

Occupational restructuring challenges competencies: Research implementation and results

The central idea behind the consortium's research has been to comprehensively assess the role of competencies—their acquisition, maintenance, development and renewal—in enhancing successful labour market transition as well as in stabilising employment and re-entry after non-employment in times of profound occupational restructuring. The focal point of our research has been to evaluate the success and failure of social mechanisms governing, affecting and mediating the trajectories of subsequent age groups from home through to the educational system and into the labour market and working life.

In order to realise the central idea of our research, to achieve its objectives and secure its societal impact, our efforts have been arranged into three closely integrated subprojects, each headed by a principal investigator who is an expert in the corresponding field:

- *Subproject 1:* How to ensure adequate competencies of young labour market entrants in times of occupational restructuring?
- *Subproject 2:* Which modes and combinations of skill acquisition and renewal are best suited for promoting the job careers of workers hit by occupational restructuring?
- *Subproject 3:* The effects of competence renewal on work participation in cases of ill-health and unemployment.

The research activities of each subproject have been guided by a set of important research questions (RQs) identified in the accepted research plan of the project. In what follows, these RQs will be addressed based on our main evidence-based answers to tackling these challenges. Alongside we will indicate how these major findings have been communicated to key stakeholders with a view to co-creating concrete recommendations for the adjustments needed to improve transition mechanisms at critical phases of individuals' educational paths and working careers. However, since the project's RQs are highly interlinked, this exercise will be undertaken by subproject and not by each single RQ.

Note that the main findings and their impact described below only provide a brief summary of results obtained, modes of communication utilized and stakeholders involved.

Important RQs of subproject 1 (How to ensure adequate competencies of young labour market entrants in times of occupational restructuring?)

- 1.I What are the strengths and weaknesses of the educational system in the transition process?
- 1.II What should be improved to make young people's transition smoother?
- 1.III What are the competencies of young people who face considerable problems in their school-to-work transition (early school leavers, dropouts, NEETs)? How can their knowledge and skills be most efficiently updated?
- 1.IV What is the ICT skill level of young people at different levels of education (basic, secondary, pre-vocational preparatory education), and what kinds of ICT skill differences do we observe for boys and girls, and for dropouts and immigrants?

Main findings and impact

- Over the past few years, the national education policy debate has been concerned with deteriorating education and competence levels with particular attention being paid to declining age-cohort shares of tertiary (university-level) educated. This concern is unfounded according to project calculations using large international databases. These contradicting findings are due it seems to the databases being multifaceted meaning that both calculations and interpretations should be made with caution. Without such precautions, education policies are at risk of arriving at false conclusions. The conflicting views about the nation's education level and its overall development trend nevertheless continue almost unchanged. Yet, a common understanding of the population's historical, present and near-future level of formal education, and competencies more generally, should be a basic cornerstone for pursuing a successful national education policy.
- The female-biased gender gap in university-level education is in Finland among the highest within the OECD area. Using comprehensive register data, project researchers have traced the progress of age cohorts within the education system and towards the labour market and working life with the emphasis being on (a) identifying critical points of emerging gender differences; (b) quantifying and explaining them; and (c) coming up with recommendations for how to tackle them. The observed gender gaps are found to boil down to boys and girls having different learning styles, including different styles of using digital tools (see the last point of subproject 1). This needs to be properly allowed for in teaching while simultaneously spurring boys and girls to explore their respective non-traditional fields of study.
- Conventional wisdom stipulates that those with a vocational secondary education tend to benefit in terms of employment and earnings in the short run but are more threatened by occupational restructuring compared to those with a general secondary education, who are argued to fare better in the long run. Project results show that this does not necessarily hold true: admission to the vocational track (a) increases annual income with this improved earnings capacity showing no signs of diminishing over time; (b) does not increase the likelihood of working in jobs at risk of being replaced by automation or offshoring; (c) is more beneficial to

those who express a preference for vocational education in their applications to secondary school and whose primary school performance was mediocre, at best. These findings, coming from a period characterized by rapid technological change, provide new evidence that the vocational track still offers an important pathway into the labour market while simultaneously indicating that the traditional classification of skills as general or vocational may fail to capture the nature of changing demand for skills. These results, which have received much attention in the academic arena, press for a rethinking of the declining value having been attached to the vocational track also in Finnish education policies.

