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Title:

Has the increase in material costs had a negative
effect on UK Construction Companies

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Submission:

May 2026

This research is submitted in part fulfilment of the
BSc (Hons) in Quantity Surveying



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Declaration

I declare that this research is the result of my own independent investigation
And that all sources are duly acknowledged in the reference list and bibliography

Signature Jac Beynon..... Date 6th May 2026.....

Abstract

This dissertation investigates how the increase in material costs has negatively affected construction companies within the UK. The study aims to assess the extent to which rising material prices have influenced project profitability, financial risk, and project delivery, as well as to explore the strategies adopted by organisations to manage these challenges.

A mixed-method approach was adopted, combining a review of existing literature with primary data collected through a structured questionnaire distributed to construction professionals. A total of 23 responses were received from individuals working across a range of roles within the industry, including Quantity Surveyors, Project Managers, and Site Managers.

The findings indicate that material cost increases have been widely experienced across the industry, with key materials such as timber, steel, and insulation identified as being significantly affected. The results demonstrate that rising material costs have had a moderate to significant impact on project profitability, contributing to reduced margins, increased tender prices, and, in some cases, loss-making projects.

In addition, the research highlights an increase in financial risk, with the majority of respondents indicating that projects are now more financially uncertain than in previous years. Material cost increases were also found to contribute to project delays, primarily due to supply chain disruption, material shortages, and the need for redesign or value engineering.

The study concludes that rising material costs have had a clearly negative impact on construction companies within the UK. While organisations have implemented mitigation strategies such as early procurement and value engineering, these measures are only partially effective. The research recommends greater use of flexible procurement approaches and contractual mechanisms, such as fluctuation clauses, to better manage cost volatility in future projects.

Acknowledgements

I would like to express my sincere gratitude to my dissertation supervisor, Rhodri Thomas for his guidance, support, and feedback throughout the completion of this research. His input has been invaluable in shaping the direction and quality of this study.

Another big thank you is to all the construction professionals who took the time to complete the questionnaire, as their responses were essential in providing the primary data required for this research.

In addition, I would like to acknowledge my colleagues and employer for their support and for providing me with a greater insight into the construction industry, which has greatly contributed to my understanding of the topic.

Finally, I would like to thank my family and friends for their continued support and encouragement throughout my studies but especially through the process of writing this dissertation.

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1. Introduction

In the United Kingdom, the construction sector is essential to societal advancement, infrastructure delivery, and economic progress. Organisations must strike a balance between conflicting demands for cost certainty, quality, sustainability, and program delivery as projects grow in value and complexity. Considering this, successful outcomes at every level of the building lifecycle depend more on efficient project management and well-informed decision-making.

During the last few years the construction industry has faced many challenges which have caused significant problems in certain areas such as, economic uncertainty, resource constraints which has made the sourcing of materials much harder, it has also faced its fair share of evolving regulations and the growing expectations surrounding sustainability and efficiency which isn't only acting the bigger companies but its also affecting essentially everyone within the industry. These problems have highlighted the need for greater improvement in collaboration between stakeholders and evidence-based approaches to decision making. As such understanding the factors which have an influence on 'the increase in material costs having a negative effect on UK Construction Companies'. These factors could include, cost management, procurement strategies, sustainability implementation, risk management and many more.

My main aim with this dissertation is to explore and evaluate 'Has the increase in material costs had a negative effect on UK Construction Companies'. To achieve this my study will explore key themes including, building material cost trends, causes of material price increases, the impact these affects have had on project profitability and project delivery just to name a few, I will assess these and see the influence they have had on the construction industry within the UK. My research will seek to contribute with existing knowledge by identifying practical insights that might support professionals such as Quantity Surveyors and the project teams in delivering projects more effectively and aid to increase their profitability.

The research that I will be undertaking will adopt a quantitative approach by developing a questionnaire which I will then give out to professionals within the industry, this will hopefully help me by gathering data which will be useful in studying my research topic whilst giving me the best possible chance of a positive conclusion. Through this methodology, the study aims to provide both academic understanding and practical recommendations grounded in current industry experiences.

I believe this is much of a significance in this research as it will strive to bridge the gap between theoretical frameworks and real-world application of the topic, with giving particular attention to the context of contemporary construction practise. I hope that my findings will assist organisations in improving decision making processes, reducing inefficiencies and enhancing overall project performances with emphasise on project profitability.

This dissertation is structured as follows. It begins with an introductory chapter, followed by Chapter Two which presents the literature review. This chapter opens with an introduction and examines key themes including building material cost trends and the causes of material price increases. It also explores strategies for mitigating rising costs, identifies gaps within existing research, and concludes with a summary of the key findings from the literature.

Chapter Three outlines the research methodology, including the research philosophy, approach, data collection methods, data analysis techniques, and considerations of reliability, validity, and limitations. Chapter Four presents the research findings, followed by Chapter Five which provides analysis and discussion of the results in relation to the existing literature.

The final chapter summarises the key findings and presents the overall conclusions of the study. The dissertation concludes with a reference list and appendices.

1.1 Research Aim and Objectives

Research Aim

The aim of this study is to investigate whether the increases in material costs has had a negative effect on UK construction companies, with particular focus on project profitability, financial risk, and project delivery and programme.

Research Objectives

To achieve this aim, the following objectives have been identified:

- To identify the key construction materials that have experienced significant cost increases in recent years
- To assess the impact of rising material costs on project profitability within construction companies
- To evaluate how material cost volatility has influenced financial risk on construction projects
- To examine the extent to which increased material costs have contributed to project delays and programme uncertainty
- To analyse the effectiveness of procurement strategies and contractual mechanisms in managing material cost risk
- To evaluate the mitigation strategies adopted by construction companies in response to rising material costs

2. Literature Review

1. Introduction

The construction industry is one of the most cost-sensitive sectors in the UK economy, where fluctuations in material prices have a direct effect on project budgets, scheduling, and overall profitability. In recent years, significant increases in the price of key materials, such as steel, timber, and concrete have placed mounting pressure on contractors and developers (RICS, 2023). This literature review examines existing research on the causes and impacts of rising building material costs, with a particular focus on their influence on project profitability and completion rates. The review also explores mitigation strategies adopted by contractors across the UK.

