

Groups of selected countries, % of total employment	High- and medium high-technology manufacturing	Technology and knowledge-intensive service
EU-28	5.8	4
Scandinavia		
Denmark	4.8	5.5
Finland	4.8	5.6
Norway	2.5	3.9
Sweden	4.3	4.8
Baltics		
Estonia	4.1	5.4
Latvia	1.6	3.1
Lithuania	2.2	2.5

Source: Eurostat, 2019. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/tsc00011/ default/table?lang=en

However, the statistics of the INSEAD experts on employment in knowledge-intensive activities (Fig. 1) and in fast-growing enterprises of innovative sectors (Fig. 2) and is slightly different perhaps as result of more sophisticated evaluations of measured determinants for selected countries and shows prevailing priorities of Scandinavian countries (except Estonia and Norway; comparative data on it not presented).
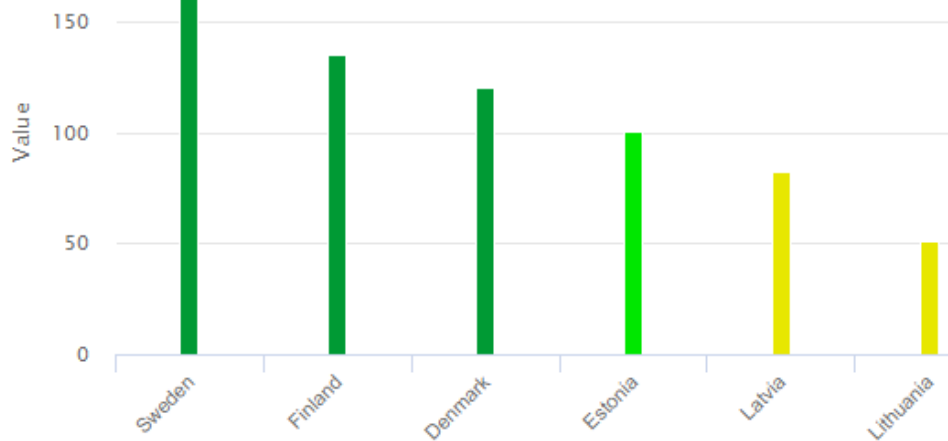

Fig. 2. Employment in knowledge-intensive activities in selected countries by their innovativeness, 2018
Source: the INSEAD expert evaluations, EU=100. European Innovation Scoreboard 2019.
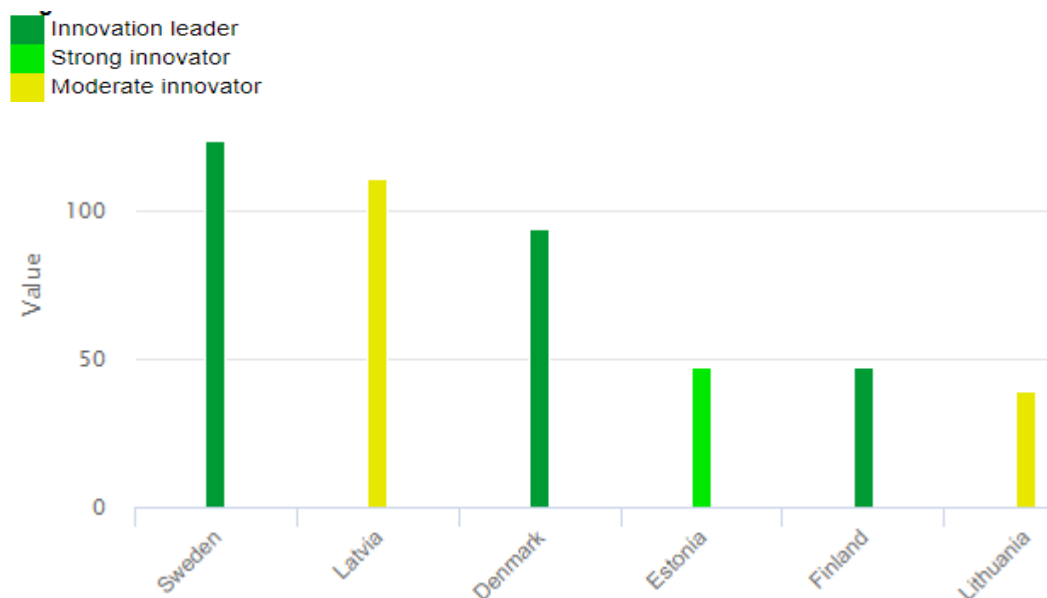

Figure 3. Employment in fast-growing enterprises of innovative sectors in selected countries by their innovativeness, 2018.
Source: the INSEAD expert evaluations, EU=100. European Innovation Scoreboard 2019

In 2014-2020, the Baltic States applied smart specialisation strategy oriented to the innovative tasks affecting higher education, innovative specialisation priorities, wide e-orientation with help of modern ICT infrastructure(content development technologies, ICT interoperability and infrastructure, cloud computing solutions and services), some of them with account of achievements in programmed measures of Scandinavian countries. The top companies in the countries under review raised their R&D expenditures within this period.

The sustainable innovation developments are characterised by total factor productivity depending of such important indicators as innovative technologies applied, or innovative products or services produced and/or exported, as expected result of patents, publications or royalties per personnel (head). They are related with the overall level of education, the quality of the education system, personnel training and retraining, professional management adequacy, encouraging creativity. The relationship between rewards and performance stability, the country's ability to attract talents from elsewhere and keep their own, mathematics a/o science subjects teaching quality are also important (Chen, 2016; WEF, 2016). Some of the data characterising the impact of ICT, digital nets and e-education (based on formalised teaching with the help of electronic resources) on competencies and innovations could be received mostly by special review or expert evaluations. P. ex., the problematic factors for doing business in Lithuania and Latvia (besides inefficient government bureaucracy and taxation) are the inadequately educated workforce, insufficient capacity to innovate, and some managerial achievements in education systems of Scandinavian states are earning necessary attention.

This review was based on annual reports concerning feasibility of global indicators for evaluating sustainable impact of HR competencies and innovations used by the WBG, WEF, INSEAD, WIPO etc. experts, such as Network Readiness Index (NRI), Global Innovation Index (GII), Global Talent Competitiveness Index (GTCI) (INSEAD, 2018, 2017; EIS, 2018). They revealed that the input and output of global innovations is dependent of employable (or labour) and vocational skills (LV), and global knowledge (professional, managerial or leadership - GK) skills developing with perspective tasks of universal sustainability in one or other country.

The *purpose* of this review is to reveal some sustainability aspects by evaluating the comparative interrelations between regional education and integrative innovation macro parameters in Scandinavian and Baltic economics. The research *methods applied* include multicriteria approach on the basis of the Eurostat system of social and economic parameters characterising comparative international evaluation of innovative impact on the sustainable growth of the countries under review.

The *object* of the paper is impact of innovative HR development characterised by education, competency and skills parameters on universal sustainability. The information to be used was presented in the international evaluations of state innovative activity, competitiveness, macroeconomic growth. So, the *originality* of research consists not in prevailing sustainability-driven innovations oriented mostly to green technologies. As the research revealed, the core innovation determinants applied in the international evaluations of sustainable

macroeconomic development do not detail some sophisticated aspects determining the impact of professional competencies on innovativeness of business and education. As a result, they do not suggest the most rational solutions for the competitive and innovative education and/ or business policy in the selected country as well as do not assess the lifestyle differences and specific needs resulting from deep social differentiation and can result in some unsustainability effects. The review of multiparametric cobweb interactions revealed the criterial inadequacy of competence parameters used by international experts for some sustainable evaluations of innovation processes (Franceschi, 2016; INSEAD, 2017; WEF, 2019).

HR innovation parameters as universal sustainability determinants: Baltic and Scandinavian States

HR innovation starts with education and continues with abilities and competencies to create new products, technologies, services, with managerial success to realise productively them and, finally, to export them. In the Scandinavian States as innovation leaders, and Estonia (attributed to strong innovators), most of registered education parameters are substantially higher than average levels of the EU. Latvia and Lithuania are attributed to group of moderate innovators, and their efficiency of HR innovation is much more problematic. This is the only necessary presumption of sustainable innovative development. Most difficult tasks are to educate new talents which would be able to produce efficient innovations and widespread them.

The comparative socio-economic surrounding of innovative performance in Scandinavian and Baltic States, 2011-2017, characterized by selected determinants in the Table 3.

Table 3. Socio-economic surrounding of innovative performance in Scandinavian and Baltic States, 2011-2017, by selected determinants

Selected indicators, by countries	EU-28	Denmark	Finland	Norway	Sweden	Estonia	Latvia	Lithuania
GDP per capita (PPS)	29500	37400	32100	43900	36100	22700	19100	22400
Gross domestic expenditure on R&D, % of GDP	2.58	3.05	2.76	…	3.4	1.29	0.51	0.89
Employment share manufacturing, %	15.5	11.8	13.4	8.3	10.3	18.9	13.4	15.4
Employment share, high-tech of all manufacturing, %	37.5	42.9	36.1	34.2	42.5	20.2	12.4	13.8
Employment share in services, %	41.8	41.4	40	38.7	41.3	40.1	41.7	39.6

Employment share, knowledge-intensive services of all services, %	35.0	34.8	39.3	38.4	44	31.3	29.3	24.3
Turnover share, SMEs, %	37.9	40.7	40.1	38.2	38.4	48.2	51.6	48.9
Turnover share, large enterprises, %	44.4	40.7	44.3	39.2	43	22.3	22.3	32.8
Share of value added in foreign-controlled enterprises, %	12,6	10.6	9.5	13.7	13.5	13.5	14.1	11.5
FDI net inflows, % GDP	4.3	1.3	4.9	-0.9	3	2.3	2.6	2.4
Buyer sophistication (1 to 7 best)	3.7	3.7	4.6	4.5	4.6	3.5	2.9	3.2
Ease of starting a business (0 to 100 best)	76.8	84	80.4	82.3	81.1	80.4	79.3	79.5
Basic-school entrepreneurship education and training (1 to 5 best)	1.9	...	2.4	2.4	2.4	2.9	2.5	,,,
Tertiary educational attainment (% of population aged 30-34)	47.0	49.1	44.2	,,,	52	47.2	42.7	57.6
Govt. procurement of advanced tech products (1 to 7 best) *	3.5	3.5	3.9	4.1	4	3.7	2.9	3
Rule of law (-2.5 to 2.5 best) **	1.2	1.9	2	2	2	1.3	0.9	1

Selected from: European Innovation Scoreboard 2019, p.46, 48,56-57, 68-69,74. * The extent to which government procurement decisions foster technological innovation. Trust is important for creating a business environment for undertaking risky innovative activities. **The differences in the extent to which people have confidence in and abide by the rules of society; it measures differences in the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

Under much lower GDP per capita in Baltic States (about ½ of Scandinavian level) and Gross domestic expenditure on R&D, % of GDP (2-6 times), they have similar employment share in services and in knowledge-intensive services, but much less in high-tech of all manufacturing (%).
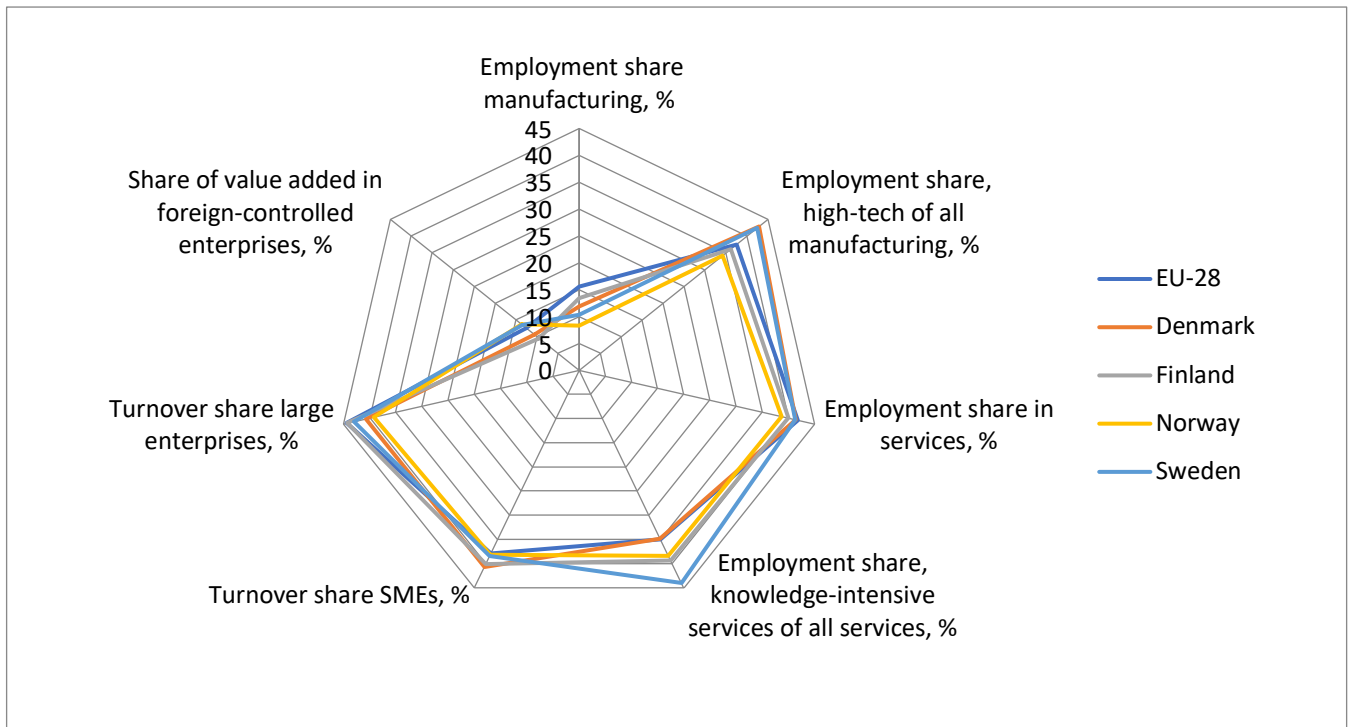
Figure 4. Selected innovative performance indices, by Scandinavian countries, 2018

The more substantial differences can be also mentioned in Turnover share of large and SMEs in both groups of countries. Other surrounding parameters are fluctuating in different countries and do not show substantial differences determining their uneven innovative effect (Fig. 4-5).
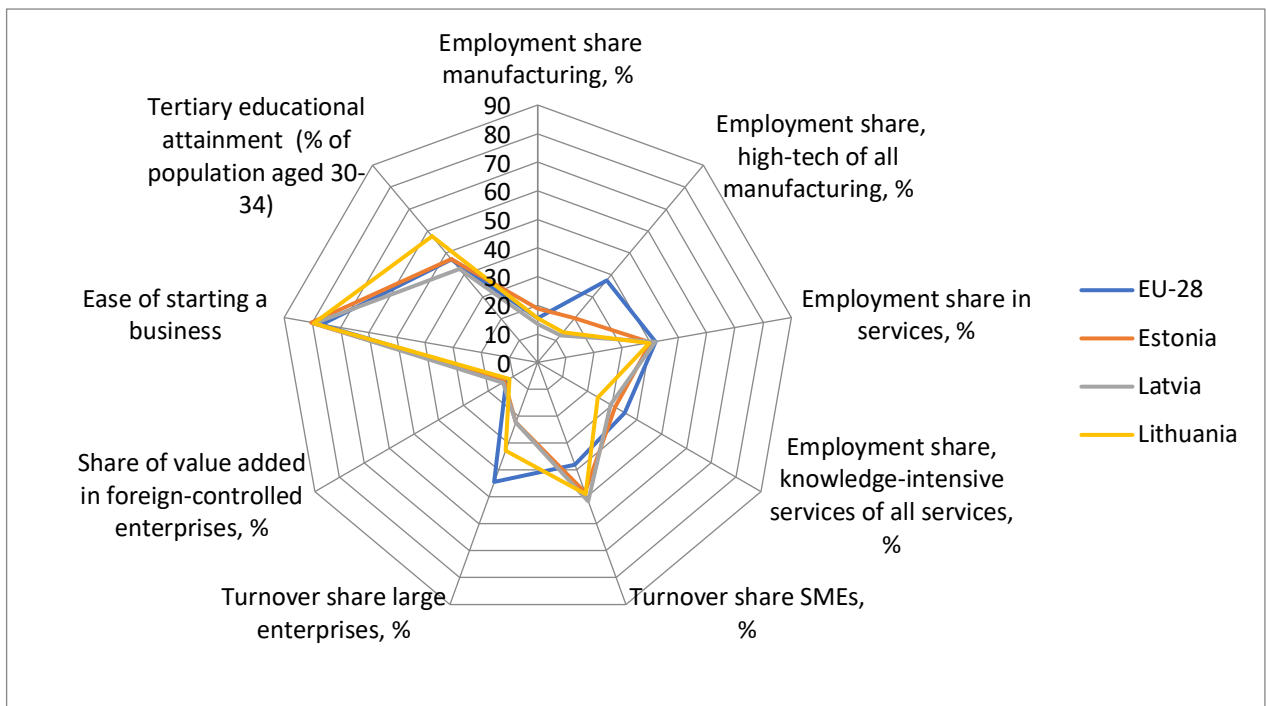

Figure 5. Selected innovative performance indices, by Baltic countries, 2018

The main type of training in the EU is non-formal with high level of educational achievement (3/5 with tertiary levels). The Scandinavian states and Estonia have evidently higher levels than EU average, in all selected countries the training of women outperforms the comparative levels for men. Latvia and especially Lithuania are lagging below EU average especially by training and lower secondary education. The part of graduate education professionals working in highly innovative workplaces also show the specific distribution of Northern European countries: Finland and Lithuania were somewhat higher than the selected Europe-19 country mean, Norway and Estonia – lower (*EU Community Innovation Survey, 2016*).

It is important to identify and compare the main obstacles not permitting youngsters to participate in the education and training. They are different in all compared groups but no access to computer or internet is between minor obstacles (for distant learning). The most wide group of selected data identified the low motivation to continue education as the main obstacle, based on the conviction that there is no need for that (some expected to continue by individual ways of learning). Latvia, Lithuania and Sweden are leading by about twice more passive drive to motivation comparing with average for the EU, low initiative of less educated people. The lowest part of people not feeling the need to continue study is in Norway and Finland. The conflict with work schedule was second group of obstacles by their significance level (especially in Finland), the significant obstacle was family matters.

The widespread of tertiary and lifelong education is especially important for stable supporting of the sustainable HR development in the future. The comparative evaluation of Northern European and Baltic States presented in Fig.6, shows much higher levels of lifelong learning in all Scandinavian countries, and % of female participating in all countries is higher than % of males.
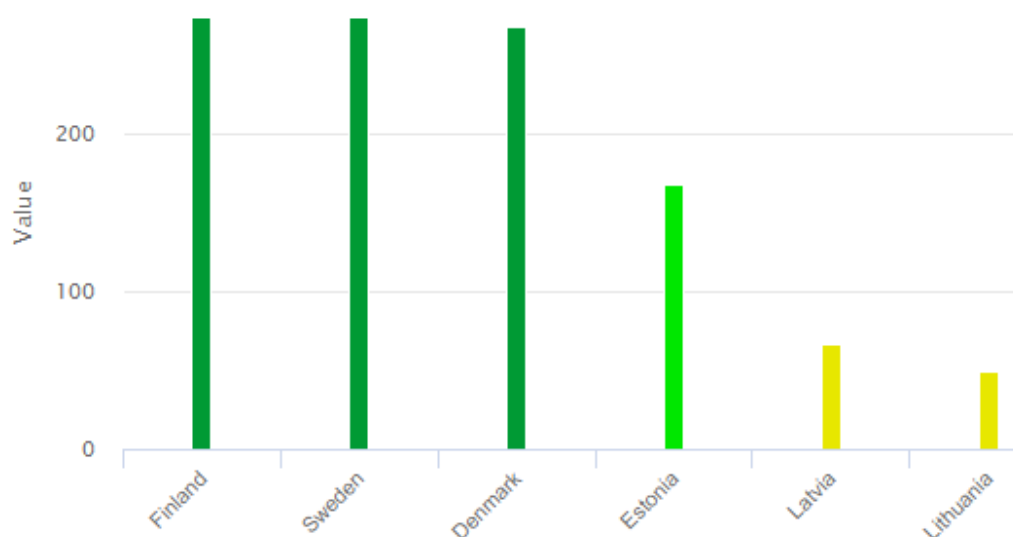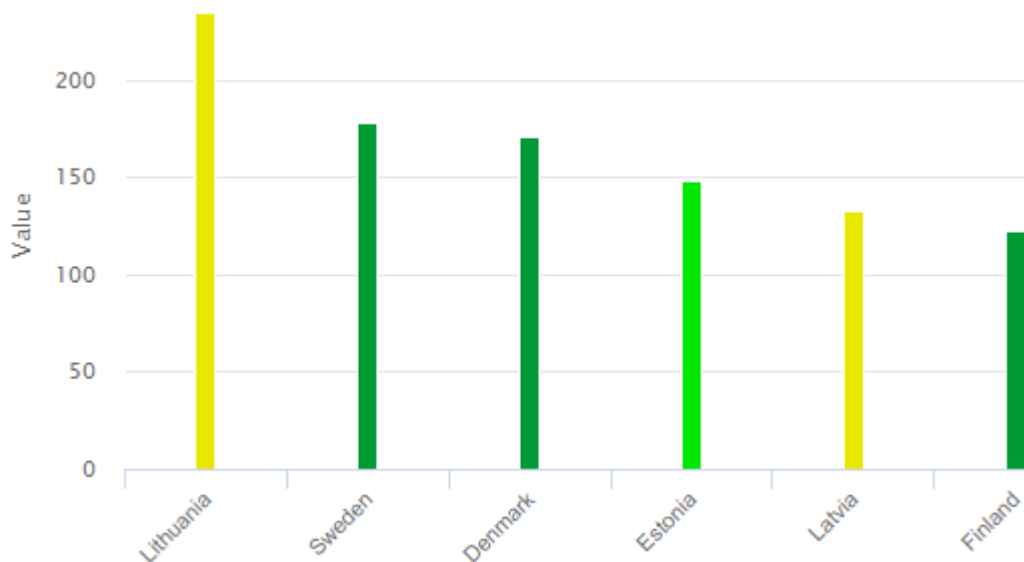

Figure 6. Life-long education in selected countries by their innovativeness, 2018
Source: the INSEAD expert evaluations, *European Innovation Scoreboard 2019*.

The INSEAD evaluations show the more even situation concerning completed tertiary education (Fig. 7): best achievements are in Lithuania (above of the EU average), and Finland has the lowest level between countries under review.

Figure 7. Population completed tertiary education in selected countries by their innovativeness, 2018
Source: the INSEAD expert evaluations, *European Innovation Scoreboard 2019.*

The review of innovative workplaces by activity sectors shown that their percentage in Lithuania, Estonia and Norway was nearly similar in the education sector (much higher in Finland) and higher than the selected Europe countries mean. In most of selected Northern European countries, manufacturing was leading sector by innovative workplaces except Lithuanian health sector where % of working graduates was highest. However, the survey statistics of special researches on EU graduates in the innovative workplaces are published only from time to time, and it is difficult to evaluate the newest changes and specific peculiarities when comparing the participation rates important for evaluation of education quality and professional orientation. Some previous surveys shown that between 2005 and 2015, the situation in Sweden detectably ameliorated, also Estonia, Latvia and Lithuania are near the EU average and slowly ameliorating its indicators (all Baltic States are nearly or achieved average 80 % of employment as target for 2020). The level of employment in resent young graduates was insignificantly slump only in Finland (Eurostat, 2018).

The statistical data of Eurostat also revealed that last 5 years the early leavers from education and training amounted to about 11-12 % of the EU population aged 18–24. The comparative view of early leavers what characterises additionally does their knowledge motivation and their interests to ameliorate their situation in the future are strong enough. First-of-all, the national targets for ameliorating this indicator for Europe 2020 are different; the levels in Sweden, Lithuania and Denmark are much below both national and EU-28 targets, they slowly ameliorated with diminishing % of leavers and Latvia just achieved the EU and national target

levels. Only in Estonia the part of early leavers from education and training not declined and was higher of national target. The comparison of the young employed people with motivation to work in the EU-28 reveals some potential possibilities of more rational learning stimulus reorientation. About 2/5 of young leavers in the EU average wanted to work and about the same part are employed (both groups in Finland, Sweden, Estonia and Latvia amount even more than 2/3), and the part of youngsters not wanting to work is only in Lithuania about half. In EU-28 and Scandinavian countries, part of young woman leavers was 1/3-1/4 less than part of young men, in Estonia and Latvia it was near ½ less. The young men leavers in most of selected countries would like to work, but their % was less than in the EU-28 (except Latvia).

The levels of education professionals by innovation knowledge type or methods in the innovative workplaces Finland (67.2 %), Lithuania (64.6) and Norway (61.8) was substantially higher than EU mean level (58.9) and Estonia – lower (51.4 %). But by output of innovative products or services the situation was reverse– both Lithuania (30.9 %), Norway (32.9) and Estonia (36.4) were lower than European country mean (37.6), when comparative data for Finland were higher (44.2 %). By technology or tools used both Lithuanian and Estonian education professionals in highly innovative workplaces were on higher levels (45.3 and 44.3 %) than European country mean (36.4 %), Norway and Finland were below the EU mean (adequately 25.5 and 32.7 %). The levels of graduate professionals in manufacturing sector and business activities were much higher in Norway and Finland.

The Eurostat data presented above are rather important for comparative evaluation of main trends in education and training, according to manpower demand changes and traditions of international division of productive activities in the EU. They are at least not sufficient for detailed recommendations of the ameliorating the education policy according to perspective aims of national development within Baltic countries with urgent needs of continuing European economic integration and consequent specialisation. However, they are significant for the multiple criterial evaluation of EU and national HR sustainable development criteria and, at last, modelling of universal sustainability at   macro level.

The innovation performance oriented for universal sustainability in the Baltic and Scandinavian States

The impact of innovative performance on the development and sustainability of the countries are best characterized by integrated, or composite, indices, their system prepared by joint Maastricht Economic and Social Research Institute on Innovation and Technology group and results published for the countries under review as European Innovation Scoreboard 2019 are presented in the Table 3. The presented composite indices reveal some important directions of Scandinavian countries mostly surpassing Latvia and Lithuania by Summary composite innovation index (1.3-2.2 times), first-of-all: Human resources indicators (1.8-3 times), Attractive research systems (3.5-4.4 times), Intellectual assets (3-3.2 times, except Norway), Innovation-friendly environment (1.5-2 times).

Table 4. Composite innovative performance indices of Scandinavian and Baltic States, 2018, relative to EU-28, by selected indices

Selected indicators, by countries	Denmark	Finland	Norway	Sweden	Estonia	Latvia	Lithuania
Summary composite innovation index*	129.5	134	117.4	135.8	95.3	60.3	74.5
Human resources	180.4	157	143	174.9	109.7	63	94.6
Attractive research systems	183.8	135.4	139.9	166.2	94.4	41	37.3
Innovation-friendly environment**	182.3	182.3	143.8	172.3	87.9	90.9	121
Finance and support	106.7	113.6	116.1	109.3	88.5	97.4	51.4
Firm investments	104.5	129.8	114.9	124.3	90.6	46.4	76.6
Innovators	95.7	168.2	179.7	115.4	107.6	39.7	110.4
Linkages***	139.2	152	157.5	147.3	121.2	48	106.9
Intellectual assets****	163.8	151.8	58	156.2	127.8	53.5	51.3
Employment impacts*****	100.7	80.2	79	134.5	66.4	94.4	42.5
Sales impacts on innovative export******	75.3	85.4	51.7	88	65.6	53.9	55

Selected from: European Innovation Scoreboard 2019, p.9, 46, 48,56-57, 68-69,74. * Calculated as the unweighted average of the re-scaled scores for all indicators where all indicators receive the same weight. ** Innovation-friendly environment captures the environment in which enterprises operate and includes two indicators, Broadband penetration among enterprises and Opportunity-driven entrepreneurship. *** Linkages includes indicators measuring innovation capabilities by looking at collaboration efforts between innovating firms, research collaboration between the private and public sector, and the extent to which the private sector finances public R&D activities. *** *Includes different forms of Intellectual property rights generated in the innovation process, such as PCT applications, Trademark applications and Design applications. ***** Includes indicators measuring Employment in knowledge-intensive activities and Employment in fast-growing firms in innovative sectors. ****** Includes indicators measuring Exports of medium and high-tech products, Exports of knowledge-intensive services and Sales due to innovation activities.

There are some differences, p. ex., by Innovators and Linkages indices only Latvia is lagging behind of Finland (3-4 times) and Norway (3-4.5 times). Estonia and Lithuania are below of Scandinavian countries (except Denmark) by these indicators (Innovators and Linkages) but surpassing ES-28 average. By Intellectual assets index, Norway, Latvia and Lithuania are nearly the half of EU-28 level what is partly determined by specifics of selected indicators included into composite index. The levels of some other selected composite indices also require to be weighed more correctly selecting primary indicators. The comparative view of all composite indices for both groups of countries is presented also in Fig. 8.
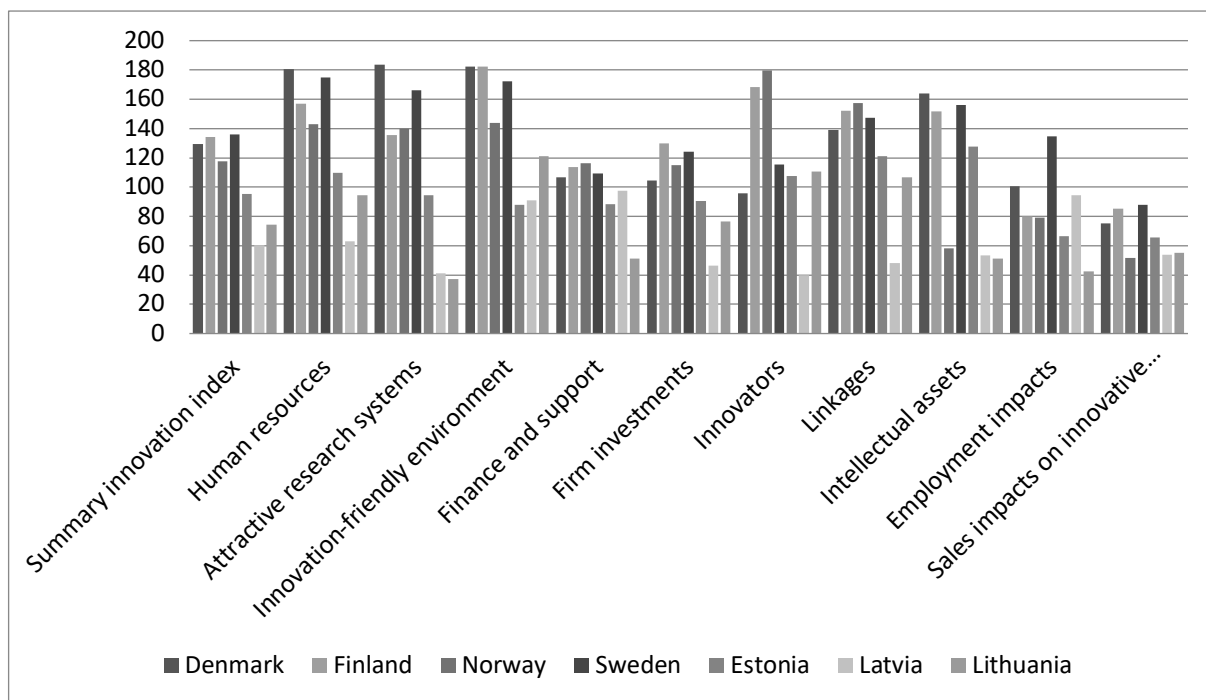
Fig. 8. Aggregated innovative performance indices of Scandinavian and Baltic States, 2018, relative to EU-28

Detailed values of selected innovative performance indices of Scandinavian and Baltic States, relative to EU, are presented in Table 5. They show nor only the advantages of Scandinavian States comparing with EU-28 and Baltic States but also uneven progress of the last group countries in mostly parameters aiming to achieve first-of-all the EU average level.

