

**GAP THEORY AS IT RELATES TO OUTSOURCED DEVELOPMENT PROJECTS, EXPLAINED IN
DETAILS: AN INITIAL STUDY**

Liu Xiu, Dhakir Abbas Ali

Lincoln University College, 47301 Petaling Jaya, Selangor D. E., Malaysia.

Corresponding author: Liu Xiu, Lincoln University College, 47301 Petaling Jaya, Selangor D. E.,
Malaysia, Email: 418928222@qq.com

ABSTRACT

Outsourced information system development projects often experience a "gap" that negatively affects the project's quality, outcomes, and stakeholder satisfaction. This exploratory study seeks to fill light on the numerous facets of the gap in outsourced IS development and its implications for project management by examining its extensive nature. Outsourcing is a common way for businesses to save money and get access to specialist skills, but it may also cause issues that slow down projects. According to this study, outsourced IS projects often have communication problems, cultural issues, and expectations misalignment. In order to capture the complexities and variations of the gap phenomenon across varied project contexts, the research utilises case studies, interviews, and industry reports. One of the explored factors is the communication gap, which encompasses issues with the flow of information and the customer's and outsourced vendor's understanding of each other. When individuals on a project have different expectations, priorities, and ways of approaching issues, researchers often point to cultural differences as a possible explanation. Examining discrepancies between actual and projected delivery may provide light on how the expectations gap impacts project outcomes and stakeholder happiness. The primary purpose of the research is to shed light on these features of the gap phenomenon in order to provide practical answers. One such all-encompassing approach that can assist bridge the gap is to improve communication strategies, increase cultural awareness, and set clear expectations from the beginning.

Keywords: Modern Materials, Eco-Friendly Concrete, Concrete with Low Carbon Content, Concrete with State-of-the-Art Mixture, and Concrete with Outstanding Performance.

INTRODUCTION

Many companies are considering outsourcing as a way to stay ahead of the competition, handle their technological needs, and adapt to the always evolving IS development landscape (Bhatti, et al., 2021). When companies outsource, they contract with other parties to produce products or provide services that would otherwise be handled in-house. Outsourcing has several benefits, including reduced expenditures, faster access to specialised knowledge, and increased concentrate on core skills. The so-called "gap" is a huge problem for projects that include developing information systems while outsourcing. The "gap" phenomenon describes the discrepancy between the expected and actual outcomes of an outsourcing relationship. Possible manifestations of this problem include divergent quality standards, misaligned project goals, communication breakdowns, and cultural incompatibilities. Understanding these gaps and managing and mitigating the risks they pose is critical for improving the overall performance of outsourced IS development projects. The gap phenomenon relies heavily on communication. Team members' inability to communicate effectively owing to differences in time zones, cultures, and locations compounds the difficulty of working remotely on a development project. Misunderstandings or communication breakdowns may lead to incorrect requirements, delayed deliverables, and project failure. If researcher having trouble communicating, try opening up channels of communication, keeping everyone informed, and working to understand each other better. An other critical component of the gap phenomenon is the client-outsourcing vendor cultural gap. When individuals in a company come from diverse cultural backgrounds and have distinct views and methods of working, it may lead to misunderstandings and arguments. The focus on cooperation in one culture may conflict with the hierarchical decision-making process in another. There is a strong correlation between cultural differences and changes in team dynamics, project management approaches, and end results. Team members' capacity to recognise and work with cultural differences is critical to any project's success (Biedenbach, 2019).When the outsourcing vendor's objectives differ from those of the client company, a wide rift may develop. When those engaged have divergent objectives or anticipations, it's possible for diverse techniques and outcomes to emerge. This mismatch is often caused by ineffective initial discussions, unclear requirements, or shifting project goals. The success of the project depends on the supplier and client having a shared understanding of the project's goals and deliverables. Deficits may also emerge in quality assurance, another crucial area. If the outsourcing vendor's standards and processes differ from the client organization's, there is a possibility that the final result will be different. This mismatch may lead to defects, additional effort, and customer dissatisfaction. Setting precise quality indicators, conducting regular reviews, and sticking to agreed-upon standards will help narrow these quality gaps and ensure the project is up to grade. In this exploratory study, we want to get a better understanding of various facets of the gap phenomenon in outsourced IS development projects. The study's main objective is to provide insights into the many reasons for these gaps and potential remedies in order to assist with outsourced project management. Companies may enhance their project outcomes and forge deeper relationships with their vendors by understanding the nature and impact