2. Building Material Cost Trends

Over the past decade, material costs in the UK construction industry have shown persistent upward trends, with notable spikes during and after the COVID-19 pandemic. The Building Cost Information Service (BCIS) recorded that the overall building cost index increased by approximately 25% between 2020 and 2022 (BCIS, 2023). Timber prices alone rose by more than 60% in 2021 due to global shortages, while steel and insulation materials experienced similar volatility (Office for National Statistics [ONS], 2022). These material price increases during the covid period had a negative effect on contractors with many showings loses through those years and many years having to shut down due to not being able to operate any longer, but this is something I will be going into more depth on.

Scholars attribute these fluctuations to both macroeconomic and structural factors. According to Olanrewaju and Anahve (2015), material cost escalation is primarily driven by supply chain fragility, inflation, and raw material scarcity. More recent studies by Turner and Hall (2023) highlight that global demand and energy cost increases have intensified price volatility post-2020, creating significant challenges for contractors locked into fixed-price contracts.

3. Causes of Material Price Increases

The rise in building material prices has been influenced by several interrelated economic, political, and environmental factors. Below is an explanation on each of the different factors that influence the increased cost of building materials.

3.1 Economic Factors

General inflation and currency depreciation have been major contributors. The weakening of the pound sterling following the Brexit referendum made imported materials more expensive, as nearly 25% of UK construction materials are sourced from the EU (Baldwin et al., 2019).

Additionally, global inflationary pressures, coupled with increased logistics and fuel costs, have amplified material cost escalation (Chigara & Moyo, 2021).

3.2 Political and Global Events

The effects of Brexit and the COVID-19 pandemic disrupted supply chains and reduced availability of imported materials. According to the Construction Leadership Council (CLC, 2022), Brexit led to delays at ports, increased import tariffs, and reduced labour availability—all of which contributed to price inflation. The COVID-19 pandemic compounded these issues by limiting production capacity worldwide and creating bottlenecks in international shipping (Al-Emad & Rahman, 2020).

3.3 Environmental and Policy Factors

Environmental policies and the shift towards sustainable materials have also influenced prices. For instance, stricter carbon emission standards have increased manufacturing costs for energy-intensive products like cement and steel (DEFRA, 2022).

4. Impact on Project Costs and Profitability

Numerous studies have linked rising material costs to declining profitability in the construction sector. Smith et al. (2021) observed that contractors operating under fixed-price contracts face significant financial risks when input costs escalate unexpectedly. Profit margins in UK construction, typically ranging between 2–5%, are often eroded when material costs rise beyond initial estimates (RICS, 2022).

Budget overruns have become increasingly common. A study by Chan and Adabre (2020) found that 64% of construction projects in their sample experienced cost overruns exceeding 10% of their initial budgets. These overruns were often linked to volatile material prices and supply chain disruptions. The inability to accurately forecast costs during tendering further compounds this issue, forcing contractors to absorb unexpected increases (Love et al., 2019).

Furthermore, smaller contractors and SMEs are disproportionately affected. Large firms may hedge costs through bulk purchasing or long-term supplier contracts, while SMEs often lack the financial capacity to do so (Laryea, 2010). As a result, profitability across the wider industry has declined, limiting investment in innovation and workforce development.

5. Impact on Project Delivery and Scheduling

The volatility of material prices does not only impact profitability but also disrupts project delivery. Delivery delays often occur when contractors postpone procurement in anticipation of price reductions, or when suppliers are unable to meet demand due to shortages (Al-Emad & Rahman, 2020).

Project schedules are particularly sensitive to material availability. Chigara and Moyo (2021) found that delays in securing materials accounted for an average of 15–20% of total project

time overruns during 2020–2022. These disruptions affect not only completion times but also client satisfaction and contractual relationships.

Moreover, contractual disputes have increased due to disagreements over price adjustments and delay penalties. According to RICS (2023), fluctuation clauses and remeasurement contracts have re-emerged as mechanisms to share risk between clients and contractors, reflecting a shift from traditional fixed-price contracts.

6. Strategies for Mitigating Rising Costs

The literature highlights a range of strategies for managing cost escalation. One commonly proposed method is the inclusion of fluctuation clauses in construction contracts, allowing adjustments based on material price indices (RICS, 2022). Early procurement and bulk purchasing can also reduce exposure to short-term price spikes (CIOB, 2021).

Value engineering—the process of substituting expensive materials with cost-effective alternatives—has become increasingly relevant (Love et al., 2019). However, this must be balanced against quality and sustainability objectives.

In addition, digital technologies such as Building Information Modelling (BIM) are being adopted for cost forecasting and supply chain management. Studies suggest that integrating BIM with real-time market data enables better cost estimation and scenario planning (Ghaffarianhoseini et al., 2017).

7. Research Gaps

While there is substantial research on cost escalation and project management, several gaps remain. First, much of the existing literature predates the COVID-19 pandemic and Brexit, meaning post-2020 data on the UK context is limited (Turner & Hall, 2023). Second, few studies explicitly link rising material costs to both profitability and project delivery performance. Finally, there is limited exploration of how SMEs, which make up over 90% of UK construction firms, adapt to price volatility (Baldwin et al., 2019).

Addressing these gaps is essential to developing effective cost management strategies and improving the resilience of the UK construction industry.

8. Summary

The reviewed literature establishes a clear link between rising material costs and negative impacts on project profitability and delivery. The causes of these cost increases are multifaceted, including economic inflation, political uncertainty, and global supply disruptions. Contractors have adopted various strategies to mitigate these effects, but many remain vulnerable to volatility, especially smaller firms. This dissertation will build upon these findings by empirically analysing how rising material costs affect project outcomes in the UK and identifying effective mitigation strategies for industry practitioners.

3. Research Methodology

1. Introduction

In this chapter I will describe the research methodology that I have adopted to best investigate the increase in material cost in the UK Construction Industry. I will be explaining the research philosophy, approach, and the strategy used, alongside the methods of data collection and analysis I used to collect my data in the best way I thought was suitable. I have also given consideration to the reliability, validity and ethical implications of the research, this should ensure that my findings are robust and credible.

2. Research Philosophy

Research philosophy refers to the beliefs and assumptions around the development of knowledge and the nature of it within a study (Saunders et al, 2019). For my search selecting the most appropriate research philosophy was essential as it will underpin the research design, data collection and analysis methods which I have adopted.

