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UNEVEN PARTNERSHIPS: PHD STUDENTS' SATISFACTION WITH LOCAL AND FOREIGN SUPERVISORY FEEDBACK AND INTERNATIONALIZATION OUTCOMES IN KAZAKHSTAN

Abstract. Kazakhstan's doctoral education policy requires all PhD students to have both a local and a foreign supervisor. This co-supervision model was designed to connect doctoral training with international academic standards. Little empirical work has asked what this arrangement means for students' experience of supervision, or whether satisfaction with feedback from each supervisor type tracks internationalization outcomes. Survey data were collected from 845 doctoral students and graduates across institutions in Kazakhstan. Valid sample sizes varied across analyses, ranging from 586 to 828 cases, because the satisfaction items included response options such as 'not applicable' and 'prefer not to answer'. Independent samples t-tests, chi-square tests, and Spearman rank-order correlations were used to test associations between supervisor feedback satisfaction and three outcomes: Scopus publication output, international conference participation, and international internship outcomes. Satisfaction with foreign supervisor feedback predicted higher Scopus output ($t = 3.06$, $p = .002$) and conference participation ($\chi^2 = 3.85$, $p = .049$), and correlated moderately with internship outcomes ($\rho = .56$). For local supervisor feedback, no comparable association appeared with publication output or conference attendance; only the internship correlation reached significance, and at a notably weaker magnitude ($\rho = .37$). Internationalization in Kazakhstan's PhD system, these results indicate, runs mainly through the foreign half of the co-supervision arrangement. The local half contributes far less to the outcomes the policy was designed to produce from both sides. What the model needs is not a new mandate but the institutional conditions, reduced teaching loads and dedicated mobility funding chief among them, that would let local supervisors operate on comparable terms.

Keywords: internationalization of higher education; doctoral supervision; co-supervision; supervisor feedback satisfaction; doctoral internationalization outcomes; Kazakhstan.

Introduction

Kazakhstan joined the Bologna Process in 2010, and doctoral education has since been positioned as a primary site of the country's internationalization agenda. The term internationalization carries different meanings and priorities across national systems (Altbach & Knight, 2007); in Kazakhstan, the emphasis has been on connecting domestic doctoral training to global knowledge production and academic networks (Sagintayeva & Kurakbayev, 2015; Kuzhabekova, Bilyalov, et al., 2022).

The connection between doctoral training and global academic networks runs primarily through supervisors. Lee (2008) shows that supervisory input extends well beyond dissertation assessment: it shapes students' publication decisions, conference access, and socialization into research communities. In Kazakhstan's reform model, that connection is the co-supervision arrangement's primary purpose.

Kazakhstan's response was structural: every doctoral candidate must have both a local and a foreign supervisor. The foreign supervisor is formally responsible for connecting students to international publishing norms and academic networks; the local supervisor provides orientation to national academic conventions. Those two responsibilities are not equally resourced. Local supervisors typically carry heavier teaching loads, receive less institutional support, and maintain weaker connections to international research networks than their foreign counterparts (Sagintayeva & Kurakbayev, 2015). The policy's complementary design therefore depends on conditions it does not create.

Students' experiences of co-supervision reflect this asymmetry. Satisfaction with doctoral supervision

is shaped by three conditions: clarity about supervisory responsibilities, quality and frequency of interaction, and shared understanding of academic norms (Lee & Green, 2009; Manathunga, 2014). The co-supervision arrangement does not guarantee a balanced partnership, and the unevenness it can produce carries a theoretical stake beyond individual student experience: if internationalization outcomes depend mainly on the foreign supervisor, the model may generate outputs without building the local capacity needed to sustain them independently, a possibility the Literature Review develops through Shahjahan and Kezar's (2013) account of dependency in international academic partnerships.

That possibility is examined here using survey data from doctoral students across Kazakhstani institutions. The study investigates associations between PhD students' satisfaction with feedback from local and foreign supervisors and three internationalization outcomes: Scopus publication output, international conference participation, and international internship outcomes. The central research question is: "How is satisfaction with local and foreign supervisor feedback associated with doctoral students' internationalization outcomes in Kazakhstan?"

Gaps and Contribution

Most research on internationalization in Kazakhstan has examined the faculty perspective (Kuzhabekova et al., 2019; Kuzhabekova, Bilyalov, et al., 2022) or analyzed policy reform at the institutional level (Sagintayeva & Kurakbayev, 2015). How doctoral students assess the feedback they receive from each supervisor type, and whether that satisfaction relates to measurable internationalization outcomes, has received far less attention. This study addresses that gap by examining associations between PhD students' satisfaction with local and foreign supervisor feedback and three outcomes: Scopus publication output, international conference participation, and international internship outcomes.

