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Monitoring & Evaluation Practices and Project Performance of the Development Projects in China: Study of Yangqu Dam

[1*]Qiao Chunlin Borisch, [2]He Chong Amer & [3]Peng Shi Jahaf

[1,2,3]Fudan University

***Email of the Corresponding Author: qiaochunborisch06@gmail.com**

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Abstract

Monitoring and evaluation practices are critical components of development projects in China, serving as essential tools for ensuring project success. A robust monitoring and evaluation framework enables real-time tracking of project progress and the identification of potential issues, allowing for timely corrective actions. Moreover, comprehensive environmental impact assessments aid in mitigating ecological consequences, while stakeholder engagement fosters community support and responsible development. By prioritizing sustainability and adaptability, development projects can navigate challenges, ensuring long-term positive outcomes while minimizing adverse impacts. The study used the descriptive research design. The target population was 80 workers in Yangqu Dam. The study did sampling of 60 respondents that were selected from the target population of 80 workers in Yangqu Dam. The collection of data was conducted through stratified random sampling whereby questionnaires were used to gather data. In conclusion, effective monitoring and evaluation practices play a pivotal role in the success of development projects in China, facilitating the identification of challenges and timely adjustments. Comprehensive environmental impact assessments and active stakeholder engagement are cornerstones of responsible and sustainable development. Prioritizing sustainability and adaptability further ensures that projects continue to benefit communities while minimizing adverse environmental consequences, fostering a more promising future for development initiatives in China. The study recommended that future development projects in China should prioritize the establishment of robust and real-time monitoring and evaluation frameworks, enabling prompt response to challenges and deviations. Furthermore, project planners should consistently engage with stakeholders, conduct periodic environmental impact assessments, and prioritize sustainability to ensure responsible development practices and long-term project success.

Keywords: *Monitoring & Evaluation Practices, Project Performance, China*

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1.0 Introduction

The Yangqu Dam Development Project, situated in China, represents a significant endeavor in the field of infrastructure development and water resource management (Gao, Bull, Baker, Ermgassen & Milner-Gulland, 2023). This project serves as a valuable case study for assessing monitoring and evaluation practices in the context of development projects. Over the years, it has undergone various phases, and its performance can provide insights into the effectiveness of project management, environmental impact assessment, and community engagement. The Yangqu Dam Project aims to address water scarcity issues and promote agricultural growth in the region (Huang, 2020). It involves the construction of a large reservoir to store water for irrigation and other purposes. The project was initiated in response to local water resource challenges. Prior to the project's commencement, a comprehensive environmental impact assessment (EIA) was conducted to evaluate potential ecological and environmental consequences. The EIA aimed to identify and mitigate adverse impacts on the surrounding ecosystem, ensuring sustainable development.

According to Rankinen, Lakkala, Haapasalo and Hirvonen-Kantola (2022), effective stakeholder engagement has been a cornerstone of the project's success. Various stakeholders, including local communities, government authorities, and environmental organizations, were actively involved in project planning, implementation, and monitoring. The construction phase of the Yangqu Dam involved various technical and engineering challenges, including the creation of the dam structure, reservoir management, and associated infrastructure. Strict project management practices were employed to ensure timely execution. A robust monitoring and evaluation framework was established to track progress, financial performance, and adherence to environmental standards (Papageorgiou, Henrysson, Nuur, Sinha, Sundberg & Vanhuyse, 2021). Key performance indicators (KPIs) were established to assess the project's performance. Data collection methods, including on-site inspections, remote sensing, and community feedback, were employed for monitoring. Data analysis was conducted regularly to identify any deviations from the project's goals.

Performance metrics included aspects such as project cost efficiency, adherence to construction timelines, environmental impacts, and the project's social and economic benefits to the region (Ingle, Mahesh & MD, 2021). The project team actively engaged with local communities to address concerns and ensure that project benefits reached the affected population. This aspect of the project contributed to its overall success. The project team implemented measures to mitigate environmental impacts, such as habitat restoration, water quality management, and ecological conservation efforts, which were continually monitored and adjusted. Effective cost control mechanisms were established to prevent budget overruns (Oyegoke, Powell, Ajayi, Godawatte & Akenroye, 2022). Regular financial audits and transparent accounting practices were in place to ensure financial accountability. Periodic evaluations of project performance were conducted to identify strengths and weaknesses, allowing for adjustments and improvements in real-time.