My study adopts a pragmatic research philosophy, meaning that I will focus on the practical application of research and priorities methods that best address the research problem which I have selected. This research philosophy does not align strictly with either positivism or interpretivism, instead it allows me to select methods based on their suitability for answering my research question which is 'Has the increase in material costs had a negative effect on UK Construction Companies'

Although my research is mainly based on a questionnaire-based approach, commonly associated with positivism and of a quantitative nature a purely positivist stance was not considered appropriate for my research as I believed that it would not be as suitable for the question I am wanting to answer. This is because my research is not aimed to identify the measurable trends in material increased but instead is to understand the practical implications and experiences of construction professionals and how they have been directly affected in their projects over the last few years. As this is the case some elements of subjective interpretation are required when analysing responses from the questionnaire.

3. Research Approach and Strategy

My research follows an inductive approach, this meaning that my conclusions are drawn on collected data rather than analysing and testing existing data and theories that are out there.

This approach is suitable for my study as I will seeking to explore how increasing material costs are affecting construction companies in their projects which emphasise on profitability. When analysing my results from construction professionals I will be able to identify patterns and themes which will aid me in developing a meaningful conclusion.

A questionnaire survey was selected as my primary research strategy, this method was chosen I believed that I would be able to research a further audience than if I was to do interviews as I would be limited to individuals that I know instead of getting the opinions of others which might have a better insight into the problem than my circle of contacts.

The questionnaire consisted of closed and open-ended questions; this allows me to get both quantitative analysis trends from the closed questions also a deeper insight into industry experiences and opinions from the open-ended questions.

I concluded that a questionnaire would be the best option for me as it is a great way of gathering significant amounts of data within a limited timeframe, making it suitable for me working to a tight schedule as many do whilst studying.

4. Data Collection Methods

My primary data was collected through an online questionnaire which I created on Microsoft forms, this was then distributed through my personal LinkedIn page, this with the help of people sharing allowed me to research the audience that I was aiming for, which was UK construction professionals including, Quantity Surveyors, Project Managers, Constructors and professionals within building merchants.

Through the time my questionnaire was active I was able to collect 23 legitimate responses which is around the number I was looking for and gives me enough data so that I can review thoroughly and get the best possible conclusion to my question.

With regards to secondary data, the data I collected to support and add context to my primary findings included,

- Academic Journals
- Government Publications
- Industry Reports

These sources that I have mentioned provided me with an insight into material cost trends and the broader affects it has on the construction industry and its projects.

5. Sampling

A sampling method was used in this study and In my research, it involved targeting individuals which I believed would give me the best possible answers for my questionnaire, this was done by including a question in my questionnaire which asked for their job role, I limited the answers to those whom I believe would give me the most valuable data.

These included the following,

- Quantity Surveyor
- Commercial Manager
- Buyer
- Site Manager
- Project Manager
- Builders Merchant

This method was deemed appropriate as I prioritised quality and relevant data over random selection, this ensured that all participants that answered the questionnaire would have had direct knowledge of the cost implications of rising material costs.

6. Data Analysis

The data collected from my research questionnaire was analysed using a combination of descriptive statistics, including percentages and frequency distributions. The results I obtained are to be presented using charts and graphs to clearly show the trends and patterns relating to the increasing price of materials in the UK, my findings will also show which materials has given the individuals the most problems. This way it enabled me to compare the responses easily and identify key findings.

Where I used open-ended questions, the qualitative data was analysed using a basic thematic approach where responses were reviewed and out into groups in which they had a common theme with each other, this helped me highlight recurring issues and insights in which the participants of the questionnaire brought to my attention. Having this data provided additional context to support my findings of the quantitative data on my questionnaire.

In all the use of a questionnaire allowed me to efficiently analyse the data ensuring that my findings could be clearly interpreted and then directly linked to my research objective. The mixed analysis also gives me an understanding of both numerical trends and professional perspectives.

7. Reliability and Validity

Reliability refers to the consistency of the research, while validity refers to the accuracy of the findings (Bryman, 2016)

Whilst undertaking my research to ensure reliability of the results I designed my questionnaire to have structured questions which would reduce ambiguity and improve consistency in the responses.

Validity of my research was enhanced by targeting experienced construction professionals as I have previously mentioned, this ensures that the data collected is relevant to my research topic. Adding to this the use of both primary and secondary data helped to support my key findings and increase credibility.

8. Ethical Considerations

This topic was always important to be as I wanted to be as transparent with the participants as possible, therefore ethical considerations were carefully addressed throughout my research into this topic.

Firstly, I ensured participants were informed of the purpose of the study and provided consent prior to completion of the questionnaire, this was done by including a 'Participants Information Form' when I issued my questionnaire for responses. Secondly all responses to the questionnaire were made anonymous to ensure the confidentiality of the participants in questions, with this no personal data was collected.

9. Limitations

There are several limitations associated with this research that should be acknowledged, firstly being, the study received a total of 23 responses, which, while sufficient to identify the key trends I am looking for it may look to be a relatively small sample size compared to the number of construction professionals which have been affected by these material increases, as a result of this my findings may not be fully applicable to all construction companies across the entire UK.

Additionally, the sampling approach relied on voluntary participation through a professional network such as LinkedIn, this may create bias within my results as it could have been only people in my network participating in the questionnaire, I did try to mitigate this by sharing the questionnaire and hopefully getting it in other parts of the UK in which I am not very associated with. This may have been something I could have done differently in the questionnaire by including a location questionnaire, then I would be able to identify the location of each person and their opinion on the matter in hand.

Finally, Time constraints associated with completing a dissertation may have restricted the duration I had to obtain the data needed, this could then have a direct impact on the number of responses I obtained, in saying this I am still very grateful to have the 23 responses and it has given me a broad range of data that I was looking for.

Despite these limitations which have occurred, the research has still provided my with a valuable insight into the impact of rising material costs within the UK Construction industry and has highlighted key trends within the industry.