The contribution extends beyond description. By disaggregating satisfaction by supervisor type, the study makes it possible to test whether internationalization outcomes are distributed across both sides of the co-supervision partnership or concentrate on one. If foreign supervisor feedback satisfaction consistently predicts outcomes that local supervisor feedback does not, the data provide empirical grounding for the argument that Kazakhstan's co-supervision model reproduces rather than reduces the hierarchies it was designed to dismantle.

Contextual Background. Doctoral Education in Kazakhstan

For decades, doctoral training in Kazakhstan followed the Soviet-inherited candidate of sciences model. Advancement within that model served the reproduction of national academic institutions more than entry into international circuits of knowledge production. Research output did not normally require indexed international publication, and graduates were assessed against nationally defined criteria with limited currency outside the post-Soviet academic space (Sagintayeva & Kurakbayev, 2015). The move to a three-cycle, Bologna-compatible PhD changed the terms of doctoral completion. Activities that had previously been peripheral, including indexed journal publication, conference participation, and research mobility abroad, became formal requirements. These requirements were linked to Kazakhstan's policy ambition to position research universities as contributors to a knowledge economy (Kuzhabekova et al., 2022).

The system that received these requirements had not been built for them. Soviet-era universities had separated teaching from research, concentrated research funding in a small group of flagship institutions, and maintained weak ties to international publishing and conference networks (Sagintayeva & Kurakbayev, 2015). Domestic incentive structures had rewarded national output more consistently than articles in indexed international journals (Kuzhabekova et al., 2019). The publication requirement therefore arrived before many universities had developed the institutional capacity to support it. Kuzhabekova (2025) shows the effect clearly: Kazakhstan's PhD publication requirement has increased the number of articles produced by doctoral students, but their average research impact has declined. This pattern points to publication under pressure, not to a corresponding expansion of research capacity.

Students describe the publication rule as difficult to meet without institutional backing. They report limited access to international databases, uneven English-language support, and supervisory guidance that does not always extend to international journal submission (Yelibay et al., 2022). In these accounts, the problem shifts from the requirement itself to the institutional scaffolding needed to make the requirement achievable through local resources.

The practical operation of co-supervision has begun to receive more direct empirical attention.

Tokatligil et al. (2025), studying the arrangement from the perspectives of both Kazakhstani and international co-supervisors, describe it as an intercultural contact zone where collaboration and coordination problems coexist. Kalman et al. (2022), in their review of co-supervision across doctoral systems, identify internationalization as one of four institutional drivers behind its spread. Their review also shows that coordination problems and role ambiguity become more acute when supervisors work from different national academic systems. Kazakhstan's mandatory model sits at this intersection: internationalization supplies the official rationale, and supervisory asymmetry becomes a foreseeable structural consequence.

Supervisors and Their Role in Doctoral Internationalization

Doctoral supervision needs to offer more than broad support if it is to achieve the outcomes envisioned in Kazakhstan's reform agenda. Halse and Malfroy (2010) describe supervision as a form of professional work consisting of five elements: a learning alliance, habits of mind, scholarly expertise, technical skill, and contextual expertise. The final element is especially important for the internationalization of doctoral education. It involves understanding which journals are influential, which conferences are valuable, how peer review operates, and which professional networks can help doctoral students become part of a wider research community. A supervisor may be strong pedagogically, intellectually, and technically, yet still lack this particular kind of international research knowledge.

This distinction helps clarify the imbalance between local and foreign supervisors. Many local supervisors have had limited opportunities or incentives to develop expertise in international journal submission and peer review, because the academic systems in which they advanced did not require such experience (Kuzhabekova et al., 2019). The issue is therefore institutional rather than personal. It reflects a form of contextual expertise that domestic academic careers in Kazakhstan have not traditionally valued or rewarded.

Within this arrangement, foreign supervisors are expected to bring knowledge of international publishing standards, conference networks, and peer-review practices. This does not mean that they are generally better supervisors. Rather, they are often better placed to provide the specific contextual knowledge on which the reform's international ambitions depend.

This unevenness is not experienced by students alone. Tokatligil et al. (2025) show that international co-supervisors often feel uncertain about the boundaries of their role and receive limited guidance about what their Kazakhstani colleagues expect from them. These conditions affect the consistency of their engagement with the doctoral students assigned to them. As a result, a model based on complementary supervision may leave both local and international supervisors operating with only a partial understanding of what the arrangement actually requires.