Table 5. Innovative performance indices of Scandinavian and Baltic States, 2018, relative to EU

Selected indicators, by countries	Denmark	Finland	Norway	Sweden	Estonia	Latvia	Lithuania
Summary innovation index	129.5	134	117.4	135.8	95.3	60.3	74.5
R&D expenditure in the public sector*	174.7	152.5	164.6	158.5	96	37.4	77.8
R&D expenditure in the business sector*	145.7	133	80.5	179.4	43.8	8.6	22.1
Non-R&D innovation expenditures**	45.3	88.9	83.3	92.4	176.1	90.4	176.1
Population with tertiary education	143.1	102.5	155	149.4	124.4	111.3	196.3
Lifelong learning	262.2	268.4	191.8	268.4	164.3	65.3	49
Most cited publications	143.5	112.8	105.9	121	85.2	37.8	35

Foreign doctorate students***	174	107.8	101.3	173.7	63	47.8	21.9
Opportunity-driven entrepreneurship****	187	187	149.1	166.6	86.9	87.2	67.1
Venture capital expenditures*	49.1	80.6	75	67.5	82.1	148.2	29
Enterprises providing ICT training*****	126.3	168.4	178.9	105.3	47.4	36.8	26.3
SMEs product/process innovations, %	96.1	174.9	174.9	115.1	126.5	41	113.4
SMEs marketing/organisation innovations, %	114.2	136.6	173.3	102.8	39.3	43.4	91
SMEs innovating in-house, %	77.5	191.1	191.1	127.8	152.4	34.8	125.9
Innovative SMEs collaborating with others, % of SME	109.8	189.1	192.2	112.8	203.6	43.1	145.7
Private co-funding of public R&D exp.*	70.5	95.3	92.5	87.4	84.2	64.5	122.4
PCT patent application/Bln GDP (PPS)	175.1	219.4	102.2	234	36.6	17.4	16
Employment in knowledge-intensive activities, %	110.6	123.5	114.1	150.6	91.8	75.3	47.1
Medium and high-tech product exports, %	79.8	67.5	…	94.9	55.3	45.4	48.3
Knowledge-intensive services exports, %	112.8	106.6	115.4	106.2	63.7	66.8	10.7
Sales of new-to-market/firm innovations**	23.7	83.1	41.9	56.6	81.6	49.5	117.9

Selected from: European Innovation Scoreboard 2019, p.46, 48,56-57, 68-69,74.*% of GDP. ** % of turnover of all enterprises. *** % of all doctorate students.**** Ratio between the share of persons involved in improvement-driven entrepreneurship and the share of persons involved in necessity-driven entrepreneurship. ******The share of enterprises providing training in respect as a proxy for the overall skills of employees.

The deepest differences between both groups of countries are determined by their economic potential setting differences in their R&D expenditure in the public (1.7-4.5 times) and especially, in business (for Latvia just 8.6% comparing with 179% in Sweden to the EU level, by % of GDP/PPS) sectors. They substantially determined the differences between both groups in Lifelong learning (up to 4-5.5 times in Latvia and Lithuania comparing with Scandinavians; but Estonia achieved 1.6 times higher level to EU-28), PCT patent application

(up to 6-12 times), Enterprises providing ICT training (4-7 times), Most cited publications (1.2-4 times), Foreign doctorate students (1.6-8 times) a/o.

By SMEs product/process innovations, Estonia and Lithuania surpassed the EU-28 level but are much below the levels of Finland and Norway. Different situation is at SMEs marketing/organisation innovations level where Estonia and Latvia are substantially below the EU-28 level (just Lithuania -91%), Finland (137%) and Norway (173%) – above it. Also, most of selected countries are above the EU-28 by SMEs innovating in-house (except Denmark – 78% and Latvia – 35%) but all (except Lithuania– 118%) are substantially below the EU-28 by Sales of new-to-market/firm innovations and by Medium and high-tech product exports, %. By Innovative SMEs collaborating with others, most of selected countries both groups achieved levels exceeding the EU-28 (Estonia, Finland and Norway – about twice) except Latvia (43%). All Baltic States are below the EU-28 level by Employment in knowledge-intensive activities (Lithuania – 47 %) and selected of Scandinavian States – above this level (Sweden -1.5 times).

This review of innovative performance indices revealed strong and weak sides of socioeconomic systems of selected countries and necessary changes, especially in the Baltic States, to strengthen some particular innovation factors determining universal sustainable development.

Some specific features following from this comparative expert evaluation for the Scandinavian States are mentioned below. Denmark's lowest indicator scores comprise Sales of new-to-market and new-to-firm product innovations, Non-R&D innovation expenditures, and Venture capital expenditure. In Finland, Performance on Lifelong learning, PCT patent applications, and International scientific co-publications is well above the EU average. Employment impacts and Sales impacts are the weakest innovation dimensions. Finland's lowest indicator scores are on Employment fast-growing enterprises of innovative sectors, Medium and high-tech product exports, and Venture capital expenditures. In Sweden, Human resources, Innovation-friendly environment and Attractive research systems are the strongest innovation dimensions. It scores high on Public-private co-publications, Lifelong learning, and International scientific co-publications. Sales impact is the weakest innovation dimension. Low-scoring indicators include Sales of new to-market and new-to-firm product innovations, Venture capital expenditures, and Private co-funding of public R&D expenditure. Norway performs well on International scientific co-publications, Public-private co-publications, and Innovative SMEs collaborating with others. Sales impacts, Intellectual assets and Employment impacts are the weakest innovation dimensions. Norway's lowest indicator scores are on Medium and high-tech product exports, Design applications, and Sales of new-to-market and new-to-firm product innovations. Most of Norway's economic indicators tend to be close to the EU average. Notable exceptions are GDP per capita, which is well above the EU average, and enterprise births and FDI net inflows, which are well below the EU average.

Among the Baltic States, Estonia scores high on Innovative SMEs collaborating with others, Trademark applications, and Non-R&D innovation expenditures. Sales impacts and

Employment impacts are the weakest innovation dimensions. Low-scoring indicators include PCT patent applications, SMEs with marketing or organisational innovations, and R&D expenditures in the business sector. Latvia Performance is relatively high for Venture capital expenditures, Population with tertiary education, and Employment fast-growing enterprises of innovative sectors. Innovators, Attractive research systems and Firm investments are the weakest innovation dimensions. Latvia's lowest indicator scores are on R&D expenditure in the business sector, PCT patent applications, and New doctorate graduates. The turnover share of SMEs, and total entrepreneurial activity are all well above the EU average. Indicators well below the EU average include GDP per capita, the employment share in high and medium high-tech manufacturing. In Lithuania, Innovation-friendly environment, Innovators and Linkages are the strongest innovation dimensions. Lithuania scores high on Population with tertiary education, Non-R&D innovation expenditures and Broadband penetration. Attractive research systems, Employment impacts and Intellectual assets are the weakest innovation dimensions. Low-scoring indicators include Knowledge-intensive services exports, PCT patent applications and Public-private co-publications. Many economic indicators are well below the EU average, including the employment share in high and medium high-tech manufacturing, the employment share in knowledge intensive services, the turnover share of large enterprises, FDI net inflows, and top R&D spending enterprises.

More detailed comparative indices of HR and education development for the Baltic and selected Scandinavian States are presented in the Fig. 9-12 based on INSEAD (2017, 2018) and European Innovation Scoreboard (2019) expert evaluations. The comparative analysis of HR and education development revealed that Baltic States are significantly below the Scandinavian levels by Formal education, Vocational enrolment (Finland is leader), International students (Norway is leader) and Relevance of education system to the economy, also by R&D expenditures (together with Norway). Lithuania performs below the average of the EU for most dimensions, except for Human resources (HR), also Finance and support. Relatively worst performing indicators are: Public-private co-publications, NonEU doctorate students, License and patent revenues from abroad, PCT patent applications in societal challenges, and PCT patent applications. Performance above average is observed for such evaluations as: Non-R&D innovation expenditures, Population with completed tertiary education, Venture capital investments and Youth with upper secondary level education.
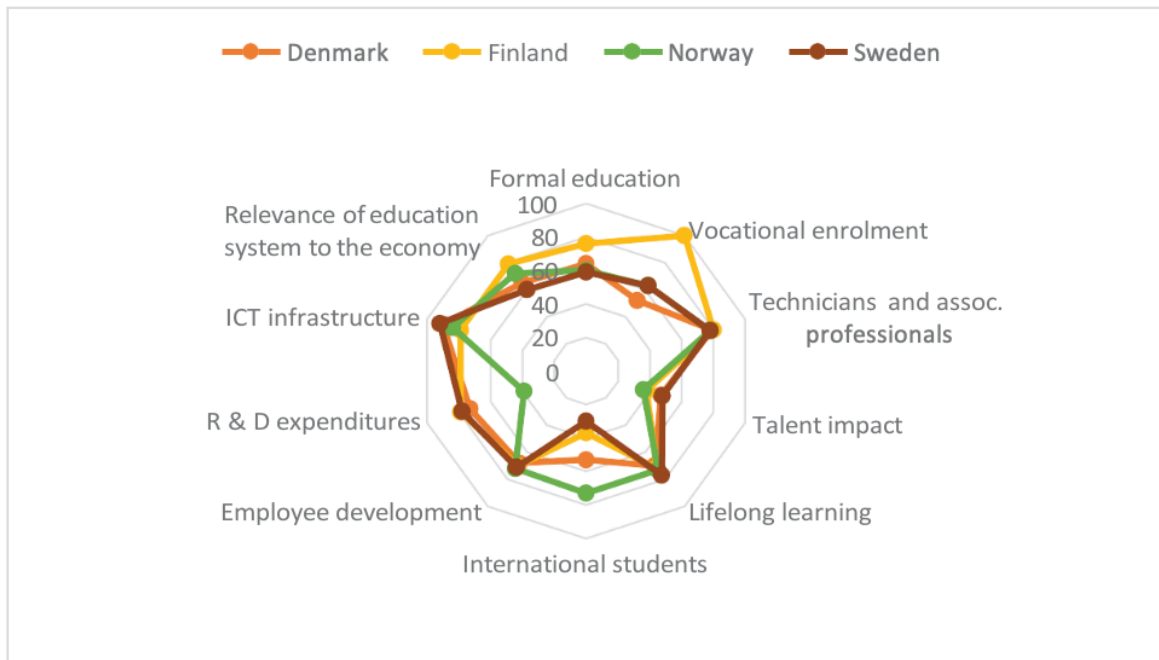
Figure 9. Comparative factors of HR and education development in the Scandinavian countries.
Source: INSEAD, 201. All sub-index rankings in expert evaluations used for cob-web diagram are between 0 and 100

For Estonia, Skills gap as a major constrain is mostly accented factor, and significance of Talent impact is highest between selected countries (Fig. 9a).
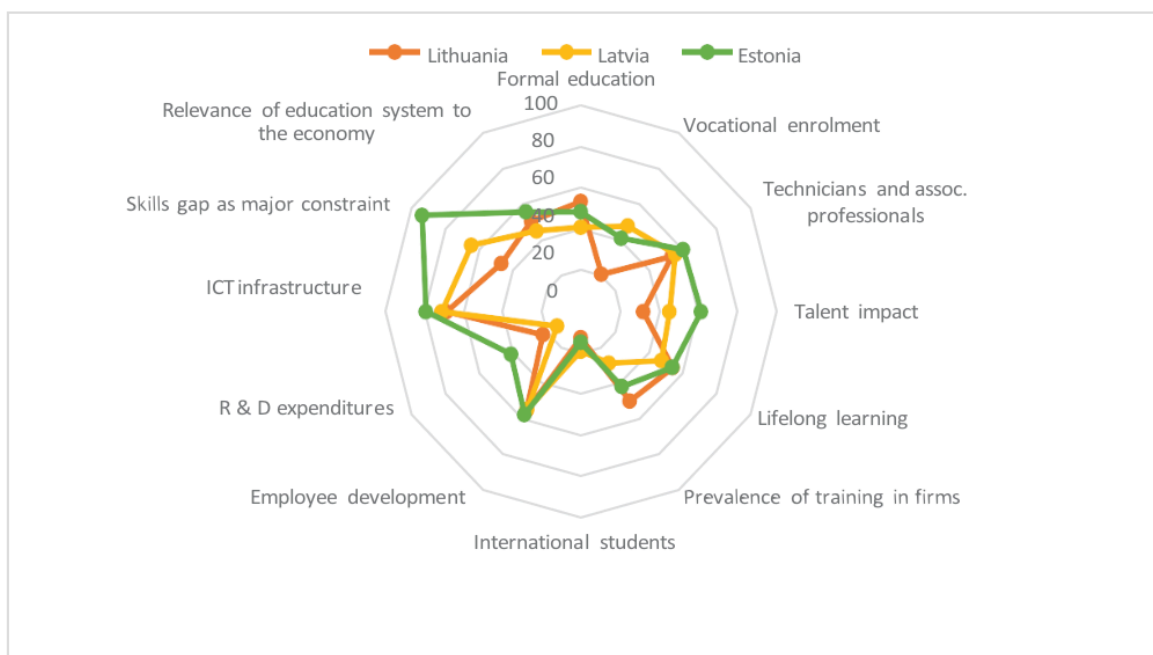

Figure 9a: Comparative factors of HR and education development in the Baltic countries
Source same as under Fig. 9.

The cause for concern is lag of Baltic States (comparing with neighbouring Scandinavia) in national talent development and preservation, as well as in the formation of professional skills needed, increase of the funds for applied research in the Baltic countries because it leads to backwardness by innovation performance (return). Fig. 10-12 revealed that many those problems are dependent on low level of R&D expenditures determining low brain gain, vocational enrolment and employable skills (especially in Lithuania). But both group of countries achieved high level in use of virtual social nets within EU; use of virtual professional nets is different: only Denmark (86 scores) can be marked as a leader. Baltic countries have very low level (20-26 scores), and Finland (37 scores) also rather low level of this indicator, so important for smart innovative and sustainable economies (Fig. 10).
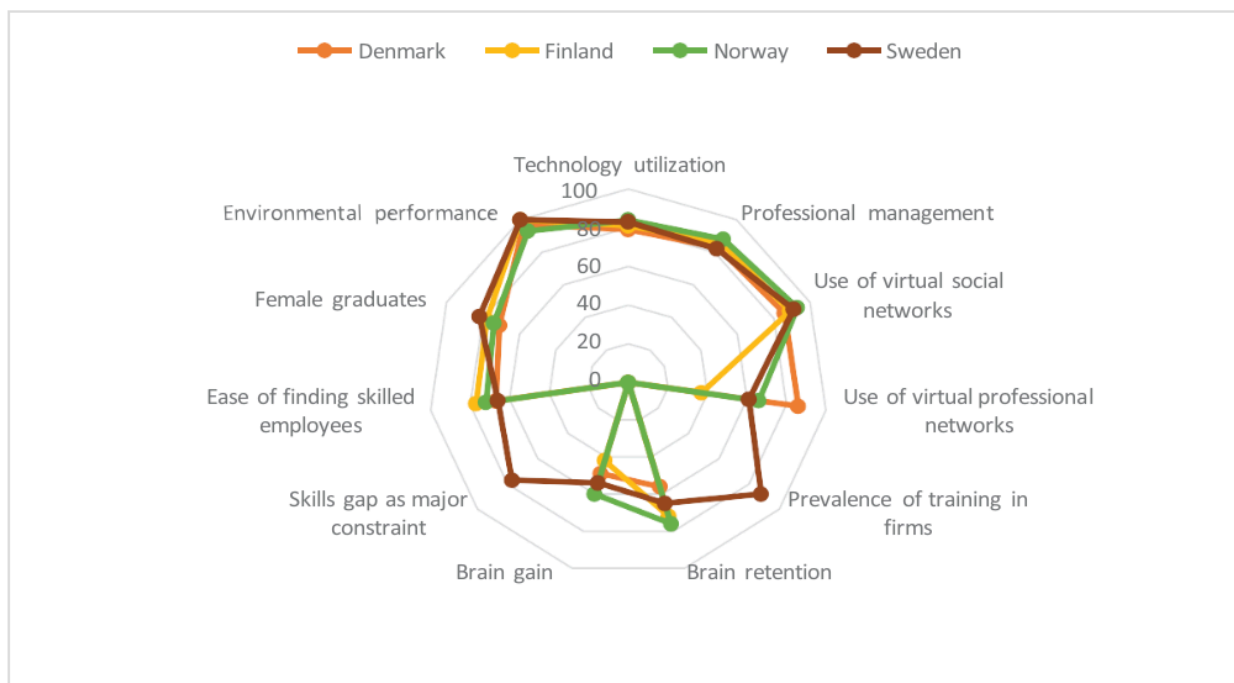

Figure 10. Indices of professional education surrounding in the Scandinavian countries
Source same as under Fig. 9.

By skills gap, the scores of the Baltics differs from 94 scores in Estonia to 47 in Lithuania; Sweden is evaluated by 77 scores and expert statistics for other Scandinavian countries is absent. Rather similar situation is with prevalence of training in firms: evaluation differs from 88 scores in Sweden to 51 in Lithuania and 29 in Latvia (expert statistics for other Scandinavian countries are absent, Fig. 10-10a).
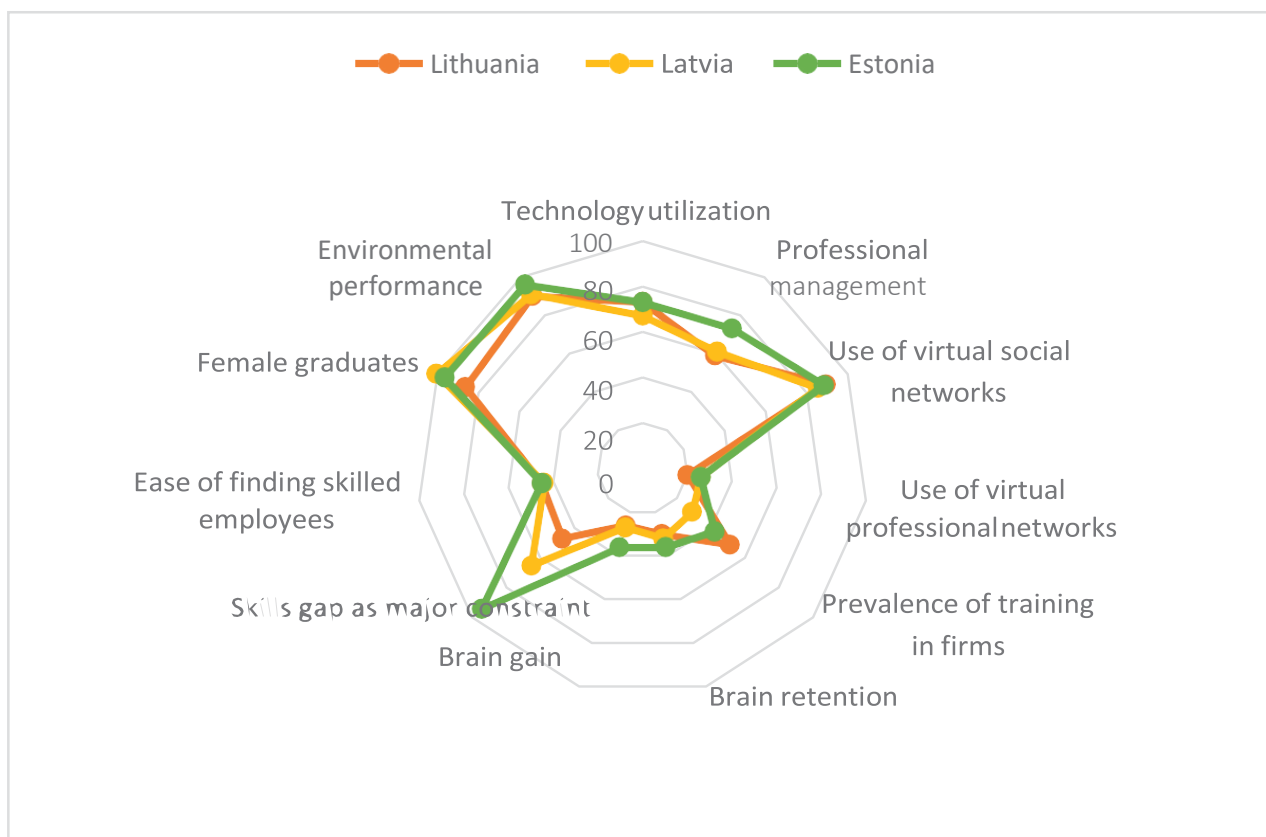
Figure 10a. Indices of professional education surrounding in the Baltic countries
Source the same as under Fig. 9.

Both more rapid development of professional education, management and retraining of specialists, along with the smart education and ICT infrastructure, should be given of greater attention in the expert evaluations of the global innovation and talent competitiveness indices (together with the use of social networks for developing competence: GTCI, 2017; European, 2016). Between the global talents´ competitiveness components characterising the professional education, the work efficiency and productivity indicators, the relationship of pay to productivity are also attributed to the factors hindering the ingenuity in Baltic countries. In addition, the export level of professional skills-intensive products and intensive services assessed by the experts was accounted.

The comparative data of *skills efficiency* in the Northern European States are presented in Fig.10-10a. They revealed short bottlenecks specific for the Baltic countries of this region in the labour productivity (Norway - 62 scores, other Scandinavians - between 43 and 47; Baltics – between 27 and 30), university rankings (Denmark and Sweden – respectively 71 and 72 scores, Latvia – 19, Lithuania 22 and Estonia 30 scores). Especially important are the level achieved and the differences in application of skills to high-value exports (Lithuania – 15 scores, Finland – 21, Norway and Sweden – respectively 28 and 29, Latvia and Estonia – respectively 32 and 34 scores). Substantial is the differentiation by innovation output: Sweden is evaluated with 81 scores, Finland – 70, Denmark – 66, Norway – 58 scores and Baltics vary from 39 (Lithuania) to 49 (Latvia) and Estonia – 65 scores.

All selected countries are on rather high levels by FDI and technology transfer: Scandinavians - between 65 scores (Denmark) and 57 (Finland); Baltics – from 72 scores (Lithuania) to 63-64 respectively in Latvia and Estonia. Unexpectedly wide variation is in new product entrepreneurial activity: from 12 scores for Norway to 60 in Denmark; Finland and Sweden are evaluated respectively 41 and 44 scores; Baltics vary between 54 scores (Estonia) and 38 (Latvia). Last years, all Northern European countries are about at the same rank by relationship of pay to productivity: Scandinavian countries between 55 and 58 scores and Baltics – between 59-60 (respectively Lithuania and Latvia) and 65 (Estonia) scores.

Figure 11. Main factors of efficiency dependence from education and competencies in the Scandinavian countries
Source same as under Fig. 9.
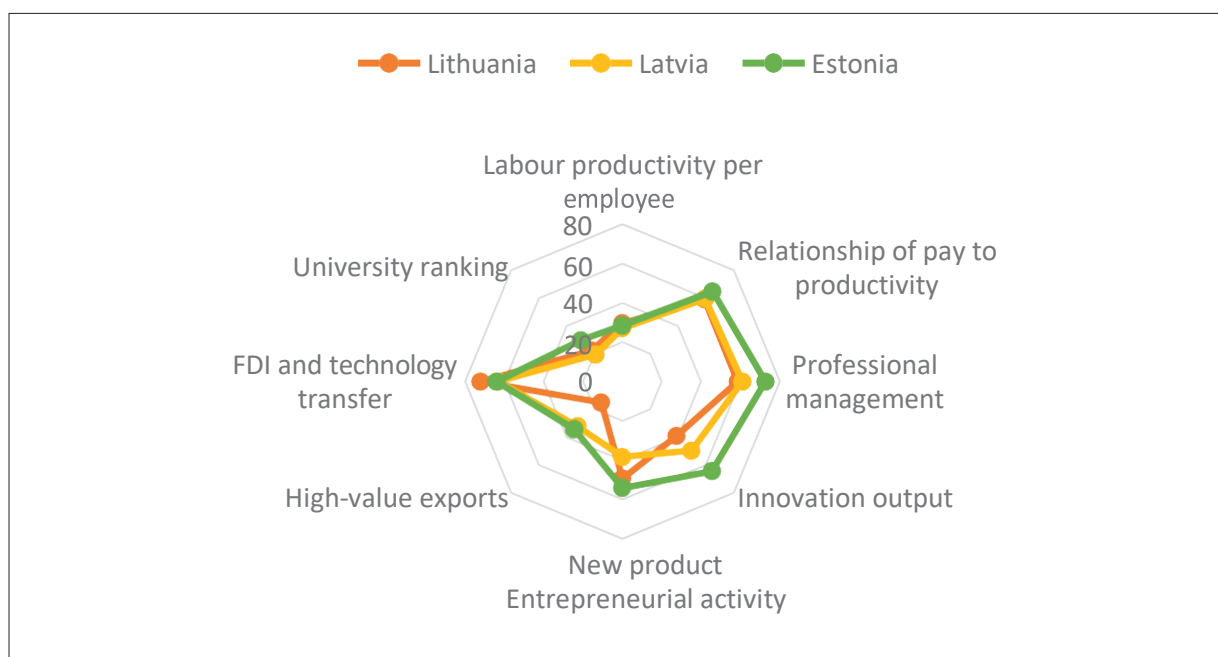
Figure 11a. Main factors of efficiency dependence from education and competencies in the Baltic countries
Source the same as under Fig. 9.

Student involvement in scientific research and related innovative business activities through specially prepared study programmes, professional practices and other forms of co-operation with business smart specialisation events, as well as the international exchange of knowledge DB and ICT packages, organisation (jointly with foreign academic institutions) of graduate courses for teachers and students, and recognition of common diplomas for specialists: all this makes a positive impact on the development of professional competence.

Better opportunities to continue professional studies and to use of the smart infrastructure a/o latest digital technology for research and professional skills development (especially for poorer students), as well as grants and other incentives for young postgraduates is creating the necessary conditions for the more wide development of perspective research and innovative business ideas. The continuing social differentiation influences substantially the innovative activity of postgraduates. It resulted of the wealthy private gains invested into new digital technologies, first-of-all into innovative non-material production and service computerization (INSEAD, 2018). In its turn, many Eastern European countries still are applying socially unfair labour income tax, compared to the assets and profits taxation, too weak social control of financial speculations.

Insufficient state support, first- of-all, in the Baltic States, was presented for education of competent students requiring a prolonged professional study (such as resident doctors, architects), also multiple practices or workshops abroad, supercomputer simulation facilities etc.
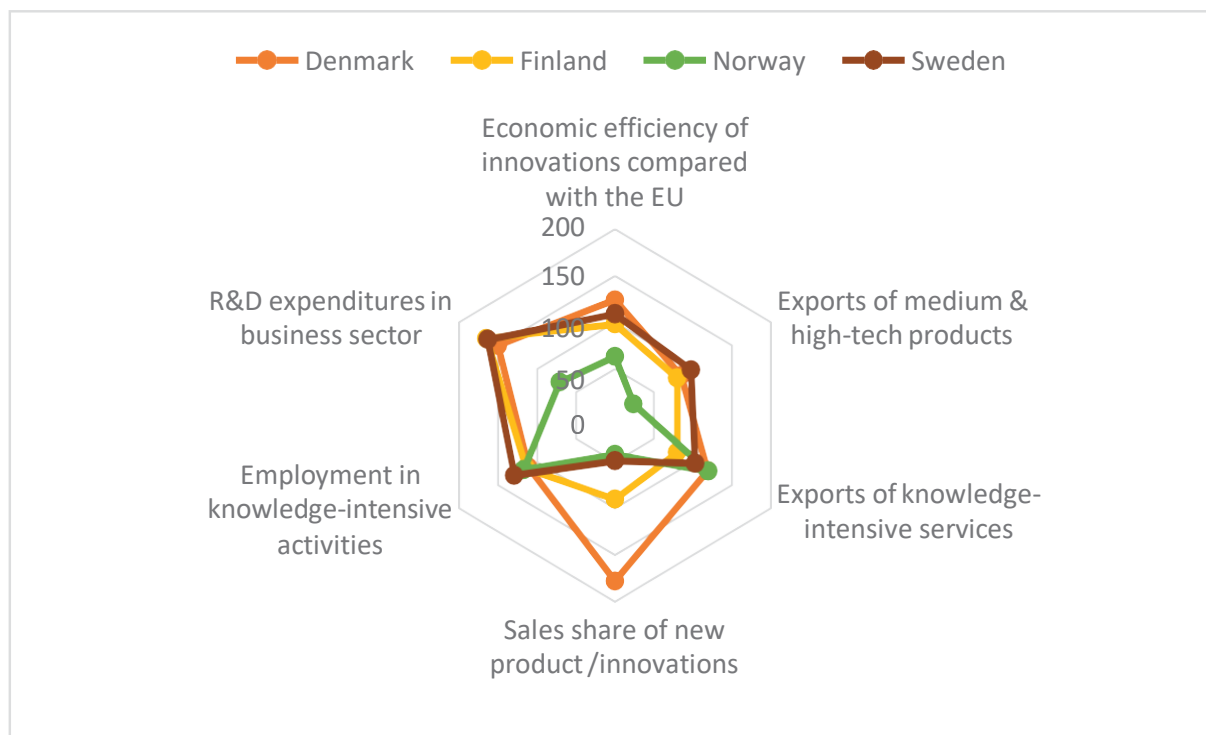
Figure 12. Main factors of professional performance in the Scandinavian countries relative to the EU

Source: European Innovation Scoreboard, 2017

By the interaction of some professional performance factors, Scandinavian states are beyond striking distance from Baltics: comparing with the EU average, the economic efficiency of innovations of Denmark was evaluated at 124 %, Sweden – 109 %, Finland – 98 % and only Norway – at 63%. At the same time, Lithuania was only at 29 %, Latvia – 44 % EU level and Estonia – 56 % (Fig. 16-17). Even more wide distribution of selected countries was by sales share of new products – from Denmark (178 %) to Sweden, Norway, Lithuania, Latvia (respectively 49-42-44-40 %) and by research expenditures in business (Finland and Sweden – respectively 165 and 163 %, Denmark – 150 %, Norway 71 %; but only 57 % in Estonia and too low 22 % in Lithuania and 11 % in Latvia).

