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Skills and Migrants, *with particular reference to 21st century skills*

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Overview

- A definition of skills
- A classification of skills
- Return to (cognitive and non-cognitive) skills
- Return to (cognitive and non-cognitive) skills of migrant population
- Conclusion and ideas for further research

A Definition of Skills

- A *skill* is...
 - “an ability to do an activity or job well, especially because you have practised it” -- Cambridge dictionary
 - “involving ideas (*cognitive skills*), things (*technical skills*), and/or people (*interpersonal skills*)” -- Business dictionary
 - Skill usually requires certain environmental stimuli and situations to assess the level of skill being shown and used.– Wikipedia

- From merely skills to *21st century skills*.

A Definition of Skills

- Examples of 21st century skills include: collaboration, communication, digital literacy, citizenship, problem solving, critical thinking, creativity and productivity (Voogt & Roblin, 2012).



A Definition of Skills

- **What's so special about the 21th century that we label our skills, accordingly?**
 - Van Laer et al. (2017, p.577):
 - *“Knowledge has become vital in the 21st century and people need to acquire such **skills to enter the workforce.**”*
 - *“These skills are labelled 21st-century skills to indicate that they are more related to the current **economic and social developments** than with those of the past century characterized as an industrial mode of production.”*

A Definition of Skills

- **What's so special about the 21th century that we label our skills, accordingly?**
 - National Research Council (2012, p.1):
 - “[21st century skills] are typically used to include both cognitive and noncognitive skills [...] that can be demonstrated within core academic content areas and that are **important to success** in education, work, and other areas of adult responsibility.”
 - Voogt & Roblin (2012, p.316):
 - **ICT** is regarded as both (a) an argument for the need of 21st century competences, and (b) a tool that can support the acquisition and assessment of 21st century competences.

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A Classification of Skills

- Geisinger (2016, p.3) classification of 21st century skills:
 - **Cognitive skills** include, among others, non-routine problem solving, critical thinking, and systems thinking.
 - **Intrapersonal skills** involved a group of metacognitive skills: selfmanagement, time management, self-development, self-regulation, adaptability, and executive functioning.
 - **Interpersonal skills** consist of complex communication, social skills including collaboration, teamwork, cultural sensitivity, and dealing with diversity.
 - **Technical skills** are primarily focused upon research and information fluency skills as well as entrepreneurial skills and financial literacy.

A Classification of Skills

- In economic literature, there is a strong overlap between skills (a person possess) and tasks (performed in occupations)
- Autor et al. (2003) argues that computers (or ICT more general):
 - **Substitutes** for workers in performing routine and manual tasks that can be accomplished by following explicit rules
 - **Complements** workers in performing nonroutine problemsolving and complex communications tasks
- “Skill-biased technological change”, or a change towards 21st century skills?

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Return to Skills

- Returns are often expressed in the percent change in hourly wages
- In case the return to skills increases over time, then economists interpret this as:
 - There are more occupations (or jobs) on the labour market that need workers having that skill, while, at the same time, persons having that skill are only limited (or not sufficiently) available **on the local labour market**.
 - ✓ This fact leads to an upward pressure on hourly wages.

Return to Skills

- Findings from Deming (2017) for US labour market:
 - The wage return to **math-intensive** occupations declined from about 1.7% to 0.8% between the 1979 and 1997 NLSY cohorts.
 - A one standard deviation increase in **social skills** yields a wage gain of 2.0% in the NLSY79, compared to 3.7% in the NLSY97.
 - Social skills are a significantly more important predictor of **labor market success for youth** in the 2004 to 2012 period, compared to the late 1980s and 1990s.