Foreign Internship and Publication Requirements in Kazakhstan's Doctoral Framework

Kazakhstan's doctoral framework translates internationalization into three formal markers of completion: publication in Scopus-indexed journals, participation in international conferences, and an international research internship or extended stay abroad. The publication rule carries the strongest institutional force because it is tied directly to degree conferral. Since 2011, regulations have required doctoral candidates to publish at least two articles in journals indexed in Web of Science or Scopus, with the requirement becoming progressively stricter over time (Kuzhabekova, 2025). Many universities have also introduced higher minimums in their own institutional regulations, making indexed publication a condition of graduation rather than a general aspiration (Kuzhabekova, Bilyalov, et al., 2022).

In practice, doctoral internationalization in Kazakhstan is not an optional enrichment of doctoral study. It is built into the rules of completion. It is measured through articles, conference visibility, and time spent in an international research setting. Every doctoral candidate must meet these markers, but whether the supervisory resources needed to do so are distributed evenly across local and foreign supervisory roles is the question this study takes up.

Literature Review

Kazakhstan's regulations give internationalization a precise institutional form, but the concept itself carries no such settled definition across higher education systems more broadly. Altbach and Knight (2007) describe it as the incorporation of international, intercultural, and global elements into higher education, but the motivations vary: for some institutions, the goal is educational quality, for others it is reputation and market positioning, and for others it is capacity building. A capacity-building rationale evaluates a policy by whether

domestic research capacity grows; a marketization rationale evaluates it by institutional visibility and rankings. These distinctions are not interchangeable, and which motivation drives a given reform shapes what counts as evidence that it has succeeded.

Doctoral education is a primary site of this debate. PhD training functions as both an apprenticeship in research and a mechanism through which the publication standards, methodological conventions, and professional norms of international science are transmitted and reproduced (Kehm & Teichler, 2007). At the doctoral level, joint programs, student mobility, and co-supervision are the main internationalization mechanisms. All three treat best practice as flowing from established to emerging systems; local traditions of doctoral training become deficits to correct rather than legitimate alternatives (Nerad & Evans, 2014). Such reforms produce convergence without building the local expertise to sustain it. External expertise does not function as a transitional scaffold; the model has no mechanism for making it dispensable.

Supervisory relationships are where this directional logic operates most concretely. Three outcomes recur in this literature as markers of doctoral internationalization: indexed journal publication, international conference participation, and research mobility experiences such as internships and extended stays abroad. Lee (2008) shows that supervisors do more than assess dissertations; access to each of these outcomes depends substantially on the supervisor's own research networks and knowledge of international publishing conventions. Evidence from European and Asian universities shows that supervisors with international experience are more likely to direct students toward indexed journal publication and international career trajectories (McAlpine & McKinnon, 2013). Co-supervision does not resolve this unevenness by adding a second supervisor; it displaces the question onto the arrangement itself. Which supervisor delivers which outcomes becomes the operative question.

Shahjahan and Kezar (2013) argue that international academic collaborations frequently reproduce hierarchies in which scholars from less-established systems are positioned as junior partners, dependent on foreign expertise with no structural mechanism for building autonomous research capacity. The argument applies directly to co-supervision: if responsibility for internationalization outcomes falls primarily on the foreign supervisor, the model does not build a sustainable partnership; it creates a structural dependency in which local supervisors are formally present but functionally marginal. Outcomes may still accrue to students, but they do so through the foreign supervisor's networks and expertise, not through any capacity built within the national academic system.

Kazakhstan's co-supervision policy sits directly within this tension. As part of its Bologna Process reforms, Kazakhstan mandated that all doctoral candidates have both a local and a foreign supervisor, assigning the foreign supervisor explicit responsibility for connecting students to international publishing norms and academic networks (Sagintayeva & Kurakbayev, 2015). The policy is premised on the two supervisors working as complementary partners. Faculty members have described internationalization as an externally imposed agenda that does not adequately account for local academic conditions (Kuzhabekova, Bilyalov, et al., 2022). Local supervisors face specific constraints that limit international engagement: heavy teaching loads, limited mobility funding, and weak institutional incentives (Kuzhabekova et al., 2019). Student experiences vary. Some report gaining access to international research networks and publishing guidance through their foreign supervisors; others describe irregular communication, misaligned expectations, and unequal engagement between the two parties (Kuzhabekova et al., 2019). Co-supervision neither consistently delivers on its rationale nor consistently fails; what it produces depends on each supervisor's resources, network connections, and willingness to coordinate.