of these gaps. This knowledge will help them prepare for and navigate the complexities of outsourcing. The "gap" in outsourced IS development projects may be caused by a variety of issues, and these issues can have an impact on the final product's efficiency and effectiveness. In order to better understand the causes of these gaps and propose practical solutions to fix them, this study aims to enhance information systems development outsourcing strategies by defining their many components (Blijleven et al., 2019).

BACKGROUND OF THE STUDY

More and more businesses are opting to outsource the development of their information systems (IS) in order to save costs, focus on core capabilities, and tap into external expertise. In their pursuit of global solutions and better technological abilities, businesses often turn to external suppliers for the construction and management of their IS projects. One of the most noticeable issues caused by the present trend towards outsourcing is the "gap" problem. One common issue with outsourced IS development projects is the "gap" phenomenon, which occurs when the vendor's given outcomes do not meet or align with the client organization's expectations. These gaps have a detrimental influence on timeliness, quality, and overall satisfaction, which in turn reduce the efficacy and efficiency of outsourced projects. The concept of outsourcing as it is known today originated in the middle of the twentieth century, when firms started to realise the benefits of outsourcing non-core jobs to skilled outside groups. The first tasks that were thought of for outsourcing were those involving administration and customer service. However, data administration, software development, and system integration are now considered critical responsibilities that may be outsourced due to the increasing complexity of information systems brought about by technological advancements. The expansion of global communication networks and the increasing need for specific skills have made it possible for organisations to work with suppliers worldwide. Despite the advantages, outsourcing has not been without its share of problems. Several operational issues have arisen as a result of differences in organisational processes and cultures, as well as the distance between the supplier and the client. As (Erdogan, 2020) points out, the "gap" phenomenon includes things like miscommunication, cultural differences, misaligned project goals, and poor quality standards. Delays, cost overruns, and less-than-ideal outcomes may occur when there is a lack of alignment along any of these dimensions. Effective communication is crucial for project management to provide positive results. Nevertheless, delays in real-time communication might occur in outsourced IS development projects because of differences in time zones and locations. Due to misconceptions induced by these hurdles, project failure, wrong requirements, and misaligned expectations might happen. Client and vendor cultures may vary in ways that impact work habits, decision-making processes, and the dynamics of the project as a whole. Different viewpoints on topics like hierarchy, risk, and collaboration, for instance, may lead to

misunderstandings and conflict. To ensure the success of the IS project, it is crucial that the client and vendor share the same objectives. Inconsistent goals, shifting project parameters, or unclear objectives may all lead to misalignment, which in turn can generate inefficiency and conflicts. In the event that the client and service provider have divergent quality standards, the final product may not meet up to their expectations. Because of mistakes, redos, and unhappy customers, the project's success might be at risk. This study's context highlights the significance of outsourcing in IS development, the complexity of the "gap" phenomenon, and the ways in which organisations should deal with these gaps to get the best possible project outcomes. According to (Gunduz & Elsherbeny, 2020), this inquiry is vital for researchers who want to get more knowledge and improve outsourced IS development.

