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# COMPARATIVE ANALYSIS OF INITIAL ESTIMATES AND FINAL OUTCOMES IN GLOBAL VS. LOCAL PROJECTS: SURVEY ANALYSIS

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**Abstract.** This study examines the differences between the initial project estimates and the final outcomes in both global and local projects, specifically focusing on Kazakhstan. The goal of this research is to address this gap in existing research by comparing the initial estimates and the final deliverables in global and local projects. The study used a survey methodology to collect data from project managers with experience in both global and local projects.

Significant differences were found in project management challenges and outcomes: global projects are more prone to cost overruns, schedule delays, and adverse impacts from scope changes compared to local projects. These findings highlight the complexity of managing global projects, emphasizing the need for enhanced planning, risk management, and communication strategies.

The methodology involved distributing a detailed questionnaire via Google Forms in Russian and English, targeting professionals through various online platforms. Statistical analysis of the quantitative data and thematic analysis of qualitative responses provided a comprehensive view of the project management landscape.

The key findings indicate that global projects encounter more challenges in sticking to their budgets and schedules and that changes in scope have a particularly strong negative impact. This research adds valuable insights that can help in developing customized project management practices for global settings. Future studies could broaden the scope to include various industries and regions in order to improve best practices for achieving project success on both a global and local level.

**Key words**: Comparative analysis, global projects, local projects, project estimates, project outcomes.

## Introduction

The increasing globalization of business necessitates the effective management of projects across diverse national and cultural boundaries. As organizations expand their operations internationally, the complexity of project management intensifies, requiring strategies that accommodate varying global contexts. While there is extensive research in the field of project management, a significant gap exists in the comparative analysis of initial estimates and outcomes between global and local projects. This gap is critical, as understanding the differences between these types of projects can inform the development of more effective management strategies, ultimately enhancing project success.

Previous studies highlight that global projects are often more susceptible to cost overruns and schedule delays due to the unpredictable nature of the global environment. However, these studies frequently lack comprehensive, data-driven analyses that reflect the diverse experiences of project managers operating in different contexts. Moreover, there is a notable paucity of research specifically comparing the performance of global and local projects within Kazakhstan. Addressing this gap is essential for advancing both theoretical and practical knowledge in project management.

This study aims to fill this research gap by conducting a comparative analysis of initial estimates and final deliverables in global and local projects. Utilizing data from a survey of project managers with experience in both global and local projects, the study intends to provide insights that can enhance project planning and management practices.

The primary research question guiding this study is: How do the original estimations for project costs, schedule, and scope compare to the final outcomes in global versus local projects? To address this question, the study will test the following hypotheses:

*Null Hypothesis (H0)*: There is no significant difference between the originally estimated project

costs, schedule, and scope, and the final outcomes in global projects and local projects.

*Alternative Hypothesis (H1)*: There is a significant difference between the originally estimated project costs, schedule, and scope, and the final outcomes in global projects and local projects.

This research is justified by the increasing need for effective project management in a globalized economy. As organizations continue to expand across borders, understanding the distinct challenges and strategies for managing global versus local projects becomes crucial. By providing practical recommendations and contributing to both the theoretical and practical understanding of project management in diverse contexts, this study offers valuable insights for scholars and practitioners. Through an analysis of the experiences and outcomes of project managers, this research aims to enhance the overall effectiveness of project management practices.

**Literature review**

Project management has evolved significantly over the decades, adapting to the increasing complexity and scope of both global and local projects. Foundational principles of project management are well-established, with methodologies such as the PMBOK (Project Management Body of Knowledge) and PRINCE2 providing structured approaches to managing projects (PMI, 2021; OGC, 2017). However, the application of these methodologies can differ markedly between global projects (GP) and local projects (LP), particularly in terms of cost, schedule, scope, and stakeholder management.

