USEFULNESS OF SKILLS ON THE LABOUR MARKET

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The data collected as part of the PIAAC study enable us to analyse the links between people’s skills and their ability to cope in different areas of life. One of the most important areas of life in this context is the labour market. Participation in the labour market is the main source of income for the vast majority of people, and the ability to cope on the labour market is one of the most significant factors influencing people’s living standards. Whereas to date it has been possible to analyse links between labour market outcomes and people’s education level, gender, age and other attributes on the basis of the data collected by Statistics Estonia, the PIAAC data makes it possible for the first time to investigate the role of information-processing skills against the backdrop of other attributes and whether taking such skills into account in analysis helps us better understand what influences people’s ability to cope on the labour market. Since a large proportion of people obtained their education many years ago and may have forgotten much of what they learned – or vice versa, have gained in knowledge as part of their work – level of education alone inevitably measures people’s actual skills and knowledge somewhat inaccurately. The data collected as part of the PIAAC survey regarding people’s information-processing skills help to resolve this problem in part.

Nevertheless, it is important to bear in mind that information-processing skills form just one part of the skills set implemented on the labour market and that in a certain sense comparing the importance of information-processing skills and education which provides specific skills is not fair – for example, ICT-sector workers are more likely to be paid a higher than average salary not because they can read text and understand it, but because they have gained (via education or independently) the professional skills required for their work, which PIAAC did not directly study. It should also be borne in mind that information-processing skills and education are closely connected and have a reciprocal effect: with better information-processing skills a person is more likely to succeed academically and thereby attain a higher level of education, while at the same time significantly improving the very same skills when studying. In such a situation it is often difficult to differentiate between the extent of the impact on labour market outcomes that information-processing skills have, what role education plays and how much success on the labour market is determined by general ability (which affects education, information-processing skills and labour market outcomes alike). The authors of this report have done their best to ensure that the assessments presented are reliable, but it is nevertheless important to keep in mind that the links evaluated do not necessarily have the causal direction presumed in analysis.

The report seeks answers to the following questions:

- Is it beneficial for those in employment to obtain better information-processing skills i.e. are information-processing skills rewarded on the labour market?
- Are information-processing skills connected at the higher level to unemployment and the speed with which people return to employment, and if so, how?
- Is the quality of people’s working lives (measured through job satisfaction and autonomy) connected to information-processing skills, and if so, how?
- What are the connections between information-processing skills and entrepreneurship?
Analysis revealed that:

A frequent topic of discussion in Estonia is that people in the country tend to overestimate the value of academic higher education and that sometimes parents herd their children (and universities accept them) into the tertiary education system when they would be better placed at a slightly lower level of formal education wherein they acquired the practical grounding needed to join the labour market.

The analysis did not support this claim. If we compare those who have acquired higher education with those whose education is limited to a lower level, then irrespective of how good their information-processing skills are, those with academic tertiary education enjoy a clear advantage in terms of salaries (which are around one-third higher than those of people with a lower level of education; the gap between them and those with applied higher education is smaller, but still notable). As such, from the point of view of this analysis at least, at the individual level it is recommended to acquire the highest level of education possible, since obtaining academic tertiary education – even if your information-processing skills are not as honed as they might be – means, on average, that you will earn a higher salary than those whose education is limited to the basic or secondary levels.

The foregoing does not mean, however, that levels of education lower than academic tertiary education produce the same labour market outcomes in terms of other indicators. Those with secondary education do not necessarily enjoy a marked advantage over those with basic education in terms of salaries, although they are far more likely to find work: any level of education higher than basic significantly reduces the risk of unemployment, and does so to a statistically important extent, regardless of the level of people’s information-processing skills.

It is important to bear in mind that decisions which prove beneficial from the point of view of a specific individual will not necessarily benefit the state overall. A greater number of people continuing on to higher education means greater expenditure on education, and if it emerges that skills acquired at university are only implemented in working life to a limited extent, such expenditure may prove unjustified for the state as a whole.

