

Research on The Developing Effects of The PPP Project in Laifeng Based on Factual Research in Business Negotiation Under The Digital Age

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Abstract. In the rapidly developing digital era, conducting factual research has become increasingly challenging and crucial. Insufficient knowledge acquisition can significantly impact the outcome of business negotiations, attracting profound attention from both scholars and practitioners. This paper examines a negotiation case in Hubei, China, where negotiators faced information deficiencies and terminated the contract due to unforeseen events. The author classifies the sources of disinformation and uncertainties into three categories: issue-based, strategy-based, and context-based. Based on this classification, the paper offers suggestions to manage the research phase better. This research aims to improve the preparation for business negotiations amid information overload and to facilitate timely strategy adjustments in response to changing external circumstances. Key recommendations include enhancing data collection and analysis processes to support strategy development and anticipating potential scenarios to prepare effective response strategies. The findings highlight the importance of thorough and accurate information gathering and the need for adaptable strategies to navigate uncertainties effectively. Future research should further explore the integration of theory and practice to refine negotiation preparation and execution, ensuring that negotiators are well-equipped to handle complex and dynamic environments. By combining theoretical insights with practical applications, future studies can provide more comprehensive guidelines for successful business negotiations in the digital age.

Keywords: Business Negotiation; Uncertainty Reduction; Information Management; Digital Age.

1. Introduction

1.1. Research Background

People often interpret “Decision-making” as a process of choosing among several alternatives. This particular mental process of human beings plays a vital role in many aspects of social life. Factual research, which acts as a key component of strategic decision-making, has an enduring appeal to both researchers and practitioners. Along with the emerging innovations in everyday life, people’s perceptions on this issue are constantly being refreshed. For example, during the COVID-19 pandemic, studies were carried out on how sufficient knowledge discovery positively influences mortgage buyers by significantly reducing the perceived risk [1]. In the healthcare area, while medical treatments become more and more diversified, researchers present methods that could better satisfy information needs. When their needs are thoroughly fulfilled, patients will be able to alleviate decisional conflicts and select the optimized treatment option with higher efficiency [2]. In addition, following the blossoming of social media, emergency events have gained more attention than ever, leading to the voice of the public, which urges to minimize the loss of disrupting disasters. Emergency decision-making has thus turned into a popular topic. Hence, a number of research studies have been done to construct a suitable dynamic methodology for generating emergency alternatives quickly in a digital way [3].

1.2. Literature Review

As a complex joint decision-making process, business negotiation relies even more on intelligent, efficient analytics of information. Not only that but the effects of factual research on negotiation should also be understood on a fairly subtle and in-depth level. Bodendorf, Hollweck & Franke showed that the partnership built through negotiation relates particularly to information transparency when it comes to digital goods [4]. Chen proved the benefits of continuous information gathering. Negotiators who obtain information steadily from the negotiation process reach an agreement after fewer rounds. In other words, these negotiations are more efficient [5]. Rattanaprichavej states that because of the advancement of today's business market, the bargaining process involves more stages and parties. The power structure is altered, and thus, improved information communication techniques are essential for reaching a final decision that satisfies all parties [6].

This article is motivated by the issues mentioned above. Speaking of business negotiation, factual research remains a constantly developing topic that requires further refining and modification as time goes on. Nowadays, knowledge management has become an unprecedentedly challenging process under the rapid growth of the Internet and the digitalization of information. Altun found that in Turkey, Brazil, and Britain, over 60 percent of Internet users have concerns about disinformation due to the development of new media. These users believe that they are surrounded by false or misleading news online [7]. Moreover, Reddy & Thanigan expressed that exposure to large-scale information sources does not always facilitate the acquisition of knowledge. On the contrary, it frequently results in an overloaded mind [1]. Therefore, there has been, in recent years, growing interest in information collection and processing, aiming to build a more appropriate mechanism for producing adequate knowledge through factual research. Solely between 2016 and August 2022, 751 articles were published dedicated to internet-based big data management. In consideration of the vast quantities of hybrid data and facts, scholars demonstrate the importance of a modified framework that conduces feasibly to information organization [8].