PURPOSE OF THE RESEARCH

"Understanding of the 'Gap' Phenomenon in the Outsourced IS Development Projects Including the Dimensions of the Gap: An Exploratory Study" seeks to illuminate the many kinds of gaps that might arise in outsourced IS development projects. This inquiry seeks to detect and comprehend the numerous facets of these gaps, since they may have a significant impact on the project outcomes. More and more businesses are realising that they may save money and make better use of current talents by outsourcing information systems development. However, issues emerge when the customer's expectations aren't met by the outsourcing vendor's deliverables. The study's goal is to find out why these gaps exist and what causes them, such as communication issues, cultural differences, project goal misalignment, and lack of quality standards. The study seeks to understand how each of these factors contributes to the challenges faced in outsourced projects by examining them. This necessitates looking at how quality standard discrepancies affect final products, how misaligned project objectives cause inefficiencies, and how communication barriers affect misconceptions. Gaining a deeper understanding of these gaps is crucial for effectively managing and executing outsourced IS development initiatives. The study's overarching goal is to provide actionable insights and solutions that will help businesses better navigate these challenges. Included in this process are the following: establishing consistent quality standards; defining project goals; enhancing communication; and aligning cultural norms. This research aims to improve vendor-client relations, project outcomes, and outsourcing procedures by providing helpful information. By addressing knowledge gaps and reducing their impact, this study aims to facilitate the launch of outsourced IS initiatives that are more successful and effective.

LITERATURE REVIEW

The "gap" phenomenon, which comprises the differences between the expectations of client organisations and the outcomes offered by vendors, may be better understood with the help of the literature on IS development project outsourcing. This study summarises prior work on the topics of these gaps, focussing on key findings and theoretical perspectives. These topics include challenges with communication, cultural differences, project goal misalignment, and quality standard inequalities. Successful information system (IS) development projects always include effective communication. Problems with communication are a leading cause of project failure in outsourced settings, according to research. As pointed out by Kedia and Bhagat, variables like language barriers, time zone differences, and geographical distances may lead to misunderstandings and misalignments in project requirements. These issues take on a considerably more complex nature in outsourced projects due to the challenges associated with real-time communication. It is critical to establish strong channels of communication and provide regular updates to ensure vendor-client alignment and overcome these challenges. Poor project management and communication may result from cultural differences between outsourcing providers and client enterprises. Using Hofstede's cultural dimensions theory as a starting point, one may better understand how cultural norms and practices impact corporate operations. Leidner and Kayworth found that disagreements about risk, hierarchy, and cooperation may lead to inefficiencies and conflicts in outsourced IS development projects. The more egalitarian decision-making process in one culture may clash with the more hierarchical one in another, resulting in misunderstandings and failures. To effectively manage these cultural differences, it is vital to foster intercultural competence and implement measures that bridge these barriers. When the goals and expectations of the vendor and the customer are not in sync, it becomes clear that there is a gap. The research of DeLone and McLean, as well as their subsequent work on the topic of IS success (Gable, 2020), all point to the need of well stated and agreed-upon project goals. Misalignment, which may arise from unclear requirements, changing project scopes, or competing goals, can lead to inefficiency and dissatisfaction. Research conducted by Zhang et al. suggests that when project stakeholders work together, project objectives may be more clearly defined and outcomes can be enhanced. Quality assurance is a crucial component of outsourced IS development to prevent significant gaps caused by disagreements over quality standards between the customer and vendor. Software quality management study and work by Boehm suggests that varying quality expectations and standards might lead to defects and rework. It is crucial to establish quality metrics and standards from the beginning of a project, according to study by Smith and Morrow. Conducting frequent reviews and sticking to the agreed-upon quality criteria are vital for ensuring client satisfaction with the deliverables. According to the research on the gap problem, there are a lot of major factors that lead to unsuccessful outsourced IS development projects. Problems with communication, cultural differences, misaligned goals, and varying quality standards are just a few of the several significant aspects that could impact a project's success. To bridge these gaps, researcher need to improve our communication tactics, learn to better handle cultural

differences, match our goals, and ensure that our quality standards are high. Many aspects of the gap problem and the challenges of managing outsourced IS development projects are highlighted in the literature as critical issues to address. When businesses fully understand these characteristics and strive to fill any gaps they discover, they may achieve better project outcomes and have more successful outsourcing engagements. This literature review provides theoretical support for the exploratory study by illuminating the challenges and possible solutions to regulating gaps in development IS projects that are outsourced (Hanafizadeh & Zareravasan, 2020).

