

The Implications of Interim Payment Certificate in UK: A Literature Review

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Abstract

The appropriate measurement and valuation of construction works is between the crucial aspects of successful project management. This takes place following traditional surveying methods and inspection techniques, however, both clients and contractors cannot properly follow-up monthly expenditures and payments without following a strict interim payment certificate (IPC) system. Also, setting the right payment methods and conditions promotes financial transactions which help preventing severe financial losses if not structured carefully in early stages of agreements. On contrary, late payments and less certified amounts from client side have many negative consequences including increased disputes, delivery delays, liquidated damages, and other financial losses for stakeholders. This study, therefore, aims to focus on the importance of the IPC system to facilitate the payment process with fewer deputies, using qualitative research approach analysing the available relevant literature focusing on residential projects in the UK. The issues arriving from IPC are divided into six main themes are discussed with a reference to relevant literature. The results indicate that without proper follow-up contractors do not get paid properly and even projects might get terminated mid-way, as cash flows are significantly constrained. Recommendations on improving on the IPC are provided along with areas for further research.

Keywords

Construction Management, Interim Payment Certificate, Construction Contracts, Economic and Finance, Contracting

1. Introduction

The construction industry is one of the biggest industries when it comes to the point of civilized societies (Umar and Egbu, 2020). Its projects require large capital investments to get delivered within the approved deadlines. However, quite often clients do not pay the due amounts on time, leading to arguments between constructors and clients (Van der Hoven, 2013), which resulted in the inception of the “interim payment certificate”. Therefore, the researcher aim is to shed light on this topic by conducting a detailed study into the “interim payment certificate” through a qualitative study design. Since projects in the industry, especially in the housing sector, are complicated as well as hierarchical in nature, payment disputes are common among all the involved parties (Zhang *et al.*, 2009). Furthermore, clients sometimes do not clear the payment after the completion of a project, which is why contractors consider this as a critical issue.

Setting the right payment method and condition is one of the most essential factors of all financial transactions, which might result in severe financial losses if not structured or determined carefully in the early stage of an agreement. The concept of “early delivery and late payment” is a common phenomenon that is widely circulated among various businesses all over the world (Stewart *et al.* 2019). According to Ahmadisheykhsarmast and Sonmez, (2018), among the most prominent problems that contractors face in the construction industry are the issues related to delays in payments and disputes between all involved parties. Time/cost overruns, business bankruptcy, as well as difficulties in managing cash flows are the consequences of withholding and dispute of the payments. In 2012, the “Government of New South Wales” has conducted analysis aiming to develop the consequences of disputes and insolvency in the

construction industry. The result of the investigation shows that surpassing the payment time, lack of assurance for payments, and refusal to pay the due amounts are three consequences of contractual disagreements in the industry (Ahmadisheykhsarmast and Sonmez, 2018). There is high requirement to come up with effective strategies so that the company can cope up with the respective situation to mitigate the working barriers. This mechanism should ensure that all the latest and innovative technologies should be taken into consideration so the targeted aims of attainment of payment on time could be reached (Luo *et al.*, 2019).

There is a huge gap between IPA and IPC that needs to be reduced with effective strategies (Nizza, Farr and Smith, 2021). The mechanism of IPC is a concept which is associated with payment certification that is generally issues by engineers, so that they can attain payments under clause 14.6 under the FIDIC regulations. According to the UK government data, the construction industry in the UK accounts for employing more than 3.1 million workers which is 9% of the total workforce (Gov.uk, 2019). In addition, The Housing Grants, Construction, and Regeneration Act 1996 highlights that the client in a construction contract, more than 45 days, is entitled to the “interim” phase of payments (Legislation.gov.uk, 2022). Figure 1 illustrate that based on payment and time to evaluate the interim payments and the real value of the desired work performed, all the payment modes can be attained through the process of interim payments as it adds a huge value to the completed project.