Numerous studies have focused either on information management in the digital age or the application of information in negotiation; nevertheless, the transboundary point effects of factual research in business negotiation in the digital age remain overlooked. Since loads of diverse information can increase uncertainty, there needs to be more research on reducing uncertainty from a contemporary viewpoint. In this context, this article contributes to discussing how to handle the information explosion better within the conception of negotiation. Drawing on a Public-Private-Partnership negotiation case in Hubei, China, the author studied the impact of information deficiency on this process of decision-making. This article is structured as follows: the second section provides the readers with a brief description of the case involved. Subsequently, the third section of this paper analyzes the possible knowledge incompleteness which could cause negotiation failure. Then, on the basis of the analysis, the author presents suggestions that are supposed to help people avoid the prospective risk in similar circumstances. Finally, the last section contains the conclusion as well as the existing limitations of this research, and the author recommends several directions for future studies.

2. Case Description

Public-private partnerships (PPP) are a newly growing business pattern in plenty of countries, including China. This partnership refers to a special cooperative relationship between the government and a private organization, mainly for the provision of certain public services. Until September 2020, 9792 projects had been established nationwide in China, and this number is equal to the sum of the project quantities in the rest of the world. Although PPP has become a widely expanded new business model, the corresponding policy systems and allocation mechanisms of obligation are not yet well-developed. This situation implies that investors on both sides are deemed to experience a challenging negotiation process at high risk [9].

In October 2017, Fenghuozhongzhi Limited Corporation (social capital) reached an agreement with the Department of Economics and Informatization of Laifeng County's government (eco-info-department) in Hubei Province through an open bid. Both sides decided on a 20-year-long cooperative relationship, aiming at the construction of a big data center. According to their contract, the government agreed to put up a land usage right and an annual payment after each evaluation, while the social capital provided technology support in the process of building an official information-sharing platform and a big data industry garden. This project belongs to the Smart City Construction Plan of the local government, which contributes to poverty alleviation by means of industrial transformation and upgrading.

In the early stage, the project went smoothly, as both sides were satisfied with the negotiation outcomes. Only two months after the contract was signed, the social capital finished assembling a team for the project operation. At the same time, the government has established a concession agreement. However, due to the large number of subprojects involved, trivial formalities depending on various institutes are required, including the National Development and Reform Commission, the Department of Public Safety, the secondary City Management Security Force, and so on. By the end of December 2018, the transfer of land usage rights had still not been implemented, which led to a delay in the commencement of the process. Additionally, the local government claimed a shortage of funds resulting from the lack of budget expenditure permission from the People's Congress. Considering the difficulties mentioned above in carrying this project forward, the social capital applied to the local department with the intention of putting an end to their cooperation [10]. Up to this day, the Smart City Project in Laifeng remains under construction, whereas the previously discussed project with the social capital has been shelved [11].

3. Analysis of the Problem

In order to advance the case study, the author refers to the existing theory about categorizations of uncertainty. In the academic fields, uncertainty is defined as events that cannot be related to the probabilities of their results, while risk appertains to effects associated with negative consequences [12]. The internal relation and dependence between these two conceptions are self-evident. In order to mitigate the risk during business negotiation, identifying and evaluating different source types of uncertainties is necessary.

Several frameworks of uncertainty reduction have been raised in the history of research on business management. The literature shows that one of the most broadly adopted classifications proposes seven factors giving rise to uncertainties, including customers, technology, competition, resources, products, partnerships, and business models. Similar theoretical studies contain another much more simplified structure that separates uncertainty propagation merely into two internal and external [12]. This paper generally draws on the idea of Schauer, Majer & Troetschel, who studied uncertainty in negotiation in three fundamental degrees, namely issue, strategy, and context. This theory basically concentrates on the uncertainty brought by incomplete knowledge. Compared to other classifications, it is more closely connected to the topic of factual research. Moreover, the classical theoretical outlines were formed in a purely commercial way. Therefore, they do not fit well with PPP projects between the government and social capital. In addition, this theory was initially used in a study on the problems with vaccine supply that occurred during COVID-19 times, which manifested its consistency with the contemporary context [13]. Since all the categorizations are not distinctively separated, the author also set aside other different frameworks above for reference in the following sections.