Significant variation of selected country levels comparing with the EU average is also detected by exports of medium and high-tech products (from 24 % in Norway to 98 % in Sweden; more moderate are differences between the Baltics: from 57 % in Latvia to 76 % in Estonia). By export of knowledge-intensive services, the country levels range less: 119-120 % respectively for Denmark and Norway, 80 % - Finland, 70-79 % respectively Estonia and Latvia, but only 29 % for Lithuania.

The expert evaluations presented in the international reports shown that Baltic States have unused reserves for developing new entrepreneurial activity in knowledge-intensive services;

it is a rather serious problem for Lithuania, it depends on rather low evaluation of researchers 'productivity and talent impact on innovation. As a result, Lithuania is behind Estonia and Latvia by innovation output. Most of researchers (76.9%) in Lithuania worked in the public sector, but only 23.1% of them were associated with business enterprises (MOSTA, 2015a). The more detailed evaluation of institutional impact on the competency formation revealed the importance of the cooperation between science and business in the Baltic States in the recent years. The expected changes must include not only academic organisations like universities and colleges but also integrate the technology transfer centres, science and technological incubators, parks or valleys participating in the implementation of innovative ideas, more widely adapt ICT infrastructure for the smart education.
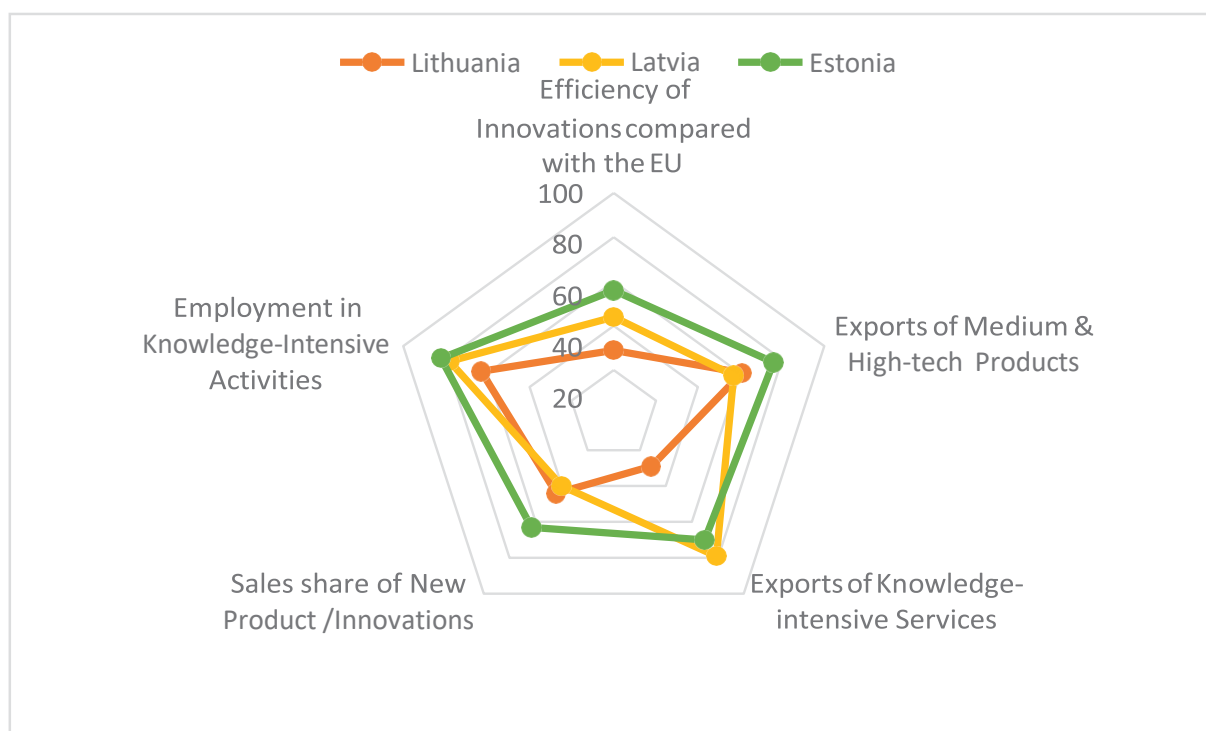
Figure 12a. Main factors of professional performance in the Baltic countries relative to the EU.

As one of the most important suggestions following from the research, is the conclusion that technological innovations which often are in the center of researches, can explain only about 25%, and social innovations – 75 % (Aslan & Çinar, 2018). In the process of consecutive sustainable development of competencies and skills, important attention must be devoted to online e-education, virtual reality, digital transfer of knowledge and skills, expertise and ingenuity of assessment technologies which should improve the quality of trained specialists and their adaptation to the newer processes of globalisation.

Among the changes favored by higher educational institutions, the development of creativity, of interdisciplinary studies is allowing to better acquire and use the innovative professional

skills. The popular suggestions are to teach all innovative offspring of the simplified business, finance, management, sociology and similar enterprising courses; they would help for engineers, technicians a/o leading specialties to become more quickly the wide profile managers and investors in professional fields effectively promoting perspective ideas. Most of special skills or professional decisions necessary for the qualified innovation risk assessment can be developed by disposing relevant e.DB, modern ICT and AI. Rather important is to increase the use of so-called demonstration packages and other computer tools, experimental classes to consolidate the vocational skills. The new e-learning opportunities liberate in some degree both the students and teachers from the collective classroom works; the remote virtual studies, "brain battles" and so on are expanded. The special system of incentives for higher education institutions is based on deep e-learning processes (Hardesty, 2017).

Sensitive and socially important aspect of universal sustainability is also different chances of representatives from various social groups to receive adequate opportunities for developing their professional talents and innovative competencies. But this wide aspect of research is scarcely illustrated by expert evaluations and require of special additional research. The social differentiation by income quintiles is in the EU about 1:5.2, and in Lithuania – 1:7.1, in Latvia - 1:6.3 (Eurostat, 2016), and the differentiation amplitude for the HR development is still widening in Lithuania (+1, 2008-16) with the economic and technological progress.

 All these approaches are oriented both to innovative efficiency and sustainability of developing HR potential.

Conclusions

The UN sustainable development goals characterise the integrated situation of the universal sustainability by international comparative indicators which revealed most strong SDG sectors of the Scandinavian States and problemic SDG sectors of the Latvia and Estonia. But their scoreboards do not detail the most actual problems of the Baltic States: innovation infrastructures and talent competency education.

The innovation policy based on HR competency education and skills development has counted on their sustainability aspects both in specific and general approaches within the global dynamic process. The core competency and innovation parameters are closely interconnected and directly dependent on the level of ICT integration within both modern learning (education) and business activities influencing the sustainable development.

The global innovation determinants are taking into account the impact of core competency but do not detail the value and ways of their impact on the dynamic sustainable development and their specific features in the countries under review.

The achievements of Scandinavian countries as innovation leaders in developing sustainable potential revealed some necessary practical changes in HR development policy of the Baltic countries. However, the widespread international innovation ratings are formally comparing the levels and parameters of the competencies and the innovative impact of vocational training and scientific researches.

It is important to update systematically the smart techniques of self-learning also personal training plans and aspirations, providing increasing access to the rapidly developing e. technologies for individual innovative skills developing, initiative, rational competitiveness and entrepreneurship, also sense of community and teamwork by realising new ideas.

The institutional impact on the competency formation must include not only academic organisations like universities and colleges, but also integrate the technology transfer centers, science and technological incubators, parks or valleys participating in the implementation of innovative ideas and must widely adapt modern ICT infrastructure for the smart education. The global evaluations of education and competencies within universal sustainable development must be joint with regional and sectoral measurements of their detailed parameters.

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Effectiveness of Simplex: The case of Portuguese social security

António Alberto Nifrário de Pinho Tavares

Abstract

Debureaucratisation initiatives are usually welcomed due to the anticipation of its benefits. Although such was the case of Simplex, its effectiveness is yet understudied and thus this scientific article aims to make a balance of the implementation of Simplex project. This balance covers both its effectiveness on the specific case of the Portuguese Social Security System as well as its levers and blockages in the ultimate goal to debureaucratise. The scarcity of information about Simplex impact encouraged this exploratory research as well as the methodological option that backed up a qualitative approach. Findings suggest Simplex is much more than deadlines and cost decrease and improving people's lives. It is not just information and communication technologies (ICT), administrative simplification and legislative simplification. Simplex has a 360° impact. It is relationship, communication and information. To achieve this, measures must be transversal to Public Administration (PA) and the private sector, demanding participation, transparency and accountability, valuing the human resources, as the best asset, because it is necessary to guarantee equity and generate trust in citizens in order to uphold the image of Social Security. But this also requires working the culture, in its most diverse facets, all with the political commitment. Overall, a suitable number of Key Performance Indicators (KPI) that allow monitoring and the comparability of the results is required as well as identifying constraints and blockages and implementing corrective measures to reduce the risks of Simplex. In this way Simplex can become a tool of continuous improvement.

Introduction

The purpose of this study is to do a balance of the implementation of Simplex project within the scope of Portuguese Social Security System contributory schemes, evaluating the effectiveness rate of the debureaucratisation process, by identifying blocks and levers (strengths and weaknesses), and eventual constraints that may motivate the review of administrative procedures or legislation.

Theme

Central and local PA have been developing administrative and political change efforts (Boyne, 2003; van der Voet, 2014), to achieve the goal of greater quality, effectiveness and efficiency in fulfilling higher public service functions that incurs. Inspired by the experiences of other countries, Portugal has initiated a reform at structures level, working methods and procedures (Rocha & Araújo, 2007). To support this purpose, several resolutions of the Council of Ministers and new laws were published. Examples of this initiative include the Restructuring Programme of Central State Administration (in Portuguese *PRACE*[1]) and the Plan for the Reduction and Improvement of Central Administration (in Portuguese *PREMAC*)[2].

The Organisation for Economic Co-operation and Development (OECD) report *Portugal reforming the State to promote growth*, of May 2013, emphasises the country's needs to define a global strategy to increase productivity and restore competitiveness with growth-focused structural reforms that go beyond the short-term budget consolidation imperative, making it sustainable over time. It also stresses that the reforms implemented to increase competition in consumer goods markets and improve labour market regulation could raise Portugal's potential Gross Domestic Product (GDP) by about 3,5% by 2020. Other structural reforms could generate potentially high gains.

This reform is in line with New Public Management (NPM), (Araújo, 2001, 2005; Rocha & Araújo, 2006; Madureira & Ferraz, 2010), which gives priority to the implementation of a new organisational culture consistent with good practices of mobilising the intellectual capital of its members and that anchor in individual participation, motivation and involvement of all employees (van der Voet, 2014), in training and empowerment of teams (Fernandez & Rainey, 2006), facing the process of debureaucratisation as a process of continuous improvement, in an incremental change logic (Kickert, 2011; Jurisch *et al*., 2012, 2013). In this way, NPM can be defined as a broad set of private sector management approaches and techniques that were replicated in public sector (Hood, 1991).

The White Paper Commission of Social Security (1998), stressed the need for urgent reform of Social Security, in a concerted way with other reforms of strong structural sense, like tax reform and all activities that generally aim for economic and social progress related, for

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[1] In Portuguese: Programa de Reestruturação da Administração Central do Estado
[2] In Portuguese: Plano de Redução e Melhoria da. Administração Central do Estado

example, with economic growth, professional qualification, prevent and fight unemployment, promote health; as well as PA reform measures, opening space for greater transparency, access to information and participation of the various stakeholders in the management of Social Security. For OECD (2013), The State plays a nuclear role in this strategy: from design to implementation, as a regulator, key-service provider and infrastructure planner. In order to reinforce the role of Government as a booster for such a structural transformation, it will be essential to reform the State and PA.

Perhaps the main vector for the design, development and implementation of these reforms is the Agency for the Administrative Modernidation (AMA, IP - Agência para a Modernização Administrativa, IP) whose mission is to "identify, develop and evaluate programmes, projects and actions for modernisation and administrative and regulatory simplification and promote, co-ordinate, manage and evaluate the distribution system of public services, within the framework of the policies defined by the Government" (2015 AMA, IP Annual Report). The Simplex programme, under its responsibility, aims to reduce administrative burdens (Sotoris, 2009) for citizens and organisations, provide faster and simpler public services, users-centred and, improve the internal efficiency of administration.

This reform is structured around the three above goals, and it is of particular sensitivity to Social Security, as a result of its irreplaceable role in ensuring social protection, *sine qua non* condition for the respect of fundamental values (Pečarič, 2016), for the preservation of well-being and social cohesion, through the sustained improvement of conditions and social protection levels and the strengthening of equity (OECD, 2013).

In the specific case of Social Security, there are a significant number of initiatives and projects of debureaucratisation and reengineering processes, implemented in order to raise the level of service provided to citizens and organisations. As in all processes of organisational change (Sminia & Van Nistelrooij, 2006), from the diagnosis of needs to the design and implementation of administrative reforms, all the outcomes of this collective effort are compromised if there is no real evaluation of the effectiveness of the measures leading to this change (Boyne, 2003; Ozcan, 2008). Although there are reports of implementation of the measures that have been attempted, doubts remain as to the extent to which programmes have been subject to systematic assessed on their impact, specifically on what is assumed to be the KPI (Araújo, 2001; Blasi, 2002; Torres, 2004; Ramalho *et al.*, 2003; Madureira & Ferraz. 2010; Vasquez, 2013) associated with the measures and its disclosure, as it competes in the administration framework of public affairs.

Therefore, the doubt about the scope of the administrative simplification measures remains, whether to the extent of their actual application, whether to the results obtained. With this research it is intended to promote the concretisation of the critical phase of the Simplex effectiveness evaluation in Social Security, and that fits in the fundamental values of continuous improvement (Kickert, 2011; Jurisch *et al.*, 2012, 2013), the legal body and the organisational processes for the introduction of new sustainable practices.

Research Problem

The public sector has been facing a series of challenges due to factors of several order (Kickert, 2011), States are challenged with growing public expectations (Pečarič, 2016). We live in the information age (Yeboah-Assiamah et al., 2016) and thus, PA is not immune to the phenomenon of globalisation of the economy and labour markets, and the consequent increase in competitiveness (Robertson & Seneviratne, 1995; Morais Sarmento & Reis, 2011). The new models of labour relations require a different approach, so the public sector must strive to be more transparent and closer to citizens (Rocha & Araújo, 2006), with an uncomplicated language that simplifies communication (Fernandez & Rainey, 2006; Stazyk & Goerdel, 2011; Fernandes & Barbosa, 2016); supported by new ICT (Buffat, 2015), data interoperability, dematerialisation and processes' simplification (Cordella & Tempini, 2015); which should require a new legal order, simpler, intelligible and above all intuitive (Morais Sarmento & Reis, 2011). ICT can also be used to support and enable bureaucratic practices in favour of government reforms and improvements in service delivery (Jain, 2004; Cordella & Tempini, 2015), ensuring key values of equity, impartiality, fairness, openness, transparency and accountability in public service delivery (Pečarič, 2016), in order to maintain legitimacy across automated decision-making process (Wihlborg et al., 2016).

Embracing market orientation practices is particularly relevant to the public sector, to achieve more citizen-focused centred services (Rodrigues & Carlos, 2010), and also to prepare organisations for the new challenges that they have to face, namely to raise trust in public servants, improving accountability and empowering citizens (Osborne & Gaebler, 1992; Virtanen & Vakkuri, 2015; Yeboah-Assiamah et al., 2016). Administrative reforms have often been associated with the NPM (Hood, 1991).

The issue of PA Reform, an old problem, remains on the agenda (OECD, 2013; Pečarič, 2016), but the proposed changes have not always fulfilled the expectations created (Kickert, 2011). The use of information technologies (IT), effective reduction in the number of civil servants, pressure on reduction of deadlines response, and budget deficit, leverage the need to rethink public sector working practices, requiring a greater rationalisation of resources (Jurisch et al., 2012). Providing simple and uncomplicated public service does not necessarily have to be synonymous of facilitation. The management of public affairs and the accountability of PA actors must remain at the forefront of concerns (Virtanen & Vakkuri, 2015).

The public reforms that have been observed since the third republic have been the cumulation of a collection of measures, countermeasures, and thus in cycle according to the ideological preferences and differentiation with the previous governmental forces (Madureira & Ferraz. 2010; Kickert, 2011). Robertson & Seneviratne (1995) pointed out that, long-term change commitment is difficult to achieve due to public officials' frequent replacement, which is linked to the electoral cycle. They also stated that without solid on-going leadership support, the viability of long-term change efforts is reduced, resulting in more frequent use of short-term initiatives that may not have as much impact as long-term developments. This dynamic has mainly resulted in the substitution of public reform measures without the time

or due evaluating mechanisms of its effectiveness have been achieved (Pečarič, 2016). Relying on this cycle that has been repeated (Aoki, 2005) as a measure of political-administrative balance is to discard the duty of exempt evaluation and the incorporation of good practices in driving organizational change to the PA.

The crisis of 2008 brought again to the limelight the role of the State (Madureira & Ferraz, 2010), and of its institutions, in society; its weight in the economy, and consequently the cost of civil service (Güzel & Çetin, 2016). In the so-called troika period, the reform was largely focused on the application of detached measures which pointed mainly to the reduction of public expenditure costs (Madureira, 2015).

In the context of organisational development (Robertson & Seneviratne, 1995), it is assumed to preside over the efforts of change objectives of greater institutional interest, which, in the case of PA, constitute the reason for being of institution's own legitimacy. The fundamental values on which the notion of public service rests embody the ethical imperative to protect the common good, such as public finances, managing efficiently without compromising effectiveness, and all the resources that are allocated to it.

Systematic change management offers the necessary tools for the documentation, tracking and auditing of any changes made to the organisation's leading change process, granting accountability and transparency (Virtanen & Vakkuri 2015). Being important to understand if PA is committed to NPM's principle of 'doing more with less' (Araújo, 2001), the research problem that motivates the present study reflects precisely this concern in understanding the extent to which, the evaluation of effectiveness or impact of administrative modernisation measures (Boyne, 2003), have been conducted and taken into account when formulated. In the specific case, as a result of direct professional knowledge, Social Security was elected as an empirical object of analysis.

The focus on Portuguese Social Security

The number of initiatives proposed in the last years do not sin by quantity, whether they are of a more incremental character, or more disruptive one (Kuipers *et al*., 2014; Kickert, 2011). Across whole PA, or directed to Social Security, aim mainly to modernise the structures of PA, betting on quality of public services, making them more efficient through simplification, rationalisation and automation of processes (Araújo, 2001; Madureira & Ferraz, 2010). The process of organisational change of Social Security has also been transversal to several areas and is therefore an interesting case, due to its complexity and sensitivity.

The Programme for legislative and administrative simplification and modernisation of public services - Simplex, which began in 2006, introduced a new dynamic in debureaucratisation of State. It is undeniable the impetus that the initiative, it can be said, with a more practical character, had and continues to have in the process of debureaucratisation of public services (OECD, 2009, 2013), with positive impacts on citizens' lives and on organisations (United Nations, 2016). But were the goals that motivated the reforms in Social Security achieved?

The *organisational structure* of Social Security institution already had several different models and denominations. In terms of *organisational change*, Social Security Institute (ISS, IP - Instituto da Segurança Social, IP) carried out several re-engineering processes, and restructuring and modernisation projects, in order to increase the efficiency and effectiveness of the institute, and to improve the relationship with citizens.

In the *technological* field, the changes were deep. In the 90's each Regional Centre had a database that did not communicate with the rest of the country, then, in 2002, the first step was taken to create a national database. The widespread use of Internet has become routine in the organisation. E-mail, relationship platforms with the citizen (Direct Social Security Platform[3] (SSD) – Internet platform), is one of the examples of e-government promoted by the institution. Apparently, the implementation of successful e-government projects would increase citizens' well-being (Duquenoy *et al*., 2005).

As far as *communication* with the citizen is concerned, the effort was also notorious. The commitment with standardisation of corporate image, concern with the simplification of written and verbal language, implementation of telephone contact centre nationwide (*VIA Segurança Social*), preparation of practical guides and informative notes, electronic forms filling available online.

At the *legislative* level, it is also worth mentioning the publication of the Code of Contributory Regimes of Social Security System, which came into force on January 1st, 2011, whose main objective was to compile in a single law all the scattered legislation regarding the contributory regimes of Social Security system. However, in its short life span, it has already eleven amendments, and its regulation six.

At the same time, it is important to perceive, on both, external and internal plan, who are Social Security stakeholders, and understand the complex interdependence relationships that, sometimes, are established with these partners, which can become a constraint to organisational development (Robertson & Seneviratne 1995).

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[3] In Portuguese Plataforma da Segurança Social Direta
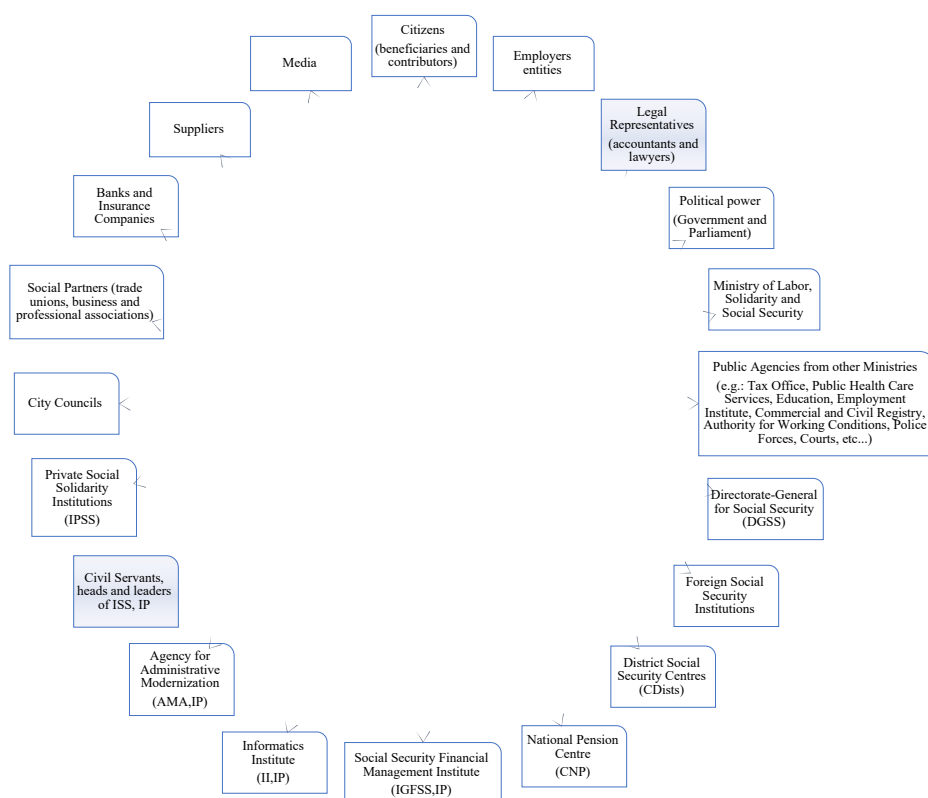
Figure 1. Social Security Stakeholders (adapted from ISS, IP Annual Report 2018)

Objectives

As pointed out, the issue of State administrative reform remains on the agenda (Pečarič, 2016). The use of IT, the effective reduction of civil servants (in 2005 ISS, IP had 15.932 employees, and presently they are 7.600, according to 2018 ISS, IP Annual Report), the requirement for shorter deadlines, and budget deficit, create pressure on public services side, imposing greater rationalisation of resources, giving in this investigation emphasis to Social Security. An effort has been made by Social Security to focus on citizens' relationship through digital platforms, improving their experience and establishing lasting trust relationships (Mintzberg, 1996). Nevertheless, the complexity of the processes resulting from the current legislative regime can be an inhibitor to leverage of administrative simplification and to the availability of new electronic services.

Though visiting a public service may still be for many citizens a painful experience (Buffat, 2015), to avoid as much as possible. The ignorance of the law, the lack of information or contradictory information, the number of documents to be delivered, the relationship with the person on the other side, the deadline for response, generate in public service users a feeling of distrust (Vigoda-Gadot et al., 2010). A new approach of customer, client and citizen concepts has arisen (Mintzberg, 1996), associated to rights but also obligations. But long-

lasting institutional patterns are not easy to change, as also social, economic and cultural institutions, due to historical traditions in State, politics, government and administration, and to institutional stability and inertia, which have a great influence on administrative reforms and organizational development (Kickert, 2011).

With this investigation, it is intended, on one hand, to give continuity to the discussion of the PA topic in the academic environment of business schools, trying to introduced the problematic of PA in management courses, namely through the analysis and discussion of case studies by students and scholars, with the expectation that the theme may be addressed, not on the political dimension, but rather in a managerial logic, seeking to convey to the public sector the best management practices, without losing focus on public service. And, on the other hand, it is also expected with this work to give a small contribution to the strengthening of Social Security Institution through internal debate.

We must note that it is not the subject of this working paper to discuss of the State's role in society and in economy, more State or less State. In the light of the current management model, we will try to understand how far the levels of Social Security productivity have improved, which efficiency and effectiveness gains have been achieved, and eventually what areas have been or could be targeted for general improvement at the level of service provided, and consequent increase of users' satisfaction.

It is therefore important to note how effective were the initiatives carried out in the context of administrative simplification process, Simplex, not only in an external but also internal logic, and for that it should be measured. In this perspective, the following research objectives were established:
- In the context of organisational change, it is intended to make a balance of the implementation of Simplex project, evaluating the achieved effectiveness of Social Security debureaucratisation process (within contributory schemes), through Simplex implemented measures, either via legislation or through administrative simplification initiatives.
- Identify levers and blockages (strengths and weaknesses) of the debureaucratisation process effectiveness, and any constraints that may motivate the review of administrative procedures or legislation.

Structure

We started by pointing out the purpose of this study, describing the theme and objectives of the research, framing the Portuguese Social Security system in the problematic of administrative simplification process in the context of State administrative reform. Accordingly, the remainder of the paper is organised as follows: Section 2 provides a review of the relevant literature, and to this end we have identified four constructs. In Section 3 we have defined the research methodology that was applied in this case study. Next, in Section

4, the data collected through the interviews carried out will be analysed, and the main findings will be revealed. The final part of the paper (Section 5) provides conclusions, limitations and makes explicit notions for future research directions in the field of Simplex effectiveness.

Literature review

Organisational change

There are signs of a new style of relationship between PA and citizens associated with NPM (Rocha & Araújo 2006; Madureira & Ferraz. 2010). The challenge is to make PA more transparent, customer oriented and more accessible to citizens (White Paper Commission of Social Security, 1998; Torres, 2004; Rocha & Araújo 2006; Vigoda-Gadot et al., 2010). The tools developed for these purposes are: Quality initiatives, one-stop shops (physical and electronic), rationalisation and simplification of administrative procedures, and a more widespread use of ICT based mechanisms, such as web-based portals and databases (Torres, 2004). However, NPM became out-dated in the sense that almost forgot the social mission of public service, considering citizens only as customers, and leaving behind good governance principles such as consensus orientation, participation, transparency, equity and inclusion (Madureira & Ferraz. 2010), emerging New Public Governance (Osborne, 2006).

Kurt Lewin characterised the mechanism of change management in three phases (Bilhim, 2013): unfreezing, changing, and refreezing. Many of the organisational change initiatives failed because they did not follow these three phases. According to Beer and Nohria (2000) 70% of all change initiatives fail (Tobias, 2015). The lack of experienced project managers (Crawford, 2006) and the project sponsor's formal support and knowledge (Gemino et al, 2007), can explain, partially, the failure of process change projects in PA (Jurisch et al., 2013), so improving project management skills is crucial for success (Sminia & Van Nistelrooij, 2006). Thus, for John Kotter (1995), organisational change often fails because it fails to generate a sense of urgency strong enough to motivate organisational members to change, also stated by the White Paper Commission of Social Security (1998). Reichard pointed out in his study that poor project management, weak participation and involvement of civil servants, and poor involvement of politicians can lead to failure (Kuipers et al., 2014).

The sense of urgency, referred by Kotter, must anchor in the perception of risk arising from misalignment with the organisational environment, from a real or impending crisis, from unexploited opportunities. As it is a complex process, John Kotter recommends that change should be driven by a team appointed for this purpose to assist in the process of developing a vision and change strategy. The project sponsor's role is therefore crucial, he needs to be committed to the project, in the means that project success relies on his/her engagement and support (Kloppenborg et al., 2014).

Kickert (2014) clustered Kotter's (1995) eight-steps change model for private sector with Fernandez & Rainey's (2006) eight success conditions model developed for change in the public sector and crossed it with the renowned Lewin's (1951) three-phase model. The result of that was a combined model of conditions for successful change in public organisations:

Table 1. Combined model of conditions for successful change in public organizations (adapted from Kickert, 2014)

1	Establish a sense of urgency, ensure the need for change, build internal support	Unfreezing stage
2	Develop a vision and strategy, provide a plan	
3	Communicate the change, empower employees for action	
4	Ensure top-management support and commitment, create a guiding coalition	
5	Build external support	
6	Provide resources	
7	Institutionalize change, anchor new approaches in culture	Refreezing stage
8	Pursue comprehensive change	

According to the researcher, the causes for organisational change failure may not relate only with the eight conditions. Nevertheless, it is consensual between many researchers that success of any change process should be strongly supported by the senior management and their employees. Leadership is regarded as an important driver of change (Kuipers et al., 2014). Moreover, van der Voet (2014) argues that the leadership role of direct supervisors should not be disregarded during organisational change process, once advocated by Russ (2008), employees are active agents of the change process.

Rigid bureaucratic structures can also inhibit effective organisational change (Robertson & Seneviratne, 1995). So, most of the time, public sector change concepts appear associated to a traditional, vertical leadership model. However, bottom-up changes require an informal, decentralised leadership (Kuipers et al., 2014). Therefore, the right combination of both change approaches: top-down strategic management and bottom-up organisational development, seemingly is the most fruitful option for full participation and active involvement of all employees, generating enthusiasm and commitment, leading to organisational change success (Sminia & Van Nistelrooij, 2006).

Yet, Kickert (2014) notes in his study that change can only remain a lasting success when it is succeeded by explicit attention to refreezing, i.e. anchoring change in new culture. Culture thus emerges as an element that fixes change. This is how for Torres (2004) there is no single model for effective public management reforms.

Some countries have carried out initiatives to create a better and more sustainable PA, often only through readjustments, in place of major transformations in their PA systems, thus seeking greater transparency and accountability, in search of closeness to citizens. Kickert (2011, 2014) stated that, small and incremental changes appeared to be far more effective and successful than visionary and disruptive changes. So, policies have to be rather stable over time (Mintzberg, 1996). Organising PA is important for countries that pursue a development effort. But, too ambitious administrative reforms, conducted at the same time, and with short implementation deadlines, raise concerns about good PA (Aoki, 2005).
Overall, to accomplish a global and integrated PA reform, according to the principles of New Public Governance, behaviours, attitudes, beliefs and job routines of civil servants and top managers are required to change (Madureira & Ferraz 2010). But there are other elements that have been identified as important determinants of implementation success, such as support by external stakeholders, communication, and the provision of adequate resources (Fernandez & Rainey, 2006).

The imperative of institutional efficiency and effectiveness

At the beginning of the 21st century, continuous pressure from citizens, on one hand, and economic context, on the other, forced PA around the world to focus on the issue of providing customer-oriented public services effectively and efficiently (Jurisch *et al*., 2013). These practices are based on theoretical principles of NPM (Hood, 1991; Rocha & Araújo, 2006).