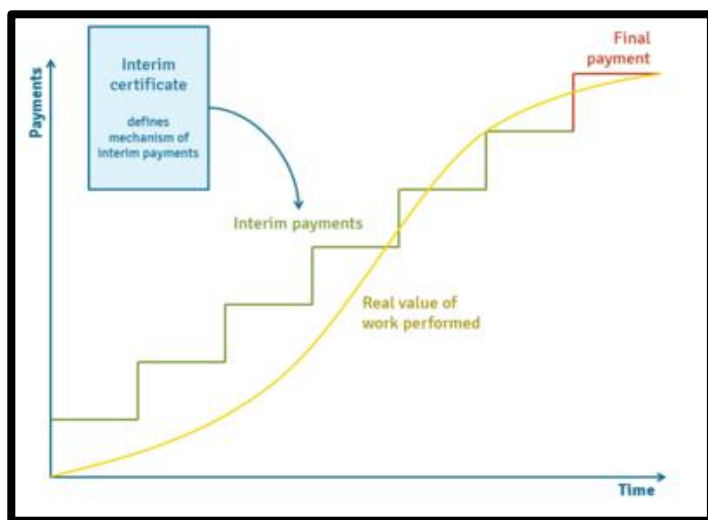


Fig.,1. Interim payment Certification (Das *et al.*, 2020)

Construction projects are unique with various scales that require a great number of both financial resources (Luo *et al.* 2017). Provided by engineers, the IPC shows how contractors get progress payments while the construction is under process. According to Durdyev, Omarov and Ismail (2017), payment disputes and construction delays have become most prevalent, and there is a need to focus on a transparent payment solution. Developing a better understanding to know the reasons behind the consistent payment issues in this sector might not be enough to properly avoid having to trade with them.

There have been several studies on payment aspects within the construction sector. There is still limited clarity on the different issue such as “what does the term “interim payment certificate””, “how effective is the concept of IPC when it comes to the point of payment transparency in the construction industry?”, and “are clients and contractors making the payment system transparent by focusing on IPC meeting contract agreement?”. The aim of this research is, therefore, is to critically analyse the concept of IPC in the construction industry, specifically in residential projects, and examine its importance by conducting a qualitative study from the perspective of contracting entities operating in the UK. The objectives include identifying the concept of IPC for residential projects from the perspective of contracting entities operating in the UK. It also considers the effects of the IPC on the economic downturns of the residential sector and analyse how effective the concept of the IPC is when it comes to the point of payment transparency in the industry as well as how effectively contractors and clients are ensuring IPC meeting contractual agreements.

In addition, the research has also laid its focus on the guidelines under the JCT contract “JCT Constructing Excellence Contract”. Hence, the payment structure of the contract is considered where it has been evaluated that a single payment is generally made for various scopes of work. This mechanism is also known as “first and final payment”. According to Khan and Ali (2018), payment issues are one of the major reasons that there are communication issues within a construction project, which lead to the delay in project completion. Therefore, this paper analyses this issue faced by multiple shareholders and parties involved by presenting the concept of an IPC especially in the residential project in the UK.

2. Research Methodology

There are several types of philosophies used in research including positivism, constructivism, and objectivism (Dougherty *et al.* 2019). Various reasons are behind the selection of the positivism research philosophy. The focus of this study is on the concept of IPC and how the impact on the clients and contractors. Therefore, there is a need to observe the real scenario. It can also be seen that positivism research philosophy is dependent on observation for gaining factual knowledge. Therefore, the requirement is completely fulfilled. To analyse the transparency in the interim payment system, there is also a requirement for clear observation (Alharahsheh and Pius, 2020).

There are various designs of research such as exploratory, descriptive and explanatory (Wipulanusat *et al.* 2020). The design of the research is the framework of the methods that are selected by the researcher to conduct the given context. The researchers selected descriptive research design. It is the type of research aims to obtain the information to describe the situation, phenomenon, and population. The IPC gives contractual advantage to clients to make payments to contractors in workplaces. Construction laws apply in the construction industry that is derived from the other area of the general laws (Ramsey, 2022). The IPC in the construction industry depends on the performance of the employees and precise they are on the valuation of the work so there is a need to select the right participants to complete the research. Therefore, the descriptive design is appropriate to select the participants of the research who give their opinion.

Using the secondary data collection method that is thematic and article review, the research gets the best information from the published articles, books, and journals for the growth of the IPC system in the workplace. Corporate social responsibility (CSR) in the organisation makes interim commitments to the stakeholders of the project work which is a major part of the growth of the economic condition of the construction industry (Wentzel *et al.*, 2022). In addition, the journals or articles hold the impact of IPC in the workplace for the growth of the skills of the employees.

The secondary data are collected through journals, and books known as qualitative analysis. In addition, the context of articles is discussed as the qualitative data. The lack of knowledge of the employees can affect the workplace and the performance of the organisation in the project. The construction industry faced many challenges in the low performance in the workplace (Li *et al.*, 2019). Data analysis is a tool that involves multiple activities to clean, gathers, and analyse the data for the context of research. The structured and unstructured data is the predefined model such as a traditional database.