Global projects often involve multiple countries, cultures, and time zones, introducing additional layers of complexity not typically present in local projects. According to Binder (2016), global projects require more sophisticated coordination and communication strategies due to their broader geographic spread and the diversity of the teams involved. This complexity can lead to higher risks and greater variability in project outcomes. Local projects, on the other hand, are usually confined to a single geographic area and are often subject to more predictable and stable conditions. This can result in more accurate initial estimates and fewer deviations from the planned cost and schedule (Aarseth et al., 2014). The relative simplicity of local projects allows for more straightforward application of traditional project management techniques.

The literature indicates that global projects are more susceptible to cost overruns and schedule delays compared to local projects. A study by Fossum et al. (2019) involving 450 respondents experienced in global projects and 57 respondents from local projects found that costs in global projects are more likely to exceed budgets. This is corroborated by the findings of Zwikael et al. (2014), who highlight that unforeseen costs and delays are more prevalent in global projects due to the dynamic and unpredictable nature of the global environment. Conversely, local projects benefit from a more controlled and familiar environment, which tends to result in better alignment with the original budget and schedule. This is supported by the work of Turner and Müller (2005), who emphasize that local projects often face fewer external disruptions, allowing for more precise planning and execution.

Scope changes are a common challenge in project management, and their impact can vary significantly between global and local projects. Research by Ika and Hodgson (2014) indicates that global projects are more prone to scope changes due to evolving stakeholder requirements and the need to adapt to diverse regulatory environments. These scope changes can lead to substantial delays and increased costs, complicating project delivery. In local projects, scope changes are usually less frequent and more manageable. This is largely because local projects operate within a single regulatory framework and cultural context, making it easier to anticipate and control changes (Müller & Jugdev, 2012).

Research also examines projects led by global companies, or multinational corporations (MNCs), which operate in multiple countries and face challenges related to different jurisdictions, cultural backgrounds, time zones, and bureaucracies that can affect business operations. Lazarus (2001) defined MNCs as corporations with operations in more than two countries, characterized by foreign direct investment. MNCs' global reach varies, with some operating in over 100 countries and employing hundreds of thousands of workers internationally. Economically, this highlights the ability of owners and managers in one country to control activities in others. Literature often reviews MNCs from a financial perspective in global projects. Goerg and Strobl (2003) noted that MNCs are becoming increasingly "footloose" with no strong national allegiance. Strategic leadership, management, and planning in MNCs are also significant topics, as discussed by Carpenter and Sanders (2008) and Kerzner (2014). Cullen and Parboteeah (2013) explored negotiations and cross-cultural communications in MNCs.

Project estimating involves forecasting the resources, time, and costs required to successfully

complete the project. Various methods such as expert judgment, analogous estimation, and parametric modeling are commonly used to estimate project parameters (Fleming & Koppelman, 2016). The accuracy of project estimates is influenced by several factors, including project complexity, uncertainty, stakeholder expectations, and external environmental factors (Flyvbjerg et al., 2003; Joslin & Müller, 2015). Global projects, characterized by diverse cultural contexts, geographic dispersion, and regulatory differences, present unique challenges that can affect the accuracy of estimates (Pinto & Prescott, 1990).

Research has demonstrated the inherent variability between initial estimates and final project outcomes in different contexts. Studies by Flyvbjerg et al. (2003) and Joslin and Müller (2015) highlight significant deviations between predicted and actual project parameters, indicating the presence of uncertainty and risk throughout the project life cycle. Global projects involve cross-border operations, the involvement of diverse stakeholders, and complex coordination across different geographic regions and cultures (Pinto & Prescott, 1990). In contrast, local projects are limited to a specific geographic region or community, often characterized by a more homogeneous stakeholder and regulatory environment (Müller & Turner, 2010).

Despite the extensive research on project management, there is a notable gap in the literature regarding the comparative analysis of initial estimates and final outcomes specifically between global and local projects. Most studies focus on either global or local projects in isolation, without directly comparing the two. This gap is significant because understanding the differences in project performance between these contexts can lead to more tailored and effective project management strategies. It is also worth noting that there is no literature that compares global and local projects based in Kazakhstan. Moreover, existing literature often relies on case studies or theoretical models without incorporating empirical data from surveys or real-world project outcomes. This limits the generalizability of the findings and underscores the need for more comprehensive, data-driven research.