Countries are dealing with increasing pressures on the balance of public accounts, due to demographic trends and globalisation, it is imperative that public resources be used in the most efficient and effective way (Jurisch *et al*., 2013), But, the public sector is often seen as ineffective (Mihaiu *et al*., 2010; Stazyk & Goerdel, 2011), so to ensure survival, organisations need to reduce their managerial structure, allow greater discretion and empower front-line civil servants, in order to operate more flexibly and innovatively (Robertson & Seneviratne, 1995). New organisational structures can be considered as a process of redesigning public service delivery, which may have impact on performance, but can also be used to sign new government policy priorities (Boyne, 2003).

Performance-management models are an evolutionary process (Virtanen & Vakkuri, 2015). Efficiency and effectiveness are the key terms used in assessing and measuring the performance of organizations (Ozcan, 2008). Performance management and evaluation became a key element of many countries' reform programmes (Torres, 2004), and sustain much of the *raison d'être* for public policies and PA (Virtanen & Vakkuri, 2015). As one of the

core elements of NPM, governance models (Torres, 2004), were implemented in Portugal through management by objectives with SIADAP⁴ (Madureira & Ferraz 2010).

Performance measurement has become the focus to address the issues of accountability and transparency (Goh, 2012). Results orientation, services cost and accounting programmes have become key criteria for performance management reforms (Torres, 2004). Aspects such as information about customer satisfaction, how public service delivery enhances service-user empowerment, what is the role of public services systems in the sphere of human life, are also important today (Virtanen & Vakkuri, 2015). So performance measurement information is used in decision-making, and for performance improvement, learning and change processes (Goh, 2012).

In this sense, the analysis of efficiency and effectiveness falls on the relationships between inputs, outputs and impacts. We can measure efficiency through the relation between inputs and outputs (Vasquez, 2013; Mihaiu *et al*., 2010). Efficiency relates the input or the output to the final objectives to be achieved (outcome), effectiveness shows success in using resources to achieve the goals set (Mandl *et al*., 2008). It is therefore crucial to link resources with results (Araújo, 2001).

We recognise that it is harder to achieve effectiveness goals, because they can be influenced by external factors (Mihaiu *et al*., 2010). To Rego & Cunha (2007) effectiveness is a process and not a stable result. Drucker (1977) distinguished efficiency from effectiveness by associating efficiency to "doing things right" and effectiveness to "doing the right thing". In its terminology, an efficiency measure assesses the ability of an organization to perform the outputs with the minimum level of inputs. Efficiency is primarily concerned with cost minimization and deals with the allocation of resources in alternative uses (Achabal *et al*., 1984). A measure of effectiveness assesses organisations ability to reach their pre-determined marks and goals (Keh *et al*., 2006), supported in clear targets, performance indicators and responsibility (Araújo, 2001). An organisation is effective as it achieves its objectives (Rego & Cunha 2007). It may be argued that effectiveness is the extent to which the political objectives of an organisation are achieved.

While efficiency and effectiveness are two mutually exclusive components of the overall performance measure, they can influence each other. More specifically, effectiveness can be affected by efficiency or can influence efficiency, as well as have an impact on overall performance (Ozcan, 2008). To Mihaiu *et al*. (2010) effectiveness is a necessary condition to achieving efficiency. Ozcan (2008) concludes that it is possible that an organisation can be efficient in the use of inputs, but not effective, as it can be effective, without being efficient. The goal is to achieve both in a balanced way, thereby reflecting increases in performance. According to Kuipers *et al*. (2014), Mandl *et al*. (2008) and Ozcan (2008) effectiveness (outcomes) is more difficult to evaluate than efficiency (outputs), since the outcome is

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⁴ Sistema Integrado de Avaliação de Desempenho na Administração Pública (In English: Integrated Performance Evaluation System in Public Administration)

influenced by political decisions. Mandl *et al*. (2008) also highlight that the outcome (Long-term results) is often associated with welfare or growth objectives and can therefore be influenced by multiple factors, including output (short-term results), but also external environment factors.

The challenge lies in measuring efficiency and effectiveness of public spending, because it has multiple objectives, and because public sector products and services (outputs), as they are mainly made available for free, their market value is not known. Moreover, it does not allow monetary quantification of production (output), and it must take into account factors of a social nature (Mandl *et al*., 2008; Mihaiu *et al*., 2010).

Performance measurement promotes transparency and innovation, is an incentive to productivity and debureaucratisation, encourages learning and can reinforce organizations' know-how (Vasquez, 2013), but has to detach from legal control and traditional administrative procedures (Araújo, 2001). However, Goh (2012) alerts us to the negative side of deviant behaviour related within performance measurement, such as: different stakeholders may look for different outcomes, define ambiguous goals, set unchallenging or unreachable targets, choosing indicators and targets to influence the results of the measures, working only for results, manipulating data, accomplish only monitored activities neglecting tasks that are not assessed, but equally important to services.

We require better forms of external communication, along with supportive evaluative and learning culture (Stazyk & Goerdel, 2011), which encourages knowledge sharing, learning through experience and from mistakes, tolerance of failure, flexibility and adaptability, and knowing how to use results for performance improvement (Goh, 2012). Organisational intelligence is necessary to elevate organisational-knowledge management and decision-making processes standards (Virtanen & Vakkur, 2015).

There is an increasing research stream which supports the fact that implementation of (internal and external) market-oriented behaviours proved to be an efficient strategy to higher levels of employees' job-related attitudes, particularly on job satisfaction and organisational commitment, in public sector, which may lead to success by improving organisational performance (Rodrigues & Carlos, 2010). Furthermore, political support has impact on organisational goal clarity or ambiguity, and the uncertainty associated with ambiguous goals may interfere with individual and organisational performance (Stazyk & Goerdel, 2011).

According to Walker & Boyne (2009), more work is needed in the many dimensions of performance and, particularly, in issues such as governance and democratic impacts, equity and cost-effectiveness ratio, which are usually ignored in empirical studies. In the same way, much of the knowledge about public service performance depends on a limited number of performancemeasures, and fails to establish the connections between different performance dimensions. Virtanen & Vakkur (2015) go even further by noting that the rationalistic model

has limitations, which is why it is necessary to take into account the human aspect of planning and implementing public policies and delivering public services. Goh (2012) advocates that to have an effective performance measurement system are required three critical factors: stakeholder involvement, a learning and evaluative organisational culture and managerial discretion.

Debureaucratisation, administrative simplification, e-government

Max Weber´s Theory of Bureaucracy supported hierarchical authority and functional specialisation, provided a standardised and formalised way of public service delivery, based on rules, process-driven, rationality, efficient method of organisation, and was viewed as necessary and classified as the ideal-type and the most efficient form of organisation (Jain, 2004; Yeboah-Assiamah *et al*., 2016). Nowadays, the term bureaucracy is more often used to refer to negative aspects of rule-based mechanistic organisations (Jain, 2004), than to the ideal type of organisational structure (van der Voet, 2014), due to the loss of its effectiveness (Yeboah-Assiamah *et al*., 2016).

A bureaucratic organisational structure is now defined as a high degree of centralisation, formalisation and red tape (van der Voet, 2014), and is perceived as a waste of services and inefficiencies (Yeboah-Assiamah *et al*., 2016). Multi-level governance mechanisms: global, national, regional and local, are a form of vertical bureaucracy, co-ordination and division of labour, and pave the way for complexity and interconnected policies (Virtanen & Vakkuri, 2015).

Scholars' opinions about bureaucracy are divided. Some stated that strong centralised bureaucracies with high levels of hierarchy are likely to increase organisational rigidity and to distort the flow of information within organisations, so efforts to ensure accountability may result in greater red tape and rule proliferation. While other scholars have suggested that organisational hierarchies in general have a long history of efficiency and effectiveness, and so bureaucracy and hierarchy may shape positive organisational outcomes (Stazyk & Goerdel, 2011). Therefore, can PA operate without rules or any form of structure or hierarchy?
Bureaucracy's rigid processes and standards are necessary to support progress (Smith, 2016), but at the same time do not tolerate change and suffocate innovation, so replacing them become problematic for modern PA (Yeboah-Assiamah *et al*., 2016). It is therefore necessary to balance pros and cons of bureaucracy: a very effective ancient system of organisation and managing the tension between providing for the public good and protecting individual rights (Smith, 2016).

Yeboah-Assiamah *et al*. (2016) stated that bureaucracy is seen as a generator of piles of paper and masses of rules, slowing down organisations' capacity to achieve established goals. However, due to lack of competition, public services may tend to be less proactive in the change process initiatives, being the primary objective for most public administrations

engaging in re-engineering efforts, is often just to automate existing processes through the use of ICT (Jurisch *et al*., 2012).

Despite the introduction of new innovative initiatives, in line with NPM, and post-NPM customer driven and people oriented theories, like New Public Governance (Yeboah-Assiamah *et al*., 2016), centralised hierarchical administrative structures with direct control over the activities of public organisations remains, like working methods and procedures, being the law the most important source of power and protection (Araújo, 2001; Bilhim, 2013; Pečarič, 2016).

Robertson & Seneviratne (1995), and Jurisch *et al*. (2013), also draw attention to the fact that processes in PA are delimited by laws and legal guidelines, and a multiplicity of stakeholders with different interests, which can be a constraint and may limit control over change processes. However, at the same time, it opens space to a greater participation and influence of employees and stakeholders (Jurisch *et al*., 2012). Pečarič (2016) believes that public servants can lead citizenship's active participation, as they are equally experts and citizens for whom they provide public services. Thong *et al*. (2000) advocate that managing stakeholders' interests must be taken into account, due to frequent changes imposed by elections and political appointments.

Regulation in all fields of society and economy is a key determinant for the business environment (Sotiris, 2009; Pečarič, 2016), but the time, energy and money that organisations and citizens have to spend in complying with a vast set of rules and administrative procedures stemming from existing legislation could be spared (Sotiris, 2009; Morais Sarmento & Reis, 2011), and whose work effort could be guided to more productive activities, as these burdensome bureaucratic impose waste on society (Sotiris, 2009). It is therefore imperative to produce better quality regulation (Morais Sarmento & Reis, 2011; Pečarič, 2016), but also improve public services' prevailing culture (Araújo, 2001).

Red tape cost, or administrative burden, from the point of view of waste of resources (Sotiris, 2009), has many negative impacts both on efficient use of these, and on economic resources, from the point of view of employment, weight in GDP, investment and external competitiveness of companies and countries (OECD, 2009), or even innovation (Yeboah-Assiamah *et al*., 2016), and it is of major importance, and a priority for governments, its reduction. The demanding and complex administrative obligations are a source of inefficiencies, with increasing transaction costs, administrative 'persecution', and also generalisation of micro-corruption and informal economy (Sotiris, 2009), burdening companies' production costs and withdrawing resources from investment (Morais Sarmento & Reis, 2011). In many cases, red tape limits action and decision-making process, and is a determinant for conducting business, high transaction costs related to corruption, lack of transparency, accountability and predictability of PA (OECD, 2009).

Bureaucratic structures lead to over-formalisation and therefore resulting in rigid formulation, implementation, and evaluation of public policies and systems, leaving no room for productivity (Yeboah-Assiamah *et al*., 2016). Sotiris (2009) stressed the need to measure the costs of legal-regulatory bureaucracy, as an important part of the process of reducing administrative burden and simplifying strategies of heavy regulatory complexity, often associated with compliance with declarative obligations, whose costs are by nature unproductive costs.

Improving the regulatory environment by promoting a culture of better legislative output is one of the priorities of the European Union (EU) Agenda. The goal of the Lisbon Strategy for the EU *"to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion"* (European Council Lisbon, 2000), has relied in part on the improvement of Europe's legal and regulatory environment (EU legislation and national legislation).

Sotiris (2009) emphasises the importance of using methodologies, such as the Standard Cost Model (SCM), an important tool for the reducing administrative burden, which allows the assessment of the real costs of the legal framework, expressing the total cost of red tape. The reduction of administrative burden by limiting administrative requirements and bureaucracy has contributed to increasing the efficiency and effectiveness of State apparatus (Jurisch *et al*., 2012), and is seen as a key factor to improve business environment, and an effective way to stimulate investment (Morais Sarmento & Reis, 2011; OECD, 2013).

Although, Otenyo & Lind pointed out that business process management in PA is rather regarded as a mean of rightsizing public sector and cutting red tape than a process of increasing efficiency and effectiveness, Jurisch *et al*. (2013) concluded in their investigation that the priority objectives of public sector in business process change projects were the reduction of costs and deadlines completion, and the improvement of service delivery. Notwithstanding, Sasak *et al*. (2015) found that the same processes performed in several PA units are planned and executed differently, revealing a reduced operational standardisation, different levels of quality, and different costs between specific units. It is therefore important to strive to improve State regulation effectiveness in all areas of society and economy through changes operated in the way that legislation is produced (Morais Sarmento & Reis, 2011), which requires a permanent updating of legislation in order to keep pace with the constant changes.

Once the legal-regulatory framework has been overcome (Pečarič, 2016), it is necessary to act at the processes level, their simplification and dematerialisation. So, the introduction of ICT is often associated with the administrative and institutional reforms of complex, inefficient, time-consuming, difficult to access and hierarchical structure of PA organisations (Fernandes & Barbosa, 2016). According to Di Viggiano (2011), the transition to digital administration is not only characterised by a new technological administration, but above all

it requires a redefined administration at the level of structures, functions, services and processes.

The information society, supported by ICT, plays an important role in today's economy. E-government is closely linked to the modernisation of PA (Mateus, 2008), and it should contribute to improve peoples' lives (United Nations, 2016), in line with the Digital Agenda for Europe 2020, a strategy for smart, sustainable and inclusive growth, in so far as it is evident that carrying out successful e-government projects would raise citizens' welfare (Duquenoy *et al*., 2005).

There are multiple definitions of e-government (United Nations, 2016; Duquenoy *et al*., 2005), but the term e-government is predominantly associated with the concept of service-type applications (Ahn & Bretschneider, 2011), like filing in a tax return or declaring social security wages. So, e-government implies providing information and services electronically.

Formerly ICT were mainly used for data entry and information storage, currently, human judgment is being replaced with software and decisions are made by automated programs (Buffat, 2015). People's needs and expectations require governments to be prepared to deliver and receive information and data in digital format, and manage services anytime, anywhere and through any sort of electronic devices (Fernandes & Barbosa, 2016). New technologies bring important changes for civil servants' daily routine work (Buffat, 2015). ICT are used in order to facilitate and support the organisational functions, helping improving efficiency, quality, and effectiveness, defined in the legal-normative framework of rules (Bilhim, 2013; Pečarič, 2016), designed to standardise administrative procedures and the level of public services delivery (Cordella & Tempini, 2015), as decisions are today more complex and integrated (Wihlborg *et al*., 2016).

Direct face-to-face and phone calls interactions have not vanished, once the use of Internet depends on citizens' perception of the complexity of the subject matter, as a result, administrative relationship remains multichannel (Buffat, 2015). But, ICT enabling citizens to have easier access to governmental information, programmes and services (Kim, 2014), providing citizens with powerful action resources on information regarding to their rights and obligations due to their facilitating nature (Buffat, 2015), since computer applications provide automated assessment of cases, limiting civil servants intervention and consequently their discretionary power (Kim, 2014; Wihlborg *et al*., 2016). The discretionary power paradigm is starting to change, shifting from caseworkers to other sources like policy making, system designers, legal policy staff and IT experts (Buffat, 2015).

At the same time, ICT can also help to reduce resistance to change (Ahn & Bretschneider, 2011), but new technologies do not promote decentralisation (Araújo, 2001), and new information technology applications may often increase workload (Ahn & Bretschneider, 2011), for example through the large-scale use of emails for external communications

(Davies, 2015), because public services are now a mere click away on the smart phone or tablet (Kreutzer & Land 2017).

It is equally true that the growing need of producing and exchanging information between citizens, citizens and PA, and between different agencies of PA, created massive amounts of information that now needs to be processed in a more efficient and effective way, through integration processes of data exchange (interoperability) between public services, in order to provide better service delivery (Cordella & Tempini, 2015). Fostering data interoperability is an opportunity to reduce administrative burdens and red tape, making use of two complementary approaches (Davies, 2015), as can be expected higher data quality (less error prone and updated):

A. 'Once only' data registration, citizens and organisations do not need do provide the same information twice or more to different agencies, information is shared and reused;
B. The 'whole-of-government' strategy, each public agency operates within the limits of its competencies to generate an integrated solution to the global service delivery.

There are multiple complex features that can curb ICT to achieve organisational transformation, like hierarchical structure, division of labour and rules rigidity (the Weberian bureaucracy), or other deep-rooted organisational and cultural issues, supported in the traditional accountability system, leading ICT to failure (Jain, 2004). Di Viggiano (2011) also points out that e-government presupposes a transition process to an organisational model, where back office (BO) activities are managed digitally, with few human resources, while most of the resources are allocated to the distribution of digital services, where procedures, decisions and planning are defined in partnership with citizens, encouraging the participation of civil society (Jurisch *et al*., 2012; Kim, 2014; Fernandes & Barbosa, 2016; Pečarič, 2016). But the current BO are still partially manual or mixed, being a heavy limitation for each form of technological and functional innovation (Di Viggiano, 2011). So, Re-engineering efforts in the public sector assume mostly a less radical character, given the fact that projects need to be verified for their compliance with laws and legal regulations (Jurisch *et al*., 2012).

ICT and, in particular, e-government, is expected to contribute to a more effective and efficient administration, based on simplification and reorganisation of administrative processes (cutting red tape), citizens-oriented and at a lower both operating and context costs; through process dematerialisation, facilitating multi-level communication, improving service quality and increasing transparency and equity, leading to public confidence and democratic participation in the decision-making process (Fernandes & Barbosa, 2016). Duquenoy *et al*. (2005) highlight the poor success rate of e-government projects and draws attention to the identification of the 'Critical Success Factors' at an early stage (design phase) of the project in order to prevent failure and maximise its benefits.

Public services tend to transform into 'digital agencies', developing websites and offering new electronic services, allowing digitisation of administrative processes and interactions, and

changing the relation between agencies and citizens (Buffat, 2015). At the same time, the progressive growth in the use of electronic documents open space to dematerialisation processes, and to progressive replacement of physical paper processes, through disruptive processes of "destruction of business models", whose impact of digital revolution and consequently of dematerialisation is unknown (Kreutzer & Land 2017).

Along with the benefits that we have mentioned, e-government also raises concerns that governments should be aware, like info exclusion of some sectors of society, preservation of security and data confidentiality, regulatory issues related with data privacy, limited financial resources and resistance to change (Davies, 2015; United Nations, 2016).

We can say that there is no single model or path for simplification, but the type of collaborative governance network depends on the way these three elements interact: 'principled engagement', 'shared motivation' and 'capacity for joint action' (Kossmann *et al*., 2016). The administrative system is composed of tools, policies and institutions at the service of the government. There are five main areas of action to cut red tape (OECD, 2009): reform of legal framework management to improve the structure of the administrative system (use of a better regulation); organisational re-engineering; use of ICT tools; quality of information provided on administrative requirements and service delivery level; and, co-ordination of multiple requirements resulting from PA (creation of synergies between administrative requirements).

Resistance to change and institutional inertia

We live in a time of high levels of uncertainty, turbulence and continuous changes, so change is the only certainty (Aleksic *et al*., 2015). Organisations are increasingly involved in multiple projects of continuous change processes (Aleksic *et al*., 2015), because if they do not change, they will not survive (Teng & Yazdanifard, 2015). Consequently, long-term change processes have become a more frequent pattern, therefore is important to balance the concept of 'how to manage change' with the notion of 'what to manage when' (Jones & Van de Ven, 2016).

Managing the public sector involves managing complex networks of actors with different learning, expectations and behaviours. Conflict of interest management requires negotiation (Madureira & Rodrigues, 2006; Falcão, 2018), and organisations must be aware of cultural influence (Teng & Yazdanifard, 2015). Madureira & Rodrigues (2006), also emphasise the need to adapt to the 'new world order', stressing the importance of behaviour change through an organisational learning process in the context of successful State administrative reform.

In turn, the failure of a change process is often attributed to resistance to change (Mariana & Violeta, 2011). Accordingly, the tendency to resist change and in this manner stabilise policy (Munck af Rosenschöld *et al*., 2014), or the disability to enact change is called inertia, which can occur at the individual, organisational or institutional and societal level (Stål, 2015). So,

the concept of inertia is directly related to non-decision-making processes (Oliveira *et al*., 2005).

Consequently, employees' motivation for change is an extremely important task, so they must be confident that the change will have a positive impact on themselves and on their organisation (Aleksic *et al*., 2015). To ensure the reduction of resistance to change managers must, for instance, apply to clear communication and keep information updated, foster positive motivation, establish a training plan, encourage people (Mariana & Violeta, 2011), involve employees in the change planning process and reduce stress levels at work (Aleksic *et al*., 2015). Leaders' managerial attitudes and assumptions concerning to employees' opposition during organisational change efforts are crucial to explain their reactions (Bringselius, 2014).

Change processes are subject to constant pressures of different order, so change managers should carry out a set of strategies to increase employee satisfaction and motivation in order to reduce their resistance to change (Aleksic *et al*., 2015), at the same time, these leaders should also bring together a combination of managerial attitudes (Bringselius, 2014), skills and behaviours towards employees objections to successfully achieve this goal: reduce resistance to change (Lundy & Morin, 2013).

The process of change implementation requires greater attention in planning and managing organisational changes (Aleksic *et al*., 2015). However, there does not appear to be a consensus between researchers on what causes resistance, and how it can be overcome (Kuipers *et al*., 2014). Though, the success of an organisational change process succeeds in changing in people's behaviour. It is not the led who must change first, but the leader. It is important for the leader to recognise the necessity of change, make a commitment to change, and then help others to change (Tobias, 2015).

Schreyögg *et al*. (2011), among others, advocate that path dependence: which emphasizes influence ability of past events in current and future actions, is, as well, a cause for institutional inertia. There is relevant literature, such as Núñez *et al*. (2016), advocating that institutional inertia, from the point of view of lack of institutional reforms, is due to political institutions. Deeper organisational culture: norms, values and beliefs, bound routines, processes, practices and management systems, more superficial cultural aspects, are also sources of resistance to change (Bilhim, 2013). Organisations and societies' distinctive cultural contexts, like individualism and collectivism, require different approaches to an effective change management (Teng & Yazdanifard, 2015). Beyond culture, multiple other factors can contribute to explain employees' opposition to change, like organisations' operating environment, quality of information system, nature of the activities, organisational structure, sense of urgency of change (Mariana & Violeta, 2011).

Portugal, like other southern European countries, is seen as a formalist and legalistic country, where change is achieved through law enforcement (Araújo, 2001; Torres, 2004; Bilhim, 2013;

Pečarič, 2016). The newly designed strategy no longer identifies law with reform. It is rather an instrument to make reform operational (Rocha & Araújo, 2007). According to the authors, those who wish to understand reforms do not need to study the law, but rather to analyse their results and impact. However, this does not mean that legalistic and formalist spirit does not seek to set limits to restrict the scope of reform on the basis of the interpretation of law, since this cultural dimension does not change from one day to the next.

But, implementation of most ICT projects in public organisations (Buffat, 2015; Fernandes & Barbosa, 2016; Yeboah-Assiamah *et al.*, 2016), as a tool to reduce red tape in favour of PA reforms to improve service delivery (Jain, 2004; Jurisch *et al.*, 2012; Cordella & Tempini, 2015), has a high influence on organisational environment and on working processes. Therefore, as a change process, face up resistance to change, through factors like fear of losing work autonomy, perceived quality of information and social influence (Meier & Schuppan 2013). *The Theory of Constraints* (TOC), developed by Goldratt, is recognised as a tool for improving efficiency and effectiveness and consequent increase in organisational performance. Mainly used successfully by private sector, it was also implemented in public sector (Maayan *et al.*, 2012). Each action carried out by any part of the organisation should be evaluated by its impact on the overall objectives of the organisation (Goldratt, 1990).

The constraints of a system are all those which limit that system to achieve superior performance against its goals. Goldratt argues that any organisation or process has at least a weak link, or constraint, and thus to improve the system, it is necessary to improve the weakest link. The author has developed a simple process. Defined global goals and performance indicators, the generic process of the system follows the sequence below (Goldratt, 1990):

1. Identify and prioritise system blockages and constraints based on their impact on objectives;
2. Decide how to take advantage of system constraints;
3. Subordinate everything else to the above decision (make block the "rhythm compass");
4. Raise system constraints (find a way to work around bottlenecks);
5. If in the previous stages a constraint was over past, return to step one, but inertia should not be allowed to become the constraint of the system.

Goldratt (1990) further emphasises another equivalent sequence of generic process, but expressed in the terminology of continuous improvement process, based on three phases:

1. What to change? Identify the main problems.
2. To what to change to? Build simple and practical solutions, because complex solutions do not work, and simple ones maybe. This is the big challenge.
3. How to cause the change? Encourage the right people to find the right solutions.

This theoretical view is therefore a matrix for the process and a continuous improvement tool. The investigator warns of a potential focus of resistance to change, which he entitles as

emotional resistance. He points out that any improvement is in itself a change, and any change can be seen as a threat to security (to stability), which can induce emotional resistance in people. Likewise, these elements also need to be considered in order to understand the extent of implementation and impact of reforms.

Culture is one of the main features to adaptability (Teng & Yazdanifard, 2015). Managerial attitudes toward employees objections differs from person to person, from organisation to organisation (Bringselius, 2014), like employees' response to managers attitudes and organisational changes, some accept them with enthusiasm and see them as opportunities for learning and growth, others react negatively, resisting to changes and feel a growing sense of frustration and distancing (Jones & Van de Ven, 2016).

As was stated in the above reviewed literature, and assuming that objections to organisational change are mainly based on emotions (Bringselius, 2014), there is no all in one recipe to overcome these barriers. Each organisation, each employee, each leader, each culture, each change is unique, as are the strategies to deal with resistance to change and institutional inertia.

Methodology

In today´s world we are faced with massive data, which turns scientific research methodologies outdated, however we cannot succeed without methods. As advocated by Thomas (2011), which suggests a typology to assist the construction and analysis of structure and method of case studies. Flyvbjerg (2006) states that case study is an important methodology for research, which can serve many purposes, being the most useful ones: exploration (explore subjects), description (describe situations and events), explanation (explain things); answering the questions of what, where, when, how, and address questions of why (Yin, 2009; Babbie, 2015).

With this exploratory research (Bardin, 1977; Manerikar & Manerikar, 2014; Babbie, 2015) we intend to reach a more complete and more adequate knowledge of effectiveness of Simplex in Social Security. In the case study developed, we evaluated the implementation degree of Simplex within the scope of Portuguese Social Security System contributory schemes, side effects (strengths and weaknesses of the debureaucratisation process carried out by simplex), and identified the constraints that may motivate the review of the legislation, thus incorporating all the theoretical elements revised in the previous section.

Data collection

This process began with the research of secondary data (Hox & Boeije, 2005), mapping the Simplex measures proposed for Social Security, collecting information about its concise description, objectives and impacts of the measures. We started by consulting the Simplex

webpage, and asked for additional information on effectiveness and impact reports of Simplex measures to ISS, IP on February 14, 2017, to the Office of the Secretary of State of Social Security on April 26, and to AMA, IP on March 16 (insisting on April 26 and May 15). After some contacts established with official entities, we learned that the existing information is actually what is publicly disclosed on Simplex webpage. Hence, we will work with that as the only official source.

In the Simplex webpage we have found implementation reports, but Simplex effectiveness evaluation reports or any other kind of information on the impact of the measures is scarce or inexistent. The fact that there is little information about the impact of Simplex justifies carrying out this research. So, this essay is based on exploratory research (Bardin, 1977 Manerikar & Manerikar, 2014; Babbie, 2015) which is more suitably served by a qualitative approach (Baxter & Jack, 2008) to evaluate the impact of Simplex in Social Security.

Therefore, we proceed to phase two: Primary data collection (Hox & Boeije, 2005) through interviews, individual semi-structured interviews (Myers & Newman, 2007; van den Berg & Struwig, 2017) and focus groups, also known as discussion groups or group interviews (Dawson, 2007).

Based on the analysis of the results, and in the literature review, we proceeded to the conclusions of the study (Yin, 2009). Thus, we believe that on an empirical basis and the neutrality provided by a systematised approach, we might help transforming an assumption of effectiveness into administrative reform, through an empirically supported conclusion (Birkinshaw et al., 2011).

Population and sample selection

We started to define our target population, choosinging for the purpose two Social Security stakeholders. To obtain a valid sample, a representative subset of the population, we sampled the target population (Kitchenham & Pfleeger, 2002). The sample (Gentles et al., 2015) was collected through non-probabilistic methods (Kitchenham & Pfleeger, 2002), also designated by non-causal methods that, although they do not allow the extrapolation of the results to the universe, which are very useful in an exploratory research.

The interviews were directed to target groups carefully selected, using a convenience Sampling (Kitchenham & Pfleeger, 2002), representing the group to be studied, insofar as selected participants have an insight into the research subject (Bolderston, 2012).

BO officials from District Centre of Social Security in Faro of ISS, IP that may be, direct or indirectly, connected with different business departments of Social Security System; and FO officials (customer service). For the groups discussion a purposive sampling was used, and key civil servants were identified. And, for the individual interviews we invited certified accountants and offices' accounting personnel (clerks and human resources technicians) with

responsibilities in the areas of human resources and social security (henceforth referred to as accountants), which act in the dual quality of employers, and especially as agents, representing their clients (mainly companies and businessmen). We also had the opportunity to interview a Social Security top manager (TM).

We believe that, from this sample, we were able to attain data saturation in terms of quality: data richness, and quantity, data thickness (Fusch & Ness, 2015), to produce an in-depth understanding and generate great insight (Boddy, 2016), that furthers Social Security Simplex effectiveness knowledge.

Interview guide

The qualitative interview (Qu & Dumay, 2011) is considered a powerful research tool, and one of the most important means of gathering data in qualitative research (Myers & Newman 2007), demanding from us a special attention in its preparation (Bolderston, 2012), to turn it effective (Drake, 2015).

The interview script (Jacob & Furgerson, 2012) was similar to the two target groups, and also to the TM, only one or two questions were adapted in each group. The interview was divided into three parts:
- The first part, composed by seven questions, was about general issues of the Simplex programme. It was intended to assess the degree of familiarity and knowledge with the programme and the degree of impact evaluation of the measures, to infer the generic evaluation of the value of Simplex, to identify opportunities for improvement.
- The second one had eight questions (seven for the TM) about specific application of Simplex in Social Security.
- The last part was composed by a questionnaire, and it was asked to make a general balance, in conclusion, initially supported only in the questionnaire replies, and then throughout the interview (Percy et al., 2015). In the case of focus groups, there was an additional question about a possible model for the evaluation of Simplex measures effectiveness.

The standardised open-ended questions (Turner III, 2010) of the guide allowed the researcher, based on the respondents' answers, to deviate, and explore other issues, through complementary probing questions (Du Plooy, 2009 *in* van den Berg & Struwig, 2017), generating an in-depth understanding of complex issues (Drake, 2015).