3. Results and Analysis

After reviewing the current literature different themes have been developed based on the data collected from the literature review. The results and analysis section is therefore divided in several sub sections based.

3. 1 Theme 1: Securing interim payments in construction projects through a block chain-based framework

According to Das *et al.* (2020), IPC provisions in the UK-based industry are susceptible to unfair practices. They have highlighted that in this sector, all the participants with different financial capabilities belong to various organisations. They are bound to follow the regulations provided in the IPC certificate. However, due to the complex nature of the IPC system, project managers as well as clients, usually do not tend to trust each other, which results in project quality deterioration. The following observation has been collected from different research:

- With the help of block chain technology, stakeholders can facilitate secure, fast, and low-cost international payment processing services.

- The use of “encrypted distributed ledgers” tends to offer reliable real-time verification of all the transactions in this sector without having intermediaries like correspondent banks and clearing houses.
- An integration of the block chain system could lower the time required for payment processing from several days to only a few hours that reflect on saving running costs and decrease the disputes related to delays.

3.2 Theme 2: Safety climate in the construction industry

According to Umar and Egbu (2018), IPC is much needed to make the transactions in the industry much smoother; however, one must not forget the impact on employee safety. The most important aspect is provisioning utmost security, health, and safety to ground-level workers, as well as engineers working on sites. As per the study, there is a need to conduct safety climate assessments that could enhance the quality of safety tools as well as workers' well-being. The results of the interviews also indicated that a better assessment of public health and well-being is as important as initiating the IPC system. Also, the relationships between health and safety assessments and IPC mechanisms are included in most contracts' payment conditions, and clients' entitlements to deduct from contracts' payment amounts.

3.3 Theme 3: IPC and “Earned-value reduction techniques” in the construction sector

According to Demachkieh and Abdul-Malak (2019), progress payment certifications and valuations are between the unique factors in the construction industry, as these aim to make construction administration better and well-structured. If certifications and valuations are not properly administered by contract administrators might set the base for disputes between clients and managers. In addition, there are many reasons that residential projects fail, some most important reasons found by the researchers are:

- Quality-related reductions and discrepancies in the measurement of project quantity could result in payment withholdings.
- The incompatibility with the estimated and planned schedule for a project, regardless of the size of a residential project.

3.4 Theme 4: Residual risks of payment

In every business engagement, the obligor and oblige of cost-related adherence in the construction industry are mostly governed by a contract based on the IPC agreement. The study paper developed by Sanni *et al.* (2020), critically examines various residual risks related to the most famous payment modes in the industry based on JCT and FIDIC contracts. As per the findings of this paper, proper adherence to the highlighted two payment modes can enhance the traction based on the IPC system in the UK.

- “Sub-Clause 14.6 (Issue of Interim Payment Certificates)” highlights the need for “Advance Payment”.
- “Sub-clause 14.6 and 14.7” highlight “Interim Valuations”- a client needs to clear the payment in every IPC certificate within 56 days after an engineer gets all the documents.
- “Sub-clause 14.8” is all about “delayed payment” and is applicable when a contractor does not get the payment adhering to “clause 14.7”.

The Construction Management Contract (JCT-CM) from the JCT is intended to be used on projects when different trade contractors are assigned by the employer, each has its own distinct contractual obligations to build the works (Designing buildings, 2017) which include the following new characteristics:

- “Incorporation of the provisions of the JCT Public Sector Supplement 2011” (Purba and Yuri Prastowo, 2020).
- “Provisions for the grant of Performance Bonds and Parent Company guarantees”.
- “Adjustments to reflect the Construction (Design & Management) Regulations 2015 and the Public Contracts Regulations 2015”.

3.4 Theme 5: Late and improper way of payment to the contractors in residential projects:

According to the findings of Bolton *et al.* (2022), issues related to late and improper way of payment to contractors are between the worst issues in the UK-based construction industry in the 21st century. The researchers used 30 secluded consecration projects from the UK to be examined; as per the findings, it can be observed that one payment was late in more than 70% of the residential projects. Furthermore, the study found that in more than 46% of the projects, contractors got their payments after the due date; while, in 56% of the projects, contractor's payments were late.