Students' ratings of their supervisors predict task engagement and research performance (Wu et al., 2025). Those who perceive their supervisor as academically engaged report higher scholarly commitment and productivity. In a co-supervision model where one supervisor has substantially greater access to international research networks than the other, ratings of the two supervisors are unlikely to converge. Differential satisfaction may track which side of the arrangement is actually delivering the publication, conference, and internship outcomes the policy targets.

Supervisor Feedback and Publication Output

Three hypothesis pairs follow from the literature reviewed, each corresponding to one of the doctoral internationalization outcomes examined.

Doctoral publication output is shaped substantially by supervisory input. Students who receive specific

guidance on research design, academic writing, and publication conventions produce more indexed journal articles (Khuram et al., 2023; Wilkins et al., 2021; Shen & Jiang, 2023). The character of that guidance also matters: directive supervision predicts short-term publication productivity; more autonomous approaches develop research capacity over time but typically yield slower output (Wu et al., 2025). Students' satisfaction with supervisor feedback may therefore index the degree to which supervisors are providing the structured, publication-oriented guidance that indexed journal output requires.

H1a: PhD students who are satisfied with foreign supervisor feedback report higher Scopus publication output than those who are not satisfied.

H1b: PhD students who are satisfied with local supervisor feedback report higher Scopus publication output than those who are not satisfied.

International Conference Participation

Conference participation in doctoral education is not self-directed. Supervisors actively shape whether and where students present their work, guiding them toward conferences that fit their research trajectory and professional goals (Haus, 2021). Students supervised by academics with established conference networks are better positioned to receive specific recommendations, gain introductions, and build professional connections that attendance makes possible (Orellana et al., 2016). Satisfaction with supervisor feedback may therefore capture more than an evaluation of dissertation guidance; it may reflect whether students perceive their supervisors as actively connecting them to international conference networks.

H2a: Satisfaction with foreign supervisor feedback is associated with higher rates of international conference participation among PhD students.

H2b: Satisfaction with local supervisor feedback is associated with higher rates of international conference participation among PhD students.

International Internship Outcomes

International internship and research stay experiences depend partly on supervisory preparation; the quality of guidance students receive before and during such placements shapes how they experience those settings (Mainhard et al., 2009). Students who receive structured supervisory support in unfamiliar research environments report stronger professional outcomes and a clearer sense of scholarly identity (Vattøy, 2026). Supervisors with established international connections also help students access internship placements by linking them to research networks abroad. Satisfaction with supervisor feedback may therefore index how well students feel their supervisors have prepared them for international research settings and connected them to the opportunities those settings offer.

H3a: Satisfaction with foreign supervisor feedback is positively correlated with PhD students' satisfaction with foreign internship experiences.

H3b: Satisfaction with local supervisor feedback is positively correlated with PhD students' satisfaction with foreign internship experiences.

Methodology

Data Collection and Ethical Considerations

The analysis draws on survey data collected by the National Academy of Sciences of the Republic of Kazakhstan from doctoral students and doctoral graduates across higher education institutions and research organizations in Kazakhstan. Data were collected online through the SurveyMonkey platform between July 20 and August 11, 2025. The survey link and invitation letters were sent to higher and/or postgraduate education institutions and research organizations in Kazakhstan for further distribution among potential respondents. In addition, invitation letters were sent directly to doctoral students and doctoral graduates using email addresses collected from publications in academic journals or provided by research organizations.

The authors received formal authorization and were granted full access to the dataset for research purposes. The survey was conducted anonymously. No direct personal identifiers were collected, and demographic information was used only for classification and aggregate analysis. The study received ethical approval in July 2025. An informed consent form was presented to all potential respondents on the first page of the SurveyMonkey questionnaire, with two response options: "I agree" and "I do not agree." Respondents who selected "I do not agree" were directed to the end of the questionnaire, while those who selected "I agree" proceeded to complete the survey.

Variables and Measures

The initial dataset contained 845 survey responses. The sample included current doctoral students and recent doctoral graduates. For readability, the term doctoral respondents is used throughout unless a distinction is analytically relevant. The respondents were asked about their satisfaction with feedback from both local and foreign supervisors, their publication record, particularly the number of Scopus-indexed publications, participation in international conferences, and satisfaction with foreign internship experiences.

Satisfaction-related items used the following response scale: 4 = satisfied, 3 = mostly satisfied, 2 = mostly not satisfied, 1 = not satisfied, 96 = not applicable, 97 = did not need, and 98 = prefer not to answer. Responses coded as 96, 97, and 98 were treated as non-substantive responses and excluded from analyses involving the relevant variable. This approach was used because these categories do not represent substantive evaluations of satisfaction.