3.1. Issue-Based Knowledge Incompleteness

Government data openness has become a common trend in the last decades. In China, data opening by the government is regarded as a practical method to promote state revitalization and rural modernization. At the state level, numerous opening big data service platforms have been built in the past few years, such as the judicial statistical data warehouse in 2014 [14]. However, as a newly born

industry, the improvement of information network infrastructure is continuously facing challenges. Despite the remarkable achievements, big-data-related technology was put into use more recently in China than in developed countries. The gap in between cannot be neglected. China is confronted with a talent gap; uneven ability and quality of technical personnel might lead to barriers to data sharing. Furthermore, the data collection of governments also calls for the coordination of the public. Due to the disparities in cognitive level, wealth accumulation, and social status among individuals, a so-called “data divide” will be formed. If the data divide were not duly handled, social discrimination or even injustice could be generated [15]. Needless to say, when the negotiation in Laifeng County took place, the expansion of digital services in China stayed only in the early-developing stage. At that time, official digital platforms had not come into service extensively, and corresponding techniques remained still in an initial and exploratory phase. Under this condition, the negotiation was compelled to be conducted due to knowledge deficiency in the construction of the big data platform. It turned out that the underestimation of the hardship by the Laifeng government explicitly led to the belated planning and overdue performance assessment [10].

3.2. Strategy-Based Knowledge Incompleteness

Plentiful studies in business negotiation indicate that on account of the topic, some information is of higher value than others. This is, in fact, the essential principle of factual research before negotiation. Maaravi, Aharon & Heller emphasized the crucial function of having a good command of the market value and the investors’ reservation price. This sometimes demands internal information rather than external [16].

In this case, in Laifeng County, the author noticed that from 2012 to 2016, the public budget expenditure of the local government substantially increased with a growth rate of 13.07% on average. Accordingly, estimators measured the upcoming rise between 2017 and 2019 with a rate of around 10%, yet the expectations were not unimpededly met [10]. The most significant transition happened in 2018 when Laifeng finally got rid of the title “poverty county”. Quickly followed, Laifeng exited from the national list of impoverished regions in April 2019 [17]. Unfortunately, this symbol of success in poverty alleviation also signifies the reduction of the special state subsidy for Laifeng. Based on the guidance of the Ministry of Finance, expenses on PPP projects should not surpass 10% of the total public expenditure. Therefore, after 2018, the payment at the social capital turned into a financial burden and was not settled in time [10]. Although following up the variation of affording ability is an achieved consensus among business managers, it is not easy to figure out the most predictable elements in all the information acquired.

3.3. Context-Based Knowledge Incompleteness

Just as the word “context” literally implies, this section explains the influence factors from external circumstances. Herein, the author analyzes the virtue of the PESTEL model, which was proposed to set up a solution for estimating the macroenvironment and is especially powerful for studying sustainable developments [18]. It is thus appropriate for the researched project that is supposed to guarantee an operation of 20 years duration. Among the six factors clarified by this model, this part focuses mainly on two vital topics-financial and political.

First of all, as discussed before, the project miscarried mostly because of the lack of budget. The shortage of funds occurred not only on the government’s side but also on the social capital’s side. The latter claimed to have undergone a formidably difficult financing process. Immediately after winning the bid, various commercial banks and governmental funding organizations actively approached the social capital. Unfortunately, financing institutions displayed distrust against the company with respect to the unpredictable profitability of this project. Without success in taking out the requested loans, the contract failed to go into effect. This situation is the chief trigger for the interruption of the project [10].

Secondly, policy fluctuation counts as another trigger for the termination of the contract. It is not rare that policy instability and implementation reside in the growth of a new cooperation pattern. To the extent of details, policies enacted by governments are not well-targeted at the regional level. Since 2014, a series of policies relevant to PPP projects have been promulgated by the Chinese government, such as the “Notice on Further Strengthening the Standardized Management of Government and Social Capital Cooperation Demonstration Projects” and “Notice on the Standardized Verification of PPP Projects Library to Promote the Sustainable and Healthy development of PPP” [9]. However, plenty of related operation procedures remained unclarified. For example, the National Ministry of Land and Resources published in 2016 a document on the compensation systems for the use of state-owned land. While this document overlooked the specific regulations for the implementation, the local Land Ministry refused to handle the required formalities for the social capital, which brought about the delay mentioned above in the land usage rights transfer. The project schedule was significantly affected [10].

4. Suggestions

4.1. Broadening the Range of Reference Case Selection and Modifying the Evaluation Framework

It is trivial that negotiators search for similar cases for reference before trading. As previously described, experience may be misleading sometimes. Another PPP project will follow this opinion in Laifeng for comparison. In 2016, the Laifeng government started a water conservancy PPP project, which was funded by the social capital firm Fengtianshuiwu. The aims of this project included the construction and reconstruction of 27 waterworks in total, as well as the laying of a water supply network of over 2600 kilometers. Up to the end of 2018, the main part of this project has been fully completed. With the central water supply rate reaching 95%, the safety of water consumption is remarkably guaranteed in the whole county [19].