## Methodology

The methodology used in this study was aimed at obtaining a comprehensive understanding of project management among professionals who have had experience in global projects and those who have been involved exclusively in Kazakhstan. The research methodology included several key steps. First, a questionnaire was developed using Google Forms in Russian and English, considering the language preferences of the respondents. Then, the link to the questionnaire was distributed through various channels including Outlook, LinkedIn, WhatsApp and other social media platforms to reach a diverse audience.

Data collection was conducted over a period of one month to ensure enough responses. A total of 40 respondents participated in the survey and provided valuable data for analysis. The survey questionnaire consisted of two main sections. The first section focused on collecting demographic information and profiles of the respondents such as age, work experience, project area and geographical coverage. The second section contained questions directly related to the objectives of the study, which explored various aspects of project management practices.

To facilitate comparative analysis, respondents were categorized into two groups based on their involvement in global or local projects. This grouping allowed for a structured exploration of the differences in perceptions and experiences between the two project contexts.

Quantitative data from the survey was analyzed using statistical methods to identify trends and patterns in project outcomes across global and local projects. Qualitative responses were also explored to better understand respondents' views on various aspects of project management.

By adhering to this methodology, the study aimed to provide a comprehensive understanding of the comparative analysis of initial evaluations and final results in global and local projects, as outlined in the subsequent Results section.

## Results and discussion

The study involved 40 respondents from different countries. As a result of the survey, it was found that out of the 40 respondents, 25 had participated in global projects (GP), while 15 had experience in local projects (LP) within one country. The average age of the respondents was 35 years, with an average of 5 years of project management experience. If we examine the age and experience across the two groups, it appears that the average age of respondents who participated in global projects was 36, with 6 years of experience, whereas the average age and experience of respondents who participated in local projects were 32 and 4 years, respectively. Thus, it was evident that respondents who participated in

global projects were significantly older and more experienced.

Regarding the presence of project management certificates, it was found that 70% or 28 respondents did not have certificates. Among the group participating in GP, the proportion of those without certificates was higher, with 19 out of 25 respondents lacking certification, compared to 9 out of 15 in the LP group. Among the respondents of both groups, there were certifications in project management such as Chapter Lead, IPMA D, MBA, AMBA, PMP, PSM I, PPO I, SMCP, with PMP being the most common certification. Thus, despite the GP group having more experience, the LP group had a slightly higher proportion of respondents with certificates.

In response to the question about roles in the project, it was found that in the GP group, more than half were project managers, while the other half had roles such as Executive Management, Senior Product Manager, Business Manager, etc. In contrast, in the LP group, 13 respondents had project management roles, while only 2 had other roles such as Financial Analyst and Scrum Master.

Regarding the question about project locations, respondents indicated multiple countries since the question was open-ended. Table 1 below illustrates the countries mentioned by the respondents.

The survey revealed that the projects of the majority of respondents were located in Kazakhstan (27), Uzbekistan (5), the USA (4), and in 15 other countries worldwide, with 23 respondents indicating projects in multiple countries. Thus, it can be inferred that respondents have diverse experiences across various countries.

Regarding the duration of projects, the average project duration was found to be 6 years. When segmented by groups, it was observed that the duration of projects for the Participate in GP group was 8 years, while for the Participate in LP group, it was only 1 year. However, it is worth noting that for several respondents in the first group, the duration of projects ranged significantly from 100 to 13 years, which represents substantial deviation. Looking at the median, it appears that the duration for the first group is 2 years, while for the second group, it is 1 year. Therefore, it can be hypothesized that for the majority of respondents, the project duration is medium-term.

Regarding the size of project teams, it was found that 13 respondents had teams ranging from 5 to 10 members, 12 respondents indicated team sizes from 10 to 20, and 8 respondents had teams ranging from 1 to 5 members. When examining the responses by groups, it was found that respondents from the second group tended to have larger team sizes, primarily consisting of 10 to 20 members. In contrast, respondents from the first group included one respondent each with team sizes of 120, 150, and even 3000 members.

