Coronavirus Guidance Webinar
5th June, 2020
All slides and a recording of the webinar are available on the website later this afternoon

- CBI Update
- Reverse VAT
- CLC People Survey
- Productivity – Brian Green - Brickonomics
- Q&A
- BESA AGM – 2nd July
PLEASE TAKE PART IN THE CLC PEOPLE SURVEY

The Construction Leadership Council is asking all employers to complete its 10 minute survey to understand the implications of a reduced workload on the construction workforce, including apprentices and graduates.

Closes this Friday at 4pm

https://www.surveygizmo.eu/s3/90240740/CLC-People-Survey
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What is productivity?

Many ways to measure productivity, some very sophisticated

The common measure used is labour productivity, where:

\[
\text{Labour productivity} = \frac{\text{Gross value added (GVA)}}{\text{Hours worked}}
\]

So what drives productivity is:

- **Quantity**: how much you do
- **Price**: how much people are willing to pay
- **Speed**: how fast the labour can deliver it

GVA (economic output) = value of output (quantity x price) – intermediate consumption *(basically, what you buy in)*
Here’s why construction productivity is a concern
Ever since the financial crisis, the world has been plagued by weak productivity growth. One explanation is that in uncertain times firms are keener to take more people on to the payroll than to invest heavily in new equipment. The construction industry has been afflicted by such problems for decades. Since 1995 the global average value-added per hour has grown at around a quarter of the rate in manufacturing.
Measuring productivity growth in construction is especially difficult due to the nature of production in the industry and the limitations of available data.

In particular, the price indexes used to deflate output are a major problem because reliable deflators are sparse and the available data suggest productivity has declined for many decades, which is somewhat difficult to believe.
Price indexes are just part of the problem...

The construction industry is exceptionally diverse in its:

- Clients
- Products
- Processes
- Locations, geographies and geologies
- Climate
- Available workforce and skills
- Structure
- Contractual forms
- etc. etc. etc.

When we measure productivity are we comparing the same things?
And demand for construction is exceptionally volatile. That makes measurement even trickier. It also influences how firms shapes their business models and how they operate.
What’s “construction” anyway?

In the official statistics construction is just part of what most people in the industry think of as the construction sector

It doesn’t include:

- Professional firms such as engineers, architects, surveyors etc.
- Plant hire (unless operated)
- Materials purchased
- Builders merchants or other suppliers

So, activity in these sectors is not directly captured in the measure of construction productivity, even though they have huge influence
Key message:

Measuring construction productivity at an industry level is difficult.

Let’s look at some examples of the statistical quirks that confuse how to make appropriate policy and process choices >>>
Example 1: “What if we plan better”

Investing more in professional services to forward plan and enhance on-site delivery may show in productivity gains...
...or it may not. It all depends on how and where the value is capture

If better planning means less work on site, the quantity falls

If on-site work is cheaper, the price of output/hour falls

Statistically this suggests less construction delivered less productively

Mad, yes, but in the official data the value added by planning better would picked up in the professional services sector not construction
Example 2: “What about off-site working?”

If done well, working off site in factories could raise productivity.

But off-site work may be classified as manufacturing not construction.

This may lead to relatively high productivity in manufacturing falling.

Productivity in construction may also fall if we deskill assembly work.

Statistically, we could end up delivering the built environment more productively while simultaneously reducing productivity in both the manufacturing and construction sectors.
Example problem 3: “Less civils work more building?”

If we change the mix of construction work, say to focus more on building work and less on civil engineering, what happens?

If you look at the 2019 q4 labour productivity figures you’ll see is:

- Construction of buildings (SIC 41) £26.90/hr
- Civil engineering (SIC 42) £49.87/hr
- Specialised construction activities (SIC 43) £27.19/hr

More building and less civil engineering would reduce productivity as measured at an industry level

Different subsectors of construction have different levels of labour productivity so the mix of work influences the headline number
What do these examples tell us?

They underscore the challenge of measuring productivity.

That headline productivity figures can be very misleading,
e.g. suggesting falling productivity even when on the ground productivity is improving.
Key message:

Be careful...