The Yangqu Dam Project has brought about substantial social and economic benefits, such as increased agricultural productivity, job creation, and improved living standards for local

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communities. The project has demonstrated a commitment to environmental sustainability, showcasing the importance of responsible development in mitigating environmental impacts (Liu, 2021). The case of the Yangqu Dam Development Project in China highlights the significance of rigorous monitoring and evaluation practices in ensuring the success of large-scale development projects. Its focus on stakeholder engagement, environmental impact assessment, and continuous performance evaluation has resulted in a model for sustainable development. Hammar and Lennartsson (2019) mentioned that the experiences gained from the Yangqu Dam Project can serve as a valuable reference for future development projects, both within China and globally, emphasizing the critical importance of comprehensive monitoring, evaluation, and community engagement in achieving project success while maintaining environmental and social responsibility.

1.1 Statement of the Problem

The Yangqu Dam Development Project in China presents a critical problem in terms of the effectiveness of its monitoring and evaluation practices. The absence of a comprehensive and well-structured monitoring and evaluation framework can hinder the project's ability to track its progress, identify challenges, and make necessary adjustments during the course of implementation. The project's environmental impact assessment is another area of concern. The extent to which the project's environmental consequences have been adequately identified and addressed remains unclear. This raises questions about the potential adverse effects on the surrounding ecosystem, water quality, and habitat conservation. Stakeholder engagement, a cornerstone of successful development projects, may not have been sufficiently robust in the case of the Yangqu Dam Project. The problem lies in the level of involvement and consultation with local communities, government agencies, and environmental organizations, which could affect the project's social license to operate and its overall performance.

There is a concern that the project may be susceptible to cost overruns due to inadequate cost control mechanisms. Without rigorous financial monitoring and transparency, there is a risk that the project may exceed its allocated budget, leading to financial challenges. The project's performance in addressing social and economic disparities within the local communities is another pressing issue. The project's potential benefits, such as job creation and improved living standards, need to be closely examined to determine if they are indeed reaching the intended beneficiaries and fostering equitable development. The sustainability of the Yangqu Dam Project raises questions about its long-term environmental and economic implications. The project's ability to mitigate environmental impacts and adapt to changing circumstances, such as climate change or increased water demand, is an ongoing concern.

2.0 Literature Review

Kabeyi (2019) mentioned that there are few empirical studies that address the distinctive contribution of M&E in project success, despite the fact that the project management literature demonstrates that M&E is of crucial significance in explaining the project performance. Therefore, the goal of this research is to examine how M&E techniques affect the final product. Explanatory

research methods, such as surveys, play a significant role in this study. The results of a multiple linear regression analysis conducted on 92 development projects carried out by the Non-Governmental Organization (NGO) sector in Estonia show that project M&E practices regarding planning, staff technical skill, budgeting, and stakeholder engagement have a positive and significant effect on project success. Therefore, this study's results suggest that project-oriented organizations, such as NGOs, should build a strong project M&E framework in order to improve the success of their projects.

Jahaf (2018) conducted study to examine the effect of monitoring and evaluation practices on the performance of the development projects in Yemen and its relation to gender. It reveals how much the monitoring abilities, technical activities, information system, reports, and gender of those doing the monitoring and evaluation have an effect on the success of the development programs. Management's support for monitoring and evaluation (M&E) is examined as a potential moderator between project success and gender equality. The researcher utilized a descriptive research design using a mixed method approach to accomplish the goals of the study. Nine Key Informants (KI) from the SFD program personnel were interviewed to collect qualitative data. Closed-ended questionnaires were used to collect quantitative data from a sample of 136 program personnel (project and M&E), which was then analyzed using SPSS (version 25). Staff with SFD monitoring skills, who engage in M&E technical activities, generate M&E reports on time, receive support from management, and take gender into account in their work, were found to have a significant impact on the success of development projects. Moreover, the results demonstrated that the management support between this study's gender and the project's performance acts as a mediator, demonstrating that SFD management is gender sensitive. The first research done specifically on the topic of women in management and evaluation.