All the interviews were conducted face-to-face (Irvine, 2011), and started with a brief description of the research and interview goals (Crawford, 1997). To motivate the participation of the interviewees we clarified that there were no right or wrong answers, all opinions were important. Participants were asked for authorisation to record the interviews, to ensure the correct transcription of responses (DiCicco-Bloom & Crabtree, 2006). The interviewer ensured total confidentiality of participants' identity. Before starting the

questions, and as a last clarification, the participants were asked if there was any other doubt they would like to see clarified (Bolderston, 2012). Finally, a written statement of consent, with the objectives of the research, and the guarantee of personal data confidentiality, was read aloud and signed by both parties.

Questionnaire guide

We used a questionnaire as an interview support tool (Baxter & Jack, 2008), as it is the most frequently used instrument in research, and a structured technique for collecting primary data (Beiske, 2002). Nevertheless, it has to follow proper guidelines, and to be adequate, simple and focused on the research subject (Elias, 2015; Waidi, 2016), to work as a checking process, and aimed to capture the aspects that participants valued most (Baxter & Jack, 2008), either from a positive or a negative perspective.

Our questionnaire was presented at the end of the interview, being an integral part of it. Contains 30 closed-ended (Krosnick, 2018) multiple-choice questions; gradating feelings, interests, perceptions, preferences (Waidi, 2016); using a Likert scale (Elias, 2015) with four categories: 1 - worsened; 2 - no change, 3 - improved; 4 - greatly improved. Usually, Likert scales have five categories (strongly like, like, neutral, dislike, strongly dislike), but we opted for a scale of four categories (Siniscalco & Auriat. 2005).

Individual interviews

Interviews, one of the most popular strategies for collecting qualitative data (Myers & Newman 2007), through an oral one-on-one method (Drake, 2015), are used across many disciplines (DiCicco-Bloom & Crabtree, 2006). For this qualitative research, the semi-structured face-to-face interview was used (Bolderston, 2012)

The interviews with accountants were circumscribed to four counties of Faro's district: Faro, Loulé, Olhão and São Brás de Alportel. The delimitation of the geographical area had to be, fundamentally, with limited timescale and financial restrictions (Boddy, 2016). We conducted 20 personal interviews with accountants, counting around 26 hours of data collection. They took place between mid-May and mid-June 2017 in accountants' offices. From our point of view, the possibility to interview a Social Security TM, whose interview took place in July 6, was an asset that can only enrich this research, since it allows gathering a different perspective (Shwetha *et al.*, 2015) from that of the two stakeholders that we have elected for this investigation.

Focus Group

Focus group method allows a number of participants to be interviewed at once (Bolderston, 2012). This survey research instrument can be used in addition to an individual interview approach (Crawford, 1997), enhancing data richness (Lambert & Loiselle, 2008).

There is no consensus among researchers regarding the number of elements that a discussion group should have, but from the literature, it is possible to determine that the ideal size of a focus group should have between four and twelve members. As suggested by Crawford (1997), we decided to keep the number of participants in the middle - between six and eight participants. The two discussion groups took place in two sessions on different dates, June 13 and 14 to the BO, June 23 and July 10 to the FO. BO group was composed by seven elements, and the FO by six, representing in a whole more than seven hours of conversation.

The invited officials who participated in the discussion groups have different backgrounds, once they come from different departments, and have different academic levels and professional categories, and also, different organisational and functional tenure, offering a greater heterogeneity of experiences and points of view (Shwetha et al., 2015).

Main Findings of the Research

Data Analysis

Qualitative research methodology gives us a comprehensive approach, offering a rich collection of data, allowing a deeper understanding of the opinions and perspectives of individual participants (Keller, 2017). Being an inductive approach (Percy et al., 2015; Zhang & Wildemuth, 2016), qualitative data analysis begins with a complete set of collected data in the form of text, usually large and complex (Life, 1994), that is not straightforward to analyse (Vaismoradi et al., 2013; Bryman & Bell. 2015).

Data analysis phase is nothing more than a data reduction (Graue, 2015) or selective reduction process, so to make sense of the data with the research questions that were provided at the beginning of this research, as well as with the literature review and similarly with the theoretical ideas that we used to illuminate the subject (Bryman & Bell. 2015).

To this process is given the name of coding (Glaser & Strauss, 2006). Which is a key process, and represents the first step in the conceptualisation of the data (Seers, 2012), once it serves to organise the information collected during the semi-structured interviews and the focus group discussions (Life, 1994), by grouping textual material in order to identify recurrent themes, patterns, or concepts, and then describing and interpreting those categories (Percy et al., 2015), with the aim of examining relationships and explaining them (Graue, 2015).
Therefore, coding is a process (Saldaña, 2013) whereby raw data are broken down into their component parts and those parts are then given labels (Bryman & Bell, 2015; Zhang & Wildemuth, 2016), with the purpose of gathering information and grouping it into codes, categories, themes or larger dimensions (Smith & Firth, 2011), through the technique of categoy analysis (Bardin, 1977).

Qualitative content analysis

According with the literature there is no single approach to analyse qualitative data (Bardin, 1977; Elo & Kyngäs, 2008). Qualitative research involves data collection techniques, methods and modes of analysis (Keller, 2017). For this qualitative study, we choose a content analysis approach (Bardin, 1977; Graue, 2015; Zhang & Wildemuth, 2016). Since we do not know previous studies dealing with the phenomenon of the effectiveness of Simplex, an inductive reasoning was used (Elo & Kyngäs, 2008; Vaismoradi *et al*., 2013), moving from specific to general instances (Hashemnezhad, 2015). Therefore, this research assumes a heuristic function (Bardin, 1977), i.e. of exploratory character.

We started by coding (Saldaña, 2013) data directly from the text data with the purpose of our study (Hsieh & Shannon, 2005; Stuckey, 2015). From reading the transcripts we have generated the categories through an open coding process (Elo & Kyngäs, 2008; Zhang & Wildemuth, 2016), or, as stated by Stuckey (2015), an emergent code, resulting from concepts, actions and meanings, explored and understood from the perspective of the participants; or in other words, pictured the vision of the social world (Hashemnezhad, 2015).

For such, we created a coding dictionary (Stuckey, 2015), which helps to build a system to organise data by categories and sub-categories (Elo & Kyngäs, 2008), which were grouped into broader higher order headings, that will hold the developing of the storyline, directly related with the research question (Vaismoradi *et al*., 2013; Stuckey, 2015). I.e., to provide the means of describing the phenomenon, to increase understanding and to generate knowledge (Hsieh & Shannon, 2005), ensuring credibility (Graue, 2015) and transparency (Keller, 2017), hence, trustworthiness is core in qualitative content analysis (Zhang & Wildemuth, 2016).

Our coding process appealed to three methods: Descriptive, In Vivo and Evaluation Coding (Saldaña, 2013). The information was organised into two perspectives: external - accountants' points of view; and internal - civil servants' perception.

Results analysis

In this section we will revisit the objectives of the research through a summary of the most important results, which will be accompanied by the theoretical foundations gathered in the literature review (Yin, 2009).

Given the features of the information collected, it is not our intention to present the results of the focus groups in an individualised way, but rather representing the points of view of the discussion groups. So, the number of internal respondents is limited to a maximum of three, representing only the FO and the BO, as groups, and the TM, individually.

Our literature review is based on four constructs, which do not exhaustively cover the theme: organisational change; the imperative of institutional efficiency and effectiveness;

debureaucratisation, administrative simplification, e-government; and, resistance to change and institutional inertia.

Despite the literature review stressing the importance of efficiency and effectiveness as key terms used in assessing and measuring the performance of organisations (Torres, 2004; Ozcan, 2008), there is no evidence of a structured evaluation of Simplex measures performance through efficiency and effectiveness indicators. None of the interviewees (E-F44; I-F13)[5] know how the impact of Simplex measures have been officially assessed, which evaluation reports exist and what KPI are used. *"I do not know how to evaluate this process. I have never seen any reports on the impact of Simplex measures... they must exist, right...?"* (A17)[6]. So, according to Blasi (2002) and Vasquez (2013), no change process is effective if it is not evaluated.

Respondents identify objectives of effectiveness, efficiency and quality, but a relationship is not established as a whole to evaluate the performance of Simplex measures in the accomplishment of Social Security assignments. Consequently, no relationship is established between inputs, outputs and outcomes to assess the impact on overall performance of Simplex (Araújo, 2001; Torres, 2004; Mandl *et al*., 2008; Mihaiu *et al*., 2010; Vasquez, 2013). Within Social Security, this evaluation is very focused on ISS, IP Action Plan and on the objectives set in SIADAP, compromising the issues of accountability and transparency referred to by Goh (2012). There is no evidence of a results orientation (Torres, 2004). So, performance measurement information is used in decision-making, and for performance improvement, learning and change processes (Goh, 2012). *"when I establish that a benefit must have an average deadline of x days, I have to take into account what simplification measure is associated with that which will realistically allow this to be achieved, and as a result, this connection to the evaluation of performance of the institute as a whole and after with each of its workers"* (TM)[7].

The participants of the FO group and the TM associated the Simplex practices with the theories of NPM's model, referenced in literature review by many scholars (Hood, 1991; Araújo, 2001, 2005; Torres, 2004; Rocha & Araújo, 2006; Madureira & Ferraz, 2010), saying that *"the fact that we started to work a bit as in private did change our image out"* (FO), and *"this structured approach is very focused on what, in the most current terminology is the customer, is central"* (TM). However, civil servants consider NPM's theories to be inappropriate for the management model that is required for PA (Yeboah-Assiamah *et al*., 2016). *"in the last few years, maybe in the last 10 years, many people come from the private thinking they could treat the public issue (res publica) as a private asset, this at the management level. We stopped calling beneficiaries we started to call clients, I do not know why clients, but clients, we stopped being workers, we became collaborators. And they want to treat the public issue as if it were private. We are talking about completely different things because the public issue has nothing to do with the*

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[5] E = External Respondents; I = Internal Respondents
  N = Total of Respondents; F = Frequency of Occurrences
[6] Accountant number (A*n*) = Respondents
[7] BO = Back office group; FO = Front office group; TM = Top manager

private thing, and many of the procedures that tried to establish have come to pervert what is the public issue" (FO).

For the majority of the respondents (E-N16; I-N3), ICT are seen as the backbone of administrative simplification, and the major driver of debureaucratisation process, namely through dematerialisation process, consequently reducing paper volume, costs, and deadlines, as advocated by Yeboah-Assiamah *et al*. (2016). *"the dimension of ICT in the PA, as a tool to improve the efficiency of public service delivery is the one that is more relevant and has greater weight, which does not mean that it exhausts completely, because some others also have this nature of improving the efficiency of procedures, make them faster, more efficient, more rational from the point of view of public management"* (TM). These Simplex measures of administrative simplification have brought an overall improvement in PA service delivery, and particularly in Social Security, with direct impact on organisations and people's lives (E-N16, E-F19; I-N3, I-F10). Therefore, interviewees hold that axis II of Simplex, has been achieved through the use of ICT. *"The Simplex project is not only necessary, as it is essential, to improve service efficiency, cost reduction, time, citizen displacement, helps counterbalance the reduction of PA human resources"* (BO).

There is little evidence of process re-engineering. Only two accountants identify this matter, being in line with the statements of Jurisch *et al*. (2012), which state that administrative simplification is not supported in process reengineering but rather in automation of processes through the use of ICT. Innovation is also a term equally scarcely used that do not associate innovation with Simplex. According to Yeboah-Assiamah *et al*. (2016) it is a key factor to organisational performance being required to ensure productivity. One interviewee from the FO group, interestingly, associates re-engineering with resourcefulness saying, *"...This word, I hate this word. Reengineering is worse than resourcefulness".*

Many of the accountants and civil servants argue that legislation is seen more as a barrier to the process of reducing red tape (E-N14, E-F23; I-N3, I-F8), questioning the quality of the legislation. Being of subjective interpretation its enforcement is equally difficult, then greater legislative simplification is required, position also holded by Morais Sarmento & Reis (2011) and Pečarič (2016) and is one of the priorities of the EU Agenda. *"A simpler legislation facilitates compliance with the rules and facilitates the control by the State. It is easier for those who apply the law and for those who control the application of this law"* (A3). So, according to the respondents, the legislative simplification process has not reached yet the desired level, and consequently Axis I of Simplex has not been achieved. Sotiris (2009) stresses the need to measure the costs of legal-regulatory bureaucracy, as an important part of the process of reducing the administrative burden.

One of the negative issues related with legislation, identified by interviewees, relates to the lack of stability of the rules and excessive law-making (E-N13, E-F40; I-N3, I-F10), which is also a deterrent to planning and private investment. According to the literature review (Morais Sarmento & Reis, 2011) and OECD recommendations in the report *Portugal reforming the*

State to promote growth, of May 2013, improving business environment, and a stimulating investment is associated with the reduction of administrative burden. An accountant (A1) notes that, *"there is a legislative production that is something from the otherworld. And we sometimes even wonder: But would it be necessary so much?"*

The purposes for Simplex translate into a set of objectives of effectiveness, efficiency and quality. At the head, we have right away debureaucratisation, which is directly linked with automation and process dematerialisation. Therefore, accountants consider that Simplex has contributed to the debureaucratisation of Social Security (E-N13, E-F23), identifying many positive aspects of this process, as we can see in the literature. *"The bureaucratisation that we had with all the necessary documentation, which is now done on a platform"* (A18). Civil servants have a dual perspective (I-N2, I-F5). If, on the one hand, the relationship with Social Security is easier for citizens, because they have to deliver less documents, they can do so through the electronic platforms. On the other hand, the administrative tasks are more demanding and complex, which translates into more work for civil servants, namely by the need to collect this information manually through other sources, which is now dispensed to citizens. *"I, 10 years ago to make a... I just needed a sheet of paper. Now to make it I need 10 sheets of paper"* (FO).

Some respondents (E-N5, E-F6) highlighted bureaucracy load, which is still too high. But curious is the fact that, although greater legislative simplification is required, three participants mention that, bureaucracy is still needed (E-N3, E-F3; I-N1, I-F1), meeting Smith's (2016) position: provide for the public good and protect the individual rights. Simultaneously, automation and dematerialisation still require a strong evolution in order to comply with the purpose of debureaucratisation (Di Viggiano, 2011; Kickert, 2011; Jurisch *et al.*, 2013; OECD, 2013). *"In the face of scarcity, given the limitations that exist, we must always make the most of the issue of dematerialisation in its various aspects..."* (TM).

But deadlines and cost reduction are a reality in Social Security, despite there are still significant delays in Social Security, as stated by some accountants (E-N12, E-F15); perhaps due to the lack of process automation. Civil servants assume that there is a great difficulty in meeting deadlines by Social Security (I-N3, I-F12). *"Timely response is complicated... I think it should be... Nowadays it is not possible to provide information in a timely manner"* (BO).

Human resources is another key objective of efficiency, which is a concern for accountants and civil servants (E-N4, E-F5; I-N3, I-F14), because the reduction in the number of staff in Social Security has not been balanced by administrative simplification and process automation, which may jeopardise service delivery. An official refers that *"the machine failed to efficiently replace the number of people who were leaving, was not yet compensated..."* (FO). As advocated by Di Viggiano (2011) and Buffat (2015) the transition to e-government requires a good and adequate management of human resources. While an accountant mentions that, *"it was also being created the idea that it was necessary to reduce staff, it was created an idea that we had a PA, in general, that had too many people, it seems that in terms of ratios has not been*

demonstrated, namely comparing with other European countries" (A1); the TM alerts to the fact that, *"there is no perspective of returning to the levels we have had in the past, Social Security Institute in the last decade has lost almost half of its employees"*.

The accomplishment of the great objectives of Simplex, being leveraged by ICT, has in its genesis three pillars identified by the interviewees, which are not presented in the literature as we discuss them here: relationship, communication and information.

This relationship is now highly valued by accountants (E-N8, E-F12), relying on trust, which has been leveraged by new technologies, and greater access to information. There are now multiple forms of relationship. Accountants recognise speed (access to information, process handling and obtaining answers) as one of the advantages of Simplex (E-N6, E-F12). They privilege remote access, but face-to-face contact remains crucial. We can find mentions to this transition to multichannel relationship in the papers of several authors (Buffat, 2015; Wihlborg *et al.*, 2016). This new relationship is currently more impersonal, and for some, Social Security is more closed (Opening to outside is a new category that deserves to be explored).

While BO group (I-F3) considers that the organisation is more open to the outside, mainly by the number of access channels that today citizens have at their disposal, at the same time, there is an inability of resolution and of response from Social Security. The FO group and the TM have a different opinion (I-F6). Social Security *"is closing due to contingencies of lack of human resources"* (FO). Already the accountants share the opinion of the seconds, i.e. they consider that the organisation is more closed to the outside, and became more impersonal (E-N9, E-F18), because communication is now more problematic, like the contact and the access to people.

Communication is another pillar of Simplex, and it is extremely important for accountants. There are several communication channels available to users: - telephone, email, web portal, and FO; however, they present several barriers that inhibit the easiness and the speed access to information, and the most immediate reply, which is so much valued today. For civil servants´ external communication can never be effective if internal communication is not. Thus, for the interviewees´ communication presents multiple challenges (E-N12, E-F22; I-N3, I-F7).

Electronic platforms have greatly facilitated communication and access to information (Torres, 2004; Mateus, 2008; Buffat, 2015), being the most efficient communication channel. But email not being a widely used tool by accountants, because a significant part of the declarative obligations is already made through the SSD platform, it continues to support many communications with Social Security (E-N14, E-F26), revealing once again the low process automation. *"Now, from the administration's point of view, it* (the email) *hampers and encumber the services with more costs"* (BO). Therefore, most civil servants associate email with negative factors (I-N2, I-F14). It is a source of stress, representing a burden and a huge workload.

Already the electronic platform: SSD, is the most efficient communication channel, and therefore the most privileged by the interviewees (E-N8, E-F13), *"with time the aim will be for all services to be guided through SSD, and only use services in sporadic situations"* (A6). In accountants' opinion it allows process automation, limiting human intervention, thereby reducing discretion and deadlines. For civil servants its effectiveness is questionable (N2, F10), given the fact that its level of automation is still very low, becoming more of a communication channel for submission applications to Social Security than in an electronic tool to process information automatically.

The third pillar is information. Today there are multiple information sources, which are seeking to be increasingly rigorous, because the information guarantees greater autonomy and more security to people for the decision-making process, and for the accomplishment of their tasks. We are witnessing a voracious appetite for information, so quality and accessibility are critical attributes of information for interviewees. Kim (2014), Buffat (2015) and Fernandes & Barbosa (2016), demonstrate this through their researches.

According to the accountants (E-N11, E-F18), presently there is more information available and consequently the access to it is easier. *"There is more access to information, it deals with the process more quickly, and above all it is done in a more useful time, which facilitates all parts. From this point of view, we can say that it is much better... but sometimes when we have those issues, more specific or urgent... it becomes difficult access to services"* (A13). Civil servants point out some issues related to data quality (errors, information not available or outdated), that immediately generates an increase in contacts by citizens (I-N3, I-F12). *"The information is more transparent... sometimes it is too transparent... That makes for a lot more people to enquiry. Any little thing out of the place they are already asking"* (FO).

Duplication of information is another negative consequence of PA's voracious appetite for information, highlighted by fifteen accountants (E-F26). *"The State does not know itself, because the State when it goes to the citizen to ask for information, often he has already given them, did not give them to Social Security, gave to another site, sometimes even in Social Security itself in different departments"* (A3). Ten interviewees (E-F19) argue that it is imperative to increase interoperability and data sharing, in order to reduce administrative burden and red tape, and respond to the growing need for production and exchange of information. We find evidence of this position with Cordella & Tempini (2015) and Davies (2015). For civil servants, interoperability and data sharing are inseparable from Simplex, however, they identify a set of blockages that bound the success of initiatives of this nature (I-N2, I-F15). According to an official, *"it may be a question of data confidentiality, incompatible computer systems... it gives the idea that they do not want to provide all the information they could. PA continues to operate in a closed manner"* (BO). Nevertheless, the TM states that there have been significant advances (I-F4), *"the positive aspect that I would emphasize is the relationship with other bodies of PA, in this sense several protocols have already been concluded and we have continued to celebrate with other agencies, which allows such interoperability and mutual satisfaction of the needs of different public*

agencies to the fulfillment of their duties". Interoperability can free the citizen of all this administrative burden that results from the lack of internal data sharing within PA. An accountant (E-N1, E-F4) states that it would be equally important to boost the integration between public and private information systems, increasing efficiency through process automation.

The lack of standardisation and accuracy of information, pointed out by 12 respondents (E-F23), as well as the lack of official information, results in the ineffectiveness of response, and does not safeguard decision-making processes. Sasak *et al*. (2015) give notes in his study the low operational standardisation of public agency. *"And sometimes, personally, the people who are in the service have already given us information that I know is completely wrong. And it has already happened, we talk to person A and says yes, then we talk to person B next and says no on the same subject, then distrust and uncertainty are generated"* (A13). For civil servants (I-N2, I-F12) this lack of standardisation and accuracy of information is due to the lack of guidance at national level, which leads to mistrust and discontent in people, and make them to return to the FO service to double-check the information that had been given to them (I-N2, I-F6). *"There were several people who went there one day and the next day they return there... because they did not trust what they have been told, and sometimes well, because they have that impression"* (BO). The FO respondents and the TM recognise that it is necessary to work to improve the objectivity of information transmitted outwardly and to standardise procedures at the national level (I-F7).

The use of ICT and specially internet, being a facilitator agent of the relationship, can also be an element of exclusion. In the opinion of eight accountants (E-F9) certain target-groups, such as small businesses, particular age groups, or social classes, do not have access to informatics means, or do not have the necessary skills to use electronic platforms, to establish an electronic relationship with Social Security. Civil servants also share this concern (I-N3, I-F10), which raises issues in the relationship with Social Security. The development cannot stop, but at the same time Social Security should, temporarily, at least, ensure the necessary support to not leave behind people who cannot keep pace with new technologies. A BO member mentioned that *"on the one hand I understand, on the other hand if you leave this open way people will no longer evolve and move to the electronic platform, when they can do it and even have the ability to do it... you cannot force it, but there is a risk, to what extent..."*. E-government info exclusion is referred to by Davies (2015) and The United Nations (2016) as a concern of which governments should be mindful.

Along with administrative simplification and easier compliance with declaratory obligations, Simplex brought with it greater demands, increasing workload and administrative burden. Respondents identify these two features as risks of Simplex. Being the second, one of the most important categories of our research, mentioned by accountants (E-N19, E-F47), as well as by officials (I-N3, I-F13), should be given more attention by Simplex because, paradoxically to administrative simplification, that has been achieved, administrative burden, as stated by Sotiris (2009), represents a waste of resources and an all set of other negative aspects. *"It is*

not just to think that this is in the computer, it is a beauty and such. There is an effort that has to be expended to be able to produce those things, and if we can reduce that effort better, but it is not easy" (A1).

Social justice is an important category for respondents. The social protection model sometimes is perceived to be unfair and to distort the labor market. This category encompasses several dimensions, some of them referenced in the literature, such as equity (E-N12, E-F26; I-N2, I-F25) and trust (E-4, E-7; I-N2, I-F9). The lack of equity translates through legal norms, internal interpretations, procedures, service decisions; and in the way of dealing with situations, whether treating similar situations in the same way, and treating different situations differently, through fairer and more balanced rules for all. But also, by the need for everyone to contribute equally or in a balanced way. And then, through the redistribution of social benefits. Ten accountants (E-F21) hold that this lack of equity reflects in the disproportionality of action of the State, *"The well-intentioned person has to lead by example, this is not infallible, of course it cannot fail so much, and we cannot fail anything, any fault suffers a penalty immediately, there is not a balance here and there should be..."* (A11). These results converge with the position of several scholars and entities (Boyne, 2009; Madureira & Ferraz. 2010; Fernandes & Barbosa, 2016; Pečarič, 2016; Wihlborg *et al.*, 2016; White Paper Commission of Social Security, 1998; OECD, 2013).

The fight against fraud and tax evasion (OECD, 2013), through data-crossing, as a technological tool, can be of great importance, due to its effectiveness and efficiency, thus complementing the inspections carried out in the field. It is an instrument of equity and social justice with the capacity to increase trust. Accountants (E-N9, E-F29) highlight the importance of inspection service action. *"I advocate, whether Social Security or any other entity, what is missing is to go to the ground, because in the field is where things are caught"* (A8). Simultaneously, they also emphasise the possibilities that availability of information currently presents at the level of automatic control by data crossing (E-N16, E-F18). *"Even because the way information is crossed... and the speed with which information is made available, for sure that at this level it also has to bring improvements in the short, medium term, and of course in the long term"* (A4). In the same direction, public officials stress the performance of inspection services (I-N3, I-F6), and recognise the need to strengthen these actions on the ground should with data-crossing processes, in a timely manner (I-N3, I-F4). Because only with a more visible performance is it possible to reduce the rates of irregularities.

According to respondents (E-N4, E-F7; I-N2, I-F9), Simplex should work on citizens' trust in Social Security, through a set of tools that have at its disposal, as advocates by Vigoda-Gadot *et al*. (2010), Torres (2004) and Wihlborg *et al*. (2016). A FO participant mention that, *"there is a lack of trust in services, because for many years it worked a lot on the basis of nepotism, the civil servant in general had the power in his hand and used it as he understood... today does not happen so much...".*

In the field of political decisions, which also influence Simplex performance, we highlight the concern of respondents with the lack of stability (E-N5, E-F11; I-N2, I-F10), insofar as the interviewees advocate that the effectiveness of the change process must supports on the stability of the measures (Mintzberg, 1996; Kickert, 2011, 2014), and also in providing new Simplex measures well-structured and thought-out way (Aoki, 2005), once *"there is no continuity, no space in time to let the measures produce results, lack of stability in the measures, evaluation, give time to obtain results, the change occurs systematically"* (FO). Simplex moratorium is a very interesting category, because it is seen as a lost opportunity by governments to carry out the administrative reform of the State, given the fact that, during the period of Sovereign Debt Crisis, conditions have been extremely favourable, not only economically and socially, but also and especially emotionally. And when it was expected that more administrative simplification measures would be implemented, which would contribute to cost reduction, to debureaucratisation and to increase the efficiency of public services, Simplex remained asleep. This subject is addressed by Madureira (2015) and respondents (E-N5, E-F7; I-N2, I-F4).

The theme of culture of change is an extremely broad subject, covering several areas. Scholars like Araújo (2001) and Stazyk & Goerdel (2011) argue that it is necessary to work the culture. So, according with the opinion of several interviewees (E-N2, E-F7; I-N3, I-F5) there is no plan for managing of change, or any prior preparation, and an involvement of civil servants, motivating them for the change. The measures are made available in haste without due reflection. it is not possible to engage and motivate the people, so there is no real sense of urgency. *"I am an apologist of change, of improvement, it is the question of the way how things often come late, bad, and then there is no follow-up, you do* not *have training too"* (A11).

We find it difficult to reproduce organisational change models of Kuipers *et al.* (2014) or Kurt Lewin (1951) since it has not been possible to gather evidence on the existence of a structured model, the reason why we presumed its inexistence. Despite not knowing a structured organisational change model (Torres, 2004; Fernandez & Rainey, 2006, Kuipers *et al.*, 2014), nor have been appointed a project sponsor (Kloppenborg *et al.*, 2014), also called "Simplex ambassador" as suggested by an interviewee (A17), to lead the process of organisational change within the scope of Simplex, we cannot talk about project failure, because as expressed by the interviewees, *"nothing is worse, now it is still not what it should be..."* (A5). In the opinion of the accountants, civil servants play a leading role in the process of change generated by Simplex, thus supporting the position of (Russ, 2008).

While scholars speak of resistance to change, identifying causes and proposing solutions (Mariana & Violeta, 2011; Schreyögg *et al.*, 2011; Bilhim, 2013; Meier & Schuppan, 2013; Núñez *et al.*, 2016), respondents associate behaviours with institutional inertia and lack of sense of urgency. We can say that they are derived concepts (Stål, 2015). So the notion of inertia is directly related to non-decision-making process (Oliveira *et al.*, 2005). Institutional inertia is also directly linked to the organisational change, which according to 10 interviewees (E- F19) it can be caused by various reasons such as: delays in the availability of tools by PA

to respond to the new changes, including the suitability of forms and new versions of software, lack of training and late access to information, the offset between the rhythm of the Simplex and the rhythm of PA, lack of regulation of certain norms, lack of pro-activity from Social Security, internal organisation of Social Security, or even lack of human resources. *"We have a mixed feedback that is: we have situations where we send an email, and sometimes the same day we have an answer, and the situation is solved, and we have other situations that take months to respond... But there is still much: we have to go there and sting to wake it up"* (A19). But for one accountant the cause for institutional inertia is the enigmatic "system", *"most of the time it is not lack of will, but there is something there that prevents them from going beyond, it is the system... because the word that is used the most at the moment is the system.* (But is it the computer system or the bureaucratic system?) *The system, the overall system... I still have not realised what the system is, but the system is something like this... abstract.... and transversal... that we do not know what the system is... and we end up saying... the system, the system... and we are here with the system..."* (A5).

The public officials consider that the sense of urgency (I-N2, I-F3) passes through a greater celerity in process handling and greater focus on deadlines, and the political involvement in leading Simplex, *"And always the Ministerial commitment, for being a truly political design, of having an assigned priority. I am not only referring to the budgetary part, obviously, because all of this has high costs, but above all this leadership and accountability of the several actors, in order to invest in the measures and also guide their teams to produce those results"* (TM).

Respondents said that with Simplex and new technologies, new roles for the State and for the accountants were born (E-N15, E-F40; I-N3, I-F4), as refer e.g. by this two interviewees: *"Simplex supported a lot on new technologies, and this make us assume some of the responsibilities that should be taken by themselves"* (A5), and *"The state functioned as a consultant. It compelled people to think and make more thoughtful decisions."* (BO). This category is not alluded to in the literature review. Responsibility for information processing has been gradually being transferred to the sphere of accountants, as Social Security processes are being automated, and the State now has the role of controlling, but at the same time not being a blocker. This transfer of assignments may allow the release of resources to new emerging areas: support and consulting, and inspection, in a pedagogical relationship.

For the civil servants, the change process of Simplex is not limited to the administrative simplification, new technologies and legislation. It goes far beyond that. It also represents a deep revolution in public service, a cultural shift in people, working methods and interpersonal relationships (I-N2, I-F30). The organisational culture of Social Security, is also fruit of its diversity and complexity of relations, lives completely different cultural realities. Accountants mentioned that a change in public service is underway through an organisational culture transformation to change people (E-N8, E-F15), which also involves training and motivating them.

The culture of a democratic society is also reflected in several collective principles, such as participation, transparency and accountability. These three principles are extensively referenced in the literature review (Torres, 2004; Duquenoy *et al*., 2005; Rocha & Araújo 2006; Jurisch *et al*., 2012; Jurisch *et al*., 2013; Kim, 2014; Cordella & Tempini, 2015; Fernandes & Barbosa, 2016; Pečarič, 2016).

