

■ Artificial Intelligence and Intellectual Property: An Economic Perspective

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Introduction

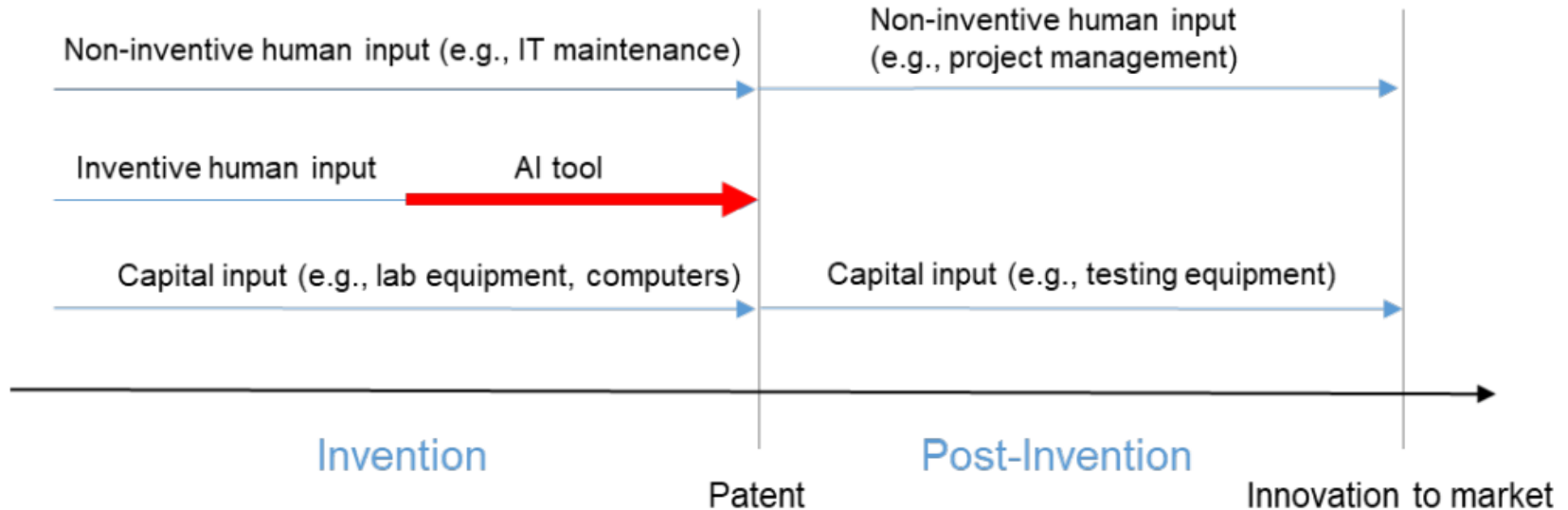
- AI is changing how innovators generate new technologies and creators produce original works
- Is AI just another tool that enhances human capabilities, like the printing press, the microscope, electricity and many others? Or is it different, because it replaces human ingenuity?
- Economic question: do we need to change the incentives associated with patents, copyright and other forms of intellectual property?

Economic rationale for IP protection

- Balanced IP rights resolve “appropriability dilemma” of inventions and creative works, while recognizing their unique social value
- Key AI questions?
 - Do AI-generate inventions/creative works qualify for IP protection, when IP laws foresee human inventors/creators?
 - As AI innovation is cumulative in nature, what is the right scope of protection?

Technological inventions (patents)

Figure 4: Human and capital inputs into innovation



Creative works (copyright)

- Historically, with the first wave of digital technology, creative sectors have been exposed to piracy and copyright infringement.
- Shortly after, digital platforms and new business models have emerged changing and, ultimately, expanding consumption.
- Substantial cost declines in the production and distribution of creative works have led to new stakeholder entry.

Potential impact of AI technology

- As in the first wave, AI holds the potential for lower costs, greater artistic productivity and experimentation, and new stakeholder entry.
- How AI will shape the returns to creative works and creative labor markets is hard to predict.
 - Is generative AI a substitute or complement to human creators and their works (short term)?
 - What will be the future demand for skills (long term)?

Creative reuse

- Notably, reuse of creative works is not a new phenomena in creative industries. Examples include hip-hop music and digital sampling.
- Creative reuse does not only cannibalize original works, but it can help promote their consumption.
- Still, AI technology is said to ‘automate’ and scale reuse activity to unprecedented levels.

Economic incentives (copyright)

- With wide-spread AI adoption, how will creative production change?
 - How well do laws balance the incentives to create original works vis-à-vis the incentives for their reuse?
- Will AI-generated works receive copyright protection?
 - Answers will invariably influence AI investment levels, AI adoption as well as the direction of creative activities.

AI service rules and training data

- Similar applies to the economic effects when determining liability or safety rules around new AI services.
- Development and access to training data
 - Who needs economic incentives, e.g. AI developers, providers of creative content and training data?
 - How important are IP rights in the provisioning of such data, relative to other privacy, secrecy, security concerns?

Thank you!

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