



Keeping track of productivity in house-building

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The productivity situation in construction



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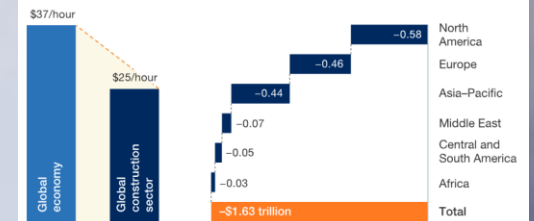
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- Poor productivity development over the years...
- The polysemy of productivity
 - Different understandings
 - Many ways for measuring productivity
- Current methods in literature
 - “*Little or no help for improving productivity*”
 - Not common praxis
- Then... How do the companies measure and use productivity?

Lagging construction productivity costs the global economy \$1.6 trillion a year.

Productivity gap = \$1.63 trillion

Economic value lost as a result of the gap,² by region, \$ trillion



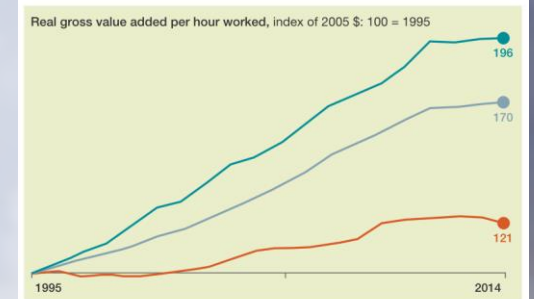
Average value added by employees per hour worked¹

¹2015 data in real 2005 dollars.

²Assumes construction productivity catches up with total economy productivity and current workers are reemployed at the total economy productivity rate.

McKinsey&Company

Globally, labor-productivity growth in **construction** lags far behind that of **manufacturing** or the total economy.



Source: GGCD-10; national statistical agencies of Turkey, Malaysia, and Singapore; OECD, Rosstat; US Bureau of Economic Affairs; US Bureau of Labor Statistics; WIOD; World Bank; McKinsey Global Institute analysis

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Method

- R&D study with five house-building companies
- 13 semi-structured interviews
 - Site-, project-, business area managers
 - What is, why measure, how measure, what affects?
- 1 interview
 - Senior manager
 - Planning and negotiations with labor unions
- Cross-case analysis & workshops with five key-representatives





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What is productivity?

- It starts with **needs** and ends with **fulfilling the needs**
- How well **resources** and **processes** are designed and combined to be **transformed** into **outputs**
- **Efficiency, effectiveness** and many **other things...**
- A measure mostly expressed as **output/input**





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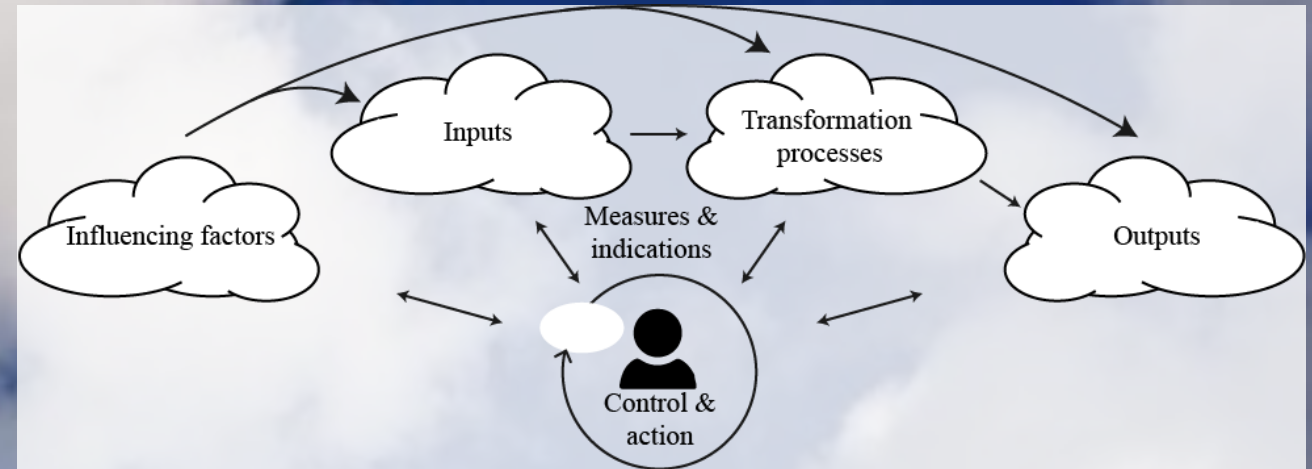
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Efficiency, effectiveness & many other things

- Inputs
- Transformation processes
- Outputs
- Many influencing factors

- Measuring and controlling productivity per se, but also much more...
- How do they keep track of productivity?