This outstanding accomplishment highly encouraged the local government to implement more PPP projects. Unfortunately, the following progress wasn't evolving likewise. In order to predict the feasibility correctly, the author suggests that negotiators identify the essential features of the upcoming project in advance and then establish the appropriate measures for reference cases. For example, despite the character of “The PPP” project “in Laifeng”, the planned cooperation is also recognized as a “long-term” relationship involving “high technology”. Hence, the water supply project, which has no connection with high technology, should not be counted as a promising experience. On the other hand, it might be significantly helpful to take other high-tech cases into account, however, they are located and whatever patterns they have. In brief, as an advantage of the digital era, it is not difficult to search for cases in a like manner. People should realize the power of big data, collect sufficient information, and never neglect to extract reliable content carefully.

4.2. Setting Flexible Terms and Preparing for Renegotiation

Situations analogous to Laifeng occurred in a considerable amount of places globally. Statistics reveal that over 30% of PPP projects in the transportation industry and over 70% in the sanitation industry have gone through a process known as renegotiation [9]. This conception describes a course of action to adjust the original contract according to the obstacles during the practice. Previous work of scholars believed that renegotiation is an efficacious method to optimize the allocation of risk and benefits. For the reduction of negative effects of renegotiation, it is instrumental to estimate the variables beforehand and reserve spaces for readjustment in the contract. In fact, elastic clauses (price adjusting mechanism, for instance) have been widely used in PPP cases in developed countries initially to avoid renegotiation. As people proceed with more hands-on activities, these flexible terms are yet to prove to be capable of making the renegotiation better organized [9].

4.3. Executing a Multi-Party Consultation and Ensuring the Feasibility of Project

As the social structure develops, the outer business environment is growing increasingly sophisticated. That is to say, the trading procedure involves, in general, far more than the two negotiating sides, especially in such a project with plentiful phases in Laifeng. To elaborate, the interests of several institutions and organizations must be reconciled and balanced, including the local Land Ministry, the funding banks, and the foreign-owned enterprises that were planned to be stationed in the new big data garden. Utterly speaking, it is necessary to transmit and renew information among all parties in a timely manner. Since a slight move may affect the whole situation, it is recommended to ask for support from the proper project management company, as well as incorporate experiential international agencies when necessary. Professional intermediaries can assess the programming, designing, transferring, and operating of the project objectively, thus avoiding misestimating the obstacles [10]. A preliminary consultation, especially with the financing affordability, is possible to avert the lack of argumentation in the prior period from the source. This so-called pre-negotiation negotiation hence diminishes unnecessary renegotiation and then saves tremendously in terms of time and energy costs.

5. Conclusion

5.1. Key Findings

From the discussion, it is obvious that misleading information highly impacts the quality of decision-making. By applying a three-dimensional analysis framework of knowledge incompleteness, this paper traces the problems back to disinformation in the research phase. Focusing on the PPP case in Laifeng, section 3 provides arguments that the deficiency of information can be covered and classified exactly by these three measures, namely issue, strategy, and context. Then, section 4 puts forward some well-targeted solutions in order to manage information more efficiently based on the former classification. Firstly, negotiators are supposed to select more cases for reference and evaluate them carefully. Secondly, flexible terms in the contract can feasibly minimize the losses if anything beyond the plan occurs. Renegotiation is, of course, a powerful method of remediation under this condition. Finally, the author emphasizes the potential capacity of a reliable third-party organization that is familiar with all the trading stages and can assess the risk objectively.

5.2. Research Value

The main contribution of this research is revealing the emerging uncertainties resulting from the information explosion and its relation with business negotiation. The transfer of risk source classification to this topic brings inspiration to collecting and dealing with information according to the specific application scenarios. With the methodology raised in this essay, commercial practitioners would be able to execute their factual research better.

5.3. Limitations

Limitations of the Research stem mostly from the particularity of the selected case. While the PPP project is a relevantly special pattern of cooperation, whether this analysis framework is valuable for further reference remains in doubt. The application causes another deficiency in the study. This paper merely discussed a pre-existing situation without the chance to put the theory into use. In the future, researchers are recommended to explore the influence of disinformation in other areas of business and develop a practical guide to action.

