Sample Title 1:

Construction Project Delay: Causes and Effects

The construction industry plays an important role in the national economy of the United Kingdom (UK), however the industry has been criticised for providing a sub-standard service to clients, with HM Government (2013) suggesting that the industry needs to reduce costs by 50% and improve the time taken to deliver projects. This is not a new criticism as evidenced by Egan (1998) and Latham (1994), and more recently by key performance indicators (KPIs) published by Glenigan (2016) which indicate that only 68% of projects were delivered on budget and 41% completed on time in 2016.

There are a plethora of causal factors for this poor performance including the fragmented nature of the industry which is dominated by small and medium sized businesses (Department for Business Innovation and Skills, 2013) and reliance on competitive forms of procurement (Morledge and Smith 2013). Other factors include changes to the design during the construction stage, poor construction management, the need for rework during construction and ineffective communication (Arditi et al., 2017; Fulford and Standing 2014; Walker 2015).

Given the economic and social importance of this industry, this research will explore the causes of delays in construction and assess the impacts of these delays. The research will also consider possible mitigation measures which could improve productivity and efficiency in this sector.

References

Arditi, D., Nayak, S. and Damci, A., 2017. Effect of organizational culture on delay in construction. *International journal of project management*, *35*(2), pp.136-147.

Department for Business Innovation and Skills, 2013. *UK Construction: An economic analysis of the sector*. London: BIS.

Egan, J., 1998. *The Egan report-rethinking construction. report of the construction industry task force to the deputy prime minister*. London: HMSO.

Fulford, R. and Standing, C., 2014. Construction industry productivity and the potential for collaborative practice. *International Journal of Project Management*, *32*(2), pp.315-326.

Glenigan, 2016. *UK Industry Performance Report*. London: Glenigan.

HM Government, 2013. *Construction 2025*. London: HM Government.

Latham, S.M., 1994. *Constructing the team*. London: HMSO.

Morledge, R. and Smith, A., 2013. *Building procurement*. Chichester: John Wiley & Sons.

Walker, A., 2015. *Project management in construction*. Chichester: John Wiley & Sons.

Sample Title 2:

Is sustainable construction in the UK an achievable goal?

The construction industry in the United Kingdom (UK) provides a valuable service in the development of the built environment, contributing to economic growth, supporting other industries in the economy and providing employment (Department for Business Innovation and Skills, 2013). However the industry also has a major impact on the environment, contributing an estimated 47% of the nation’s greenhouse gas emissions (Designing Buildings 2018). At the same time, the government is committed to reducing greenhouse gas emissions by 80% by the year 2050, a target that will be difficult to achieve unless the construction industry reduces its emissions by at least 50% (HM Government 2013). There are several causal factors driving this problem including ineffective management, the disjointed nature of project delivery and a lack of collaboration (Kibert 2016; Tabassi et al., 2016; Ogunbiyi et al., 2014).

This dissertation will explore the sustainability of the construction industry, examining performance over the past two decades in relation to carbon emissions and waste to determine its current level of sustainability. The research will also determine the barriers to greater efficiency in the industry and consider ways in which these barriers can be reduced.

References

Department for Business Innovation and Skills, 2013. *UK Construction: An economic analysis of the sector*. London: BIS.

Designing Buildings, 2018. *Carbon Dioxide in Construction*. [online]. Available at < <https://www.designingbuildings.co.uk/wiki/Carbon_dioxide_in_construction> > [accessed 28th August 2018].

HM Government, 2013. *Construction 2025*. London: HM Government.

Kibert, C.J., 2016. *Sustainable construction: green building design and delivery*. Chichester: John Wiley & Sons.

Ogunbiyi, O., Goulding, J.S. and Oladapo, A., 2014. An empirical study of the impact of lean construction techniques on sustainable construction in the UK. *Construction innovation*, *14*(1), pp.88-107.

Tabassi, A.A., Roufechaei, K.M., Ramli, M., Bakar, A.H.A., Ismail, R. and Pakir, A.H.K., 2016. Leadership competences of sustainable construction project managers. *Journal of Cleaner Production*, *124*, pp.339-349.

Sample Title 3:

Effective waste management in the construction industry: Is Building Information Modelling the solution?

The construction industry generates an estimated 59% of total waste in the United Kingdom (UK) (Department for Environment, Food and Rural Affairs, 2018). This waste has to be treated and managed, usually in landfill sites which has a negative impact on greenhouse gas emissions, land consumption, productivity and efficiency in the industry as well as the natural environment (Butera et al., 2015; Dahlbo et al., 2015).

HM Government (2013) take the view that Building Information Modelling (BIM) offers a solution to this problem, as the software provides three-dimensional virtual modelling which enhances the efficiency of the design and the construction process. BIM also provides a central database which facilitates collaborative working practices. However there are barriers to the roll-out of this technology including high levels of investment in hardware, software and training (Azhar et al., 2015; Miettinen and Paavola 2014).

This research will explore the problem of waste in the construction industry, addressing the causal factors for waste generation. The study will also assess the application, benefits and drawbacks of BIM as a solution to waste in the industry.

References

Azhar, S., Khalfan, M. and Maqsood, T., 2015. Building information modelling (BIM): now and beyond. *Construction Economics and Building*, *12*(4), pp.15-28.

Butera, S., Christensen, T.H. and Astrup, T.F., 2015. Life cycle assessment of construction and demolition waste management. *Waste Management*, *44*, pp.196-205.

Dahlbo, H., Bachér, J., Lähtinen, K., Jouttijärvi, T., Suoheimo, P., Mattila, T., Sironen, S., Myllymaa, T. and Saramäki, K., 2015. Construction and demolition waste management–a holistic evaluation of environmental performance. *Journal of cleaner production*, *107*, pp.333-341.

Department for Environment, Food and Rural Affairs, 2018. *UK statistics on waste.* London: DEFRA.

HM Government, 2013. *Construction 2025*. London: HM Government.

Miettinen, R. and Paavola, S., 2014. Beyond the BIM utopia: Approaches to the development and implementation of building information modeling. *Automation in construction*, *43*, pp.84-91.