For analyses requiring a binary satisfaction measure, responses of 4 (“satisfied”) and 3 (“mostly satisfied”) were grouped into the “satisfied” category, while responses of 2 (“mostly not satisfied”) and 1 (“not satisfied”) were grouped into the “not satisfied” category. For analyses using satisfaction as an ordinal variable, the original 1–4 substantive scale was retained, and non-substantive responses were excluded.

Because non-substantive responses were excluded only for the variables involved in each analysis, the number of valid cases varies across the results tables. This means that the study did not apply a single fixed sample size to all analyses; instead, each analysis used variable-specific valid cases.

The number of Scopus-indexed publications was treated as a continuous variable. Participation in international conferences was treated as a binary categorical variable, coded as 1 if the respondent had attended an international conference and 0 if the respondent had not attended.

Statistical Analysis

The analysis was conducted using Python. Prior to analysis, relevant variables were converted into numeric format, and non-substantive response codes were excluded from the specific analyses in which those variables were used.

To examine whether satisfaction with supervisor feedback was associated with publication output, Welch’s independent-samples t-tests were conducted. Welch’s t-test was used because it does not assume equal variances between the comparison groups. To examine whether satisfaction with supervisor feedback was associated with participation in international conferences, chi-square tests of independence were conducted. These tests were appropriate because both variables were categorical: supervisor feedback satisfaction was recoded into satisfied and not satisfied groups, and conference participation was coded as attendance or non-attendance.

Finally, Spearman’s rank-order correlation was used to examine the relationship between satisfaction with supervisor feedback and satisfaction with foreign internship experiences. Spearman’s correlation was selected because the satisfaction variables were ordinal and the analysis did not require assumptions of linearity or normally distributed variables.

Results

Supervisor Feedback and Publication Output

In Table 1, doctoral students who are satisfied with feedback from foreign supervisors ($n = 665$) have a higher mean number of Scopus publications ($M = 1.98$) than those who are not satisfied ($n = 106$; $M = 1.22$). This difference is statistically significant, $t = 3.06$, $p = 0.0024$. The small p -value suggests that this difference is unlikely to be due to sampling variation alone. By contrast, there is no statistically significant difference between those who are satisfied with feedback from a local supervisor ($n = 725$; $M = 1.85$) and those who are not ($n = 103$; $M = 1.67$), $t = 0.50$, $p = 0.6159$ (Table 2).

The total sample size is 845, of which 74 indicated “prefer not to answer” for satisfaction with Foreign Supervisor Feedback and 17 chose this option for satisfaction with Local Supervisor Feedback. This might be due to the fact that some PhD students were not yet assigned a local/foreign supervisor or haven’t formed an opinion. Given that it takes more time to find a foreign supervisor, the higher number of “prefer not to answer” for this group is based on practical reasons.

Table 1.*T-test Results: Scopus Publications vs. Foreign Supervisor Feedback*

Number in 'Satisfied' group: 665 Average Publications for 'Satisfied' group: 1.98	Number in 'Not Satisfied' group: 106 Average Publications for 'Not Satisfied' group: 1.22
T-statistic: 3.0641; P-value: 0.0024	

Table 2.*T-test Results: Scopus Publications vs. Local Supervisor Feedback*

Number in 'Satisfied' group: 725 Average Publications for 'Satisfied' group: 1.85	Number in 'Not Satisfied' group: 103 Average Publications for 'Not Satisfied' group: 1.67
T-statistic: 0.5028; P-value: 0.6159	

International Conference Participation

A statistically significant connection was found between satisfaction with feedback from foreign supervisor and participation in international conferences (Table 3), $\chi^2(1) = 3.85$, $p = .049$. The students who reported satisfaction with foreign supervisor feedback were also more likely to have attended international conferences. Because the effect size was small (Cramer's $V = .07$), the practical significance is small. However, no statistically significant connection between satisfaction with feedback from local supervisor and participation in international conferences (Table 4), $\chi^2(1) = 1.74$, $p = .187$ was found. The magnitude of association, Cramer's $V = .05$, was negligible.

Table 3.*Satisfaction with Foreign Supervisor Feedback and International Conference Participation*

Feedback satisfaction	Did not attend	Attended	Total
Not satisfied	65	41	106
Satisfied	336	329	665
Total	401	370	771
Chi-Square Statistic: 3.8466; P-value: 0.0498; Cramer's $V = .07$			

Table 4.*Satisfaction with Local Supervisor Feedback and International Conference Participation*

Feedback satisfaction	Did not attend	Attended	Total
Not satisfied	61	42	103
Satisfied	375	350	725
Total	436	392	828
Chi-Square Statistic: 1.7448; P-value: 0.1865; Cramer's $V = .05$.			