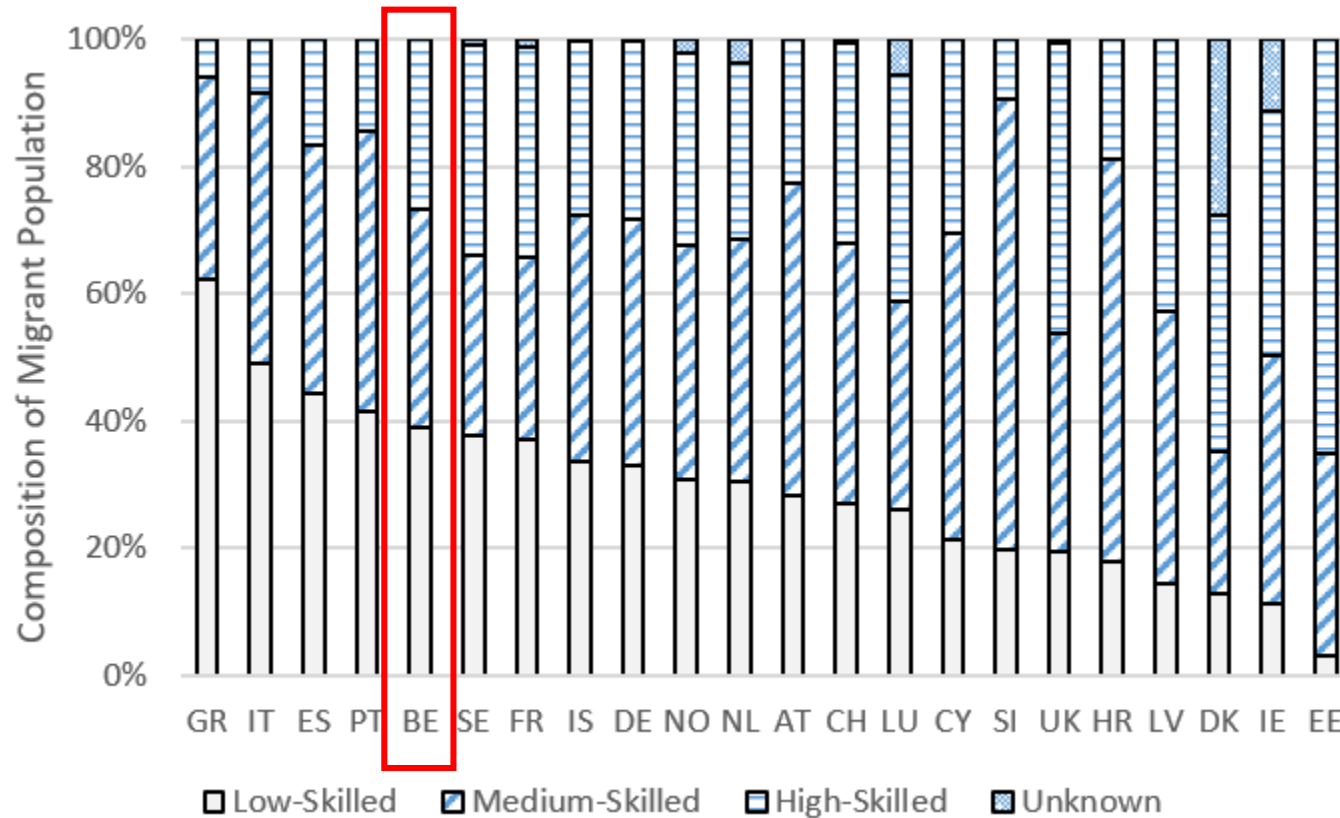
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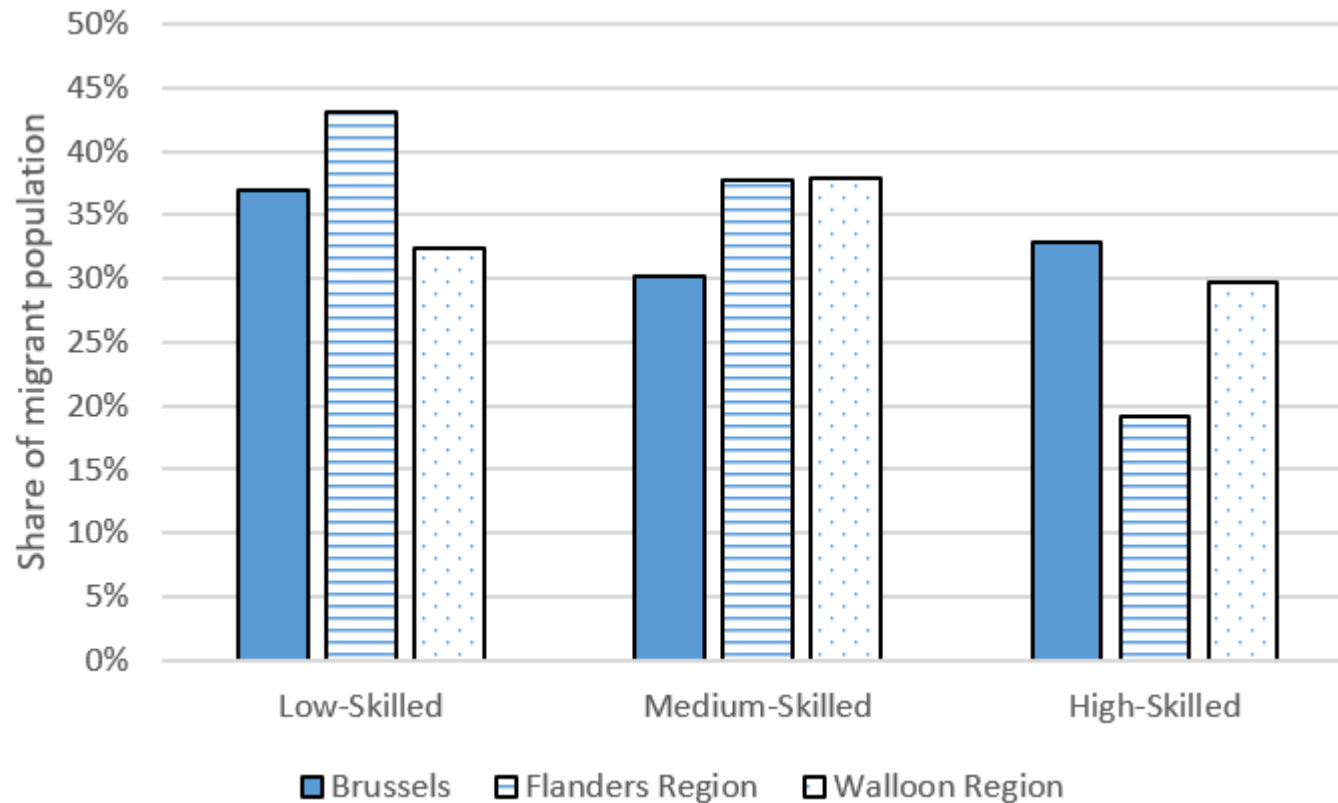
Return to Migrants' Skills