RESEARCH QUESTION

1. How does strategy effects on gap phenomenon?

RESEARCH METHODOLOGY

Researchers used a cross-sectional design and monitored participants over the course of four months to compile their findings. Data collection has to occur at a single, affordable point in time in order for the cross-sectional design to be put into play. The study was conducted by a wide variety of groups in China. The researcher settled on a quantitative approach due to the limited time and resources at their disposal. Every single respondent was contacted for the poll using a random sample procedure. After that, 1473 samples were collected after a sample size was calculated using Rao Soft. Researchers read aloud the survey questions to those who are unable to read or write them, and then they record their responses verbatim on the survey form. This method is used for people who are confined to wheelchairs or who are unable to read and write. The researcher briefed the participants about the experiment and took their questions while they waited to fill out the questionnaires. Occasionally, it is requested that individuals complete and submit surveys at the same time.

Sampling: Research participants completed questionnaires to provide data for the study. Utilising the Rao-soft software, researchers identified a study sample of 1,473 individuals, prompting the distribution of 1,580 questionnaires. The researchers received 1,567 responses, excluding 67 for incompleteness, resulting in a final sample size of 1,500.

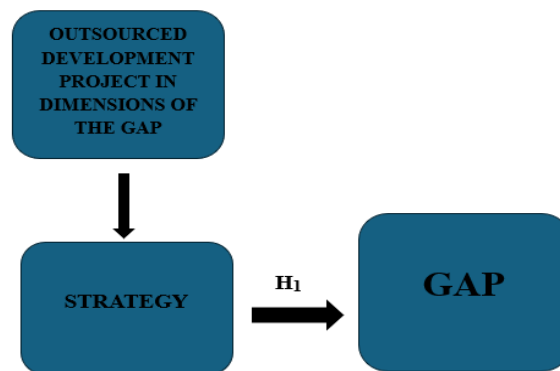
Data and measurement: The majority of the data for the research came from a questionnaire survey, which might have been a one-to-correspondence survey or a Google Form. The survey included two parts: (A) a section asking participants to identify themselves according to their preferred method of contact (online and offline), and (B)

a section asking them to rate various variables using a 5-point Likert scale. Many other sources, most of which could be accessible online, provided the secondary data.

Statistical Software: SPSS 25 was used for statistical analysis.

Statistical tools: To get a feel for the data's foundational structure, a descriptive analysis was performed. A descriptive analysis was conducted in order to comprehend the fundamental characteristics of the data. Validity was tested through factor analysis and ANOVA.

CONCEPTUAL FRAMEWORK



RESULT

Factor analysis (FA) is often used to validate the fundamental basis of a measurement battery. The rationale is as follows: These assessed scores may result from hidden traits. The basis of accuracy analysis is modelling (FA). The claimed objective is to illustrate the relationship among data, unidentified factors, and measurement error. The Kaiser-Meyer-Olkin (KMO) Test assesses the appropriateness of data for factor analysis. Researchers confirm that enough data exists for all model variables and the whole model. Researchers can determine whether many independent variables exhibit a specific degree of variation by analysing the statistics. Factor analysis is effective for addressing minute proportions. KMO yields integers ranging from 0 to 1. A suitable sample size is represented by KMO values ranging from 0.8 to 1.0. The sample must be substituted if the KMO is below 0.6, indicating its inadequacy. Some writers use 0.5 for this function, allowing considerable latitude between that and 0.6. It is the KMO. A number around 0 indicates that partial correlations are more substantial than complete correlations. Researchers reiterate: large-scale correlations pose a significant challenge

for component analysis. Here, researchers may observe the minimum and maximum criteria of Kaiser's requirements: Kaiser has delineated its minimal and maximum standards. Numerous values ranging from 0.050 to 0.059. It generally resides within the middle school quality point range of 0.80-0.89, with an additional range of 0.60-0.69. A broad spectrum of values is seen between 0.90 and 1.00.