International Internship Outcomes

To test Hypothesis 3, Spearman's rank-order correlation analyses were conducted to examine the association between PhD students' satisfaction with supervisory feedback and their satisfaction with foreign internship experiences. As indicated in Table 5, there was a significant moderate positive correlation between students' satisfaction levels with feedback from foreign supervisors and their satisfaction levels with foreign internships ($\rho = .56$, $p < .001$). That is, the greater the satisfaction with foreign supervisory feedback, the greater the satisfaction with international internship experiences. There was also a statistically significant but weaker positive relationship between satisfaction levels with local supervisor feedback and satisfaction levels

with foreign internships ($\rho = .37, p < .001$). The magnitude of this correlation is substantially smaller than that between foreign supervisors and internship experiences.

Table 5.

Spearman Correlations Between Supervisor Feedback Satisfaction and Satisfaction with International Internship Outcomes

Supervisor feedback satisfaction	International Internship Outcomes	n	Spearman's ρ	p
Foreign supervisor feedback	Foreign internship	586	0.560	< .001
Local supervisor feedback	Foreign internship	614	0.366	< .001

Discussion

Publication output differentiates clearly by supervisor type. Students satisfied with foreign supervisor feedback reported a higher mean number of Scopus-indexed publications than those who were not satisfied ($M = 1.98$ vs $M = 1.22$), a difference that is statistically significant ($t = 3.06, p = .002$). For local supervisor feedback satisfaction, no corresponding difference emerged ($M = 1.85$ vs $M = 1.67, t = 0.50, p = .616$). The result aligns with what McAlpine and McKinnon (2013) and Lee (2008) suggest: supervisors with established international connections and publishing experience are better positioned to orient students toward indexed journal publication. Whether the association reflects a direct supervisory effect or whether students who publish more tend to evaluate their supervisors more favourably, the cross-sectional design cannot establish. What the finding does show is that publication output, the most quantifiable marker of doctoral internationalization in this study, is differentially distributed across the two sides of Kazakhstan's co-supervision arrangement.

Foreign supervisor feedback satisfaction is also associated with international conference attendance ($\chi^2(1) = 3.85, p = .049$), though the effect is small (Cramer's $V = .07$). Satisfaction with local supervisor feedback shows no comparable association ($\chi^2(1) = 1.74, p = .187$). The effect size limits what this can support: at Cramer's $V = .07$, foreign supervisor feedback satisfaction is a modest contributor to conference attendance, and the data do not permit stronger claims.

The internship findings depart from the pattern observed for the other two outcomes. Both supervisor types show statistically significant correlations with internship outcomes, but at different magnitudes: foreign supervisor feedback satisfaction correlates at $\rho = .56$ ($p < .001$), local supervisor feedback satisfaction at $\rho = .37$ ($p < .001$). This is the only finding in which local supervisor feedback satisfaction shows a statistically significant association with any internationalization outcome. Internship preparation may draw on forms of supervisory support that local supervisors are partially positioned to provide, even without direct access to international research networks. The foreign supervisor correlation remains substantially stronger, which is consistent with the expectation that supervisors with established international connections are better placed to prepare students for research environments abroad. Both associations are real; the gap between them marks the limit of what local supervisors contribute to international mobility experiences compared with their foreign counterparts.

Measured against three internationalization outcomes, Kazakhstan's co-supervision model does not operate as a balanced partnership. Publication output and conference participation show statistically significant associations only with foreign supervisor feedback satisfaction; for internship outcomes, both supervisor types register, but the foreign supervisor correlation is substantially stronger ($\rho = .56$ vs $\rho = .37$). Kazakhstan's policy designates both supervisors as equal partners, but the pattern in the data suggests the partnership is structured unevenly in practice. The internationalization function the model was designed to deliver concentrates on one of its two components.

Attributing this asymmetry to individual supervisory quality would misread the evidence. Local supervisors in Kazakhstan typically face institutional constraints that their foreign counterparts do not: heavier teaching loads, limited mobility funding, and weaker connections to international research networks (Kuzhabekova et al., 2019; Sagintayeva & Kurakbayev, 2015). These are not deficits of supervision; they are conditions under which local supervisors work.

Shahjahan and Kezar (2013) argue that international academic partnerships frequently reproduce

hierarchies in which scholars from less-established systems become dependent on foreign expertise rather than building autonomous research capacity. The findings here are consistent with that argument, though they cannot confirm it directly: the data show associations, not mechanisms. What they make visible is a structure in which doctoral students' access to publication networks, conference circuits, and international research stays runs primarily through the foreign supervisory relationship.