Accountants advocated more power of attraction to citizens through wide involvement in decisions by participative management processes (E-N9, E-F34). There is a need for greater openness to reciprocal dialogue through more participative management and greater involvement of partners in decision-making processes, to fill the gap between theoretical models and the implementation of measures in practice. An accountant notes that Simplex, *"is a process to continue, to approach more. Simplex should not be, in my understanding, Social Security on one side and citizens on the other side and have only one linking channel. It must be a space, not a linking tube. It has to be a space of relationship, where the other actors appear, like accountants and such, and to have a greater approximation in another relation"* (A19). A participative process can help to identify constraints and propose solutions, evaluating the impacts of ongoing measures and capturing new proposals, in a cycle of continuous improvement. Because the adjustment of small blockages can generate great improvements, with evident reduction of costs for the users.

Participative process should be part of all decision areas, law-making, Simplex measures, Social Security assignments. In order to improve the legislative process, 12 external participants (E-F23) call for a legislative process that is more participative and closer to practical reality, involving civil society and public institutions, generating capacity of action with the legislator. Officials consider that it is necessary to fulfill the expectations of the society through a more participative process (I-N2, I-F10), as well internally fostering a participative culture in Social Security (I-N2, I-F3), *"Citizens should be heard, see what they need and want. The services too. Decisions are made at the top without listening to the base, who is on the ground and has practical knowledge"* (BO).

Due to Social Security singularity, since it escorts citizens from birth until after death (TM), it is important to generate trust in people and to build long lasting bonds. Therefore, sustainability of the Social Security system generates trust and brings people together, being a requirement to strengthen transparency and accountability. Accountability can also be a process of continuous improvement (A3), but there is not much evidence of an effective evaluation that goes beyond perception or common sense (A4).

Transparency and participation of stakeholders are fundamental values defended by some scholars (Rocha & Araújo 2006; Torres, 2004), and also by the White Paper Commission of Social Security (1998), which according to our investigation have not yet been achieved, that from the point of view of Torres (2004) and Vigoda-Gadot *et al*. (2010), are necessary to give citizens a sense of trust and bring PA closer to people. According with the participants the involvement of citizens and civil society in everyday decisions, requires a more active stance

from the part of the society. They also refer that there is a long way to travel in terms of transparency and accountability (E-N18, E-F43; I-N3, I-F11), because in the opinion of an interviewee, *"Transparency is not a State's strengths, and never will be, at least with the current culture. Must take several generations until it happens"* (BO). We try to assess the degree of public participation of respondents, asking them if they ever had proposed any Simplex measure. Only one out of the twenty accountants answered yes, and only two FO members (out of fifteen) claim to have contributed with proposals for Simplex. *"I proposed a few years ago, but no one answered me, no one paid attention to me"* (FO). Thus, the involvement of citizens and civil society in the daily decisions of the country is still very low.

Several respondents stated that institutional marketing (E-N3, E-F9; I-N3, I-F15) is necessary to work Social Security's image and the emotional relationship with the user (Rodrigues & Carlos, 2010), building a strong relationship based on win-win partnerships (Falcão, 2018), engaging all actors, through a negotiating and participative process, to fulfill the expectations of all stakeholders. *"Social Security also does not sell itself well, it is what I say, we accountants do not know how to sell ourselves, Social Security also did not know how to move, make a campaign. Always talked about Simplex to the Tax Office, knowing that there was also a process in Social Security..."* (A19). But it has not been achieved what authors advocate as "The Good Governance Model", that requires a perfect, accountable, efficient, equitable, representative, comprehensive and transparent PA (Torres, 2004; Madureira & Ferraz, 2010; Kim, 2014), which respects the rule of law (Pečarič, 2016; Wihlborg *et al*., 2016).

According to Robertson & Seneviratne (1995), organisations need to reduce their managerial structure, allow greater discretion and empower front-line civil servants, in order to operate more flexibly and innovatively. Although there is no evidence of the adequacy of the organisational structure of Social Security, the TM highlights the need to adapt the organisational structure and assignments of Social Security, and the entire PA to the new reality, also to the new way of serving citizens and organisations, imposed by Simplex (I-F2). *"This study should be done hand-in-hand. I know that there is the prospect of some evolutions at that level, more macro, of adapting the institutes themselves to these new realities, either by transferring attributions, or whatever"* (TM). New organisational structures can be considered as a process of redesigning public service delivery (Boyne, 2003), and an adaptation to the transformations brought by Simplex.

The expectations of half of the accountants (E-F14) go in the direction that Simplex should be seen as an open process, "Simplex is something that we miss and above all is something that, according to what we have seen today, and is established, should not stop" (A17). It requires the identification of new areas and processes with greatest need of development, as well as the identification of blockages of the ongoing measures, which limit Social Security performance. According with the opinion of the majority of participants (E-N16, E-F41; I-N3, I-F19) Simplex should not end with the implementation of the measures, and therefore must advance in a logic of continuous improvement, "often measures are implemented and then there is no follow up in terms of assessing the constraints they have" (A11). This process

requires assessment, identification of deviations and implementation of corrective measures (A3), and value the error (A4), which is not part of Social Security culture. Goh (2012) refers in its study that learning through experience and from mistakes, tolerance to failure, flexibility and adaptability, and know how to use results, for performance improvement. Civil servants add that this gap in introducing process improvements results in significant costs and increased administrative burden.

In terms of the overall balance, the evaluation that 16 accountants and the officials' discussion groups make of Simplex (E- F27; I-F27), based on perception and common sense, is positive. The programme was well accepted, although recognising that it is not possible to meet the expectations of all the people. *"Simplex is good, speeds up processes, but is more demanding"* (A7). But Simplex should clarify the target groups of the measures, because accountants and civil servants do not feel as beneficiaries of Simplex (E-N6, E-F8; I-N3, I-F17), mainly due to administrative burden. It is important to look to Simplex from the point of view of the different stakeholders, which requires a multi-perspective approach. Simplex *"is focused more on the citizen, in the need of the citizen, and consequently some things turn out to be in our favuor... by chance. Most of the measures are designed for the citizen, and then are not foreseen, nor are they articulated inside. Only when the problems arise is that then internally the employees try to solve and articulate with other institutions to make things work, because usually when it is going to see if it works is in the perspective of the citizen"* (FO).

Respondents also consider that Simplex is necessary and very positive, it is successful, and it works, it represents a huge qualitative leap, it is a driver of simplification, it frees resources. However, the effectiveness of Simplex depends on the evaluation of the impacts of the measures, and the identification of levers and blockages of Simplex (E-N8, E-F20; I-N3, I-F15).

Social Security's lengthy past, identified by three respondents and by FO group, is one of those barriers, which Schreyögg *et al*. (2011) refer to as path dependence, is related to the organisation of information, and data computerisation, which narrows the performance of the services, affecting the image of the institution. Another respondent mentions that the fact of the scope of Social Security assignments being very wide, represents a high effort in the organisation of information, which makes administrative simplification more difficult. Two other interviewees report the difficulties that data confidentiality adds to Simplex, also stated in the literature review by Davies (2015) and the United Nations (2016). Moreover, we add that, data protection has been strengthened recently with the entry into force of the General Data Protection Regulation (GDPR), bringing new challenges to PA's internal data sharing and to Simplex itself. Lastly Another participant sees Simplex with a different representation; the model should be based on top-down management, with the political power involving the services, and a closer approximation of policy makers to practical reality, on the ground, through direct contact with the situations.

For civil servants, "the impact of the measures in the services has not been evaluated. Even today they continue with procedures, constraints and anomalies that should have been

revised and implemented new solutions" (BO). The blockages (I-N3, I-F15) are mainly related to the failure to evaluate the measures, the low level of process automation, the lack of human resources, the more demanding and bureaucratic administrative tasks which narrow performance and weigh on administrative burden, the deficiencies in the provision of national guidelines and harmonization and, the limitations of the software provider.

Legislation, technology and procedures form the triangle of vectors that drive Simplex (E-N9, E-F14; I-N3, I-F9). There is no consensus among the interviewees about which of the three is the true booster of Simplex, nor about the hierarchical and interdependence relationship that is established between them. Probably there may be a relationship of mutual interdependence, and each vector is conditioned and conditions the others, thus forming a system.

However, there is a tendency to choose the technological vector as the main driver of Simplex, perhaps because it is the most accessible from the operational point of view. Procedures are sometimes confused with technology itself. While legislation does not have this practical side. Yet, in the opinion of some respondents, the three vectors do not live in isolation, but complement each other.

It is important to work on the perception that the stakeholders have of the internal impact of Simplex in Social Security and bring them to the real world. The reputation and prestige of Social Security is another area that should be worked, through the reinforcement of the image of Social Security, in order to high levels of public confidence, and Simplex may play a crucial role here. Prestige and reputation are important to Social Security due to its unique character within PA (I-N1, I-F2), that requires a different outlook from Simplex, as referred by the TM, because not only *"accompanies the citizen throughout the life cycle, from the time he is born, until his active life, to his retirement, and even when he dies, Social Security is always present and has this accompaniment"* (TM), but also because *"I do not think there is any other public service in the Portuguese PA that has the same characteristics, since it is both an institution that collects revenue and at the same time performs expenses with the payment of benefits. It has very specific characteristics that which make it in a certain way special within the framework of the administration"* (TM).

Conclusions, Limitations, and Further Research

The purpose of this research is to do a balance of the implementation of Simplex project within the scope of Portuguese Social Security System contributory schemes, in the problematic of the administrative simplification process, under the context of State administrative reform, evaluating the effectiveness degree of debureaucratisation process, by identifying blockages and levers, and eventual constraints that may motivate the review of administrative procedures or legislation.

The fact that there is little information about the effectiveness, or impact, of Simplex in Social Security justifies carrying out this research. It is therefore important to note how effective were the initiatives carried out in the context of administrative simplification process: Simplex, not only in an external but also internal viewpoint, and for that it should be measured.

In this perspective, the following research objectives were established:
- In the context of organisational change, it is intended to make a balance of the implementation of Simplex project, evaluating the achieved effectiveness of Social Security debureaucratisation process (within contributory schemes), through Simplex implemented measures, either via legislation or through administrative simplification initiatives.
- Identify levers and blockages (strengths and weaknesses) of the debureaucratisation process effectiveness, and any constraints that may motivate the review of administrative procedures or legislation.

To meet a more complete and more adequate knowledge of the proposed objectives, an exploratory research method was applied (Bardin, 1977; Manerikar & Manerikar, 2014; Babbie, 2015). Since it has a pilot study nature, we carried out an empirical investigation (Birkinshaw et al., 2011) using a qualitative approach (Baxter & Jack, 2008), through personal semi-structured interviews (Myers & Newman 2007) and focus group (Dawson, 2007) to evaluate the impact of Simplex.

Final Considerations

It is not possible to link Simplex to the administrative reform of the State, but as we have been able to confirm through our investigation, Simplex is perhaps the most effective tool that governments can serve themselves to trigger the much-desired State reform.

Simplex is much more than deadlines and cost reduction and improving people's lives. It is not just ICT, administrative simplification and legislative simplification, or as we called it, the triangle of drivers: legislation, technology and procedures, is much more. Simplex has a 360° impact. It is relationship, communication and information. For this, the measures must be transversal to PA and to private sector, demanding participation, transparency and accountability, valuing the human resources, as the best asset, because it is necessary to improve equity, generate trust in citizens, raising the image of Social Security. But it is also working the culture, in its most diverse facets, all with the political commitment.

Since no change process is effective if it is not evaluated (Blasi, 2002; Vasquez, 2013), e-government is no exception, its quality should be assessed the same way traditional services are (Sá et al., 2014). Therefore, a commonsense assessment is not enough. Monitoring the results, of each Simplex measure, is part of the process to identify constraints and blockages (Goldratt, 1990), and implement corrective measures to reduce the risks of Simplex. The TOC,

developed by Goldratt, is an excellent model that could be adopted (Maayan et al., 2012) to improve efficiency and effectiveness and consequent increase in Social Security performance. For that, it is necessary to set measurable objectives of efficiency, efficacy and quality, through a suitable number of KPIs that allow the comparability of the results (Ramalho et al., 2003), for each Simplex measure, which enables assess the impact of the measures on the different stakeholders, whether internal or external. Simplex must be a tool of continuous improvement.

At the level of the legal framework, the SCM is a tool that allows to assess the real costs of the legal framework, expressing the total cost of red tape, that could be used to reduce administrative burden (Sotiris, 2009). The model must be adapted to also consider public sector costs. This model is provided in the Practical Guide for the Quantification of the Administrative Charges, available on the Simplex webpage, but we have not been able to gather evidence of its application.

Therefore, legislative simplification should play a greater role in the process of administrative simplification, although it requires a superior effort in its implementation. Procedures have changed substantially, but it is possible that the working processes have not changed so much, that is, kept up with the change in informatics and process automation. Dematerialisation should be compensated with a good dose of interpersonal relationship. This research allows us to realise that there is no sharing of good practices within PA, which could represent enormous gains in efficiency, through cost reduction.

Simplex believes in the future, and in the ability to generate change. We hope therefore that with this research we had contributed to the improvement of the effectiveness of Simplex in Social Security in concrete, and in the PA in general.

Suggestions for Further Research

As pointed out above, this investigation provides a useful basis for identifying key variables and hypothesis for future investigations (Ahn & Bretschneider, 2011). The fact that very few studies on Simplex are known, in particular on the evaluation of their effectiveness, open up a whole range of opportunities for future research in this area. For this reason, the replication of our study including other District Centres, whether of larger dimensions or even smaller District Centres, can bring new insights on the subject. A broader nationwide investigation would not be unrealistic, or involve other stakeholders, who have different interests from those of our research. We also suggest the application of this case study to other public agencies, with the possibility of further benchmarking.

Finally, we feel that each of the categories or subcategories identified in our content analysis may also allow for a more in-depth individualised research, given the wealth of information each code has provided to us. Therefore, we left some questions for future answer: To what extent can Simplex, through organizational or technological change, promote changes in

procedures and working processes? And, what contribution can Simplex make to reducing the tax level?

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Emerging Platform Work in Europe:
Hungary in Cross-country Comparison

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Abstract

In this paper, we assess the main characteristics of a growing form of precarious employment, namely platform work. These digitally enabled services cover a wide range of activities from personal low or semi-skilled services (e.g. personal transportation) to highly skilled online services such as software development. In our paper, we characterise the digital platform labour force by the content of the job, working conditions, employment status, and collective voice. The primary aim of the analysis was to give an overview of theoretical foundations and empirical evidence for an EU supported project on platform workers. Here we present an overview of the variety of terminology, definitions of platform work, and platform workers and examine the grey zone of labour law regulation in which many of them operate. We assessed the size of platform employment in Europe, indicating the knowledge inequalities within the EU countries and some methodological inconsistencies. As a case study to scrutinise the regulatory challenges accompanying diffusion of platform work, we look at the failed story of Uber in Hungary and the subsequent success of Bolt which took over the market share of the former. Our findings showed that while the size of the platform economy is growing in Europe, there is no consensus in the social scientific community either on the appropriate terminology or the most convenient methodology on how to measure its extent. This emerging form of employment represents a significant challenge not only for labour law jurisdictions, but for the softer forms of social regulation as well. To better understand the proper governance of digital labour markets and the issue of "collective voice" through the transformation of the content of work, working conditions, and employment status of the Platform Work sector, it is necessary to focus on both the transformation of work/labour as well as its interplay with value creation, governance, management and labour in the platform-based economy.

Introduction

Capitalism today is coping with the following three mega-crises: the COVID-19 pandemic and its uncertain impact on the resulting economic downturn, the culminating climate challenges[1], and the so-called automation anxiety, which is a general fear from a mass unemployment conditioned by the technological development regularly emerging since the first industrial revolution. Woven into the fabric of this triple crisis (Mazzucato, 2020) are the social and economic actors, who are facing an unprecedented structural transformation of both economic and social regulation that is the result of trajectories set in motion by the technological revolution (Perez, 2010).

In the 21st century capitalism: variously labelled, digital capitalism, platform economy, sharing economy, collaborative economy, creative economy, gig economy, etc., the front-runner or pioneering firms (e.g. Uber, Amazon, Upwork, Google etc.) "… represent a new type of *platform-based business model* that builds on the development of the of 1980s and 1990s, but combines them with new features. Whereas the previous NOC (Network of Contract) model centred largely on 'price-based competition among producers of relatively similar products', today's platform firms represent a new way to create and capture value. They do so, above all, through their capacity to extract and harness an immense amount of data in ways that allow them to operate as critical intermediaries and market makers" (Rahman & Thelen, 2019:179).

Due to societal transformation brought by digitisation, platforms achieved breakthrough changes in a variety of markets: services (e.g., Uber), physical goods (e.g., eBay), video-based information (e.g. YouTube), finance (e.g. Prosper) and labour (Upwork). Uber, which "converts taxi company employees or former medallion owners into contractors, whose access to income is through the Uber platform, while removing government from the rate-setting equation" (Kenney & Zysman, 2016:9), offers a convenient example the spectacular growth of this sector. Established in 2009, after half a decade of existence Uber operates in hundreds of cities in 60 countries and its value in 2016 was around USD 60 billon (Christensen et al., 2015:5), and when it went public in 2019 it was valued at around USD 75 billion.[2] While opinions are divided on the "booming" or "declining" character of the platform economy, however, the latest essential statistics indicate the sector's high growth potential.

Due to the grey regulation zone in which the majority of these platform companies operates, it is difficult to compare the available data on the number of workers affected by platform economy. In the US, which usually acts as a front runner on such workforce trends, almost two fifths (36%) of workers participate in the platform economy, through either their primary

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1 Almost a half century passed since the organisation of the first international gathering in Stockholm (1972) on sustainable development based on the three pillars of economy, society and environment. "Given the dismal outcome of international negotiations spanning over 47 years it is unlikely that the international declarations and agreements will be able to produce any concrete results in the foreseeable future." Gupta, 2020:215.
2 https://www.fool.com/investing/2020/02/25/if-you-invested-500-in-ubers-ipo-this-is-how-much.aspx

or secondary jobs, and for more than two fifths (44%) of them it is the primary source of income. In 2018, 3.3 millions of high-earning independent platform workers reported earning USD 100 000 or more and before the economic downturn caused by the coronavirus pandemic, it was anticipated that their share keeps growing (Duszynszki, 2020:9-10). Many such workers in the US and elsewhere may now in fact be unemployed and some, because of their independent contractor status, may not easily qualify for unemployment. Moreover, in the US, many had no health insurance through their work, and may now be both unemployed and without health care coverage.

The number of platform workers in the countries' studies varied substantially, with some unexpected findings. For example, Serbia and Romania were among the leading countries of platform workers per capita in both the world and Europe, according to a World Bank report. "Serbia has 3.52 digital workers per 1000 inhabitants, compared to 1.72 workers in the United States of America, the cradle of the gig economy" (Andjelkovic, Sapic & Skocajic, 2019:3). Even, within the EU, various surveys on the platform workers indicate substantial variations by country.

In our paper we characterise the *digital platform labour* force by content of job, working conditions, employment status and collective voice. In the digital network economy, the transformation of work and employment and their interest articulation are not driven exclusively by the technological (algorithmic) process. In this respect we are sharing the view of Grabher & Tuijl (2020:11): "… platform operators are not simply match-makers, but instead veritable market-makers. As market-makers, platform operators do not only enable individual transactions, but actually frame and co-develop the entire institutional and regulatory framework of the platform economy."

The primary aim of our analysis is to provide an overview on theoretical foundations and empirical evidences for an EU supported project on platform workers. The "CrowdWork21" project[3] aims to analyses strategies of traditional interest representative association (i.e. trade unions, employer organisations, etc.) and grassroots movements facing the challenges of finding a collective voice in the arena of the emerging new social-institutional regulations of the platform work.

The paper is structured in five sections, beginning with this introduction. The second section provides a short overview of the variety of terminology, definitions of platform work. The third assesses the size of the platform workforce in Europe, indicating the knowledge inequalities within the EU countries and some methodological inconsistencies. In the section four the regulatory challenges accompanying diffusion of platform work is illustrated by the failed story of Uber in Hungary, which reveals the common contradiction between the Labour versus Civil Code regulations of platform work, and debate in the labour law community in

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[3] The members of the international research consortium are Germany, Hungary, Portugal and Spain. For further information, please visit: https://crowd-work.eu/

the country. Finally, in our conclusion, we summarise the core issues of the analysis, and raise some future research challenges.

Platform Work: Theoretical Foundations

Discussion on Platform work terminology

While platform economy and related employment constitute a relatively new phenomenon, there is no shortage of definitions attempting to describe it with a plethora of terminology. Sedlakova (2018), for instance, identified the following terms most often used to describe platform work: crowdsourcing, sharing economy, collaborative economy, collaborative consumption, share economy, click-work, on demand economy, crowdworker, platform work, crowdwork, platform economy, gig work, platform labour. (Sedlakova, 2018:6)

In a similar vein, Heeks (2017) made a systematic analysis of the literature on digital labour and found nearly 30 different terms to describe the intersection between work, connectivity, and digital technologies. Based on a literature review, he suggested using the "prime terms" presented in Table 1.

Table 1. Terms used and the implied differences in their focus

Main focal point	Prime terms to be used
Work (labour)	online labour, crowd work, digital labour, microwork
Clients	online outsourcing, micro-sourcing
Overall domain	gig economy, platform economy

Source: Based on Heeks (2017:2)

In this relation, it is necessary to call attention on the following sector-characteristics of the platform firms: "… *service platforms* such as Uber or Upwork provide a link between requesters and providers of services; *goods platforms* like Amazon connect buyers and sellers of all kinds, and *information platforms* such as Google and Facebook connect end users to sources of information and media search, news feeds, and the like"[4].

Comparison of the results of various surveys on platform work is often hindered by the lack of harmonious terminology on digital labour and by the insufficiently systematic and uncoordinated data collection. This "knowledge deficiency" syndrome makes it difficult to undertake cross-country comparison of platform working, but it is also an impediment to developing concerted policy actions on both national and EU level public governance aimed at regulating the online labour market.

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[4] Rahman, K. S. and Thelen, K. (2019) The Rise of the Platform Business Model and the Transformation of Twenty-First-Century Capitalism, *Politics & Society,* Vol. 47(2), p. 3

The terminological choices have far reaching consequences in terms employment and working conditions of the platform workers, the content of the job as well as the taxation and social charges they would have to pay. According to Pongratz (2018): "The term 'worker' emphasises the mere status of being employed and evokes associations of routine tasks and tough working conditions. 'Freelancer' on the other hand, stresses the independence and responsibility of self-employment, including prospect of demanding jobs and reasonable income. Thus, they refer deliberately to the established discourses of work and employment in order to arouse interest among target groups with suitable skills and ambitions" (Pongratz, 2018:64). Using such characteristics of work as job quality (JQ), wages, education and training, working conditions, employment quality, work - life balance, etc., we may avoid the oversimplification in such vague terminology as 'crowdworker' and the possible misinterpretation of the research outcomes. For example, a semiotic analysis of the 44 global English language platforms, calls attention to "… the diversity of the occupational groups involved… it impedes any attempt to find an overarching category for all online works as no one category is widely used across all types of platforms' (Pongratz, 2018:64).

Definition of platform work: The Eurofound terminology

Digital platforms are a new co-ordination form of economic activities where transactions between the partners involved are carried out through a digital platform. According to Mateescu and Nguyen (2019:3), its main features are the following: (1) exhaustive data collection and data mining (2) tracking workers' activities through digital technologies in order to (3) make good management decisions, (4) a large share of which are already automated or semi-automated. It is also important that (5) the performance evaluation and incentive systems are also based on this continuous monitoring of platform workers.

In this respect, it is worth citing the definition of *Eurofound* as the largest labour research supporting foundation in Europe, co-ordinating multiple European wide surveys and case study research in the field of work and employment.

Eurofound defines digital platform work: "… is a form of employment that uses an online platform to enable organisations or individual to access other organszations or individuals to solve problems or to provide services in exchange for payment." (Eurofound, 2018:9) It is important to highlight that this definition of platform work describes it as a form of employment in which a service provider is paid by the contractor.

Reflecting the multidimensional characteristic of platform work terminology, Eurofound further specifies six characteristics of platform work: (1) the work is organised via an online platform in which (2) three parties are involved: the platform provider, the clients and the workers. Furthermore, (3) the service consists of solving problems that (4) are divided into specific tasks, which (5) are then contracted out through the platform. Finally, (6) these services are provided on-demand. (De Groen, 2018:9).

Multidimensional Character of platform work

One of the most important features of platform work is its widely heterogeneous character. It covers different kind of works both in terms of job characteristics, skill requirements as well as the nature of service provided. Of this latter element, Codagnone, Abadie, and Biagi (2016) Pajarinen et al. (2018) distinguish between platforms that are about mediating physical services requiring personal presence (e.g. Uber, Babysitter.hu, AirBnB, Delivero, Bolt etc.) and platforms where digital services are fulfilled without personal presence (e.g. Upwork, Guru, Cloud Factory, Amazon Mechanical Turk etc.). To put this in a more formalised way, the authors classified two different types of platform workers: "(a) Online Labour Markets (OLMs), in which an outcome of a job task is electronically transmittable; and (b) Mobile Labour Markets (MLMs), in which the delivery of a service requires personal presence." (Pajarinen et al., 2018:5). Works on OLM and MLM can be further distinguished according to such characteristics as the duration and the skill requirements. On OLM microtasks are those that are relatively easy and quick to perform involving routine cognitive tasks, while the other type of work called project requires higher skill level and more time to execute. Similarly, MLM jobs can be split into two other categories: "physical services (i.e. performing low skilled manual work and errands such as in TaskRabbit); MLMs for interactive services (i.e. interactive services requiring high skills such) (Codagnone et al., 2016:7 cited by Pajarinen et al., 2018:5). This typology is summarised in Table 2.

Table 2. Types of labour markets and platform works

	Online Labour Market (OLM)		Mobile Labour Market (MLM)	
Service characteristics	Electronically transmittable tasks		Services requiring personal presence	
	Microtasks	(Mini) Projects	Physical services	Interactive services
Duration	Short	Long	Short	Long
Skill level	Low-to-Middle	Middle-to-High	Low	High
Dominant form of transactions	Peer-to-Business	Peer-to-Business	Peer-to-Peer	Peer-to-Peer
Examples	Amazon Mechanical Turk	Upwork	Uber	TakeLessons

Source: Codagnone et al. (2016:7) and Pajarinen et al. (2018:5)

Pongratz (2018) adds two additional analytical dimensions to this classification that are relevant from the perspective of the heterogeneity of platform work. The first dimension is the average payment level, and the other is the term used to describe workers, jobs, the platform itself and the clients. Analysing the content of 44 website operating platforms,

Pongratz (2018) found that different types of platform work involve clearly different "discursive constructions" and that these discursive constructions exercise a strong influence as to how the partners involved (clients, workers and the platforms) perceive themselves, the other partners and the work itself. The research results are summarised in Table 3.

Table 3. The main types and semantics of various platforms

	Microtask	**Freelance platforms**	**Specialised platforms**
Task complexity	Low	High	High
Payment	Low-paid	Higher wages	Higher
Workers are addressed	… as workers	… as freelancers	… as freelancers
Jobs are labelled	Task	Project	Varies according to the purpose (design, translation, etc.)
Platform designation	Platform or marketplace	Platform or marketplace	Platform or marketplace
Buyers are called	Customers, clients, buyers	Customers, clients, buyers	Customers, clients, buyers

Source: based on Pongratz (2018:63-64).

As we can see from the Table 3, the semantics of the platforms differ greatly, especially in the case of jobs description and the way the workers are addressed. For example, jobs that are relatively simple and require lower skill level are often described as tasks or even microtasks, while jobs involving medium or highly skilled workforce are labelled as either projects or directly refer to the content of the work to be done (e.g. design, translation, etc.). When it comes to workers, platforms that deploy primarily low-skilled, low-paid microtasks tend to call their service providers workers, while platforms dealing with higher skill level jobs mostly address their workers as freelancers. However, Pongratz (2018) did not report any differences as to how these platforms designate either themselves (platforms or marketplaces) or the clients (customers, clients, buyers). This illustrates the fact that platform workers are highly individualised and their quasi-employment relations do not ensure a minimum level of job or social security: they are either independent freelancers or workers without employers.

The variety of platform work can be demonstrated not only between multiple platforms but even within one. For example, within the framework of the CrowdWork21 EU project we analysed the data available on one of the most popular global online platform company website (Upwork) and found substantial variety in professional profile of the jobs. On the Upwork freelance platform the following professionals were represented:

1. Software developers, web designers
2. IT and networking professionals
3. Data scientists and analytics expert
4. Engineers
5. Designers and creative workers
6. Writing assistant
7. Translators
8. Legal experts

Table 4 illustrates the professional profiles of the Upwork platform in the four countries (Germany, Hungary, Portugal, and Spain) participating in the "CrowdWork21" EU Project. Among the countries, Germany has a leading role, following by Spain, Portugal and finally Hungary. The difference between the frontrunner Germany, Spain and the trailing edge Hungary is more than double regarding the aggregate number of the Upworkers. The most populated professions are as follow: translation, writing and software development & web design. These professions are the most populated in the leading-edge countries (Germany and Spain). However, in the trailing-edge countries (Portugal and Hungary), the differences are less sharp in the case of "IT and Networking" (Portugal: 355 – Hungary: 345) and "Data science and analytic" (Portugal: 255 – Hungary: 245).

Table 4. Upworkers by professional profiles in Hungary, Germany, Portugal, and Spain

Profiles	Hungary	Germany	Portugal	Spain
Software Development & web-design	1235	3206	1518	2150
IT and Networking	345	706	355	524
Data Science and Analytics	245	730	255	420
Engineers	332	594	425	574
Design and Creative	1304	3381	2111	3375
Writing	493	2214	1266	2075
Translation	1304	4307	3000	4447
Legal experts	17	45	27	58
Total	4891	13489	7565	12200

Source: Hungarian National Research Team. Calculation based on Upwork.com as of April 4, 2019

Empirical Foundation

The empirical foundation of this paper is the result of combining desk research: synthesising both academic and grey literature finding on platform workers, and empirical data analysis of the three most comprehensive European projects surveying various characteristics of platform workers. Focusing on Hungary: beside reviewing the results of the surveys, the paper is using deeper experiences of the other European initiatives based on case studies focusing

on the operation of various platforms (e.g., Uber aborted attempt to establish operation on Budapest).   Finally, the debate in the labour lawyer community on the status of platform workers is briefly presented.

The three recent European wide comprehensive surveys reviewed were the following. The first is the Collaborative Economy (COLLEEM), a two-wave survey, carried out in 2017 and 2018 in 14 EU Member States in a sample UK, Spain, Germany, Netherlands, Portugal, Italy, Lithuania, Romania, France, Croatia, Sweden, Hungary, Slovakia, and Finland) among 38 878 internet users aged between 16 and 74 years. The core of this survey was to measure digital platform work as a form of employment. The second project composed by a set of surveys (Huws at.al. 2019) were conducted in 13 European countries (UK, Sweden, Netherlands, Germany, Austria, Italy, Switzerland, Estonia, Finland, Spain, France, Slovenia, and Czech Republic) mainly in the form of online. The samples composed by the age group of 16 to 75. The third survey of the European Trade Union Institute (ETUI) Internet and Platform Work Survey was carried out in 5 Central and Eastern European countries (Bulgaria, Hungary, Latvia, Poland, and Slovakia) in 2018 – 2019. The sample of 4 730 respondents covered the working age population aged between 18 and 64.