...how you interpret productivity figures in construction, certainly at the macro level, and how you ascribe meaning to them

This is, of course, not an excuse to dismiss measures of productivity or for that matter other measures of performance
Productivity is not just about the headline data

Measuring productivity for the industry may have potential traps, but there are other ways to gauge and boost productivity in construction

We can look at processes or individual trade activities:
- Desk-based analysis of programmes, costs, times and outcomes
- On-the-ground measurement, akin to time and motion studies
- Gathering data on procedures and spreading best practice
- Rephase workflow to see how you can reduce wasted time
- Examine and improve logistics and supply-chain efficiency

And a lot of other things that I am sure most businesses do...
Key message:

Be realistic...

...it’s unlikely you can radically shift overall industry productivity, but you can raise the productivity of the work you control.

And, in this particular crisis, probably the most immediate place to look for gains is at an operational level.
Before dismissing the bigger picture...

Let’s examine some major challenges often overlooked

The business model
The industry structure

These are interrelated and shape how and why business do what they do
They can hinder productivity gains

The business models and industry structure have evolved to cope with the nature high volatility and risk inherent in the industry

Demand for construction is very volatility and there are high levels of uncertainty in outcomes

Firms understandably seek to shift risk (mainly down the chain) or contain risk and form structures that are flexible to shocks

This has helped to creating an industry that is both fragmented and light on capital investment
The place of production varies project to project

Construction projects are most often one-offs

The effects of fragmentation are increased when design and assembly teams created for one job are then disbanded

Organisational learning is lost or dispersed.

Good ideas developed don’t necessarily transfer project to project.

Q: Does this suggest an industry geared up for raising productivity?
The net effect

Fragmentation means each firm acts to maximise its benefits/profits, not necessarily in the interest of the project as a whole.

Without integration/collaboration to refine the end-to-end design and production system, opportunities to raise productivity are limited.

If the client goes for low-cost, low-wage contractors rather than high-efficiency, high-wage firms, labour productivity will be low.

Volatility, risk and uncertainty of future work limits the incentive to invest in people and better equipment, and develop new techniques.
Another point to bear in mind:

The value of a building is often determined more by the value of the land it is built on than the cost of construction.

The way the residual land value model works tends to mean that the benefits of building less expensively show up in the land value more than the capital or rent paid for a building.

Yes, building more cost-effectively is a good thing.

But who benefits and where do the incentives lie?
Construction’s productivity problem is not new

Numerous reports, often prompted by government, have sought ways to boost the industry’s performance.


There were many others in that time and many since.

One line worth noting:

“What is left unsaid in every report is precisely who benefits from the performance improvement.”
Key message:

Improving construction performance is not an easy fix...

... and this is not just a UK problem
Thoughts on raising productivity in a crisis

Many processes need to be adapted to cope with Covid 19

This means:
- Isolating problem areas
- Developing replacement methods (hopefully, collaboratively)
- Seeing how they mesh with the existing processes
- Observing the new methods in operation (measuring if possible)
- Assessing any issues they might pose
  - Refining and observing again

Most of this you will have done or have in mind...
Factors associated with improved performance

Supply chain analysis in 2013 found these among the top factors

- Good communication
- Early selection and involvement of subcontractors
- Good relations on site
- Few variations
- Good critical path
- Realistic pricing
- Keeping teams together as much as possible
- Certainty and promptness of payment

In all the interviews I conducted the value of having a good construction manager was heavily stressed

Key message:

Foster collaboration within the industry especially within teams

To strive harder to maintain quality and reduce reworking
To develop the best working methods you can in the situation
To encourage smart ideas from the floor (or indeed anywhere)
To communicate over arising issues rather than rushing to a quick fix
Agreeing oversight procedures to maintain quality and workflow
etc. etc. etc.

Most importantly – work with the best construction managers you can

I appreciate that may not be down to you...
My top tip to raise productivity during a crisis

Covid 19 has meant quickly finding alternative ways to do things

Some might match the pre-Covid processes … Most may not

But…

Totally rethinking processes prompts innovation

If so…

The best way to boost productivity is to:

SHARE GOOD IDEAS
Q&A

covid19@thebesa.com
Webinar Programme

Coming Up:

50th Webinar - Tuesday 9th June – Acceptance Testing Methodology for Heat Interface Units – for contractors, consultants and housing developers (both social and private) that are involved in delivering residential communal or district heating networks – Gareth Jones – Fairheat.

Friday 12th June – International Women in Engineering Day – Elizabeth Donnelly, CEO of the Women’s Engineering Society will be joined by a panel of women from BESA member companies talking about their experiences in the building engineering sectors.
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Thank you

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