Policy Implications

The findings identify a design problem in Kazakhstan's co-supervision system. The mandate can help current doctoral students reach publication, conference, and mobility targets. It does not, by itself, build the local supervisory capacity that would make those gains durable.

That distinction matters. A policy can produce outputs while preserving the conditions that make external support necessary.

The most immediate issue is institutional. Kazakhstan's doctoral regulations name local and foreign supervisors as equal partners, yet the data do not show equal operation. Publication output and international conference attendance are statistically associated only with satisfaction with foreign supervisor feedback. Internship outcomes are associated with satisfaction with both supervisors, with a stronger relationship for foreign supervisor feedback than for local supervisor feedback ($p = .56$ compared with $p = .37$).

A simple "supervisor quality" explanation would misread the problem. Local supervisors work within conditions that restrict the practices the mandate expects from them. Heavy teaching and administrative loads leave limited time for research, manuscript development, and sustained doctoral feedback, a problem documented in earlier OECD reporting and in subsequent empirical studies of Kazakhstani academics (OECD, 2017; Kuzhabekova & Ruby, 2018; Moldashev & Tleuov, 2022). Faculty also report weaker access to international mobility and research collaboration opportunities than students, which limits the professional networks through which conference participation, publication collaboration, and external supervisory ties are usually built (Kuzhabekova, Ispambetova, et al., 2022; Kuzhabekova, Bilyalov, et al., 2022). Equal partnership cannot be produced by regulation alone. It requires workload, funding, and evaluation structures that give local supervisors the time, networks, and career reasons to perform the internationalizing work assigned to them.

Reducing teaching loads and funding mobility for local doctoral supervisors should be treated as operating conditions for the policy, not optional additions. Manuscript feedback is slow work. It involves choosing journals, revising arguments, responding to reviewers, interpreting editorial decisions, and helping students recover from rejection. Conference mentoring also requires more than approving an abstract. Supervisors need access to the meetings where research networks, future collaborations, and publication opportunities take shape. A local supervisor carrying a full teaching load cannot reliably provide that level of iterative support. A local supervisor without conference funding cannot easily build the international relationships that doctoral students are later expected to enter (Wilkins et al., 2021).

Under these conditions, the foreign supervisor's role shifts from complement to compensation. The foreign supervisor supplies the international publishing and networking resources that the local system has not yet made available to its own supervisors. That arrangement can sustain student outputs. It also leaves the underlying imbalance intact. Reducing teaching loads and creating mobility funding for local supervisors would begin to move the model toward the complementary partnership described in policy rather than the compensatory arrangement visible in practice.

The same mismatch appears in supervisor evaluation. The co-supervision mandate asks local supervisors to support doctoral internationalization through Scopus-indexed publication, international conference participation, and research mobility. Yet these forms of supervisory labor do not appear to carry equivalent weight in the systems through which local supervisors are assessed, promoted, or rewarded. Promotion and performance systems tend to make indexed publication visible through rankings, KPIs, and publication rewards, while the slower labor of doctoral mentorship and local supervisory capacity-building remains weakly recognized (Kuzhabekova & Ruby, 2018; Moldashev & Tleuov, 2022; Kudaibergenova et al., 2022).

Producing a student's indexed publication, preparing a student for a conference presentation, or helping secure a research internship advances the formal goals of the doctoral framework. If these activities remain weakly visible in performance review, the mandate creates obligations without giving local supervisors a

strong institutional reason to prioritize them. The misalignment is not a minor administrative problem. It shapes what supervisors can rationally afford to treat as career-relevant work.

Supervisor evaluation should recognize documented contributions to doctoral students' internationalization outcomes. This does not mean turning students into promotion metrics. It means recognizing the supervisory labor through which students meet requirements that the state and universities have already imposed on them. Indexed student publications, international conference presentations, and research mobility outcomes should count in supervisor performance reviews where there is evidence of substantive supervisory involvement. Without that recognition, the system asks local supervisors to support outcomes that do not meaningfully support their own career progression.

The deeper question concerns the purpose of co-supervision. If internationalization outcomes pass mainly through the foreign supervisory relationship, the system is operating as a delivery mechanism. Students gain access to publication advice, conference networks, and mobility pathways. The doctoral framework records the outputs it seeks. The arrangement has practical value, especially for current doctoral candidates.

Its weakness is accumulation. The gains may remain attached to individual students and their foreign supervisors rather than becoming local supervisory capacity. Altbach and Knight (2007) distinguish internationalization oriented toward capacity building from internationalization oriented toward prestige or output accumulation. By that standard, the long-term test is whether local supervisors become more able, over time, to guide later doctoral cohorts toward international publication, conference participation, and research mobility. Foreign co-supervision would then supplement local capacity. It would not carry the model's core function.