The qualitative data this paper draws mainly on the project entitled "Industrial Relations and Social Dialogue in the Age of Collaborative Economy (IRSDACE) (2017-2018) aimed to map involvement of the platform workers in social dialogue. Qualitative data was collected using the tool of the comparative country case studies. Countries participating in the project were the following: Belgium, France, Germany, Slovakia, Hungary, Spain, and Denmark. The core objective of the project was to identify the traditional social actors (i.e. trade unions, employers' associations etc.) involvement in the emerging digital labour market (Akgüc et al., 2018, and Meszmann, 2018). The Hungarian national case study covered several platforms (i.e. microwork, Airbnb, and Uber) (Meszman, 2018). This article intends to focus on the roles of the Hungarian labour relations actors in challenged the attempt of Uber to enter into the Budapest transport market in 2016. In this relation, a debate on the legal regulations of the employment status of platform workers is outlined through the legal document analysis.

Estimating Size of Platform Workers in Europe: Difficulties Created by Methodological Inconsistencies

There are three major surveys conducted in Europe on platform work. The COLLEEM survey was carried out in 2017 and 2018 in 16 EU Member States across 38,878 internet users aged 16-74 years. It aimed to measure regular platform work, which was defined as earning money through platforms at least once a month. In contrast, Huws et al. conducted a survey on platform work in 11 European countries between 2016 and 2019. The size of the samples was at least 2000 respondents in most of the countries participating in the survey. However, as Piasna and Drahokoupil (2019) rightly note: "(the results) are not directly comparable between the studies as the methodologies differed (in terms of questions asked and the weighting of the sample). Moreover, in the Huws et al. study, cross country comparisons are

limited because of the different age brackets used to define the adult population. The results reported in the two waves of COLLEEM are not directly comparable either, since the targeting of the sample was changed in the second wave." (Piasna & Drahokoupil, 2019:8)

However, it is worth highlighting their results, as these were the first attempts to measure the extent of platform work in Europe. Huws et al. found that this type of employment is most prevalent in the peripheral countries, while core countries, which are typically leading in other aspects of digital economy, are lagging. For example, 8.2 % of the adult population in the Czech Republic earn 50% or more of their income was coming from platform work. We find similarly high share of platform work in Spain (6.3%), Slovenia (5.7%) and Italy (4.9%). In contrast, the lowest share of "heavy-weight" platform workers can be found in the Netherlands, Austria, Germany, the UK, Sweden and Finland, where this ratio is below 3% (see Table 5). Similar patterns characterise the share of those platform workers who at least once a week generate income from platform work: their share is larger in less developed countries, while their presence is significantly weaker in the most developed EU Member States.

Table 5. Extent of platform work in Huws et al. and in the COLLEEM survey (% of adult population)

	Huws et al.				COLLEEM 2017 (1st) and 2018 (2nd) waves, 16-74 years				
	Ever	At least monthly	At least weekly	At least 50% of income	Ever (1st wave)	Ever (2nd wave)	Monthly or more (1st	20h+/week or 50% of income*	At least 50% income
Austria (2016 in Huws, 18-65)	18.9	12.7	9.5	2.2					
Croatia					8.1	10.7	5.2	1.1	1.0
Czechia (2019 in Huws, 18-55)	44.2	33.9	28.5	8.2		5.9		0.9	
Estonia (2018 in Huws, 18-65)	19.5	10.2	8.1	3.1					
Finland (2018 in Huws, 18-65)	15.0	9.5	8.2	2.8	6.0	6.7	4.1	0.6	0.6
France (2019 in Huws, 16-75)	15.4	10.2	7.7	3.0	7.0	7.8	5.9	0.9	1.8

Country									
Germany (2016 in Huws, 16-70)	11.9	7.8	6.2	2.5	10.4	11.9	8.1	1.5	2.5
Hungary					6.7	6.5	5.0	1.4	1.3
Ireland						13.0		2.0	
Italy (2017 in Huws, 16-70)	21.7	15.4	12.4	4.9	8.9	8.8	7.1	0.9	1.8
Lithuania					9.1	11.8	5.9	1.2	1.6
Netherlands (2016 in Huws, 16-70)	9.0	6.3	4.9	1.5	9.7	14.0	8.7	2.7	2.9
Portugal					10.6	13.0	7.1	1.5	1.6
Romania					8.1	10.5	6.4	1.4	0.8
Slovakia					6.9	6.1	5.1	0.9	0.9
Slovenia (2019 in Huws, 18-55)	36.3	23.6	18.5	5.7					
Spain (2018 in Huws, 16-65)	27.5	20.5	17.0	6.3	11.6	18.1	9.4	2.6	2.0
Sweden (2016 in Huws, 16-65)	9.5	6.2	4.9	2.6	7.2	10.2	5.3	0.9	1.6
Switzerland (2017 in Huws, 16-70)	18.2	12.7	10.0	3.5					
United Kingdom (2016 in Huws, 16-75)	9.3	5.7	4.7	2.5	12.0	12.8	9.9	1.6	4.3
United Kingdom (2019 in Huws, 16-75)	15.3	11.8	9.6	3.5					

Source: Piasna and Drahokoupil (2019:9)

Although the two surveys are not comparable, the results of the COLLEEM survey reveal different patterns than those of Huws et al. The share of heavy platform users is the highest in the UK (4.3%), the Netherlands (2.9%) and in Germany (2.5%). In contrast the lowest share

of platform workers whose income was mainly coming from platforms was found in Finland (0.6%), Romania (0.8%), Slovakia (0.9%) and Croatia (1.0%). The results of the second wave are even more contradictory. In this phase the "heavy" platform workers were defined as working 20 hours more per week or generated at least 50% of their income through platforms. Their share was the highest in the Netherlands (2.7%), Spain (2.6%) and in Ireland (2.0%). The lowest share was found in Finland (0.6%), the Czech Republic, France, Italy, Slovakia and Sweden (0.9% each).[5] Despite many differences both in their methodology and in their results, the two surveys show that a significant share of European employees regularly use platforms for generating income. The share of those who work at least once a month on platforms ranges between 4.1% and 9.9% in the first wave (2017) of the COLLEEM survey and between 5.7% and 33.9% according to the results of Huws et al.

According to the estimates of the COLLEEM project, a share of the Hungarian adult population (6.7%) makes some earnings from platform works. This ratio is well below of the rates of such countries as Spain (11.6%), Portugal (10.6%) or Germany (10.4%).
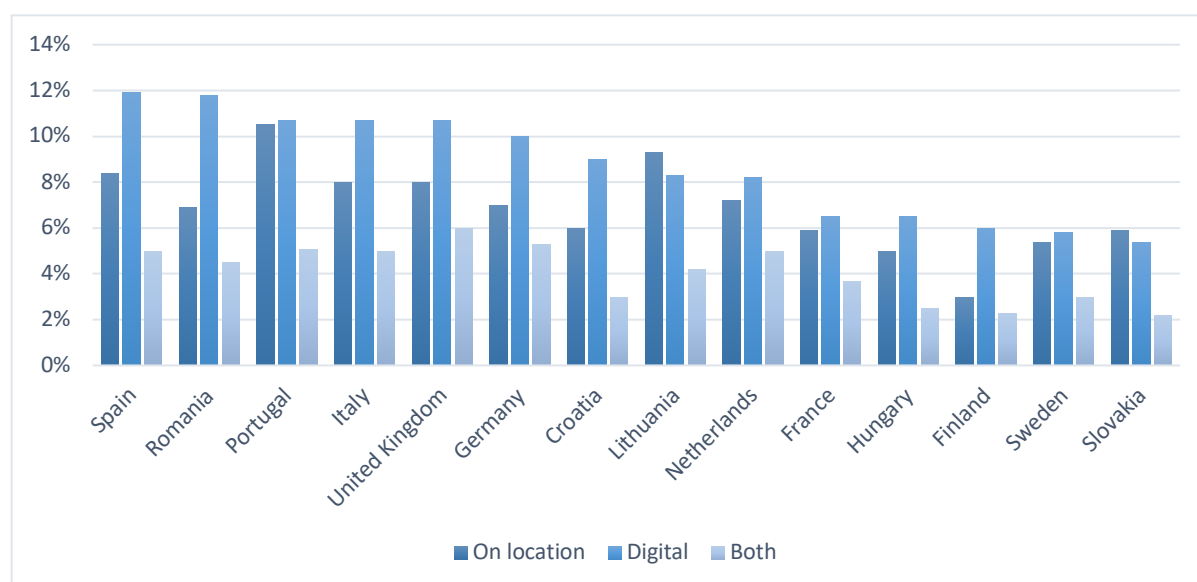

Figure 1: Types of provided service by country (2017)
Source: Pesole et al. (2019:35) (COLLEEM dataset)

In all the countries surveyed, the "digital service" sector (OLM) dominates other personal services provided on location (MLM), with the exception of Lithuania and Slovakia, but the ratio is closer in Portugal, the Netherlands, France and Sweden. In relation to the CrowdWork21 research consortium countries, it is necessary to call attention the leading roles of Spain, Portugal in comparison with Germany and especially with Hungary. Another counterintuitive result of the survey: Nordic countries with the highest level of "digital literacy" are among the "trailing edge" countries. As we mentioned earlier, the COLLEEM survey was the first attempt to map the quantitative and qualitative characteristics of platform workers in selected European countries.

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5 It is worth repeating that the two waives of the COLLEEM are not directly comparable as different weightings were applied.

The third survey was conducted by the European Trade Union Institute (ETUI) in five central and eastern European countries: Bulgaria, Hungary, Latvia, Poland and Slovakia. The ETUI Internet and Platform Work Survey was more broadly focused than the other two, with the aim of mapping the extent of any work carried out through the Internet in general: "We were interested in broad range of paid activities that can be found or carried out online and that typically fall outside of a standard employment relationship." The survey distinguished two types of working activities:

1. Broader category of *Internet work* that "covers all activities aimed at generating income through the use of websites or mobile apps" but not necessarily through online platforms. Renting and selling activities belonged to this category as well as taxi driving, delivery work, blogging or running social media accounts, freelance work including short tasks and more creative longer projects, etc.6

2. *Platform work* including all paid activities carried out through online platforms but excluding renting apartments and the sale of products.

The intended advantage of the survey designers was to better distinguish between these two types of work and create less ambiguity in the respondents. Or at least this was the aim of the survey designers. Table 6 shortly summarises the main results of the survey, which was carried out in 2018 and 2019.

Table 6. The extent of internet and platform in five CEE countries (ETUI 2018-2019)

Internet work							
	Any	**Excluding selling belonging**	**Any**	**Excluding selling belonging**	**Any**	**Excluding selling belonging**	**in the past 12 months**
Bulgaria	19.2%	13.9%	2.8%	2.6%	1.3	1.2%	2.9%
Hungary	20.0%	13.1%	4.4%	3.7%	2.1	2.1%	2.5%
Latvia	17.6%	7.6%	3.9%	3.2%	2.0	1.8%	1.7%
Poland	33.3%	20.2%	7.3%	4.7%	3.6	3.0%	n.a.
Slovakia	32.1%	28.7%	5.4%	5.1%	2.3	2.3%	0.9%
	Ever tried		At least monthly		At least weekly		At least 50% of income the last time did this work
Bulgaria	4.4%		1.5%		0.8%		1.1%
Hungary	7.8%		3.0%		1.9%		3.4%
Latvia	4.0%		0.8%		0.5%		0.7%
Poland	1.9%		0.4%		0.4%		0.1%

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6 For a detailed description of the questions and the options for the answers, see Piasna and Drahokoupil, 2019:13-15.

Slovakia	7.1%	1.1%	0.4%	1.0%

Source: ETUI Internet and Platform Work Survey; Piasna and Drahokoupil (2019:16).

Note: Share among all respondents aged 18-64.

As is evident from the data in Table 6, more workers are involved in the broader category of Internet work than in the platform work. This is especially true for the occasional working activities as the differences between the two types of digital work is largest in the case of the category of "ever tried". In contrast, the differences are smaller in the case of those who participate on the digital labour market on a more regular basis (at least monthly, or weekly or those who generated at least 50% of their income by this type of work). It is also interesting to note that while Internet work is more prevalent in Poland, the share of platform workers is the highest in Hungary. Overall, we can see that a relatively large share of the adult population tried at least once to generate income via Internet, but their ratio dramatically drops when it comes to regular working activities. It remains to be seen whether this number will grow in time and how fast.

While the coronavirus and economic aftermath make projecting the workforce trends into the future, we can anticipate some growth, particularly since more work has moved online, not only because of the continuous technological development, but also because platform workers are typically younger than those who are not active on the digital labour market; in total the average age of an individual who did some platform work at least once a year is 37.5, while the average age for those who never did so was 41.8 (Piasna & Drahokoupil, 2019:20).

Platform work contributed the most to the workers' monthly income in Hungary, with nearly one in five (18.9%) reporting that it was their only source of income, and 44% indicating that they generated half of their monthly income through platforms. The same shares are much lower in the case of the other four countries. However, we must be cautious in interpreting these data as the respondent's opinion might be biased about the real extent of this contribution or simply did not want to tell the truth because of tax-avoidance concerns.
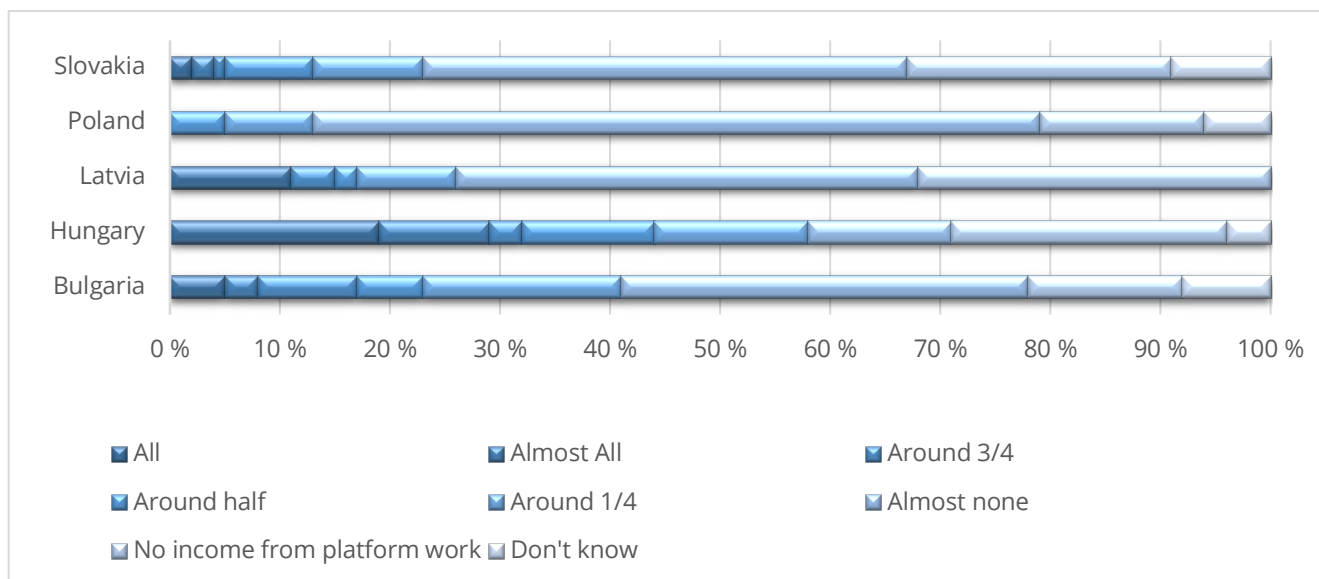
Figure 2. Contribution of platform work to monthly personal income by country among respondents who had ever tried platform work (%)
Source: ETUI Internet and Platform Work Survey; Piasna and Drahokoupil (2019:33).

If we compare the results of the ETUI Internet and Platform Work survey with previous two surveys, we can see that the results are closer to those of the COLLEEM survey, although in the latter case the sampling population was larger and included a wider range of people between 16-74 years of age, the results therefore are not directly comparable. Nevertheless, two countries represented in both surveys, namely Hungary and Slovakia, which were similar in both surveys: 6.7% vs 7.8% in the case of the former and 6.9% vs 7.1% in the case of the latter survey.

In addition, the ETUI Survey found that in Hungary more people generate at least 50% of their income via platform work than those who work for platforms on a monthly basis (3.4% vs 3.0%). In the case of Slovakia, people who earned at least half of their income is around 1% according to both surveys (see Table 7).

Table 7. The results of the COLLEEM and the ETUI survey on platform workers

		Ever	**At least monthly**	**At least 50% of income**
Hungary	COLLEEM	6.7%	5.0%	1.3%
	ETUI	7.8%	3.0%	3.4%
Slovakia	COLLEEM	6.9%	5.1%	0.9%
	ETUI	7.1%	1.1%	1.0%

Source: COLLEEM survey and ETUI Internet and Platform Work Survey

Regulatory challenges of platform work: the Uber failure in Hungary

"*Don't ask permission, ask forgiveness*". This well-known Silicon Valley motto is quoted in a recent study written by Kathleen Thelen, who described a common approach used by many platform companies penetrating in different markets (Thelen, 2018:939). Platform companies are often operating on special two-sided markets when the rule of "winner-takes-all" applies, which means that first movers gain market leadership early on, and thus attract the vast majority of users from other platforms. The best case to illustrate this dynamic is Facebook: once it became the clear-cut market leader, users of other similar platforms joined, often quitting other platforms such as My Space, in the case of Facebook. This market dynamic represents a significant motivation for these companies to act quickly, sometimes breaching the rules by design, but more predominantly discovering and using regulatory holes. In many instances, the regulatory framework is new or in some cases non-existing, and regulators often find themselves struggling to catch up and keep pace with technological development and regulatory and tax avoidance by the companies.

A good case to illustrate this complex interplay between institutions, private market actors, soft and hard forms of regulation, and customers is to observe how Uber entered into the Hungarian market. Soon after its foundation in San Francisco (March 2009), Uber spread into many markets around the world, appearing in the Hungarian transport market in the early 2010s. Its business model became a hot topic immediately. There were two main concerns about their activities: first Uber paid its company tax outside Hungary. Second, their business model was based on unfair competitive advantages. Uber claimed that they are not a taxi company but only a high-tech firm and application developer through which they link customers and individual service providers who were (self-employed) entrepreneurs. Rival taxi companies began protesting against them for several reasons:

1. Uber did not pay the obligatory deposit to government regulators that every other taxi company had to pay;
2. Uber did not have to comply strict environmental requirements by claiming they did not operate a car fleet;
3. The company claimed it did not have any obligations towards their quasi-employees; and
4. The taxi drivers did not have to take the same exams and tests every other taxi driver had to.

Subsequently, the main root of all of these issues relates to the fact that Uber refused to be acknowledged as a taxi company. As with the great majority of platform operators, this transport platform intended to carry out his operation in the status of "... of neutral intermediary that solely matches supply of and demand for independent contractors ... platform operator seek to avoid basic entitlements resulting from employment contracts – like social security, minimum wages as well as work time and security regulations" (Grabher & Tuijl, 2020 :9).

Taxi drivers represent a traditionally strong interest group in Hungary and in this case, they found a powerful ally in the Hungarian government because of the tax evasion.[7] The taxi drivers' trade unions organised demonstrations, petitions versus Uber and the owners of the taxi companies promoted their campaigns, too. The Hungarian Trade Union for Taxi Drivers (Magyar Taxisok Szakszervezete) blocked Budapest in January 2016 with a demonstration. Following this demonstration, the Hungarian Parliament adopted a new regulation, which virtually prohibited providing services in a similar way than Uber did. The taxi company lost Hungary and announced to leave the country on 13rd July 2016. However, it is worthy of note that the employment status and the working conditions of the taxi drivers working for traditional taxi companies are rather similar to those working for Uber, therefore the public debate around Uber focused mainly on unfair competition and tax avoidance, while deeper problems related to job quality, working conditions and employment status have been overshadowed.

From a broader perspective, Thelen examined the appearance of Uber in the US, Germany and Sweden, and found significant differences as to how the consumers, competitors and institutional actors (e.g. government) reacted to it (Thelen, 2018). According to her analysis, Uber was able to position itself as the "champion of free markets and consumer choice" (Thelen, 2019:999) in the US, and thus found a strong ally in the consumers. In contrast, existing German taxi companies, in alliance with public transport companies, were able to force institutional regulators to adopt a coordinated action against Uber in the "defense of consumers' interest". Sweden represents a third markedly different country where "taxes emerged as the central regulatory flashpoint and served as a common focal point for a broad coalition that included taxi companies, labour unions, and state actors in defense of the norms of fairness on which the Swedish social system rests" (Thelen, 2018:949).

Legal Regime: Labour vs. Civil Code Regulation[8]

In Hungarian labour law, platform workers are mostly independent contractors, as Hungary does not have the third labour law category. Independent contractors are self-employed workers (e.g. freelancers), whose work relationships are covered by the Civil Code (CC). The CC does not provide any employment protection in the framework of such contracts for service, contrary to the Labour Code (LC) provisions on employment relationships.

Hungarian labour law is unprepared to cope with the regulation of platform work. According to the labour lawyers, "The gig economy is immature in Hungary, platform work, as such, is neither defined nor regulated. Moreover, platform work (as a phenomenon) is immature,

[7] Illustrating the strong bargaining position of the Budapest (40 000) taxi drivers, it is worth remembering of the so-called *taxi-blodace* organised between 25th and 28th of October 1990 in protest to the gas price increase. It paralysed almost the transport of the whole country. Greenhouse, S. (1990) Evolution in Europe: Gas Price Protest Cripples Hungary, *The New York Time,* October 28, p. 14.
[8] This section is based on the contributions of Dr. Tamás Gyulavári (labour lawyer, Department of Labour Law, Péter Pázmány Catholic University, Budapest) and Dr. Bankó Zoltán (labour lawyer, University of Pécs, Faculty of Law). The authors are grateful to them.

hardly visible and marginal; it is not perceived (yet) as a separate regulatory / employment field and it also lacks specific policy (etc.) attention. Platform work is not discussed as an issue.[9] There are no planned policies or legal measures or developments that would specifically affect the working conditions and/or the social protection of platform workers in Hungary" (Kun & Rácz, 2019:10).

Platform work is presently characterised by a rigid "binary model" of employment regulation consisting of employment contracts and civil law contracts: "universal" versus "zero" legal protection. In the perspective of the binary regulation, platform workers have either an "employee status" entitled to complete labour law protection guaranteed by the LC, or have the status of "self-employed" working without any legal protection under the scope of the CC.

Hungarian LC does not regulate the third type of employment status: economically dependent worker or dependent contractor or worker. There is no special legal regulation on this third category of workers in the LC, because legal regulations covering the standard (typical) and non-standard (atypical) employment relationships in the LC do not apply to these workers. The major legislative issue is whether the regulation of the third employment status (economically dependent worker) would be an appropriate solution for the protection of platform (gig) workers. However, the third labour law status could only partly solve the specific challenges created by gig work. Certainly, there are various issues related to platform work, which require rather particular legal solutions due to its special characteristics.

In this relation, one of the unique features of platform work is the use of a rating system, whereby those providing a service, and in theory the customers, are rated, often using the five-star system popularised by Amazon. The lack of transparency and potential to "game" the rating system has substantial legal implications, and Hungarian regulation is totally missing on addressing the issues of "digital ratings", making it impossible to guarantee the transparency of online evaluation or to question its correctness (i.e. legal remedy). Beyond transparency, the transferability of ratings is also a fundamental issue without legal guarantees. Online rating has two consequences: disciplinary sanctions or termination of the legal relationship (inactivation). In the case of transport platform operator Bolt, passengers rate the taxi driver service on a 1-5-point scale. The driver does not know the factors assessed by their passengers therefore it is rather difficult to improve the rating. In addition, passengers are asked to evaluate the trip in general, and not more specifically the quality of the taxi driver. Consequently, if some problems occur (for example, the mobile application underestimates the waiting time or dislocates the geographical position of the passenger) the dissatisfaction of the clients appears in the evaluation of the driver and not in the evaluation of the company. The passengers have no option to communicate directly with the company (e.g. via customer relationship management department) and can provide feedback only indirectly through the different Appstores. If the rating of the taxi drivers falls below 4.76 calculated on 40-50 trips, he or she will be disconnected or inactivated automatically from

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[9] See for further details: Tibor Meszmann (2018): Industrial Relations and Social Dialogue in the Age of Collaborative Economy (IRSDACE), National Report Hungary, CELSI Research report 27, 2018. https://celsi.sk/media/research_reports/RR_27.pdf

the platform, which adds to the pressure and stress on drivers, who may not be at fault for low ratings.

According to the LC, disciplinary sanctions may be levied if the collective agreement or the employment contract allows it. By contrast, according to the CC, the parties must agree on such legal consequences. In case of termination of employment (inactivation), platform workers usually lack any protection against termination due to the unilateral regulation of the employer (conditions of work on the website). It has become common practice for many Silicon Valley firms to rely on contractors who must cover their own health care insurance and other taxation requirements, and who can be fired or laid off for any or no reason, such as reorganisation, not meeting quarterly profit expectations, or an executive decision to abruptly terminate a project. Such contractors may or may not be eligible for unemployment compensation, allowing the companies to socialise their risk since they have avoided paying unemployment insurance, leaving it for the workers to fend for themselves.

Furthermore, platform workers are not fully entitled to seemingly universal social rights, such as prohibition of child work and discrimination. In relation to child work, in principle the LC provisions on the protection of young employees could be a satisfactory solution (i.e. in case of employees under 18, it is obligatory to apply the LC articles on the protection of young employees). Unfortunately, it is unclear, if the special rules on establishment of employment in relation to young employees (the age limit) shall be applied outside the employment contract. As for the equal treatment principle, the Equal Treatment Act (125 of 2003) applies in all legal relationships involving work, and therefore in this instance equal treatment provisions must be applied in all circumstances.

Collective rights, especially the right to conclude collective agreements, are not ensured outside the scope of the LC. In the Hungarian labour market, collective agreements exist almost exclusively at workplace level. Collective agreements may be concluded by a trade union or their federation if at least 10 % of the employees are union members. But, if workers are lacking the employee status, they cannot be covered by a collective agreement. Works Council agreements may provide an alternative or quasi collective agreement.

Sector level collective agreements would be the ideal solution covering legal relations beyond employment relationships, including platform work. For instance, if a sector level collective agreement were operational on the entire personal transport sector, it would be possible to extend it over digital platforms providing taxi services. However, sector level collective agreements hardly exist in Hungary (e.g. in the electric energy sector). Moreover, while Act 74 of 2009 on sector level social dialogue regulated the role of sector level dialogue committees and middle level social dialogue, however, the Act only covers interest representation of employees. In addition, the constraints of EU competition law regarding the conclusion of collective agreements by non-employees are present in Hungarian law as well.

Consequently, Hungarian LC presently hardly answers any questions related to the protection of platform workers. Therefore, it would be necessary to create a separate and detailed legal

regulation regarding workers outside the scope of employment relationships, with specific attention to platform workers. Comparing the employment regulation of the offline to the online labour markets may help to better understand the radical and far reaching shift in the characteristics of employment in the platform economy. In this relation, Grabher and Tuijl (2020:10) stress that "In terms of employment regimes, platforms accelerate the "vanishing of the corporation" and expedite the secular shift from (long-term) employment relations over (short-term) jobs to (discreet) gigs. This "taskification" of work transforms professional careers governed by (offline) accumulated human capital into contractual portfolios shaped by (online) reputation capital."

Conclusion and Future Research Challenges

Extensively examining the terminology-related issues is not a redundant theoretical exercise, as the terminology used has an important impact on how we study and develop socio-economic regulations of this type of work (Kenney & Zysman, 2016). In this paper, we have adopted a multidimensional definition of platform, covering such characteristics of platform work as task complexity (micro vs. project work), level of payment (high vs. low), and employment status (dependent contract worker vs. freelancer/entrepreneur). Illustrating the decidedly differentiated nature of platform work, it is necessary to call attention to the global platform "Upwork", which covers from seven to thirteen professional profiles. The visible inequalities in the nature of platform work (e.g. project work requiring creativity versus low skilled micro-task) predict the anticipated inequalities in bargaining power of the various strata of platform workers. (Its importance became extremely visible under the impact of COVID-19, when significant differences in the protection of those most vulnerable were identified not only in Europe but throughout the world).

Estimating the size of platform work in Europe is a difficult challenge, due to the diversity of types of work, and the evolving and sometimes abruptly changing dynamics of the economy writ large. During the last several years a number of comprehensive EU-level surveys were carried out (e.g. COLEEM, 2017-2018, Huws et al., 2016-2019, ETUI, 2018-2019) that provide an important if incomplete snapshot of recent conditions. Nevertheless, making reliable estimations on the number of platform workers is inherently fraught, due to the lack of harmonious methodology, terminology, and samples. In addition, the so-called "knowledge asymmetry phenomenon" between countries also adds to the complexity. In the last half decade, a more comprehensive knowledge base was established in the Nordic, Continental and Anglo-Saxon countries than in the Mediterranean and the Central and Eastern European (CEE) countries. Despite these shortcomings in data integration, we may with a high degree of confidence that currently only a minority of the European workforce, perhaps one in ten, is involved in the digital platform work, even if a dynamic increase with visible country differences characterises the growth pattern of platform work. However, there are some anomalies, such as Serbia and Romania, which have a high number per capita compared to other European countries (Andjelkovic et al., 2019:1).

As insightful as they are in providing a general context of platform work, the existing pan-European surveys on platform work do not inform us at a granular level about the complexities involved: the varieties in task structures, working conditions, regulations of employment status, or the role of collective voice supported by the incumbent trade unions, employer associations or emerging grassroot organisations of platform economy. Even fewer studies are able to identify the platform workers' complaints directed to the operating platforms. For instance, the "customer service" of Upwork imitates the role of mediation in the conflict between platform workers and clients, although the platform is prioritising the support of clients against the platform workers.

As a case study of the disruptive nature of platform companies, Uber's attempt to capture the Hungarian transportation market offers a cautionary tale. Uber's penetration into the traditional market of the transportation sector (taxi services) attracted the worldwide attention both among the academics and policy makers. But in the Hungarian capital, Budapest, the company was confronted in January 2016 by the demonstration by taxi drivers who held a strike in the centre of the city, which in turn resulted in taxi drivers' being granted a friendly decision of the Parliament. This forced Uber to conform to the existing regulation of personal transportation service, which proved to be daunting for the company to contend with. Due to this new law, Uber ceased his operation in Budapest in July 2016. In Hungary, similarly to Germany, the social actors" … framed Uber as a threat to the public interest and themselves as defender of the rule of law. The debates therefore moved quickly away from the public to the judicial arena" (Thelen, 2019:3). But in the aftermath, the Uber-like company BOLT filled the vacuum and their drivers, like traditional taxi drives, still have limited rights.