**Table 1** – Location of project

| Location of project (country /-s) | # responds |
|---|---|
| Kazakhstan | 27 |
| Uzbekistan | 5 |
| USA | 4 |
| Australia | 3 |
| United Kingdom | 3 |
| Kyrgyzstan | 2 |
| Russia | 2 |
| India | 2 |
| Canada | 2 |
| China | 1 |
| Korea | 1 |
| Ireland | 1 |
| UAE | 1 |
| Georgia | 1 |
| Azerbaijan | 1 |
| Germany | 1 |
| Bangladesh | 1 |
| Italy | 1 |

It is noteworthy that these deviations are likely associated with the industry of the project. For instance, the respondent who indicated a team size of 150 works in the telecommunications sector, while respondents indicating team sizes of 120 and 3000 work in the oil and gas sector. Furthermore, these same respondents had the longest project durations, 100, 13, and 40 years, respectively.

Upon examining the industries of the projects in which our respondents participated, it was found that the majority worked in IT, Banking/Insurance, and Consulting. The figure 1 below illustrates the project sectors in which our respondents participated, and since respondents could participate in multiple projects, the question allowed for selecting multiple options and specifying other industries if they were not listed. The category of "other industries" includes sectors such as logistics, metal extraction, FMCG, education, the automotive market, and others.

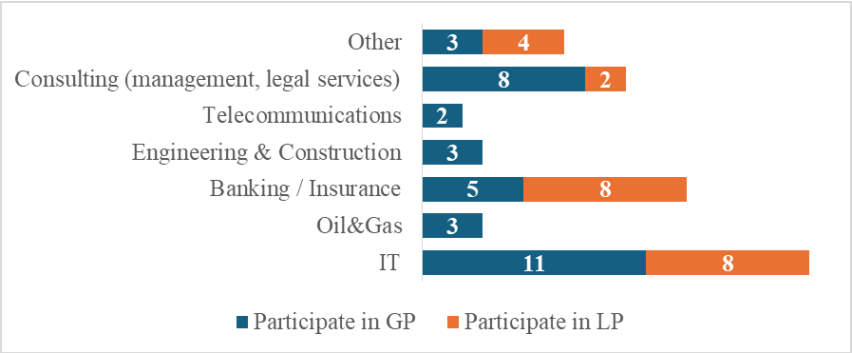


**Figure 1** – Industry or industries of projects

To make a comparative analysis, the survey included questions about the cost, schedule and scope of the projects. For each aspect, 2 questions were compiled.

The first question addressed the extent to which unexpected cost overruns affect the overall success of projects. Analyzing the responses of the group participating in global projects (Participate in GP), 48% of respondents indicated that unexpected cost overruns moderately affect the overall success of their projects, while 40% stated that these overruns significantly impact success, and the remaining 12% reported minimal impact. The second group of respondents participating in local projects (Participate in LP) had 33% indicating moderate impact, 53% noting significant impact, and 13% reporting minimal impact.

A comparative analysis reveals noticeable differences in perception between the two groups. Specifically, a higher proportion of respondents in Participate in GP stated that cost overruns have a moderate impact compared to Participate in LP (48% vs. 33%). Conversely, a greater percentage of respondents in Participate in LP indicated a significant impact of cost overruns on project success compared to Participate in GP (53% vs. 40%).

These results suggest that practitioners participating in global projects may perceive unexpected cost overruns as having a somewhat less serious impact on project success compared to those involved in local projects. Figure 2 presents the respondents' answers.

When surveyed on the extent to which current project costs are in line with the original budget, Participate in GP 56% indicated that project costs are above the original budget, 4% reported costs below budget, and 40% stated that costs are in line with the original budget. Participate in LP 40% reported costs above the original budget, 7% reported costs below budget, and 53% matched the original budget.

A higher percentage of respondents in the global project group reported costs above the original budget compared to respondents in the local project group (56% vs. 40%).

These results indicate that practitioners involved in global projects may face greater challenges in managing project costs within the constraints of the original budget than those involved in local projects. Figure 3 summarizes the respondents' responses.

