

Nobel Prize 2025 Lecture

Joel Mokyr ¹ Philippe Aghion ² Peter Howitt ³

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³Brown University

Lecture by Jack Liang

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- Strong interest in Economics
- Completion of 12 hours of economics courses at time of application
- Cumulative GPA of at least 3.0
- GPA of at least 3.0 in economics coursework



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- Graduate Membership Requirements

- Completion of one semester of full-time coursework
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 - GPA of at least 3.0

Please contact Chapter President gracee.clark@temple.edu or Faculty Advisor dimitrios.diamantaras@temple.edu with any questions.



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- Important: growth is *sustained* over time

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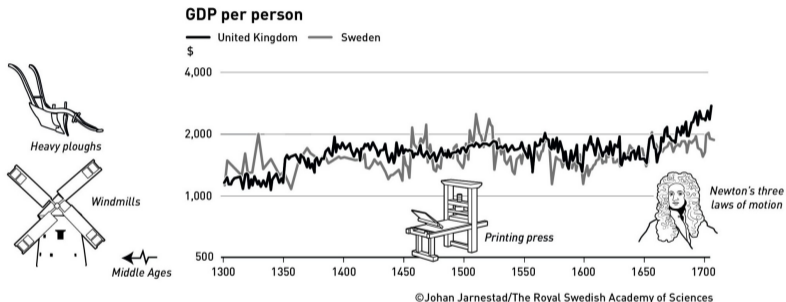
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 - ★ What is needed to grow?
 - ▶ **Aghion & Howitt**: *“for the theory of sustained growth through creative destruction”*
 - ★ How does growth work?

What is Needed to Grow?

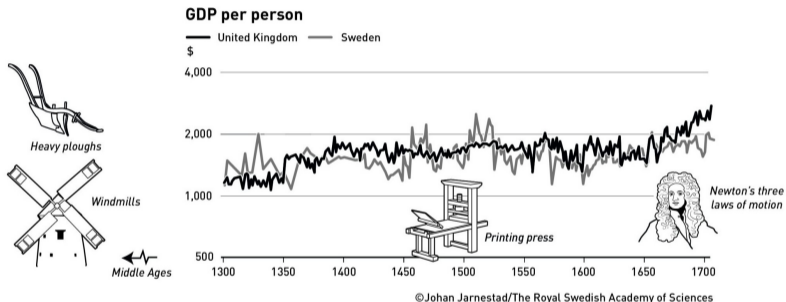
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Maddison Project Database 2023 with underlying sources from Broadberry et al. (2015), Krantz (2017) and Schön and Krantz (2015)

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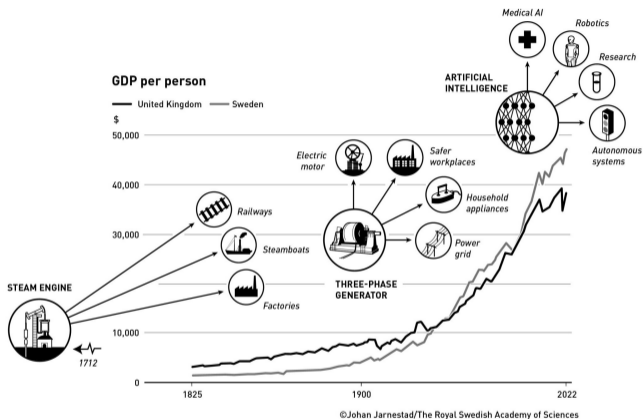
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- In spite of many important scientific discoveries, annual growth rates were about 10x slower than they are today

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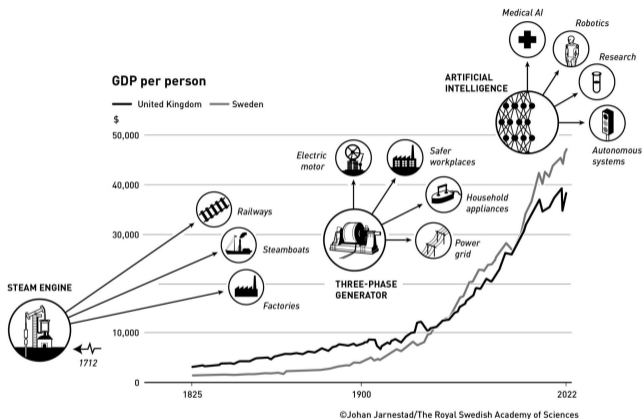


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- What changed?

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- **Industrial Revolution:** available practitioners to *apply* propositional knowledge in production. “Tinkerers”
- All together: “*Industrial Enlightenment*”
 - ▶ For institutional reasons, England had a head-start, but soon much of the world embraced this means of growth

Historical Perspectives to Modern Implementation

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- Unlike first 3, Schumpeterian growth has *“creative destruction”*
 - ▶ Older, low quality vintages are replaced by newer ones

Example of Schumpeterian Growth: Mobile Phones



Nokia 1100, released 2003

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Feature	Original	Iphone 17
Battery	1400 mAh	5088 mAh, faster charging
Display	3.5 in	6.9 in
Resolution	163 ppi	460 ppi
Camera	One 2MP rear camera	Several 48 MP rear cameras, 18 MP front facing camera
Connectivity	2G	5G
iOS	1, limited app support	iOS 26

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 - ▶ Key takeaway: creative destruction is sustainable!

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 - ▶ Model matches key features in microdata on firms

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- Mokyr: it didn't come out of thin air, required *useful knowledge*
 - ▶ Kickstarted by the Industrial Enlightenment
- Aghion and Howitt: growth can be sustained even when knowledge is *creatively destroyed*
 - ▶ Many of the merits of the model are in the math
 - ▶ If interested, email me! jack.liang@temple.edu