4. Research

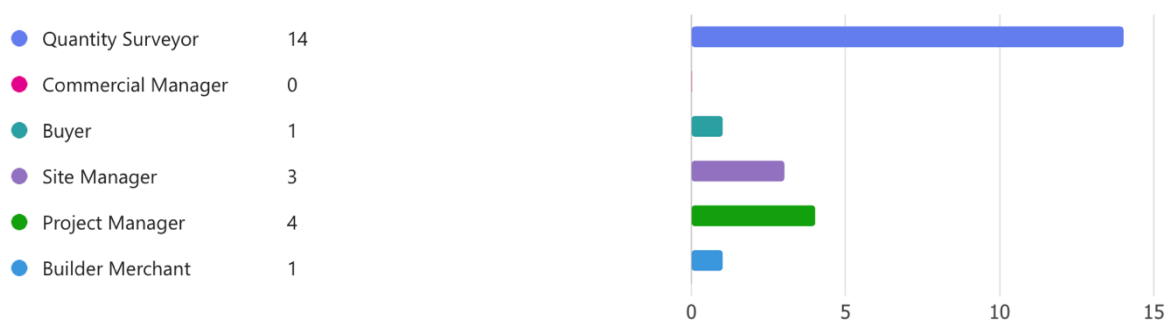
1. Introduction

In this chapter I will be presenting the findings I obtained from the questionnaire survey I created as part of my research, the questionnaire was made to investigate the impact of rising material costs within the construction industry. It was distributed to a range of construction professionals, including Quantity Surveyors, Project Managers and other industry stakeholders.

From the time my questionnaire was active I received a total of 23 valid responses, the results help provide an insight into industry experience, different views into material cost increases, and their impact on project delivery and profitability. My findings are presented in a structured format and aligned with my research objectives.

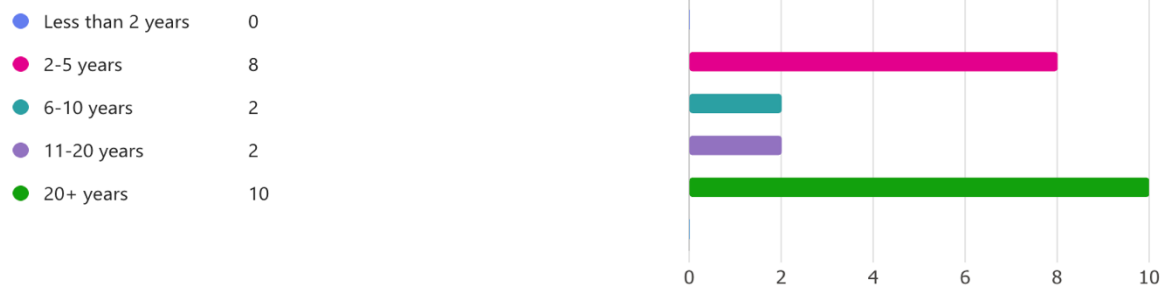
2. Respondent Profile

The majority of respondents were Quantity Surveyors, I expected this as I think they would be able to provide me with the best data for my topic as they must deal with this problem first hand on a daily basis. The remaining respondents to my questionnaire consisted of Project Managers, Site Managers and stakeholders in procurement and supplier-based roles.



(Figure 4.1 – What is your role within the construction Industry?)

This distribution of respondents suggests that the findings I have gathered are primarily involved with cost management and project delivery which I am glad about as they will be able to give me the most accurate data.



(Figure 4.2 – How many years’ experience do you have?)

Respondents to my questionnaire demonstrated a broad range of industry experience with a significant proportion having over 20 years of experience, while a notable number were within the 2–5-year experience range. Smaller groups were represented within the mid–level experience categories.

This range indicated that both experienced professionals and those in their earlier years of their careers contributed to the data, this provides a balanced perspective.



(Figure 4.3 – How would you describe the company you work for?)

Respondents also represented a range of company types within the industry, but a majority work for main contractors, and the least for builders’ merchants, I had hoped for a higher percentage here as they work very closely with materials and have knowledge of increases before they hit contractors. Neither the less this is beneficial as it shows my findings are not limited to one specific area of the industry but instead reflects views from different organisations perspectives.

Lastly from the responds I received it was clear that the respondents are a part of projects which are ranging in size, from small-scale development to complex multi-million-pound projects, but the majority work in projects in the range of £6-10 Million.

This shows that the material increases affect all size of projects and contractors, these results will further enhance the application of the results across the industry.



(Figure 4.4 – What is the typical size of project you work on?)

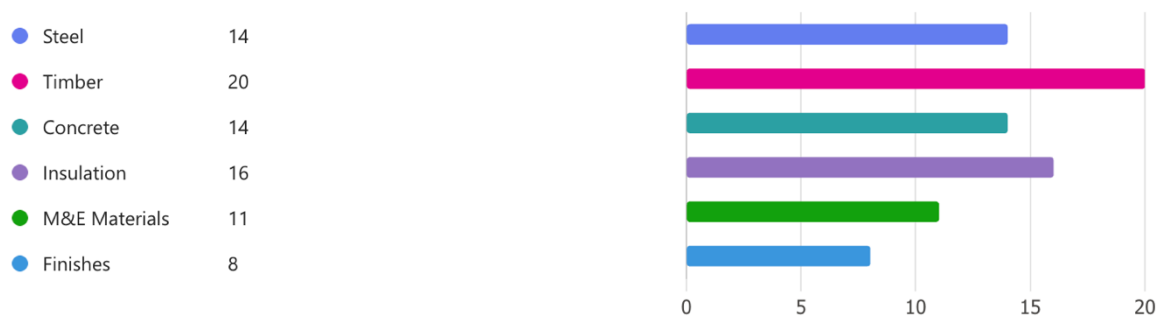
3. Material Cost Increases

All respondents confirmed that they had experienced material cost increases within the last five years, this highlights a consistent and industry wide recognition of the problem which is material price inflation.



(Figure 4.5 – Have you experienced significant increases in building materials in the last 5 years?)

In terms of the types of materials, respondents were asked to identify the types of materials in which they had experienced price increases in recent years. The below graph shows the results from this question.



(Figure 4.6 – Which materials have you seen the greatest cost increases?)

As you can see the materials in which professionals within the industry experienced the biggest increases in cost were Timber & insulation, along with other such as Steel & concrete, this is something I had expected as these materials are core within a construction projects as they are frequently used everywhere, from below DPC all the way up to the roof coverings.

These findings illustrate that material price increases have not been isolated to certain types of materials but instead have been widespread across multiple categories of construction materials which are commonly used.

7. How severe do you consider recent material cost increases to be?



(Figure 4.7 – How severe do you consider recent material cost increases to be?)