Table 1: KMO and Bartlett's Test^a

KMO and Bartlett's Test^a		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.897
Bartlett's Test of Sphericity	Approx. Chi-Square	4790.175
	df	190
	Sig.	.000
a. Based on correlations		

The first stage in exploratory factor analysis (EFA) is to assess the appropriateness of the data for factor analysis. Kaiser asserts that factor analysis is only permissible when the KMO (Kaiser-Meyer-Olkin) metric of sample adequacy exceeds 0.5. The Kaiser-Meyer-Olkin (KMO) test assesses sample adequacy. This investigation yielded a KMO score of .897 based on the used data.

- **INDEPENDENT VARIABLE**

OUTSOURCED DEVELOPMENT PROJECTS IN DIMENSIONS OF THE GAP:

Finding and fixing discrepancies between expected and delivered results is a top priority when working with outsourced development projects. These gaps might show up in performance, quality assurance, project management, and communication. Examining the discrepancies between the project's goals, deliverables, and execution is essential for determining if the outsourced team meets the client's expectations. It is critical to close these gaps for the project outcomes and collaboration to be fruitful (Gable & Raman, 2020)

- **FACTOR**

STRATEGY:

To find out whether they are making the most of their resources, businesses and other organisations might utilise tools like strategic gap analyses. It finds the distance between the current situation and the ideal outcome. To build a strategy, businesses conduct strategic analyses, which include looking at both their internal and external surroundings. It entails learning about the market and researcher competitors as well as your own SWOT (strengths, weaknesses, opportunities, and threats). To find out whether they are making the most of their resources, businesses and other organisations might utilise tools like strategic gap analyses. It finds the distance between the current situation and the ideal outcome. What researcher need is a strategy, or "where to play and how to win," to help researcher reach researcher objectives and make the most of researcher time and energy. It lays out the steps researcher need to follow to get from researcher current position to the one researcher want (atobá et al., 2022).

- **DEPENDENT VARIABLE**

GAP:

There is a disparity, difference, or chasm when there is a mismatch between expectations and reality, or between expected and actual outcomes. A lack of or deviation from a mark, goal, or criterion is indicated by it. It is critical to identify and fix gaps in order to enhance processes, accomplish objectives, and guarantee that what was intended is precisely what was delivered. This is relevant in many contexts, including business, project management, and performance evaluation. Some things required fixing or improving before researcher could narrow the gaps and accomplish the objectives (Komaroff, 2020).

- **RELATIONSHIP BETWEEN STRATEGY AND GAP**

The difference between an organization's actual and intended performance in relation to its stated purpose, objectives, goals, and strategy for accomplishing these things is called a strategy gap. A strategic gap, according to Mckeown, may be turned into a strategic stretch. To find out how far off their present performance is from their desired performance, businesses do strategic gap analysis. A corporation might devise a strategy to attain its ideal performance or targeted objectives by pinpointing this gap. When

discussing health research, the term "knowledge gap" may apply to either organised evidence-based information or unstructured information that lacks evidence. When no adequate answers to specific research questions can be found in the current literature, this gap becomes relevant (Huang & Li, 2023).

- H01: There is no significant relationship between strategy and gap.
- H1: There is a significant relationship between strategy and gap.

Table 2: ANOVA(H₁)

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	42670.620	544	5163.519	2835.884	.000
Within Groups	688.770	955	5.346		
Total	44369.39	1499			

The outcome of this research is noteworthy. At the p-value of .000, which is lower than the alpha level, the value of F, which is 2835.884, approaches significance. This indicates that "H1: A strong correlation exists between Strategy gaps and quality." is accepted and the null hypothesis is rejected.

