

REVIEW: THE FUTURE OF WORK

This paper picks up an interesting and relevant question for academics and practitioners alike: The challenge of skill mismatch in the digital age and governance mechanisms for policy makers and managers to steer against it. The authors argue that while society is exposed to new challenges on basis of changes brought forward through digital innovation, recent innovation also represents an opportunity for welfare improvement if managed correctly. It provides various practical suggestions for governance solutions on both policy and managerial side to combat skill mismatch, reduce existing skill gaps, while also emphasizing new demands for skill. The paper highlights human capital as both a resource and responsibility.

The authors demonstrate their ability to combine relevant insights from both academia and practice and bring forward a holistic agenda for fueling job growth in the G20. Still I have the remaining conceptual concerns regarding its current version that I elaborate on below.

MAIN CONCERNS: ARGUMENTATION LOGIC AND CLARITY

- The authors (p.3) view skill mismatch and automation as two separate phenomena. However very often both phenomena are inseparable, as automation induces changes in job tasks and hence skill requirements. Rather than arguing that the focus of a very large academic literature is wrong, I would suggest highlighting that while a strong focus has been placed on documenting consequences of automation, i.e. establishing skill mismatch as a social challenge, less is known on solutions to the problem.
- It is unclear to me why the authors choose to first derive “simplistic” conclusions assuming the reading of only one study (Frey and Osborne, 2017).
 - P. 5: The academic literature beyond Frey and Osborne (see e.g. Brynjolfsson & McAfee, 2012) does recognize that automation provides opportunity for high-skilled workers to spend time on remaining, more value-generating tasks. I agree with the authors that less discussion has surrounded reducing head counts.

I would suggest to derive conclusions only after the general assessment of the literature (p.6), integrating points from p. 5 here.

- P. 7-8: I would like to hear more on how tasks are changing according to the McKinsey Global Institute and how conceptualizations relate to academic views on task reorganization (e.g. Autor, Levy & Murnane, 2003).
- P. 8: Your previous argumentation that digital innovation increases need for human capital and talent (p.7) seems to contrast your following argumentation, that upskilling technologies allow workers to execute tasks with no prior training (p.8). Here differentiating under which circumstances digital innovation enhances or reduces need for human capital or providing nuanced views e.g. for different technologies or jobs could provide more clarity. Potentially also, a clearer separation between skill- and welfare enhancing technologies could provide more structure to your arguments.
- P.9: Concerning your emphasis of welfare enhancement, I would also like more clarity on how upskilling links to wages and head count of workers across skill levels. It seems to me that upskilling of some workers could come at the disadvantage of others and the net effects are not clear.

- P.10, 15: You could consider strengthening your claims with an overview of what schools, companies and governments are doing currently so that your suggestions react to mapped out deficiencies.
- P. 11: Your paper would benefit from making the transition from digital innovation to a sudden focus on the manufacturing skill gap clearer. Please elaborate why manufacturing hires are reducing, i.e. elaborate whether skill mismatch is the main driver or not e.g. changes in attractiveness of more traditional industries for new cohorts in the midst of new digital industries and agile work environments coming up.
- P. 11 While it becomes implicitly clear towards the end, I would clarify that while digital technologies can be a temporary, complementary solution in the transition phase to new curricula, but they cannot substitute adaptation efforts.
- P.12 I think a clearer title emphasizing the role of digital technologies in changing structures in society would better fit the structure of your paper. Please clarify and provide facts on what the source of youth unemployment is. Your positioning of this topic seems to suggest that structural issues concerning job mobility are the main driver. If in fact skill mismatch would be the driver, this discussion could potentially fit better to the previous section.

MINOR CONCERNS: WORDING, TERMINOLOGY AND FORMAT

- P. 3, 4: I would suggest to rephrase “believing”, which triggers associations with a subjective evaluation, with the more objective, fact-based term of “arguing”.
- Citations should best be included not only in the main body but introduction. Additional citations for topics such as wage and employment growth, inequality, outsourcing, the digital revolution as well as calls for research from economists are easy to find (see e.g. Brynjolfsson & McAfee, 2012, 2014).
- When using robot or manufacturing examples in early parts of the paper (e.g. p. 5-6) the authors could make clearer that digital and not only mechanical innovation is the innovation source given the framing of the paper.
- P. 7-8: I would advise to be careful in using human capital and talent as synonyms or make your definition of talent clearer.
- P. 9 & 10: The sentences in parentheses (e.g. on gender equality or excessive reliance on portable devices) are phrased in a bit informally for my taste (e.g. thankfully, “...”). Partially bold sentences (p. 10, 11, 13) also seem uncommon to me.
- The authors use a high number of paragraphs throughout the paper. The reading flow could benefit from greater bundling of related topics.

Good luck!

REFERENCES

- Autor, D. H., Levy, F., & Murnane, R. J. (2003). The skill content of recent technological change: An empirical exploration. *The Quarterly Journal of Economics*, 118(4), 1279-1333.
- Brynjolfsson, E., & McAfee, A. (2012). *Race against the machine: How the digital revolution is accelerating innovation, driving productivity, and irreversibly transforming employment and the economy*. Brynjolfsson and McAfee.
- Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. WW Norton & Company.