References

- [1] N. S. Reddy & J. Thanigan. Determinants of Purchase Intention, Satisfaction, and Risk Reduction: The Role of Knowledge and Information Search among Mortgage Buyers. *Cogent Economics & Finance*. 11 (2023) 226659.

- [2] S. Motorny, S. Sarnikar & C. Noteboom. Design of an Intelligent Patient Decision Aid Based on Individual Decision-Making Styles and Information Need Preferences. *Information Systems Frontier*. 24(2022) 1249-1264.
- [3] J. Zheng, Y. Wang, K. Zhang & J. Liang. A Dynamic Emergency Decision-Making Method Based on Group Decision Making with Uncertainty Information. *Int J Disaster Risk Sci*. 11(2020) 667-679.
- [4] F. Bodendorf, B. Hollweck & J. Franke. Information Asymmetry in Business-to-Business Negotiations: a Game Theoretical Approach to Support Purchasing Decisions with Suppliers. *Group Decision and Negotiation*. 31(2022) 723-745.
- [5] H. Chen. Enterprises Negotiation and Communication Management System under the Guidance of the Internet of Things. *PLoS ONE*. 18(4): e0284891 (2023).
- [6] N. Rattanaprichavej. Decision-Making Progress towards Real Estate Agents, Landlords, and Expatriate Tenants' Criteria with Perspective from Principal-Agent Theory. *Cogent Business & Management*. 10(2023) 2288692.
- [7] F. Altun. The Organization of Turkic States' Digital Communication and Digital Diplomacy Perspective. *Bilig*. 106(2023) 01-33.
- [8] A. Naghib, N. J. Navimipour, M. Hosseinzadeh & A. Sharifi. A Comprehensive and Systematic Literature Review on the Big Data Management Techniques on the Internet of Things. *Wireless Networks*. 29(2023) 1085-1144.
- [9] G. H. Zhao & Y. Li. Analysis and Reflection on PPP Renegotiation Cases. *Project Management Review*. 35(2021) 54-57.
- [10] T. J. Zhao & M. Y. Liu. Case Study of PPP Project Renegotiation. *China Management Informationization*. 22(17) (2019) 140-143.
- [11] Laifeng Big Data Center, Laifeng Government Procurement Intention in February and March 2024-Laifeng County Smart City Industrial Park Project (Phase II), 2024.02.04, 2024.05.08, <https://www.bidcenter.com.cn/news-271256314-2.html>
- [12] J. M. Fernandes, L. P. Reis & T. G. dos Santos. Managing Uncertainties during the Development Process of Technological Innovation Projects: Lean Startup Contributions. *Proceedings of the 18th European Conference on Innovation and Entrepreneurship. ECIE: 1011-1020*. (2023)
- [13] M. Schauer, J. M. Majer & R. Troetschel. Nine Degrees of Uncertainty in Negotiations. *Negotiation Journal*. Spring 2023: 207-228.
- [14] W. M. Zuo & C. Y. Wang. Judicial Big Data and Big-Data-Based Legal Research in China. *Asian Journal of Law and Society*. 7(2020) 495-514.
- [15] K. Xu. Challenges, Opportunities and Future Paths: Environmental Governance of Big Data Initiatives in China. *Sustainability*. 15(2023) 9975.
- [16] Y. Maaravi, A. Levy & B. Heller. To Bid or not to Bid? That is the Question! First-Versus Second-Mover Advantage in Negotiations. *Negotiation Journal*. 39(3) (2023) 259-278.
- [17] Poverty Alleviation and Development Office of the People's Government of Laifeng County, Response of the Development Office of the People's Government of Laifeng County to Recommendation No. 2019066 of the Fourth Session of the Seventeenth National People's Congress of the County, 2019.07.08, 2024.05.08, http://www.laifeng.gov.cn/xxgk/gkgk/qtzdgknr/rddbgyh_1/201909/t20190902_484766.shtml
- [18] X. W. Li, Y. C. Huang, X. X. Li & X. Liu. . Mechanism of Smart City Policy on the Carbon Emissions of Construction Enterprises in the Yangtze River Economic Belt: a Perspective of the PESTEL model and the Pollution Halo Hypothesis. *Humanities & Social Sciences Communications*. 10(2023): 580. <https://doi.org/10.1057/s41599-023-02111-0>
- [19] M. L. Ye. Reformation and Innovation-Deliver the Water of Blessing. *Guanzhu*. 6(2017) 19-21.