As you can see in the above graph which covers the severity of cost increases on materials 57% of respondents identified that material cost increases have had a high effect on their project, while 39% considered them to be moderate with then only 1 respondent rating the increases as ‘very high’. As you will be able to notice no respondents selected ‘low’ or ‘very low’ this highlights the issue we in the industry are facing now with cost increases.

These findings help show that cost increases are widely perceived as having a substantial impact on projects across the construction industry and on many different levels from small house builders to national main contractors.

4. Implications on Projects

The extent to which rising material costs have impacted project profitability and performance was assessed through the questionnaire. The result of the below graph indicates that individuals have experienced moderate to significant impact on project profitability due to the increase in material costs.

This reflects the financial pressures that construction companies are having to deal with due to the increased in material costs.

8. To what extent have material increases affected project profitability?



(Figure 4.8 – To what extent have material increases affected project profitability?)

Also, In line with project profitability, participants were asked to identify the effects that rising material costs have had on projects. The findings of these questions indicate that the impact has been wide-ranging, with respondents selecting several different consequences which have been affecting both commercial performance and project delivery.

9. Have rising material costs led to any of the following? (Select all that apply)



(Figure 4.9 – Have rising material costs led to any of the following?)

As you can see from the above, the common effects of rising materials costs have been ‘increases tender prices’ at 34% and ‘reduced profit margins’ in which 28% selected. Participants also commonly selected both ‘projects being delayed or cancelled’ and ‘increased claims or variations’ These four affects that I have mentioned I expected to be the most common as it’s something I have heard a lot on and unfortunately have seen companies seize trading due to being affected.

This also shows that material cost increases have created pressure not only on project budgets, but also on companies tendering strategies, contractual issues and overall project viability. I can only imagine the struggles of tendering in the industry with the ever-increasing price of materials, there isn’t much that can be done, you can add a fluctuation clause in when tendering or take a hit, both have their own negatives which could influence company performance.

This questionnaire also explored whether construction projects are now considered more financially risky compared to five years ago as a result of rising material costs. Through my findings I was able to determine that a significant proportion of respondents believed that the financial risk had increased.

10. In your experience, are projects more financially risky now than 5 years ago due to material costs?



(Figure 4.10 – In your experience, are projects more financially risky now than 5 years ago due to material costs?)

As shown in figure 4.10, a majority of respondents (35%) agreed and a further 30% of respondents strongly agreed that projects are more financially risky. A further 6 respondents indicated that this is potentially the case, while only 9% disagreed, and none strongly disagreed.

This distribution of results that I obtained demonstrates a strong overall perception that financial risk has increased, with the majority of respondents recognising the growing uncertainty associated with material cost volatility.

11. Have material cost increases contributed to project delays?



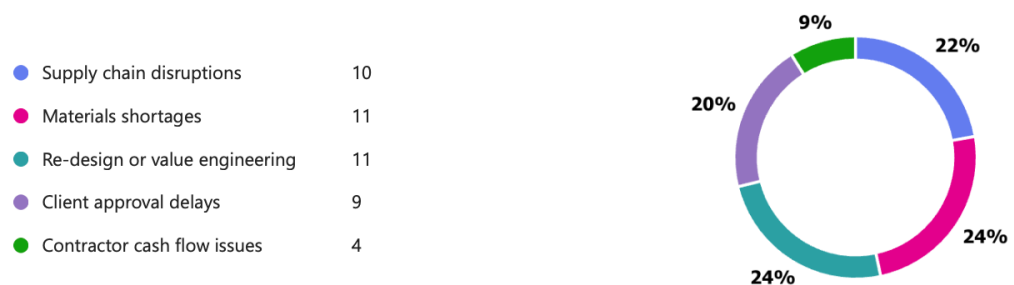
(Figure 4.11 – Have material cost increases contributed to project delays?)

As you can see in the above graph, participants were also asked whether rising material costs have contributed to delays in project delivery. The results show a majority of them have experienced delays as a result of material cost increases.

As illustrated in figure 4.11, 65% of respondents indicated that delays had occurred, while only 35% reported that they had not experienced delays as a result of material price increases.

These findings suggest that material cost increases frequently contributed to project delays, although the extent of this impact varies depending on a project's circumstances.

Where delays were experienced, respondents were asked to identify the primary causes. The findings indicate that the delays were largely linked to supply chain and procurement – related issues.



(Figure 4.12 – If yes, what were the main causes?)

As you can see above the ones in which the respondents identified were, material shortages & value engineering with 24%, followed by supply chain disruptions with 10 respondents and client approval delays with 9 respondents. A smaller number of respondents then identified contractor cash flow issues which had only 4 respondents.

These results demonstrate that delays are influenced by a combination of supply chain challenges and project-level decision making processes.

13. To what extent have cost increases affected programme certainty?



(Figure 4.13 – To what extent have cost increases affected programme certainty?)

As you can see in figure 4.13 the impact of rising material costs on programme certainty was also assessed. The findings indicate that project timelines have been affected to varying degrees.

The majority of respondents with 57% indicated that programme certainty has been moderately affected, while only 26% reported a slight impact. A smaller number identified

either no impact or significant impact with 2 respondents each, with no respondents selecting extreme impact levels.

The above findings suggest that material cost increases have had a noticeable but generally manageable effect on programme reliability.

5. Procurement and Contractual Risk Management

In the topic of procurement respondents were asked to identify which procurement routes are most affected by material cost volatility. The results indicate that traditional procurement methods are perceived to be the most exposed.

14. Which procurement routes are most effected by material cost volatility?



(Figure 4.14 – Which procurement routes are most affected by material cost volatility?)

As illustrated in the above figure 4.14, traditional procurement was identified as the most volatile with 39% of respondents selecting it, followed by design and build with 30%. A much smaller number selected framework agreements at only 13% while 17% selected that they were uncertain. No respondents selected management contracting.

The findings in this topic suggest that procurement routes involving fixed pricing and longer exposure to market conditions are more vulnerable to material cost fluctuations.

The questionnaire also explored whether certain contract types are more effective at managing material cost risk, my findings indicate that the majority of respondents believe this to be the case.



(Figure 4.15 – Do you believe certain contract types manage material cost risk better?)