- Family background is well known to have a strong influence also on children's early adulthood. But our knowledge about the mechanisms of *how* family background affects children's later outcomes in life is still scarce. The project has contributed to filling this gap by use of long-term, register-based follow-up data included in the 1987 Finnish Birth Cohort study. Our results provide crucial information on a broad set of social factors and their influence on young people's educational, labour market and health outcomes; information that helps policymakers develop service and benefit systems to better correspond to the need of care.
- Young people are often stated to have superior digital skills compared to adults. These kinds of generalizations, however, overlook the heterogeneity in digital skills that de facto exist also among young people. Based on information gathered by use of a unique ICT test measuring practical ICT skills of thousands of young people aged 12 to 23 years in basic and secondary education, our project has unravelled conspicuous differences in digital skills, notably by gender and ethnicity. This digital inequality, which threatens to divide youngsters into achievers and losers, needs to be tackled proactively especially in primary and secondary education.
- The results produced within the framework of subproject 1 have been discussed at large with representatives of major stakeholders, notably the Ministry of Education and Culture and the Finnish National Agency for Education. Major outcomes have also been communicated to local authorities responsible for teaching matters. A special occasion was arranged for a project researcher to meet young political players with a view to influencing the priorities of the 2019 Governmental Programme of Prime Minister Antti Rinne. The current writing of the Programme stresses the need to deal with, inter alia, gender segregation, young dropouts and upper secondary vocational education.

Important RQs of subproject 2 (Which modes and combinations of skill acquisition and renewal are best suited for promoting the job careers of workers hit by occupational restructuring?)

- 2.I Does skills upgrading or renewal while employed advance the individual's possibilities of remaining in the current (declining) occupation or moving to a new one?
- 2.II Which modes, including their timing and combination, seem to best support successful labour market outcomes and transitions?
- 2.III Do active labour market programmes help the individual shift to a new occupation after unemployment?
- 2.IV Are there conspicuous gaps between the competencies needed in the destination occupation compared with those requested in the origin occupation?
- 2.V What is the role of school choices made and formal qualifications gained prior to labour market entrance in these contexts; that is, are individuals with certain educational degrees better equipped to adjust to occupational restructuring than others, and are some educational qualifications inevitably becoming obsolete?
- 2.VI To what extent do educational certificates and work experience acquired in Finland improve the labour market prospects of immigrants in times of occupational restructuring?

Main findings and impact

- Education leave programs represent a policy tool encouraging adults to upgrade their skills in times of structural change in the labour market. Such programs allow employees to take a prolonged study leave while being partly compensated for their lost earnings. Despite considerable policy interest, little is known about the impact of such programs. Rigorous evaluation of the Finnish so-called adult education allowance point to a large positive impact on educational attainment and change of occupation with the effects on earnings and employment being negative during the lock-in period and close to zero afterwards. In view of the substantial amount of money spent on this form of adult education (over €200 million annually) the allowance seems not to be optimally allocated to those at risk of losing their jobs due to occupational restructuring. These evaluation results have been thoroughly discussed with the board of the Employment Fund, the authority granting adult education allowances, education policy specialists of labour market organizations, and adult education specialists at the Ministry of Education and Culture. The allowance is presently being remodelled at the tripartite level. The project's results are utilized in this reform work.
- Those whose employment prospects have been particularly challenged by occupational restructuring are also the ones in most need of their skills being updated, broadened or totally renewed. Above we noted that these workers seldom appear as beneficiaries of the adult education allowance. They are neither found to be frequent users of other modes of adult education, including active labour market programs. These findings point to an urgent need to undertake a comprehensive evaluation of the economic as well as social effects of Finnish adult education and its various modes. The results of such a rigorous evaluation would provide a

much-needed knowledge base for reforming adult education towards being more efficient in all its major dimensions, including costs.

- One important aspect of lifelong learning in response to occupational restructuring concerns an appropriate distribution of the financial responsibility for the upgrading of skills: What would be the optimal distribution of the financial burden across individuals, firms and the society? A pondering contribution of the project to answering this critical question emphasizes that lifelong learning needs, first and foremost, to be treated as an investment causing immediate costs while accruing benefits only in the longer run. Financial responsibility divisions should mirror allocations of returns. But we still lack a conclusive answer to the question of who benefits from lifelong learning and how much, information that is indispensable for assessing who should bear the financial burden of the investment.
- Occupational restructuring means that the demand for certain skills declines (e.g. routine skills) while simultaneously other skills are in growing demand (e.g. social skills). This means that those possessing skills with increasing demand may find it easier to cope with occupational restructuring, as they more easily find a new job where they can utilize their current skills. We have traced and analysed employees who lost their jobs due to plant closings to explore whether task usage in the origin job matters for the wage and employment losses observed upon the job loss. The results show that those in jobs emphasizing social tasks face only small and short-lived employment and earnings losses. In contrast, employees in jobs with emphasis on routine tasks are particularly threatened by occupational restructuring: they face large and persistent reductions in employment and earnings. A policy objective for the future should be to find ways to encourage these workers to broaden their skills set. These findings have gained attention in academic circles and have also been discussed with decision makers.
- Immigrants with refugee backgrounds are often called “welfare migrants” or “passive social benefits receivers”. With the focus being on skilled refugees the project has, using interview data and qualitative content analysis, produced broad-based information on the role of employment in enhancing immigrants’ subjective well-being and, hence, in promoting their whole acculturation process. In particular, the key is noted to lie not in increasing economic wealth but in the establishment of social networks, a sense of collective purpose, a possibility to maintain a positive identity and, most importantly, the accumulation of cultural capital enabled by employment, including active functioning in work-life-related contexts. Stumbling blocks hindering a successful acculturation process are identified and ways to tackle them are recommended. These results have received much attention in the media. Policymakers, however, today focus on occupational immigration, not on effective acculturation of recently arrived refugees.
- Apart from the more result-specific impact briefly described above, the major results of subproject 2 have been presented and discussed at a multitude of occasions directed towards stakeholders.