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Keeping track of productivity

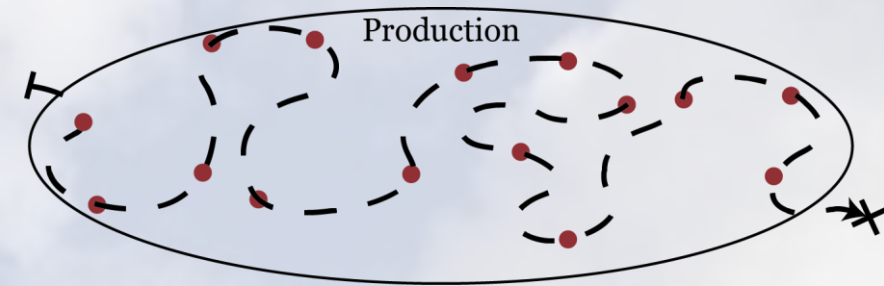
- Before and after production

- Setting up the plan, with KPIs and expert assessments
- Bottom line times and costs



- During production

- Costs and time
- Resources: workforce, materials, tools, etc...
- Quality
- Work environment
- Culture





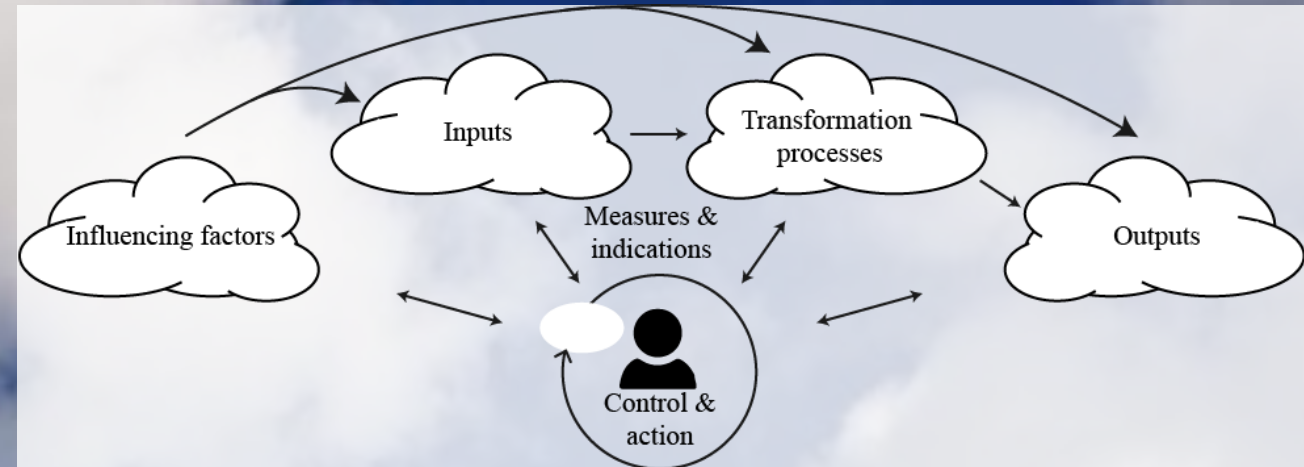
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Concluding and some next steps...

- Measure or assess **many things** in **different ways** continuously
- **Depends** on the project, managers...
- Some **quantitative** measures, mostly **qualitative judgements**
- **Lack of systematic** measurements
- What about **performance indexes** and **performance measurement systems**?
- What about **systematizing productivity** measurement and control **in and between processes** and **sub-processes** of projects?





Thank you for listening!

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