The correspondence of work place and education level is important and is easy to intuit: if a person with higher education does work of little or no complexity, they are unable to make use of a significant part of their knowledge, and there is no reason for their employer to pay them for knowledge they are not implementing. Our analysis confirms that those who are employed in positions for which a lower level of education would suffice earn less (ca 7%) than colleagues with the same level of education. As such, skills are only rewarded if they are actually used, and from society’s point of view and the point of view of the person in question it is likely considered a waste to work in a position that requires a lower level of education than the person has.

On the other hand, if we recall the salary advantage enjoyed by those with academic higher education (ca one-third), it appears that even if a tertiary-educated person takes

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1 This conclusion should nevertheless be treated with a certain amount of caution, since at the beginning of a person’s career it is quite normal for them to work in one or more positions in which not everything they learnt at university or in vocational education is needed.
up a position requiring a slightly lower level of education, their salary advantage ahead of someone with secondary education remains considerable. This is most likely due to the fact that marked disparity between the level of education required for a job and the level of education actually acquired is limited. Of course, this does not rule out salary nosedives at the case-by-case level due to a person being overqualified.

If we compare people at the same level of education whose information-processing skills range from high to low, those with higher skills (in particular those with academic tertiary education) have certain advantages in labour market outcomes (for example, additional remuneration being attributed to them as a point estimate), but statistically important differences cannot be seen between people with higher and lower levels of skills.

Skills do seem to take on a somewhat greater role, however, during a recession. Looking at registered unemployment it was noted that there were statistically significant differences by skills level primarily in years when the unemployment rate was high (2009). In conditions of high unemployment, taking skills into consideration more effectively highlighted the contrasts between basic education and higher levels of education in terms of their effect on the duration of unemployment. In other words, this means that among the unemployed with tertiary and post-secondary vocational education it was primarily those whose level of information-processing skills was higher who more quickly found work during the recession.

There are without doubt a number of facets to high-quality working life. Two of these were examined in this report: how satisfied people are with their jobs; and how much freedom people have in terms of deciding how to do their jobs. There does not seem to be a clearly discernible connection between people’s job satisfaction and their level of information-processing skills. This applies not only to Estonia, but to the majority of the countries that were analysed based on the PIAAC data.

At the same time, it was found that people employed in highly skilled occupations and those whose skills and knowledge match the skills and knowledge required of the position are more satisfied with their jobs. It can therefore be said that job satisfaction does depend on working conditions but that the level of information-processing skills is not a factor that directly influences satisfaction – rather it is more important that skills in broader terms be at a good level and in line with the needs of the position.

In terms of autonomy the results were not as uniform: analysis of the Estonian data revealed that employees with better problem-solving skills in a technology-rich environment are more likely to make choices affecting their work. It also emerged that in terms of information-processing skills generally, those employed in highly skilled occupations and those in positions requiring management skills are more likely to make choices affecting their own work. In this sense the analysis shows that information-processing skills are to a certain extent connected to greater autonomy among employees, although this does not apply to all information-processing skills.

It can be concluded from the analysis that the working life quality of an employee tends not to depend on their level of information-processing skills but is more closely connected to the use and development of their skills.
On the whole it can be claimed that as far as information-processing skills are concerned, entrepreneurs are in no way different from employees. Rather, entrepreneurs are distinguished by their characteristic way of thinking: compared to employees, entrepreneurs are more likely to gather new information, process it and connect it to the knowledge they already have i.e. to exhibit metacognitive skills. The more frequent connection of new ideas with actual situations and the fitting together of different ideas mark out entrepreneurs in Estonia and many other countries.

At the same time, from the point of view of success (if this is measured in terms of the income of the entrepreneur) three things are important: functional reading skills, mathematical writing skills and problem-solving skills in a technology-rich environment. Interestingly, information-processing skills play a more significant role than level of education in determining incomes among entrepreneurs, which tended to become unimportant in regression analysis. It can therefore be seen that in terms of the success of entrepreneurs the level of information-processing skills is important and that a significant proportion of these skills are acquired outside of the education system.

If our aim is to foster the spirit of enterprise, the results of this analysis suggest that more needs to be contributed to teaching methods that are seen to have a greater impact on shaping enterprising ways of thinking – without forgetting that if we want entrepreneurs to be successful, this must be balanced out in such a way that the entrepreneurs have adequate information-processing skills.