DISCUSSION

The "gap" phenomenon in outsourced development projects, which may have a major influence on the project's performance, may be better understood by analysing the discrepancies between expected and actual outcomes (Lee & Song, 2021). The success and quality of a project are at risk when there is a mismatch between the client's expectations and the final product. There could be gaps in communication, project management, quality control, and overall performance if development is outsourced. Inadequate communication, exacerbated by language and cultural barriers, may lead to misunderstandings and a misalignment of project goals. These misconceptions might lead to disagreements about expectations and deliverables. Client and outsourced partner differences in project management methodologies may also lead to inefficiencies and coordination issues, which in turn can create delays or inconsistent

outcomes. If the outsourced job isn't up to snuff, the final result could not be as reliable or practical as the customer had hoped. If expected results, such efficiency or speed, are not achieved, the project's success is at danger of being derailed. Exploratory research may help find the causes and find ways to fill these gaps. If companies can address these collaboration and alignment gaps, their outsourced development projects may be more successful.

CONCLUSION

The study's findings It is essential to understand the "gap" phenomenon in outsourced development projects so that issues arising from discrepancies between expectations and actual outcomes may be effectively addressed. Performance, quality assurance, communication, and project management inadequacies are at the heart of the problems with outsourced projects, according to this exploratory study. Disagreements, stemming from a failure to adequately communicate due to linguistic or cultural barriers, may have a devastating effect on a project's end outcome. Accurate documentation and efficient methods of communication are vital in closing these knowledge gaps and making sure that everyone involved in the project understands its goals and requirements. Different techniques and methodologies may lead to gaps in project management, which in turn can cause delays and inefficiencies. Standardising project management processes and enhancing communication between client and vendor teams are two ways to tackle these challenges and guarantee projects operate successfully. Quality and performance gaps are equally important. Consistently meeting quality standards is crucial to project success. Failure to do so may lead to unsatisfactory customer deliverables. Researchers want strict quality assurance processes and clear performance indicators to fill these gaps and ensure the final product is up to standard and works smoothly. When companies consistently find and fix these gaps, it could lead to better alignment between expectations and outcomes in outsourced development projects. Not only does this improve the performance and quality of output, but it also facilitates better collaboration and trust between customers and outsourcing partners. When these gaps are filled, cooperation become stronger and more productive, leading to improved project outcomes (Ried et al., 2022).

REFERENCES

1. Bhatti, B. M., Mubarak, S., & Nagalingam, S. (2021). Factors impacting information security risk management in IT outsourcing: An agency theory perspective.

2. Blijleven, V., Gong, Y., Mehrsai, A., & Koelemeijer, K. (2019). Critical success factors for lean implementation in IT outsourcing relationships: A multiple case study. *Information Technology & People*, 32(3), 715-730.
3. Erdogan, D. (2020). The role of contract and relationship norms in the success of information technology outsourcing. *Eastern Journal of European Studies*, 11(2), 230-233.
4. Gunduz, M., & Elsherbeny, H. A. (2020). Operational framework for managing construction-contract administration practitioners' perspective through modified Delphi method. *Journal of Construction Engineering and Management*, 146(3), 04019110.
5. Hanafizadeh, P., & Zareravasan, A. (2020). A systematic literature review on IT outsourcing decision and future research directions. *Journal of Global Information Management*, 28(2), 160-201.
6. Gable, G. G., & Raman, M. (2020). Outsourcing in IT projects: A study on performance gaps. *Information & Management*, 57(1), 103126. <https://doi.org/10.1016/j.im.2019.103126>
7. atobá, M. N., Franco, M., & Rodrigues, M. (2022). The role of communication between partners in the process of strategic alliances: A systematic literature review. *Journal of Business & Industrial Marketing*, 38(7), 1511-1531.
8. Komaroff, E. (2020). Relationships between p-values and Pearson correlation coefficients, type 1 errors and effect size errors, under a true null hypothesis. *Journal of Statistical Theory and Practice*, 14(3), 5- 10.
9. Huang, Z., & Li, S. (2023). Quality management in outsourced software development: Bridging the gap. *Software Quality Journal*, 31(2), 423-445
10. Ried, L., Eckerd, S., Kaufmann, L., & Carter, C. R. (2022). From target to actor: Contagion of honesty and deception across buyer-supplier negotiations. *Journal of Operations Management*, 69(2), 261-283.
11. Lee, J., & Song, M. (2021). Bridging the communication gap in outsourced software projects. *Information Systems Journal*, 31(2), 183-207.