Important RQs of subproject 3 (The effects of competence renewal on work participation in cases of ill-health and unemployment)

- 3.I How do competencies, demographic factors, occupational factors, ill-health and the use of employment services affect individuals' transitions between the main work participation statuses and predict working life expectancy?
- 3.II Which groups will and will not benefit from vocational rehabilitation paid for by pension insurer companies or the Social Insurance Institution?
- 3.III Is vocational rehabilitation, paid for by pension insurance companies, effective in terms of future work participation, taking into account the level of competence and competence development during vocational rehabilitation?
- 3.IV Does the use of employment services increase the likelihood of employment within three years among the unemployed?

Main findings and impact

- Ongoing structural changes in the workforce have been boosted by the recent economic crisis. Such changes need to be accounted for also when following-up trends in ill-health. Using nationwide register data, the project has unravelled a non-negligible impact of compositional changes on pure statistical trends of both sickness absence and disability retirement. Hence, overlooking simultaneous changes in the composition of the workforce is likely to result in incorrect conclusions on the overall time trend of sickness absence and disability retirement, but also concerning the corresponding developments among those in different occupations. Especially in periods of fluctuating economic circumstances, raw trend statistics on ill-health in the workforce should be complemented with rigorous calculations accounting for concurrent compositional changes. This is a precondition for better targeted prevention of exit from paid employment caused by ill-health.
- Sickness absence can lead to high costs for both the individual and the society. Hence, governments have often taken action to reduce sickness absence and enhance return to work from prolonged sickness absence. The project has, by use of nationwide register data, evaluated two legislative changes affecting sickness absence: a partial daily allowance to compensate for earnings losses during part-time sick leave introduced in 2007 and amended in 2010, and an obligation for employers to give notice of prolonged sickness absence to occupational health services, which came into force in 2012. The use of part-time sick leave was found to have a notable positive impact on both sustained return and work participation. Additionally, it reduced social security costs. The effectiveness of the latter legislative change was modest, however. These findings suggest that legislation targeting the enhancement of return to work might be effective if carefully planned and implemented.
- Vocational rehabilitation has been a statutory right since 2004. The ultimate goal of vocational rehabilitation is to prevent work disability. Its use in the earnings-related pension system has mushroomed over the past years, reaching an annual cost level of almost €170 million. Only a few studies have been carried out on its effectiveness, though. According to a rigorous

evaluation undertaken by the project, the effectiveness of vocational rehabilitation on work participation during a three-year follow-up is modest. A submitted paper addresses the effectiveness of vocational rehabilitation on transitions to disability retirement during a follow-up of five years. These as well as previous results on the effectiveness of vocational rehabilitation suggest that to effectively promote sustained work participation the vocational rehabilitation scheme needs to be enhanced and possibly also complemented with parallel interventions.

- A manuscript in preparation focuses on trajectories of work participation among persons with and without previous work disability undergoing vocational training provided as public employment services for job seekers.
- In all analyses, considerable effort has been made to identify critical, notably individual-level background factors affecting the outcomes under scrutiny. Distinct patterns of varying impact across population groups, including underlying ill-health, are clearly discernible. This kind of information is valuable in the planning and implementation of interventions.
- The results of subproject 3 have been communicated to stakeholders mainly in the form of bilateral discussions, hearings of experts, seminars, press releases, and popularised leaflets and other writings. The most critical stakeholders have been the Ministry of Social Affairs and Health and the Finnish Pension Alliance TELA. Crucial for our communication of major results have also been advisory committees on notably occupational health, work ability and rehabilitation issues, composed of representatives of, inter alia, the earnings-related pension sector. The results are also of relevance for Prime Minister Antti Rinne's Governmental Programme of 2019.