3.6 Theme 6: Moving towards a more sustainable construction business practises to focus on green future:

By 2030, there will be 8.5 billion people on the earth, due to the rapid increase in population (Umar, 2020). The sustainability of the planet depends on protecting our non-renewable resources, and sustainable building practises do just that. Both public and private developers can use green building techniques to address environmental issues. It has been found that the construction industry in the UK alone generates more than 222.2m tonnes of construction waste back in 2018, which was 120 million tonnes in 2016 (Ghaffar, Burman and Braimah,2020). In addition, the author states that the industry contributes to more than 40% of the overall CO2 emissions. Therefore, contractors and clients must work jointly to design and develop new frameworks that decrease carbon footprint.

4. Discussion, Conclusion and Recommendations

The effectiveness of clients and contractors' relationships in the IPC is crucial in meeting contractual agreements and obligations. The contractors oversee creating structural and architectural designs, purchasing building supplies, planning construction sequences, and carrying out works on site in accordance with the approved blueprints (Newman *et al.* 2020). Therefore, it is the responsibility of both clients and contractors, as derived by the JCT standard form of contract, to ensure whether all the IPC norms are being followed or not and that's one of the benefits of JCT to encourage the collaboration and coordination between stakeholders by setting the liability on both. However, this study highlighted that for many construction projects, there are trust issues that deteriorate the effectiveness of the on-going projects. The findings of the study highlight the importance of the IPC system, as it enables contractors to collect all types of payments and thereby valuing project works and progress. It has been found that interim payments offer a clear and meaningful mechanism for clients and contractors prior to completion of projects. The Construction and Regeneration Act and the Housing Grants in the UK highlight that any party to a construction contract more than more than 45 days is entitled to stage as well as interim payments (Bralić, 2019). Although interim payments are frequent monthly payments whose value is determined by the value of work that has been accomplished, interim payments can also be agreed upon in advance and paid at specific milestones. These payments are recorded on an interim certificate, which the client is required to honour within the contract's allotted timeframe. The interim certificate is often appraised by cost consultants after consulting the lead designer and customers must notify contractors of their intended payment amount.

Improper arrangements of the IPC such as lack of management/supervision, un skilled Quantity surveyors to valuate, lack of transparency and traceability of work progress, low quality inspection system, poor controlled quantity measurements system in line with contractual methods of measurement, in addition to unclear payment terms and contractual obligations, can lead to issues related to productivity of contractors and workforce which consequently would impact the overall success of construction projects, not only in terms of quality but also time in terms of delay, and cost aspect in terms of extra costs and less profitability. Consequently, clients will not get best value of money and disputes would take place and that's what the research aims to mitigate.

The results indicate that the IPC issue is not only impacting specific group of contractors or clients, but it is a global concern. However, managers and quantity surveyors with the required skills and knowledge can lead and reduce the issues related to payment systems. Using BIM as a tool to enhance transparency and traceability for quantities and materials, and to have one model graphically representing the contractual obligations and progress for all stakeholders are also helpful. In addition, for fast payments in terms of transferring, tracking, low cost and transparent transactions, Block chain is taking the lead to fix such issues. In case the payment is done in a confidential and transparent manner more investors will be attracted to invest within the construction companies.

An IPC system with appropriate tools, it can play a positive role in the profitability of constructors. When profitability is increased, such companies can offer higher benefits to lower supply chain partners. Therefore, the

relationship between workers and contracting companies will be improved. If contracting companies finish projects on planned deadlines, it can leave a good impression on consumers and allow clients get the best value for money. Consequently, fewer disputes would arise related to late payments or contradiction between payment application values from contractors and client certified values.

Various issues have been observed related to this subject that reduce the effectiveness of the IPC and open the door for future research, which include:

- It is required that payments are only provided by professional engineers; therefore, it is recommended to skill up graduates so that the requirements of potential engineers are fulfilled.
- Construction entities with good management facilities have faced less IPC-related issues than the other companies; it is possible only because of the experienced managers working for these companies. When construction companies give major priority to obtaining experienced managers with suitable know-how, the risks related to IPC will be drastically reduced.
- IPC must clearly show the total amount of retentions for nominated sub-contractors and any other potential deductions mentioned in the contract agreements and payment condition terms.
- In addition to the enhancement of the IPC system, contractors should work jointly with clients to agree on timelines, payment terms and breakdowns of activities, quality inspection system, progress quantity justification process and payments compared to expected cash flows to provide better value of money beneficial for both parties.

From the authors point of view, it is essential to focus on the role of BIM in IPC systems; BIM enables stakeholders to evaluate various potential project impacts even before construction starts by including specific building materials and information into the early design stages, especially when it comes to resolving disputes before, during and after construction, with higher quality, increased production, accuracy, transparency by let all stakeholders dealing with one model and time/cost savings as the end results.

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