Due the extremely weak position of the Hungarian trade unions on the offline labour market as well as the traditional weak affinity of trade unions towards the employment and working conditions of the "precariat", workers who are unable or unwilling to attain full time employment, the regulatory role of the legal framework of platform work is of particular importance.[10] Therefore, as a recommendation for protecting vulnerable workers, it is necessary to create separate and detailed legal regulations regarding workers outside the scope of standard employment relationships, with particular attention to platform workers. The community of labour lawyers is aware of the new challenges of the digital labour market. However, to solve the dilemmas of the Labour Code versus Civil Code regulations, more systematically collected empirical evidence and social dialogue are required between the social actors involved: employees and employers and their respective associations, new grass-root movements and organising, as well as engagement with other civic organisations and the academic community.

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[10] For example, according to the latest comprehensive survey on Hungarian trade unions (2010), largest the share of trade unions leaders (78-98 %) did not pay attention to the various forms of precariat active on the offline labour market (e.g. part time workers, fixed-term contract workers and leased workers; Neumann, 2018:81). The trade unions' role and position in relation with the new "digital precariat" (e.g. platform workers) are even less visible.

Some future research challenges:

In reviewing the various theoretical strands and available European empirical experiences on platform economy, we observe that the higher value-added future research should put more emphasis on *the similarities and differences between offline and online labour market in the content of work, working conditions and interest representation ("collective voice").* In this respect, we found extremely creative the theoretical conceptualisation of platform economy by Grabher and Tuijl, (2020: 4-10). The authors compared and evaluated the main features of the global production network (GPN) to the network of digital network economy. The key dimensions of the comparison were as follows:

1. Value: from owning assets to granting access,
2. Governance: from make-or-buy to employ-or-enable,
3. Management: from back-end to front-end,
4. Labour: from jobs to gigs.

In order to better understand the governance of the digital labour market and the issues of interest representation ("collective voice") through transformation of content of work, working conditions, and employment status it would be necessary *to focus not exclusively on the transformation of work/labour, but also its interplay with value creation, governance, management and labour in the platform-based economy.*

The core aim of our project (CrowdWork21) is to map the existing and new forms of *interest representation* ("collective voice") of platform workers. But identification of new trajectories of interest articulation requires an unorthodox and innovative approach towards labour relations. For example, in the basis of our preliminary experiences on the platform workers carrying out "high-end" project tasks (e.g., developing artificial intelligence software), we found the particularly important role of the "Customer Service" portfolio of the platform ("Upwork"). *"Complaint management"* in the traditional offline economy firms represents the process by which companies handle customers' complaints. If managed effectively, complaints can help your business grow and improve its operations. Furthermore, in the case of the platform firms: which usually regard themselves as neutral platform operators matching supply and demand, it would be important to "enlarge" with mediatory responsibility of the present narrow role of "customer service". Creating this system of disputes treatment services between clients of platforms could birth to a new interest reconciliation institution. Similar *"role enrichment"* practices and protocols for solving workers' grievances to avoid trade unionization at workplaces took place in the early 20th century by the Human Relations Departments at the large U.S. companies[11].

In relation with the theoretical and methodological challenges of the platform work related research, it is worth noting that there is a substantial increase in the empirical research (especially surveys) both globally and in Europe during the last decade. Despite these efforts,

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[11] Grievance handling is the management of employee dissatisfaction or complaints (e.g. favouritism, workplace harassment, or wage cuts). By establishing formal grievance handling procedures, you provide a safe environment for your employees to raise their concerns. (Lewin, D. and Golan, P. J. (2018), Lewin, D. (2005)

within Europe we still cope with the *"knowledge asymmetry"* syndrome between the EU-15 and the New Member States (NMS), and between North and Mediterranean countries, with a clear advantage of the first country clusters. Moreover, in the case of the few recent surveys covering some of the Central and Eastern European (CEE) countries, the data are not comparable due to the diverging terminology of digital labour, different survey methods, sampling problems, etc., which inhibits using reliable empirical evidence. Such as the number of platform workers, the range of incomes, the vulnerabilities of this novel from of precariat[12].

However, even if methodological inconsistencies of the European surveys were eliminated, it would be difficult to explain the existing country differences in the working and employment conditions of platform workers in the EU. In order to better understand both converging features and national diversities in the development of the online labour market, it would be advisable to combine the survey methods with the use of case study techniques in the future. In designing the future projects, we recommend the combination of the quantitative and qualitative empirical methods the theoretical conception of the so-called *"societal effect" (SE) approach*[13]. The SE approach offers a theoretical framework, through which one can better understand dynamic embeddedness of platform work into the national social and economic regulation system, and to identify the interplay between collective actors and institutions (system). In this perspective it would be possible to "compare the incomparable" (Maurice, 2000; Maurice, Sellier & Silvestre, 1986; Crozier & Friedberg, 1977, 2014).

In our view, the SE perspective not only helps us to better understand the continuous reproduction of national diversities in the generic diffusion of the digital platform-based capitalism, but also helps to illuminate the origins of the varieties in the national social-economic regulation (or the lack thereof). Due to the multiple impacts: work, working conditions and employment status, and the dynamic nature of the platform work, it is difficult to anticipate its future socio-economic outcomes, particularly in these turbulent and uncertain times. However, the SE approach, as a cognitive tool for applying more complex measuring kits (i.e. combining survey, case study methods with the exploitation of secondary sources on the operation of the platforms) may help produce more reliable theoretical and empirical knowledge, which is the precondition of the evidence-based collective learning and intervention of the social actors.

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Discussion Forum

Workplace innovation supports implementation of European Pillar of Social Rights

Frank Pot
Peter Totterdill
Steven Dhondt

Abstract

The implementation of the European Pillar of Social Rights could be enhanced by stimulating workplace innovation. There is a reciprocal relationship between job quality and innovation capacity as well as between job quality and labour productivity. Whether these relationships are positive (higher job quality, more innovation capacity, higher productivity) or not depends to a large extent on management strategies and workers' involvement. Results of 'participation & trust regimes' are often better than results of 'command & control regimes'. Fragmented changes are less beneficial for workers and organisations than joint optimisation of work organisation, technology and labour relations. This joint optimisation together with a 'participation & trust regime' is called 'workplace innovation' which was adopted in the EU2020 Strategy in October 2012. The European Commission funded the European Workplace Innovation Network (EUWIN) from 2013 to 2017. The concept of workplace innovation integrates (parts of) agendas such as innovation, digitisation, productivity, job quality, lifelong learning, wellbeing at work, skills and social dialogue. Activities of EUWIN have been successful in a number of countries and many organisations. However, continuous attention is necessary as well as extension to other countries. The market mechanism does not provide a 'good jobs economy' nor 'upward convergence' by itself. The policy action of the European Commission should be to continue support for workplace innovation (dissemination, capacity building, research). The partners of EUWIN pledge to do the same in their own countries and to continue international collaboration.

Keywords: workplace innovation, European Pillar of Social Rights.

Introduction

In 2020 the European Commission started a public consultation on the European Pillar of Social Rights that was launched in 2017. In this paper we argue that workplace innovation is a comprehensive approach to create the fair working conditions mentioned in the Pillar. Simultaneously organisational performance (productivity, innovation capability) can be enhanced by workplace innovation (Oeij, Rus, & Pot, 2017).

To achieve these goals, we discuss two challenges; 1) to connect job quality to innovation and productivity, and 2) to broaden the policy debate on skills, connecting it to work organisation and employee participation.

The EU has a long tradition of supporting new form of work organisation and recently high-level advisory groups recommended to continue support for workplace innovation. This support should include awareness raising, stimulating social partnership, research and a skills policy that includes learning on the job.

Rationale

"European companies need to adapt to rapid change. Advances in automation, digitisation and advanced manufacturing represent enormous opportunities for both employers and employees. But too few companies are actually rethinking the way people work and collaborate. Too few companies are remodelling their internal organisation to tap into the capacities of all their employees—not only in their R&D departments. To be a leader of the new industrial revolution means to look beyond technologies. It requires having workplace innovation at the very DNA of the organisation" (Peltomäki, 2017, p. vii)[1]. Generally speaking, we should rethink the way we conceptualise company or corporation. This "requires a balancing of business-design principles, where both formal structuring and dialogical participation play important roles" (Johnsen, Midtbø & Ennals, 2018, p.203).

Workplace innovation: process and outcomes

The European Workplace Innovation Network (EUWIN), started in 2013, describes workplace innovation as follows: "Workplace innovations describe new and combined interventions in work organisation, human resource management, labour relations and supportive technologies. It is important to recognise both process and outcomes. The term workplace innovation describes the participatory and inclusive nature of innovations that embed workplace practices grounded in continuing reflection, learning and improvements in the way in which organisations manage their employees, organise work and deploy technologies. It champions workplace cultures and processes in which productive reflection is a part of everyday working life. It builds bridges between the strategic knowledge of the leadership, the professional and tacit knowledge of frontline employees and the organisational design knowledge of experts. It seeks to engage all stakeholders in dialogue

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[1] Antti Peltomäki was until April 2019 Deputy Director-General of the Internal Market, Industry, Entrepreneurship and SMEs Directorate-General (DG GROW), European Commission.

in which the force of the better argument prevails. It works towards 'win-win' outcomes in which a creative convergence (rather than a trade-off) is forged between enhanced organisational performance and enhanced quality of working life" (Dhondt, 2012, p. 2).

European Pillar of Social Rights

- Chapter 2 of the European Pillar of Social Rights ('Fair Working Conditions') defines several key principles, the realisation of which in practice will be substantially enhanced by workplace innovation:
- Key Principle 5:
  - o "Innovative forms of work that ensure quality working conditions shall be fostered."
- Key Principle 8:
  - o "Social dialogue and involvement of workers"
- Key Principle 10:
  - o "Workers have the right to a high level of protection of their health and safety at work."
  - o "Workers have the right to a working environment adapted to their professional needs and which enables them to prolong their participation in the labour market."

Happily, some working conditions are improving, but others are not. Some working conditions show upward convergence between counties, others do not show convergence or even downward convergence (Eurofound, 2019). However, globalisation, the digital revolution, the corona crisis and other broad social, political and demographic developments have the potential to generate divergence rather than convergence.

The workplace is not a black box whose workings are invisible to policymakers. Rather, the ways in which we design the organisation of work plays an indisputable role in achieving upward convergence towards better living and working conditions in Europe. Two major challenges can be considered in realising this convergence:

Challenge 1: Job quality, innovation capacity and innovation

"The relationship between the different types of innovation and the various components of job quality may differ. Moreover, causality can run both ways: innovation can affect job quality and job quality can affect innovation. In addition, in both cases that effect may be positive or negative: innovation might enhance or diminish job quality; job quality might enhance or diminish innovation; innovation and job quality might also be mutually reinforcing. It is argued that their interaction requires the development and deployed of employee-derived innovative capacity. This innovative capacity within firms is both a function of the innovation potential of firms and the job quality of its employees, and an outcome of firms' ability to access and

mobilise this potential – and hence the adoption of a mode of innovation that is employee driven. This set of interactions potentially forms a virtuous circle. Within this circle, it is suggested that innovation might improve job quality, job quality then might then enhance innovative capacity, and innovative capacity might deliver more innovation. The converse can also occur, creating a vicious circle whereby innovation undermines job quality, which in turn diminishes innovative capacity, resulting is less innovation" (Warhurst, Mathieu, Keune, & Gallie, 2018, p. 5).

Job quality

Drawing upon and synthesising the existing scientific studies of job quality, the overlaps across the disciplines are identifiable and suggest six key dimensions that commonly constitute job quality.

- Terms of employment: wages, working time, job security
- Occupational safety and health
- Work organisation and tasks
- Employee participation
- Work-life balance
- Education and training

Core issues in workplace innovation are work organisation and tasks, employee participation and how these two dimensions relate to the other four dimensions.

Two side notes may be important here. The first one is the misunderstanding that a participative style of leadership is a good solution. However, decision latitude of managers and consequently employee participation is confined by organisational structures and corporate governance. It makes no sense to train managers in participative leadership and send them back to hierarchical organisations. The second side note is the common misunderstanding that the happy employee is a productive and innovative employee as well. However, 'employee satisfaction' measures, most of the time, the level of adjustment to existing circumstances and not the work environment itself. Being happy with your work may have to do with having nice colleagues and an average workload. Individual and group performance is not directly the result of employee satisfaction or motivation but is achieved through the involvement and commitment of workers' representation, HRM practices and work organisation (Judge, Thoresen, Bono, & Patton, 2001; Peiro, Kozusznik, Rodriguez-Molina, & Tordera, 2019). For instance, organisational commitment can be brought about by an organisational design that provides job autonomy, teamwork, possibilities of consulting others, learning on the job etc. These are exactly the same measures that are recommended to reduce psychological stress risks as a way of 'prevention at the source' (Pot, 2017).

The creation of a virtuous circle of job quality and innovation depends largely on a 'participation & trust' management regime and employee participation. 'organisational choice' does exist (Bloom & Van Reenen, 2010; Corrado & Hulten, 2010; Brynjolfsson & McAfee, 2014; Osterman, 2018). "Outwith the firm, it is also acknowledged that firms' embedding within particular national institutional configurations can more easily shape the functioning of the

virtuous circle. Four particular aspects of firms' institutional environment are considered as salient: the industrial relations system, the education and training systems, and employment protection and welfare regimes" (Warhurst et al., 2018., p. 5).

Challenge 2: Broadening the debate on skills

In many policy discussions on skills views are being narrowed to the need for digital skills, the modernisation of formal education and the individual's responsibility for his or her employability. That does not take us much further.

Of course, there is a skills gap regarding new technologies that should be addressed. But that's not the only mismatch. Cedefop's 'European skills and jobs survey' (ESJS) shows that in 2014 about 39% of EU employees had skills that were not being fully used in their jobs and so did not have potential to develop their skills further. The jobs of overskilled workers typically entailed a low level of task complexity and were lacking adequate learning opportunities (Cedefop, 2018). Recent German research shows that new technologies do not change this situation. New forms of repetitive work emerge (Ittermann & Virgillito, 2019). The European Commission concludes that overqualification is on the rise and underqualification is declining (European Commission, 2019a).

Rodrik and Sabel (2019) argued recently that the shortfall in 'good jobs' can be viewed as a massive market failure – a kind of gross economic malfunction, and not just a source of inequality and economic exclusion. They make the case that this problem cannot be dealt with standard regulatory instruments. Binding agreements between companies, social partners and governments are necessary to start a 'good jobs' industrial policy.

The next issue is the mismatch regarding so called 'soft skills' such as flexibility, intrapreneurship, ability to work in a team, creative thinking and problem solving. This is being emphasised in many statements, but its implications are not very well understood. The most important implication is that organisations should be structured in such a way that they enhance the development of these 'soft skills' and are able to benefit from them. Imagine the many traditional, hierarchical organisations having jobs with little decision latitude or even repetitive tasks and a 'command & control' management regime. In such organisations intrapreneurial workers will be disappointed soon and the organisation might harvest problems instead of solutions. 'Soft skills' and digital skills together are sometimes called '21st century skills'. The conclusion of this paragraph seems to be easy: only 21st organisations with a 'participation & trust' management regime can develop 21st century skills and benefit from them. We also know from research of Felstead, Gallie, Green and Henseke (2016) that a rise in employee involvement induces a rise in skill levels and vice versa. In the age of digitisation we need not only new skills but the utilisation of all (also underutilised) skills to recover from the corona crisis.

The policy debate on skills often focuses on formal education, in particular vocational education and training (VET). Formal education should be modernised, teaching 21st century skills and providing lifelong learning. Part of the curriculum should be work-based learning such as apprenticeships. However, this is only half the story. The most important development of skills occurs during working life by informal learning on the job. Creating the best conditions for such continuous learning presupposes a deliberate policy to design high quality jobs with task complexity, job autonomy, skill discretion and organisational participation.

Finally, making only individuals responsible for their employability is not correct from a social science point of view. Of course, individual capabilities and attitudes matter. But individual employability is also related to the work environment as well as the employment relationship. High quality jobs provide a learning environment. 'Older' workers can still acquire new skills if they have been working in a learning environment during their career. The same holds for the employment relationship. Sometimes workers take the wrong decisions themselves in their careers, but they are to a large extent dependent on bosses and employers for the development of skills and for the sustainability of their employability. One example is that temporary jobs quite often require fewer skills and offer fewer learning opportunities than permanent jobs.

Developing skills that bring competitive advantage requires investment in education and training, but also the design of good jobs that can enhance people's skills and provide wellbeing at work. This is an important intangible asset and an element of what OECD calls 'Knowledge-Based Capital' which is considered to be increasingly the foundation of modern economies.

Briefly this means: *Every policy regarding skills should include workplace innovation*.

A tradition of support for workplace innovation in EU policy

A seminal moment for those advocating the recognition of workplace innovation as a key dimension in EU strategy came in 1997 with the publication of the Commission's Green (consultation) Paper '*Partnership for a new organisation of work*': "The Green Paper invites the social partners and public authorities to seek to build a partnership for the development of a new framework for the modernisation of work. Such a partnership could make a significant contribution to achieving the objective of a productive, learning and participative organisation of work" (pp. 5 - 6). The Green Paper combines in essence a legalistic discussion of the regulatory conditions which might help or hinder workplace flexibility visibly stitched together with an open-ended call for measures by governments and social partners to stimulate participative working practices. Nonetheless it provided a rallying point for those who had been advocating recognition of workplace innovation, and there was high expectation that specific policy interventions would follow (Ennals, 1998; Ennals, Totterdill & Ford, 2004). Based

on the responses to this consultation, a policy document '*Modernising the organisation of work – A positive approach to change*' was published by the European Commission in 1998. A substantial volume of evidence for the positive effects of new forms of work organisation was provided by the European Work & Technology Consortium (1998) funded by DG EMPL. Meanwhile, Eurofound conducted a large-scale research project into 'employee participation in organisational change' which provided again evidence for the positive relation between employee participation and organisational performance (EPOC: Eurofound, 1997).

In this first period, work organisation became a clear topic with support from the European Commission, in particular its Directorate General for Employment (DG EMPL),
Research commissioned by DG Research showed positive results of what was called 'the high road of work organisation' and represented the first substantial attempt to define the concept of 'workplace innovation' (Totterdill, Dhondt, & Milsome, 2002).

In 2004, facilitated by the 6th EU Framework Programme ERA-NET, the 'Work-In-Net' consortium (2004 - 2010) coordinated research in the field of 'Innovation of Work Organisation' (Alasoini, Ramstad, Hanhike, & Lahtonen, 2005; WIN, 2010). In the same period the Employee-Driven Innovation (EDI) Network was established, in particular by the Norwegian and Danish trade union confederations and researchers in the field of work organisation (Høyrup, Bonnafous-Boucher, Hasse, Lotz, & Møller, 2012).

Key influences on the European Commission included a 2011 Opinion of the European Economic and Social Committee (EESC, an advisory forum representing employers' associations, trade unions and NGOs) on '*Innovative workplaces as a source of productivity and quality jobs*' (EESC, 2011) and the 'Dortmund-Brussels Position Paper' (Dortmund-Brussels Position Paper, 2012) signed by more than 30 experts and practitioners across the EU, both calling for more proactive interventions by the European Commission.

In 2012 DG ENTR adopted workplace innovation in its industrial and innovation policy and decided to support and fund a European Workplace Innovation Network (EUWIN) for four years, embracing all 27 EU Member States, EU candidate countries, Switzerland and Norway. EUWIN was designed to exchange good practices and establish 'workplace innovation alliances' of employers' associations, trade unions, governments and knowledge institutes.
According to DG Internal Market, Industry, Entrepreneurship and SMEs (DG GROW, the former DG ENTR) workplace innovation improves motivation and working conditions for employees, which leads to increased labour productivity, innovation capability, market resilience, and overall business competitiveness. All enterprises, no matter their size, can benefit from workplace innovation, states DG GROW. It improves performance and working lives, encourages creativity of employees through positive organisational changes, combines leadership with hands-on, practical knowledge of frontline employees, and engages all stakeholders in the process of change. This policy is also part of the 'Advanced Manufacturing Programme' (ADMA): "Workplace innovation has to provide advanced solutions for manufacturing industry, based on the newest technologies" (European Commission, 2014, pp. 27 – 28).

In the words of DG EMPL: "With the Europe 2020 Strategy it also became a priority to support workplace innovation aimed at improving staff motivation and working conditions with a view to enhancing the EU's innovation capability, labour productivity and organisational performance" (European Commission, 2015, pp. 169 – 70). One of the paragraph titles is *'Complementing technological innovation with workplace innovation'* (p. 164).

Workplace innovation still supported at EU-level

The importance of job quality has recently been underlined in the conclusions of the evaluation of the Europe2020 Strategy: The employment policy was rather successful but "cannot encompass all the aspects of the changing workplace, in which the quality of jobs matters as much as their availability. In the future, greater attention should be given to the aspect of the quality of work" (European Commission, 2019b, p. 7).

In another publication, DG EMPL concluded: "Robust economic expansion in the EU cannot be sustained without higher total factor productivity growth, which relies more on the efficient use of productive factors, rather than just expanding their use. Total factor productivity thrives in Member States and regions with strong labour market institutions and in firms that invest in workers' training and innovative capital and processes. Policies that help to develop human capital and facilitate workplace innovation are most effective in increasing productivity in the long term, provided labour markets do not discriminate and firms can access the necessary capital" (European Commission, 2019c, p. 28).

In December 2017 the European Commission established the '*Industry 2030 high-level industrial roundtable*' with 8 independent experts and 12 representatives of employers' associations and trade unions. Among the opportunities for Europe are mentioned:
- "Europe has more experience in social dialogue than other regions in the world and can use that to shape industrial transformation to achieve co-ownership. It can build on this expertise to co-create future industrial policy and adapt it to the needs of a changing world and society.
- The human-centred design of technology, while breaking down the silos between technology and society and democratizing technology development with more bottom-up initiatives, could stimulate responsible disruptive innovation, e.g. the European way of creating intelligent machines based on collective human-machine dynamism provides an opportunity to enhance human labour with new robot and AI tools instead of substituting human labour with robots" (Industry 2030 high-level industrial roundtable, 2019, p. 11).

Finally, one of the recommendations for building an enabling environment for more sustainable business activities is: "Promote the development of workplace innovation and

other modern practices, which influence both wellbeing and economic performance of companies" (p. 35).

Recently the *European Economic and Social Committee (EESC*) published a new 'own-initiative opinion' on 'Social dialogue for innovation in digital economy'. One of the recommendations is to continue promoting workplace innovation. "At national level initiatives by social partners to enhance the productivity and well-being of workers at workplace level are a promising method, that should be promoted in a wider European context. In this regard the EESC welcomes the initiatives and research of Eurofound and the European Workplace Innovation Network and proposes that the EU take action to develop the dialogue between social partners and other stakeholders in the context of participative approaches to promote workplace innovation" (...) "The EESC endorses the view that the probability of innovation is boosted when strong work organisation structures are combined with various forms of increased employee participation within a solid legal and contractual framework. With this aim collective representation needs to be increasingly accompanied by a more inclusive, reflective and democratic dialogue in work structures and methods. The importance of training in social dialogue for management in order to adapt management methods in the new context should equally be taken into account" (EESC, 2019, p. 4).

The *European Agency for Safety & Health at Work* (EU-OSHA) published a study, *Foresight on new and emerging occupational safety and health risks associated with digitalisation by 2025* (EU-OSHA, 2018) in which workplace innovation is used as an option to construct scenarios. In a recent Discussion Paper EU-OSHA uses the concept of 'social innovation in the workplace', meaning non-technical innovations that emphasise good quality jobs and employee participation. The argument is that the fourth industrial revolution should go together with social innovation in the workplace (EU-OSHA, 2019).

These high-level recommendations seem to reflect high levels of agreement about the positive impact of workplace innovation. However, the transposition of these recommendations to EU and national policies is not that self-evident. In particular the employers' representatives emphasise that work organisation and technology is their responsibility. They decide when and how workers will be involved. Arrangements with trade unions and/or governments do exist but are exceptional. Where joint programmes of social partners are not achievable (at the moment), the need for government initiatives seems obvious. Good examples are ongoing programmes in Finland, Germany, Basque Country (Pomares, 2019) and Scotland (Totterdill, & Exton, 2018).

Policy actions needed from the EU

The implementation of the European Pillar of Social Rights could be enhanced by stimulating workplace innovation.

There is a need to *increase awareness of the benefits of workplace innovation* among the management of organisations. Accumulating research links workplace innovation to critical issues for organisations, such as productivity, innovation, competence development, job quality and wellbeing at work, employee recruitment and retention. Workplace innovation connects these agendas. However, too few organisations are having workplace innovation at the very DNA of the organisation. The European Commission should continue to support

- The specific and combined roles of social partners, professional organisations and researchers in scaling up evidence-based practice;
- The operation of learning networks as a means of disseminating and resourcing work-place innovation

Social partnership can help to support upward convergence in working conditions by improving the implementation and operation of policy at EU, Member State, sector and organisational levels.

A study by Eurofound (2019) found upward convergence in six dimensions of working conditions, in terms of poorer-performing Member States catching up with better-performing Member States. The seventh dimension (prospects: job security and career advancement) showed downward convergence. The policy analysis uncovered a strong preference for social partnership among stakeholders. Given that it is supported and seemingly effective, the European Commission should enlist social partnership in its endeavours to promote upward convergence (Eurofound, 2019). The same holds for workplace innovation which is strongly related to working conditions. Upward convergence in workplace innovation is still very limited. Compared to working conditions an important reason is probably that the type of influence that was chosen could be called 'soft regulation' (invitation, stimulation, research etc.), to be distinguished from 'hard regulation' (legislation, directives etc.) for most working conditions.

In its *skill policy* the European Commission could emphasise that only 21st century organisations that apply workplace innovation can fully benefit from 21st century skills.
Formal recognition of the skills acquired by workers would improve their job prospects. Skills learnt on the job, in particular, tend to go uncertified, especially when workers have multiple, and often temporary, employers. The experts interviewed for this study emphasised the need for proper accreditation of skills acquired in the workplace. One option suggested was the introduction of a skills passport held by all workers (Eurofound, 2019).

The European Commission should *continue supporting research* into

- The relation between job quality, productivity and innovation
- Barriers and promoting factors for workplace innovation
- Evaluating and benchmarking national and regional policy interventions designed to promote workplace innovation
- Monitoring workplace innovation. 'Organisational innovation' in the Community Innovation Survey (CIS) is not an alternative as this measurement is not specific (Kesselring, Blasy, & Scoppetta, 2014). Organisational innovation has the potential to

enhance or diminish job quality (Boxall & Winterton, 2018, Warhurst et al., 2018). For research we need to know what kind of organisational innovation is at stake.

Conclusion

Organisations, either public or private, have to change. The conceptualisation of organisation or corporation needs rethinking. Not only because of globalisation and digitisation but also because of energy transition, the corona crisis and demographic developments. It's clear that this cannot be left to management and/or market forces alone. All talents available must be unlocked. Public authorities on different levels should develop programmes to stimulate and facilitate the changes (soft regulation). The European Pillar of Social Rights provides the values and objectives for such programmes. Workplace innovation can play a key role in the implementation of such programmes, achieving better jobs and performance.

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The Quality Coffee Shop

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The current global Covid-19 pandemic has brought great challenges across the world. It has also opened up unique opportunities. These are being explored by a number of groups, such as Fresh Thinking Labs, working in association with the European Workplace Innovation Network (EUWIN). We need to identify and disseminate examples of good practice.

"Virtual coffee drinkers" around the world, who are now all locked down in their homes for an indefinite period, have been able to visit "The Quality Coffee Shop", operating online on each weekday. Our Host and Barista is David Hutchins, Principal of DHI Quality College (Hutchins, 2008, 2019). Over a long career with industry, Hutchins worked with the great Quality Gurus such as Dr Juran and Dr Ishikawa, and he has an unrivalled stock of anecdotes and videos. Each of our daily sessions, using Zoom video conferencing, is rapidly edited into a video, available free on Vimeo.

The Quality Coffee Shop is a twenty-first century version of a seventeenth century London coffee house, with a virtual backdrop of a shop front on screen. The free of charge cup of virtual coffee provides access to a potential new "Penny University", a rich resource of practical knowledge, and provides a context for participation in active project work. Three break-out groups have concentrated on virtual companies: a company making Personal Protective Equipment, a School, and a Coffee Shop. Taking principles set out in presentations by Hutchins, participants have worked hard in daily sessions and in homework. Group leaders have been Stephen Coles, Winston Brown and Chukwudi Ononogbu.

Most of the virtual drinkers have not met physically. They have come together as a new ad hoc open access international Community of Practice, sharing experience and concerns, relating closely to Workplace Innovation. Typically, about 12-15 participants attend each day. There is a core of Quality professionals based in the UK, and a committed group from Nepal, who are largely associated with the NGO Quest-Nepal.

In Nepal there is a unique national movement of Students' Quality Circles, founded by Professor Dinesh Chapagain (Chapagain, 2019), operating across the country, with training

and conventions organised at regional level. They have achieved official government recognition. On the other hand, the Nepali economy remains in need of development, and there should be potential for new Quality Circles in workplaces, and a comparable national movement. There has been active implementation and exploration of Students Quality Circle in Nepali schools since 2000, under the leadership of Chapagain. The main objective behind implementing SQCs was to contribute towards the development of each participating student into a "Total Quality Person" (TQP), who is "both smart as well as good in nature" and is ready to collaborate to work for the betterment of society. Quality Circles were introduced in the beginning of 1980's (Hutchins, 2008, 2019) and have been linked with several positive organisational outcomes and success worldwide (Barrick & Alexander, 1987; Upadhyay, 2011; Aslam & Haroon, 2017). Similarly, the Quality Circle concept was initiated in one Nepali organisation, Surya Nepal, but could not survive (Dinesh Chapagain, personal communication, January 16th, 2019) leading towards the realisation that it is extremely difficult to change the behaviour of grown adults. Quality Circles were introduced in the educational sector, keeping in mind that the students' behaviour can be changed when they are young, by using different behaviour modeling techniques. (Chapagain, 2019). The educational institutions were choosen to implement SQC as an innovative intervention for developing students' personalities when they are young.

If we look into the present growth of SQC in Nepal, up to now approximately 70,000 students have received SQC training (Chapagain, 2019). Many Private and Public schools in Nepal have been actively involved in implementing SQC in their respective environments, creating a huge movement in Nepal through SQC by keeping in mind the important role of participation and empowerment. SQC's have been adapted from the Quality Control Circle concept, exercised in an industrial setting (Chapagain, 2019). The implementation of the Quality Circle concept in an industrial setting still remains largely unexplored in Nepal, further highlighting the need to implement Quality Circles in Nepali organisational settings, in order to create an environment of continuous improvement and learning culture.

As Hutchins has reported at the Quality Coffee Shop, when he speaks at major Quality conferences in Japan, he is usually the only British European speaker, and North Americans have been conspicuous by their absence. He has outlined the different perspectives: the American emphasis is on Compliance, while the Japanese focus has been on Empowerment. In the UK, there can be a tendency to assume that because the debate on Quality tends to be conducted in English, it is merely a matter of common sense. "No Quality Please, We're British" (Cox & Ennals, 1998). This is a dangerous mistake, as we see the UK struggling with declining productivity.

The Quality Coffee Shop should be seen as an Action Research intervention. It will continue at least as long as the international emergency and lockdown. The agenda is, and will continue to be, driven by the growing group of virtual drinkers. Even with social distancing, there is plenty of room inside! For a Zoom invitation, contact david@hutchins.co.uk