As shown in figure 4.15, 70% of respondents answered yes to this question while only 22% responded with maybe and a further 9% answered no.

This demonstrates a strong belief within the industry that contract structure plays an important role in managing material cost volatility.

16. If yes, which mechanics are most effective? (Select all that apply)



(Figure 4.16 – If yes, which mechanics are most effective?)

Tying in with figure 4.15 the questionnaire also asked that if answered yes to the earlier question then which mechanics are most effective. The findings from this show a clear preference for specific approaches.

The most common selected was fluctuation clauses and cost-plus management in which 13 respondents selected, followed by early material procurement with 10 respondents. Fewer selected fixed price contracts which had 4 selections and risk-sharing contracts which had even fewer with only 3 selections.

The results obtained indicate that flexible pricing mechanisms are widely viewed as the most effective at managing cost volatility.

6. Mitigation Strategies

Participants were asked in this section to identify the strategies used within their organisations to mitigate material cost increases. The findings show a range of approaches are being adopted.

As shown in the below figure, the most commonly used strategies include value engineering with 17 respondents, early procurement with 14 respondents, and improved supplier relationships with 12 respondents. Other approaches with fewer selections include increased contingencies with 6 respondents and BIM / Digital cost management which only had 1 selection.

17. What strategies does your company use to mitigate the risk of rising material costs? (Select all that apply)



(Figure 4.17 – What strategies does your company use to mitigate the risk of rising material costs?)

These findings demonstrate that organisations are actively adapting their approaches to manage cost increases.

Keeping within the same topic precipitants were also asked to identify how effective these strategies are working within their organisations. The results obtained indicated that they provide a moderate level of success.

18. How effective are these strategies overall?



(Figure 4.18 – How effective are these strategies overall?)

As shown in figure 4.18, 50% of respondents considered their strategies to be somewhat effective, while 27% of respondents rated them as very effective. A smaller number of 23% indicated that they are only slightly effective, while no respondents selected either extremely effective or not effective.

This suggests that while mitigation strategies are useful, they do not fully eliminate the impact of rising material costs.

7. Key Challenges Identified

In this last section respondents were asked to identify the biggest challenges they have faced from material cost increases. The responses highlighted a range of recurring issues across the industry.

Common themes included increases tender prices, reduced profit margins, cost uncertainty, and difficulties in forecasting project costs. Additional concerns included project viability, client expectations, and the impact of fluctuating material prices on budgeting and procurement decisions.

These findings demonstrate that the challenges associated with rising material costs are both financial and operational.

Respondents were also asked to suggest improvements that could be made to better manage material cost volatility in future projects. The findings from this open question indicate a strong preference for both contractual and procurement-based solutions.

The most frequently suggest improvement was the increases use of fluctuations clauses, alongside earlier procurement of materials and the establishment of stronger supplier agreements. Additional suggestions included improved cost planning, the use of alternative materials through process which as value engineering, and greater consideration of material risk during project planning.

These responses suggest that improved planning, procurement strategies, and contractual mechanisms are key to managing material cost volatility.

5. Analysis

1. Introduction

This chapter analyses the findings presented in Chapter 4, examining the impact of rising material costs on construction companies within the UK. The analysis links the primary data collected through the questionnaire with existing literature to identify key trends, implications, and areas of agreement. The discussion is structured around key themes including material cost increases, project profitability, financial risk, project delivery, procurement strategies, and mitigation measures.

2. Material Cost Increases

The findings from this study indicate that all respondents (100%) have experienced material cost increases within the last five years, with the majority identifying these increases as either moderate or high. This demonstrates that cost escalation is a widespread issue across the construction industry.

This aligns with data from the Building Cost Information Service (BCIS, 2023), which reported significant increases in construction material prices between 2020 and 2022. Similarly, the Office for National Statistics (ONS, 2022) identified sharp increases in materials such as timber, steel, and insulation, driven by supply chain disruption and increased global demand following the COVID-19 pandemic.

The questionnaire results also identified timber and insulation as the most affected materials, which supports existing literature highlighting these materials as particularly volatile due to global shortages and increased production costs (ONS, 2022).

Overall, the findings from this study and the literature both confirm that material cost increases are not isolated incidents, but part of a broader industry-wide issue.

3. Impact on Project Profitability

The findings from this study indicate that rising material costs have had a moderate to significant impact on project profitability, with the majority of respondents selecting these categories in the questionnaire results. In addition, 34% of respondents identified increased tender prices, while 28% identified reduced profit margins as key effects of rising material costs.

This aligns with findings from RICS (2023), which identified declining contractor margins as a major issue within the UK construction sector. Contractors operating under fixed-price contracts are particularly exposed, as they are often unable to recover increased material costs, resulting in reduced profitability or, in some cases, loss-making projects.

The increase in tender prices identified within this study suggests that contractors are attempting to account for cost uncertainty during the pricing stage. However, this approach may reduce competitiveness and limit opportunities for securing future work.

These findings highlight the ongoing challenge faced by construction companies in balancing financial risk with maintaining a competitive position in the market.

4. Financial Risk

The findings from this study demonstrate that construction projects are widely perceived as more financially risky than five years ago. Specifically, 35% of respondents agreed and a further 30% strongly agreed that financial risk has increased, with an additional 26% indicating that this is potentially the case.

This perception of increased financial risk can be attributed to the volatility of material prices, which makes cost forecasting more difficult. As identified by RICS (2022), contractors operating under traditional lump sum contracts bear the majority of financial risk when material costs increase unexpectedly.

The findings from this study therefore suggest that rising material costs have significantly altered the financial risk profile of construction projects, requiring organisations to adopt more cautious pricing strategies and consider alternative contractual arrangements.

5. Impact on Project Delivery

The findings from this study indicate that material cost increases have contributed to project delays, with 65% of respondents confirming that delays had occurred as a result of rising material costs.

This aligns with findings from the Construction Leadership Council (CLC, 2021), which highlighted supply chain disruption as a major issue affecting construction project delivery. The questionnaire results further identified material shortages and value engineering as the most common causes of delays, followed by supply chain disruptions and client approval delays.

The findings also show that programme certainty has been moderately affected, with 57% of respondents identifying a moderate impact and 26% identifying a slight impact. This suggests that while delays are common, they are not experienced across all projects.

Overall, the findings from this study demonstrate that rising material costs have had a direct impact on project delivery, although the severity of this impact varies depending on project conditions and management approaches.