The next question pertained to the frequency of successful implementation of recovery plans in the event of project schedule delays. The results revealed that among respondents involved in global projects, 72% reported that recovery plans are always successfully implemented, 16% reported occasional success, and 12% reported rare success. As for respondents participating in local projects, 100% reported that recovery plans are always successfully implemented, with none indicating periodic or rare implementation.

Analysis indicates significant differences in the perception of successful recovery plan implementation between the two groups. It can be inferred that practitioners involved in global projects may encounter more significant challenges or obstacles in achieving successful recovery plan implementation in response to project schedule delays compared to those working on local projects. Figure 4 presents the responses.

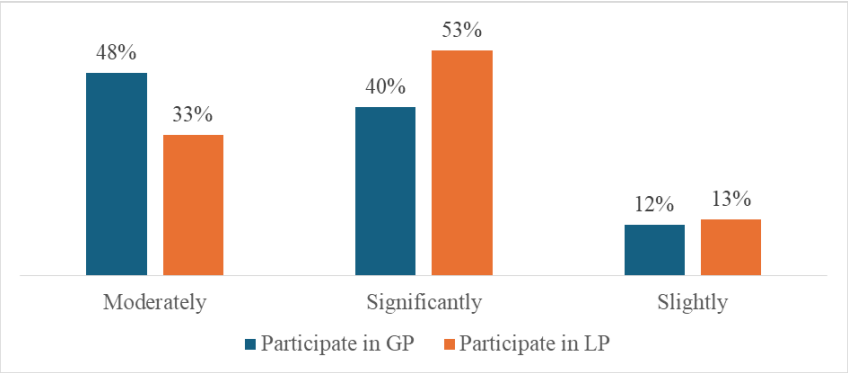


**Figure 2** – To what extent do unexpected cost overruns impact the overall success of global projects?

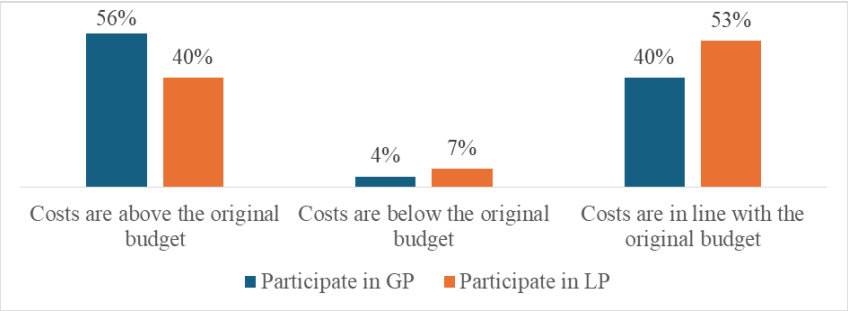


**Figure 3** – How well do the current costs of your project align with the initial budget?

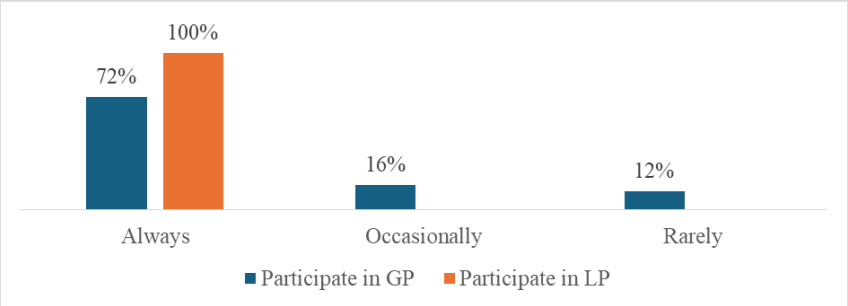


**Figure 4** – In case of delays in the project schedule, how often are recovery plans successfully implemented?

Analysis of responses to the question regarding the extent to which the current project completion schedule aligns with the initial plan revealed that among respondents in the Participate in GP group, 20% indicated that the project is ahead of schedule, 8% noted a lag behind the schedule, and 72% stated that the project is on schedule. In the Participate in LP group, 7% reported the project being ahead of schedule, 7% indicated a lag behind the schedule, and 87% stated that the project is on schedule.