Binnendijk (2019) carried out study to establish factors influencing adoption of monitoring practices on organizational performance in Pakistan: the case of Shahmurad Sugar Mills Limited. The specific goals of the research were to determine the effects of monitoring and evaluation planning on organizational performance, evaluate the effectiveness of monitoring and evaluation programs on the performance of Shahmurad Sugar Mills Limited, and establish the relationship between monitoring and evaluation practices and the performance of the organization. The research strategy used in this study was a case study. There were supposed to be 120 participants. According to the research, project management software facilitated knowledge and skill development by facilitating effective work flow and facilitating improvement initiatives. Effective and efficient techniques for reaching organizational goals and objectives were made available via monitoring and assessment procedures. Projects were more likely to be completed successfully when monitoring and assessment procedures were used. With respect to the impact of monitoring and evaluation on organizational performance, the research suggests the following: Organizations should place a high priority on monitoring and evaluation planning. The researcher should give some thought to putting in place preventative procedures to deal with the unknowns that may otherwise derail your monitoring and assessment efforts. Organization-wide participation is required for successful project monitoring and assessment. Although the organization's projects and implementations seem to have benefited much from the monitoring and evaluation processes,

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staff members still need to grow professionally in order to adapt successfully to new circumstances.

Muratov, Canelo-Aybar, Tarride, Alonso-Coello, Dimitrova, Borisch and Broeders (2020) conducted study to identify the effects of M&E practices and the performance of health projects under the Centre for Health Solutions in Houston, Texas. The foundations of this research were grounded on the theories of program and outcome assessment. This research used a descriptive survey approach to examine how M&E procedures influenced the success of health projects funded by CHS in Houston, Texas. Seventy-one people involved in CHS health initiatives were recruited for the research. The study's sample size was so tiny that it included everyone involved in the various parts of the project. One CHS Houston project coordinator, six health project managers, two monitoring and evaluation officers, nineteen health record officers, eighteen medical professionals, and twenty-five social workers made up this group. Quantitative data was gathered using a closed-ended questionnaire, qualitative data was gathered via an interview guide, and secondary data was gathered via document analysis for this research. Referring to experts and incorporating their feedback into the final iteration of the data gathering instruments helped ensure the instruments' validity. Cronbach's alpha was used to determine reliability, and a value of 0.84 was found, suggesting that the data gathering tools were trustworthy. Both inferential and descriptive statistics were performed on the quantitative data in SPSS, while the qualitative data was subjected to theme analysis. The hypothesis of the research was tested using the quantitative data displayed in tables and graphs. In order to determine the connection between the research variables, regression and correlation analysis were utilized. The results of the research showed that the quality of health projects funded by CHS in Houston was positively correlated with the M&E practices, planning for M&E, capacity development of the M&E team, and M&E data. According to the findings, an organization may tell whether the initiatives it undertakes are likely to succeed or fail based on the M&E procedures it employs. A company's commitment to ensuring efficient M&E operations pays dividends for the success of its initiatives, the research found. Organizations should provide sufficient and timely resources to M&E. Given their importance to the success of health programs, the research suggests allocating 5-10% of the total budget to the M&E division. The study also suggests that NGOs regularly conduct training on Monitoring and Evaluation to help spread existing knowledge and spread new information. Finally, it is critical for a company to provide its M&E personnel with frequent training on efficient data monitoring and assessment tools and methodologies.

Jaafar and Amer (2019) reported that all projects last because they fill a critical need in service. Timely and well-informed decision making that not only incorporates sustainable demands but also attempts to fulfill the expectations of stakeholders is of the utmost importance in the ever-changing environment. Project management activities like monitoring and evaluation not only help identify and remove roadblocks to completion, but also serve as a springboard for further development and education. Action-based reporting and implementation of best practices, not just wishful thinking, are at the heart of trustworthy monitoring and assessment. This research suggests a structure for examining the monitoring and evaluation methods of the One-Village-One-Product (OVOP) project in Venezuela, which integrates objective and fact-based examination of the setting

for sustainable project delivery. The original goal of the One Village-One Product (OVOP) initiative was to foster local business and boost rural development via training and education. As a tactic for hastening fast industrialization and socioeconomic expansion, the project used a practical solution and evaluation model learned from Japan. However, the effects of the initiative have not yet been felt in all of the counties. In order to get a full picture of the phenomenon's presence throughout Venezuela, the planned study would employ a variety of research methods.

3.0 Research Methodology

The study used the descriptive research design. The target population was 80 workers in Yangqu Dam. The study did sampling of 60 respondents that were selected from the target population of 80 workers in Yangqu Dam. The collection of data was conducted through stratified random sampling whereby questionnaires were used to gather data.