6. Procurement and Contractual Risk Management

The findings from this study suggest that procurement routes such as traditional procurement and design and build are most affected by material cost volatility. Traditional procurement was identified by 39% of respondents, while design and build was selected by 30%.

These procurement methods typically involve fixed pricing at an early stage, increasing exposure to market fluctuations. This supports industry guidance which recommends more flexible procurement approaches in volatile market conditions (RICS, 2022).

The findings also indicate that the majority of respondents believe certain contract types manage material cost risk more effectively. In particular, fluctuation clauses and cost-plus arrangements were identified as the most effective mechanisms, reflecting a shift within the industry towards more collaborative and risk-sharing contractual approaches.

7. Mitigation Strategies

The findings from this study show that construction companies are actively implementing strategies such as value engineering, early procurement, and improved supplier relationships to mitigate rising material costs.

Value engineering was identified by the highest number of respondents, followed by early procurement and improved supplier relationships. However, the effectiveness of these strategies appears to be limited, with half of respondents identifying them as somewhat effective, while others considered them either very effective or only slightly effective.

This suggests that while organisations can reduce the impact of cost increases, they are unable to fully eliminate the risks associated with global supply chain disruption and economic uncertainty. This aligns with BCIS (2023), which highlights that external market conditions continue to influence material prices despite mitigation efforts.

8. Key Challenges and Industry Response

The findings from this study highlight key challenges including cost uncertainty, reduced profitability, and difficulties in forecasting project costs. These challenges reflect wider industry concerns identified in RICS (2023), which emphasises the impact of economic volatility on construction performance.

Respondents also identified improvements such as increased use of fluctuation clauses, earlier procurement of materials, and stronger supplier relationships. These findings suggest that the industry is actively adapting to manage material cost volatility, although challenges remain.

9. Summary

This chapter has analysed the findings from this study in relation to existing literature, confirming that rising material costs have had a significant impact on project profitability, financial risk, and project delivery within the UK construction industry.

While organisations have adopted various mitigation strategies, these measures are only partially effective, and material cost volatility remains a key challenge.

6. Summary

This dissertation set out to investigate whether the increase in material costs has had a negative effect on construction companies within the UK. By combining a comprehensive review of existing literature, and with the primary data I was able to collect through questionnaire surveys issued to construction professionals, the study was able to provide a clear understanding of how material price increases have influences project profitability, financial risk, and project delivery.

The findings from this study demonstrate that rising material costs are a universal issue across the construction industry, this is evident as all respondents to the questionnaire confirmed that they had experienced increases in materials prices within the last five years. The majority also identified these increases to be moderate to high.

Key materials which participants identified as having the biggest increases included timber, insulation, steel, and concrete-related products such as kerbs and blocks, this indicates that cost increases have impacted both structural and finishing elements of a construction project. These findings are consistent with industry reports from organisations such as the building cost information service (BCIS) and the office for national statistics, which highlights a significant price volatility in these materials.

In The realms of financial implications, the research identified a clear negative impact on project profitability. The majority of respondents indicates that rising material costs had a moderate to significant effect on profitability. Increased tender prices and reduced profit margins were the most frequently identified consequences, this highlights the real problem in the UK construction industry as we see far to many contractors struggling with cashflow issues which then consequently lead to them not being able to trade anymore, this is an issue which comes from the rise in material costs as project as priced at one time but it may be months before they are on site, and within that period material prices are prone to increases therefore the contractor has to take the hit if there is no clauses in their contract to help them in this situation. These findings reflect wider industry concerns regarding the erosion of already narrow profit margins within the UK construction industry.

Keeping on track this study highlighted an increase in financial risk associated with construction project. A substantial proportion of respondents agreed that projects are now more financially risky than five years ago. The perception is closely linked to the volatility of material prices, which makes accurate cost forecasting more challenging and exposes contractors to greater level of uncertainty, particularly under fixed-price contractual arrangement which I mentioned early.

In addition to financial implications, my research found that rising material cost have had a noticeable impact on project delivery. The greater majority of respondents reported that material cost increases had contributed to project delays, with the primary causes being material shortages, supply chain disruptions, and the need for re-design or value engineering.

Furthermore, programme uncertainty was also noticeable with a many respondents considering project programmes to have been moderately affected, this suggests that while delays were common, they were not experienced by all professionals across their projects.

The findings also put emphasise on the importance on the method of procurement and contractual strategies put in place to manage material cost volatility, this was shown as traditional procurement and design and build were identified as the routes which were affected the most by rising material prices. This is likely down to them relying on fixed pricing at an early stage within a project, typically put in place months before the projects have even broken ground yet. Conversely, contractual mechanisms such as fluctuation clauses and cost-plus contracts were viewed as more effective in managing financial risk, this reflects the growing shift towards more collaborative and flexible approaches within the industry, such as two stage tendering which allows contractors to price projects more accurately knowing that they are going to be awarded the project if successful in the first stage of the tendering process.

Finally, the research identified a range of mitigation strategies which are being adopted by professionals within their companies to manage the impact that rising material costs could have on them. The most commonly used approaches included value engineering which I mentioned early, early procurement of materials, and the development of stronger supplier relationships. While these strategies were considered beneficial to some individuals and their contractors, they were generally viewed as only somewhat effective, this indicates that contractors remain exposed to external economic and supply chain pressures which could have a larger effect on contractors.

Overall, the findings of this study provide a comprehensive overview of the challenges posed to contractors on a daily basis due to the rising material cost within the UK construction industry today. The results demonstrate that material cost rises have had significant implications on profitability, financial risk, and project delivery, while also highlighting the importance of having the correct procurement strategies and mitigation measures in place within construction companies to help mitigate and manage these challenges they face regularly.

7. Conclusion

This dissertation was set out to investigate whether the increases in material costs had had a negative effect on UK construction companies. By combining a review of existing literature with my primary data collected from construction professionals through a questionnaire, the study has provided a clear understanding of how material cost inflation has had an influence on project profitability, financial risk, and project delivery and programme.

The findings from this study confirm that rising material costs have had a significant and widespread impact across the whole of the industry. All respondents of the questionnaire identified that material costs have increased within the last five years, with key materials such as timber, insulation, and steel being most affected. These increases have placed considerable financial pressure on construction companies, particularly when operating within competitive, fixed-price environments.