The analysis demonstrates notable differences in the perception of project completion schedule alignment with the initial plan between the two groups. Practitioners from the Participate in GP group may encounter more significant challenges or difficulties in ensuring project schedule adherence to the initial plan compared to the Participate in LP

group. Figure 5 presents the responses from both groups.

The survey results regarding the frequency of changes occurring in project scopes after the initial planning stage revealed that among respondents involved in global projects, as depicted in Figure 6, 36% reported changes occurring within their projects always, 56% indicated changes happening from time to time, and 8% stated changes occurring rarely. Among respondents participating in local projects, 47% reported changes always, 47% indicated changes happening from time to time, and 7% stated changes occurring rarely. It was found that both groups often encounter changes in project scopes, with the majority of respondents in both groups noting that changes occur from time to time.

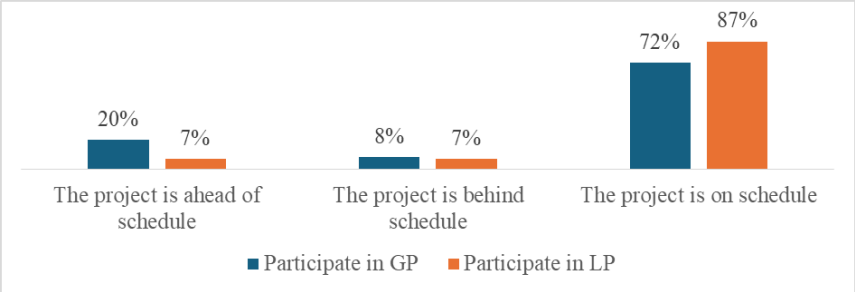


**Figure 5** – In case of delays in the project schedule, how often are recovery plans successfully implemented?

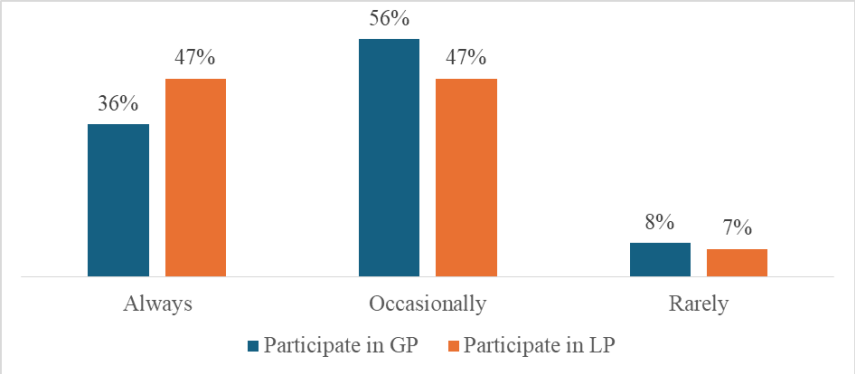


**Figure 6** – How often do changes occur in the scope of your project after the initial planning phase?

The survey results presented in Figure 7 regarding the impact of changes in project scope on overall project implementation provide valuable insights into the perceptions of the respondents. It was found that among the group Participate in GP, 48% noted that changes in project scope negatively affect project implementation, leading to delays and issues, 16% reported a neutral impact with minimal effect, and 36% perceived changes positively, resulting in improved outcomes. Respondents from the group Participate in LP indicated that 40% experienced a negative impact, 47% reported a neutral impact, and 13% perceived changes positively.

A higher percentage of respondents in the group Participate in GP reported a negative impact compared to the group Participate in LP (48% vs. 40%). This suggests that specialists involved in global projects may encounter more serious problems or disruptions due to changes in project scope. Conversely, respondents from Participate in LP may experience relatively fewer disruptions and delays due to changes in project scope, which may be attributed to a more rational and localized project environment.

Throughout the investigation, key aspects of project management in global and local projects were

examined, including cost management, schedule adherence, scope change, the impact of scope change on project implementation, and the execution of recovery plans. The results revealed differences between global and local projects in these areas, indicating potential disparities in project assessments and outcomes. Regarding the research question on the variability of project estimates, the results confirm the alternative hypothesis that significant differences exist between initially estimated costs, schedules, and project scope and the final outcomes in global and local projects.

