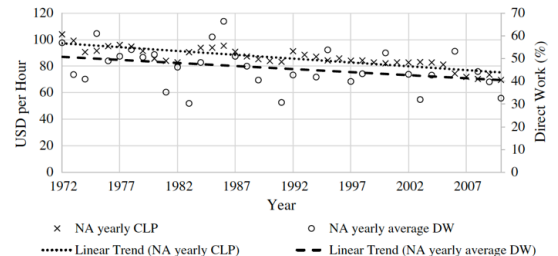


Is on-site Construction Labour Productivity decreasing due to more offsite production?

Associated with the **ReVALUE** research project

Purpose: Construction Labour Productivity (CLP) has been continually declining for four decades (1972-2010). Our previous research has shown that this decline is corresponding to a decline in Worker Efficiency, by means of Direct Work Time. This has been published in one of the highest ranked journals in our field, in the paper:



Kilde: Neve et al. (2020). "Determining the relationship between direct work and construction labor productivity in North America: Four decades of insights". *J Constr. Eng. Manage.* 146(9).

1 % øget DW => 5,4 mia USD i øget BNP for USA
1 % DW svarer til 36 sekunder pr time, eller 22 min per uge

Neve, H.H., Lerche, J., Teizer, J., Lindhard, S.M., and Wandahl, S. (2020). Determining the relationship between direct work and construction labor productivity: Four decades of insights. In *Journal of Construction Engineering and Management*. [http://doi.org/10.1061/\(ASCE\)CO.1943-7862.0001887](http://doi.org/10.1061/(ASCE)CO.1943-7862.0001887)

However, some argue that the decline in onsite productivity is related to an increase in offsite construction activities, which leaves the relative more difficult task left at the onsite job, thus decreasing the productivity.

We need YOUR assistance in falsifying this hypothesis.

A recent Norwegian study provided some more insights. However, we need to develop a time series of offsite vs onsite that can be used to show that no negative correlation between this time series and the declining CLP time series exists.

Main activities:

- Theoretical understanding of CLP
- Develop a time series of offsite vs onsite from statically databases
- Correlation analysis

Contact person: Søren Wandahl (swa@eng.au.dk)

Theory: ☒ ☒ ☒ **Experimental work:** ☐ ☐ ☐ **Statistical Analysis:** ☒ ☒ ☐

Suitable project type(s): **Research & Development:** ☒ **Master thesis:** ☒