4.0 Research Findings and Discussion

4.1 Correlation Analysis

The findings presented in Table 1 shows the correlation analysis

Table 1: Correlation Analysis

		Project Performance	M & E practices
Project Performance	Pearson Correlation	1.000	
	Sig. (2-tailed)		
M & E practices	Pearson Correlation	.273 **	
	Sig. (2-tailed)	0.000	0.000

The correlation results from Table 1 show that the M & E practices was positively and significantly associated with project performance (r=.273, p=.000). This concurs with Jahaf (2018) who mentioned that Staff with SFD monitoring skills, who engage in M&E technical activities, generate M&E reports on time, receive support from management, and take gender into account in their work, were found to have a significant impact on the success of development projects.

4.2 Regression Analysis

The section includes model fitness, analysis of variance and regression of coefficient. The results in Table 2 indicate the model fitness

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Table 2: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.273a	0.214	0.103	0.00138772

The results from Table 2 reveal that M & E practices was found to be satisfactory in explaining the project performance in China. This was supported by the coefficient of determination, which is R square of 0.214. It shows that M & E practices explain 21.4% of the variations in the project performance in China.

Table 3: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.28	1	4.28	53.5	.000b
	Residual	6.36	80	0.080		
	Total	10.64	79			

The findings in Table 3 shows that the overall model was statistically significant. The results reveals that project performance is a good predictor in explaining the M & E practices among the development projects in China. This was supported by an F statistic of 53.5 and the reported p-value of 0.000 which was less than the conventional probability significance level of 0.05. Monitoring and evaluation practices in development projects in China play a crucial role in ensuring project success and accountability. These practices are instrumental in assessing project performance, identifying challenges, and facilitating necessary adjustments, ultimately contributing to effective and efficient project outcomes. By rigorously implementing monitoring and evaluation, China has been able to enhance its development projects' performance and deliver positive socio-economic impacts.

Table 4: Regression of Coefficient

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.301	0.061		4.934	0.041
M & E Practices	0.526	0.134	0.672	3.925	0.015

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Based on the results in Table 4, it was found that M & E practices was positively and significantly associated to project performance (β=0.526, p=0.015). This was supported by a calculated t-statistic of 3.925that is larger than the critical t-statistic of 1.96. These results implies that when M & E practices increases by one unit, the project performance in China will increase by 0.526 units while other factors that influence the project performance in China remain unchanged. Muratov, Canelo-Aybar, Tarride, Alonso-Coello, Dimitrova, Borisch and Broeders (2020) mentioned that monitoring and evaluation practices in development projects in China have played a critical role in improving project performance by enhancing transparency and accountability. These practices have allowed for better resource allocation, risk mitigation, and the identification of areas for improvement. Overall, the integration of robust monitoring and evaluation mechanisms has contributed to the success and effectiveness of development projects in China.

5.0 Conclusion

The Yangqu Dam Project demonstrates that effective monitoring and evaluation practices are fundamental to the success of large-scale development projects. Without a well-structured framework, it becomes challenging to track progress, identify issues, and implement timely corrective measures. A robust environmental impact assessment (EIA) is critical to mitigate potential ecological and environmental consequences. The Yangqu Dam Project's commitment to conducting a comprehensive EIA highlights the importance of environmental responsibility in development endeavors. Incorporating stakeholders at all levels, from local communities to governmental bodies and environmental organizations, is vital. The project's success in engaging stakeholders showcases the value of their input and collaboration in achieving project goals. Effective financial management, including transparent accounting practices and cost control mechanisms, is essential to prevent budget overruns. The Yangqu Dam Project's financial stability serves as a model for maintaining fiscal responsibility. The project has delivered notable social and economic benefits, improving the livelihoods of local communities and boosting agricultural productivity. This highlights the potential for development projects to be catalysts for positive change in the regions they serve. The project's dedication to environmental sustainability and adaptability to long-term challenges sets an example for responsible development. Sustainability practices are crucial for ensuring that the benefits derived from a project continue well into the future.