- Return to skills of the **migrant population** depends on the type and selectivity of immigrants (often expressed in the skills they possess) (Kahanec and Pytlikova, 2017):
 - Immigrants are assumed to increase a country's **unskilled** population [traditional Solow–Swan model]
 - Immigrants increase **increase the variety** in talents and (cap)abilities on the labour markets of receiving countries [Borjas, 1995]
 - **Heterogeneity** of migrant workers in terms of skills [Hanson, 2008]

Skills that Migrants Possess by Highest Level of Diploma



Skills that Migrants Possess by Highest Level of Diploma



Skills that Migrants Possess and Perspectives

- A significant proportion of foreign nationals registered in Flemish higher education only comes here to study and then leaves again [Statistics Flanders].
- Only highly educated immigrants tend to improve their skills over time in host countries [Tverdostup & Paas, 2019]
- Figures from the OECD indicate that the migrant population in Belgium have an employment rate of 53 percent. In this respect, Belgium scores worse than any other developed country [De Tijd].

Return to Migrants' Skills

- Return to skills of the **migrant population** depends on substitutability (or complementarity) between migrant and native workers' skills:
 - Immigrants' and natives' **skills are not perfectly substitutable**, which creates the incentive for natives to specialize in more skilled jobs, and let the immigrants to do the manual tasks (Peri, 2007; Peri and Sparber 2009)
 - Previous research also shows that immigrants **are substitutes for work performed by migrants** that came in earlier migration waves.
 - Immigrants are **more responsive** to labor and skill shortages than natives.

Skills that Migrants Possess and Perspectives

- Numeric skills and problem solving **in technology-rich environments** are positively correlated with income [Lissitsa & Chachashvili-Bolotin, 2019)]
- Immigrant-native wage gap is estimated at 5.7% [Tverdostup & Paas, 2019]
 - ✓ Literacy and numeracy **[cognitive] skills** account for approximately 30 percent of the pay disadvantage faced by immigrants.

Skills that Migrants Possess and Perspectives

- Immigrant-native wage gap is estimated at 5.7% [Tverdostup & Paas, 2019]
 - ✓ Systematic differences between migrant population and natives in **skills application at work**, which contributes to the immigrant-native wage gap [Tverdostup & Paas, 2019]
 - = Immigrants apply literacy and numeracy skills significantly less at work, compared to natives;
 - = Intensity of skill use **could be strongly related to the non-cognitive skills** (e.g. inter-personal skills, self-confidence).

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Conclusion & Ideas for further research

- Literature argues an increasing return to non-cognitive skills, or 21st century skills (as compared to cognitive skills).
- When it comes to the migrant population, there is lack of information in the literature on their 21st century skills.
- Assessment of the 21st century skills, that particularly migrants possess, seems like a good starting point for further research on this topic (discuss: NVQ; skills diploma).

Conclusion & Ideas for further research

- Voogt & Roblin (2012):
 - A major challenge associated with the implementation of 21st century competences [in curricula] concerns their **assessment**
 - ✓ Upon which diplomas are granted...
 - The challenge, then, involves the development of new assessment **procedures and instruments** that
 - ✓ facilitate and permit the application of these competences in authentic contexts;
 - ✓ enable the collection of multiple types of information about the learner's application of the competence (role of ICT).