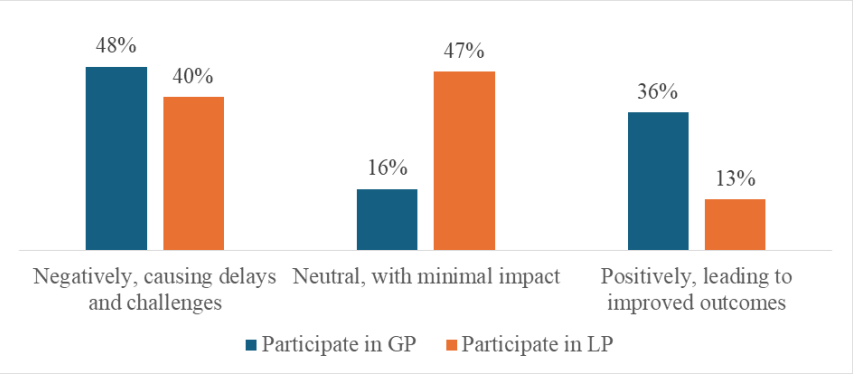


**Figure 7** – How do changes in project scope impact the overall project delivery?

Comparing our results with a study by Knut R Fossum, Jean C. Binder, Tage K. Madsen, Wenche Aarseth, Bjorn Andersen (Success factors in Global Project Management - A study of practices in organizational support and the effects on cost and schedule, May 2019), which included 450 respondents with experience in global projects and 57 respondents who worked only on local projects, there are similarities in the findings. As in our study, their results indicate that costs in global projects are more likely to exceed budget, schedules in these projects are met or ahead of schedule, and changes in workload have a more negative impact on local projects.

## Conclusion

The aim of this study was to conduct a comparative analysis of the initial estimates and final outcomes of global projects (GP) versus local projects (LP) within Kazakhstan. By examining the discrepancies between projected and actual project parameters, this research sought to understand the key factors influencing cost, schedule, and scope variations in these two distinct contexts. The study utilized a survey methodology to gather data from professionals with experience in both global and local projects, allowing for a detailed comparison of their experiences and outcomes.

The findings reveal significant differences between global and local projects in terms of project management challenges and outcomes:

Cost Management: A higher percentage of respondents from global projects reported costs exceeding the original budget compared to local projects (56% vs. 40%). This indicates that managing project costs within budget constraints is more challenging in a global, possibly context due to factors such as exchange rates, international regulations, and logistical complexities.

Schedule Adherence: While a significant portion of both groups reported adhering to their schedules, the study found that 72% of global project respondents stated their projects were on schedule, compared to 87% in local projects. This suggests that global projects face more difficulties in maintaining their schedules, possibly due to the added complexity of coordinating across multiple time zones and cultures.

Scope Changes: Changes in project scope were frequent in both contexts, but global projects experienced more severe impacts from these changes. 48% of global project respondents indicated that scope changes negatively affected project implementation, compared to 40% of local project respondents. This underscores the additional challenges in managing scope changes in a global environment, where diverse stakeholder expectations and regulatory requirements can complicate project execution.

Based on these results, it is evident that global projects are more susceptible to cost overruns, schedule delays, and adverse impacts from scope changes compared to local projects. These findings

confirm the hypothesis that there are significant differences in the project management dynamics between global and local contexts. The increased complexity of global projects necessitates more robust planning, risk management, and communication strategies to mitigate these challenges.

The insights gained from this study highlight the need for developing tailored project management practices that address the unique challenges of global projects. Future research could focus on exploring specific strategies that have been successful in mitigating the identified issues, such as enhanced risk management frameworks, improved cross-cultural communication techniques, and advanced cost control mechanisms.

Additionally, expanding the scope of the study to include a larger and more diverse sample of projects across different industries and regions would provide a more comprehensive understanding of the global versus local project dynamics. This could further inform the development of best practices that enhance project success in both global and local contexts.

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