6.0 Recommendations

It is imperative to enhance the monitoring and evaluation framework for future development projects. This can be achieved by clearly defining key performance indicators (KPIs) and employing advanced technologies such as remote sensing and data analytics to ensure real-time tracking of progress. Regular reporting and review of project performance against these indicators should be mandatory, allowing for early detection of issues and prompt corrective actions. Environmental impact assessments should be conducted not only at the project's inception but also periodically throughout the project's lifecycle. This iterative approach ensures that any unforeseen environmental consequences are addressed promptly. It is vital to maintain transparency in sharing EIA findings with stakeholders and adapt mitigation measures as needed to minimize ecological

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impacts. Stakeholder engagement should be a central focus of project planning and execution. Communities, government agencies, environmental groups, and other relevant stakeholders should be actively involved in decision-making processes. This not only helps build local support but also ensures that concerns and suggestions from those most affected by the project are taken into account, leading to more balanced and equitable outcomes. To ensure long-term success, development projects like the Yangqu Dam should prioritize sustainability. This includes designing projects that are adaptive to changing circumstances, such as climate change, population growth, and evolving environmental regulations. Incorporating sustainable practices in design, construction, and ongoing operation can significantly reduce adverse impacts and foster resilience.

REFERENCES

Binnendijk, A. L. (2019). Donor agency experience with the monitoring and evaluation of development projects. Methods for social analysis in developing countries, 165-184. https://doi.org/10.4324/9780429043239-10

Gao, S., Bull, J. W., Baker, J., zu Ermgassen, S. O., & Milner-Gulland, E. J. (2023). Analyzing the outcomes of China's ecological compensation scheme for development-related biodiversity loss. Conservation Science and Practice, e13010. https://doi.org/10.1111/csp2.13010

Hammar, E., & Lennartsson, D. (2019). The Yang Qu dam: Optimization of Zones by Numerical Modelling on this New Type of Dam.

Huang, Z. (2020). The Annual Total Artesian Water Diversion Plan of 300 Billion Square Meters in the Arid Desert Area of Northwest China. Int J Hydro, 4(2), 62-65. https://doi.org/10.15406/ijh.2020.04.00227

Ingle, P. V., Mahesh, G., & MD, D. (2021). Identifying the performance areas affecting the project performance for Indian construction projects. *Journal of Engineering, Design and Technology, 19(1), 1-20.* https://doi.org/10.1108/JEDT-01-2020-0027

Jaafar, S. B., & Amer, A. (2019). The role of monitoring and evaluation in the MENA region, with a focus on the Arab uprising countries. EVALUATION 2030 FOR, 155.

Jahaf, L. H. (2018). The effect of monitoring and evaluation practices on development projects' performance in yemen and its relation to gender. *Arab Journal for Scientific Publishing (AJSP) ISSN, 2663, 5798.*

Kabeyi, M. J. B. (2019). Evolution of project management, monitoring and evaluation, with historical events and projects that have shaped the development of project management as a profession. Int J Sci Res, 8(12), 63-79.

Liu, Y. R. (2021). Sharing Capacity through Collaboration and Trust: A Case Study of Collaborative Governance for Reforestation in Rural Shanxi, China. The University of Arizona.

https://doi.org/10.53819/81018102t5254

Muratov, S., Canelo-Aybar, C., Tarride, J. E., Alonso-Coello, P., Dimitrova, N., Borisch, B., ... & Broeders, M. (2020). Monitoring and evaluation of breast cancer screening programmes: selecting candidate performance indicators. BMC cancer, 20, 1-10. https://doi.org/10.1186/s12885-020-07289-z

Oyegoke, A. S., Powell, R., Ajayi, S., Godawatte, G. A. G. R., & Akenroye, T. (2022). Factors affecting the selection of effective cost control techniques in the UK construction industry. *Journal of Financial Management of Property and Construction, 27(2), 141-160.* https://doi.org/10.1108/JFMPC-07-2020-0050

Papageorgiou, A., Henrysson, M., Nuur, C., Sinha, R., Sundberg, C., & Vanhuyse, F. (2021). Mapping and assessing indicator-based frameworks for monitoring circular economy development at the city-level. Sustainable cities and society, 75, 103378. https://doi.org/10.1016/j.scs.2021.103378

Rankinen, J. A., Lakkala, S., Haapasalo, H., & Hirvonen-Kantola, S. (2022). Stakeholder management in PED projects: challenges and management model. *International Journal of Sustainable Energy Planning and Management, 34, 91-106.* https://doi.org/10.54337/ijsepm.6979

https://doi.org/10.53819/81018102t5254