In terms of financial performance, the research has demonstrated that rising material costs have negatively affected project profitability. Increased tender prices and reduced margins were identified as the most common consequences, highlighting the difficult contractors face in maintaining financial stability when costs are unpredictable.

The study also identified a clear increase in financial risk within construction projects; this is shown as a significant proportion of respondents indicated that projects are now more financially risky than in previous years. This is largely due to the volatility of material prices and the challenges associated with accurate cost forecasting, as contractors do not get enough communication from material suppliers regarding when increases are expected, and when they do get notified, it is often too late. This has increased the level of uncertainty faced by contractors, particularly under traditional procurement routes.

In addition, the findings also demonstrate that rising material costs have contributed to project delays. Material shortages, supply chain disruptions, and the need for re-design or value engineering were identified as the primary causes. While the overall impact on programme certainty was considered moderate, the results show that cost volatility can still have a direct effect on project delivery. The research also highlights the importance of procurement and contractual strategies in managing material cost risk. Traditional procurement and design and build were identified as the most affected routes, while more flexible approaches, such as cost-plus arrangements and fluctuation clause were viewed as more effective in managing financial uncertainty.

Although construction companies within the UK are actively adopting mitigation strategies, including value engineering, early procurement, and improved supplier relationships, these measures are only partially effective. This suggests that organisations remain exposed to wider economic and supply chain pressures that are beyond their direct control.

Final Answer to Research Aim

Based on findings of this study, it can be concluded that the increase in material costs has had a clearly negative effect on construction companies within the UK. The impacts are evident across multiple areas, including reduced profitability, increased financial risk, and delays in project delivery.

While companies have adapted to the increases through the use of mitigation strategies and more flexible contractual arrangements, the findings suggest that these measures only partially reduce the risks associated with material cost volatility.

Recommendations for Industry

Based on the findings of this research, construction companies should adopt more proactive and flexible approaches to protect themselves from ongoing material cost increases. Key measures include the increased use of fluctuation clauses within construction contracts to share cost risk more effectively, alongside the adoption of more flexible procurement strategies such as cost-plus or target cost arrangements. Greater emphases should also be placed on the early procurement of materials to reduce exposure to price increases, as well as the development of stronger supplier relationships to improve reliability and cost certainty. In addition, improved cost forecasting and risk management practices are required to better manage uncertainty. Overall, these findings suggest that construction companies must take a more strategic approach to procurement and cost management in order to protect themselves from future material price volatility.

Limitations and Future Research

As this study based on a relatively small sample size, and the findings may not fully represent all sectors of the UK construction industry. In addition, the use of a questionnaire limited the depth of responses that could be obtained.

Future research could expand on this study by using a larger sample size or incorporating qualitative methods such as interviews to gain deeper insights. Further investigation into specific procurement strategies or contract types could also provide a more detailed understanding of how material cost risks can be managed effectively.

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9. Appendices

Appendix A – Questionnaire Survey

A.1 Introduction

This questionnaire was used to collect primary data from construction professionals regarding the impact of rising material costs within the UK construction industry.

A.2 Questionnaire

Q1. What is your role within the construction industry?

- Quantity Surveyor
 - Commercial Manager
 - Buyer
 - Site Manager
 - Project Manager
 - Builder Merchant
-

Q2. How many years of experience do you have?

- Less than 2 years
 - 2–5 years
 - 6–10 years
 - 11–20 years
 - 20+ years
-

Q3. How would you describe the company you work for?

- Main Contractor
 - Subcontractor
 - Consultant
 - Developer
 - Builders Merchant
-

Q4. What is the typical size project you work on?

- Under £1 million
 - £2–5 million
 - £6–10 million
 - £11–20 million
 - £20+ million
-

Section 2: Material Cost Increases

Q5. Have you experienced significant increases in building materials in the last 5 years?

- Yes
 - No
-

Q6. Which materials have you seen the greatest cost increases? (Select all that apply)

- Timber
 - Steel
 - Concrete
 - Insulation
 - M&E Materials
 - Finishes
-

Q7. How severe do you consider recent material cost increases to be?

- Very low
 - Low
 - Moderate
 - High
 - Very high
-

Q8. To what extent have material increases affected project profitability?

- No impact
 - Minor impact
 - Moderate impact
 - Significant impact
 - Severe impact
-

Section 3: Impact on Projects

Q9. Have rising material costs led to any of the following? (Select all that apply)

- Reduced profit margins
 - Loss-making projects
 - Increased claims or variations
 - Increased tender prices
 - Projects being delayed or cancelled
-

Q10. In your experience, are projects more financially risky now than 5 years ago due to material costs?

- Strongly agree
 - Agree
 - Potentially
 - Disagree
 - Strongly disagree
-

Q11. Have material cost increases contributed to project delays?

- Yes
 - No
-

Q12. If yes, what were the main causes? (Select all that apply)

- Supply chain disruptions
 - Material shortages
 - Re-design or value engineering
 - Client approval delays
 - Contractor cash flow issues
-

Q13. To what extent have cost increases affected programme certainty?

- Not at all
 - Slightly
 - Moderately
 - Significantly
 - Extremely
-

Section 4: Procurement and Contracts

Q14. Which procurement routes are most affected by material cost volatility?

- Traditional
 - Design and Build
 - Management Contracting
 - Framework Agreements
 - Not sure
-

Q15. Do you believe certain contract types manage material cost risk better?

- Yes
 - No
 - Maybe
-

Q16. If yes, which mechanisms are most effective? (Select all that apply)

- Fluctuation clauses
 - Early materials procurement
 - Risk-sharing contracts
 - Fixed price contracts
 - Cost-plus arrangements
-

Section 5: Mitigation and Industry Response

Q17. What strategies does your company use to mitigate the risk of rising material costs? (Select all that apply)

- Early procurement
 - Value engineering
 - Improved supplier relationships
 - BIM / digital cost management
 - Increased contingencies
-

Q18. How effective are these strategies overall?

- Not effective
- Slightly effective
- Somewhat effective
- Very effective
- Extremely effective

Section 6: Industry Challenges and Improvements

Q19. In your opinion, what has been the biggest challenge caused by rising material costs?

Q20. What improvements would you recommend to better manage material cost volatility in future projects?