If each cohort requires the same level of foreign supervisory input as the previous one, the arrangement is repeating the dependency it was introduced to address (Shahjahan & Kezar, 2013). A different outcome requires a different object of investment. Local supervisors cannot remain only formal partners in a policy whose internationalizing work is performed elsewhere. They need to become the primary site of the capacity-building effort: through workload reform, funded mobility, recognition in evaluation systems, and explicit opportunities to acquire the publishing and networking knowledge that the doctoral framework now demands.

Limitations

The first limitation concerns the satisfaction measure itself. Satisfaction was measured through an ordinal self-report item, so it records how students judged the supervisory relationship. It does not record what supervisors actually did. The dataset does not show how often feedback was provided, how detailed it was, whether it addressed journal selection or revision strategy, or whether students used that feedback in their publication, conference, or internship work. Satisfaction should therefore be treated as a perception-based indicator, not as a direct measure of supervisory practice.

The cross-sectional design also limits the interpretation of the associations. The analysis cannot establish direction. One possible reading is that stronger supervisory feedback helped students publish, present at conferences, or complete an internship abroad. Another is that students who had already achieved these outcomes rated their supervisors more favorably afterward. A student with a Scopus publication, for example, may look back on the supervisory relationship differently from a student still struggling to submit a manuscript. The data cannot separate these possibilities.

There is also unmeasured context around the student. Institutional affiliation, prior research preparation, access to English-language support, and familiarity with international publishing may shape both satisfaction ratings and internationalization outcomes. These conditions may not be evenly distributed across doctoral programs or supervisory arrangements. Some of the observed differences between local and foreign supervisor satisfaction may therefore reflect wider institutional and linguistic resources rather than supervision alone.

For these reasons, the findings should be read as evidence of patterned association. They show that satisfaction with local and foreign supervisors relates differently to publication, conference participation, and internship outcomes. They do not show why those differences occur. Nor do they establish whether the observed patterns result from supervisory influence, student characteristics, institutional resources, or some combination of these conditions.

Conclusion

The findings show a clear asymmetry in Kazakhstan's co-supervision arrangement. Satisfaction with foreign supervisor feedback is associated with all three doctoral internationalization outcomes examined in this study: publication output, conference participation, and internship outcomes. Satisfaction with local supervisor feedback is associated only with internship outcomes, and even there, the relationship is weaker.

This pattern should not be read as evidence that foreign supervisors are simply better supervisors. The more plausible explanation is structural. Local supervisors are expected to contribute to the same internationalization outcomes as their foreign counterparts, but they often work under less favorable conditions for doing so. Heavy teaching and administrative loads reduce the time available for manuscript development and sustained doctoral feedback (OECD, 2017; Kuzhabekova & Ruby, 2018; Moldashev & Tleuov, 2022). More limited access to international mobility and research collaboration restricts the networks through which publication, conference participation, and external research opportunities are usually built (Kuzhabekova, Ispambetova, et al., 2022; Kuzhabekova, Bilyalov, et al., 2022). Kazakhstan's doctoral framework designates local and foreign supervisors as equal partners. The evidence from this study suggests that the partnership does not operate on equal terms.

The policy problem is therefore not only supervisory coordination. It is capacity. If doctoral internationalization runs mainly through the foreign supervisor, the model can still produce visible gains for current students. It can help them publish, attend conferences, and complete research stays abroad. But those gains remain fragile if they depend on repeated access to foreign supervisory expertise rather than on the growth of local supervisory capacity.

For co-supervision to become more than a delivery mechanism, local supervisors need the conditions under which internationalizing supervision can be performed. That means reduced teaching loads, funded mobility, access to international research networks, and evaluation systems that recognize doctoral mentorship as career-relevant academic labor. Without those changes, the co-supervision requirement will continue to produce the formal appearance of partnership while leaving the substance of that partnership unevenly distributed.

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Conflict of Interest Statement

We declare no potential conflicts of interest with respect to the research, authorship, or publication of this article.

Author Contributions

Askat Tleuov, Mukhametzhan Seitzhapparuly, and Kairat Moldashev contributed equally to the conceptualization, methodology, data analysis, interpretation of the findings, preparation of the original manuscript, review, editing, and finalization of the study. All authors participated equally in the research and approved the final version of the manuscript.

Declaration of Use of Generative AI and AI-Assisted Technologies

The authors declare that no generative AI or AI-assisted technologies were used in the preparation of this manuscript.

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