Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

Bridging the Digital Divide: Management of Platform *Merdeka Mengajar* for Self-Regulated Teacher Professional Development in Remote Elementary Schools

Listia Rismayanti

Universitas Islam Nusantara, Bandung, Indonesia
Corresponding Email: listiarismayanti@uninus.ac.id

Abstract. The implementation of the Merdeka Curriculum in Indonesia necessitates a paradigm shift in teacher professional development towards digital self-regulated learning. This study investigates the management of the Platform Merdeka Mengajar (PMM) as a strategic instrument for enhancing the academic capacity of elementary school teachers, specifically within the technological constraints of SDN Girimukti and SDN Pacet 1, West Java. Employing a qualitative case study design, data were harvested through participant observation, in-depth interviews, and document analysis. The findings reveal a tripartite management mechanism: (1) Adaptive Planning and Structural Organization, where school leadership navigates infrastructural scarcity through resource mapping and the appointment of digital champions; (2) Implementation Dynamics, characterized by peer-scaffolding models and hybrid online-offline learning strategies to overcome connectivity barriers; and (3) Surveillance and Evaluative Feedback, where the principal transitions from an administrator to a digital pedagogical supervisor. The study concludes that while digital infrastructure is a prerequisite, the management of human resources—specifically the principal's active leadership and the cultivation of a collaborative learning culture—is the decisive factor in the successful adoption of PMM. These findings challenge the technological determinism view, suggesting that managerial agility can mitigate infrastructural deficits in educational transformation.

Keywords: Platform *Merdeka Mengajar*, Self-Regulated Learning, Educational Management, Digital Divide, Elementary Education.

1 Introduction

The global trajectory of educational reform in the 21st century has increasingly converged on the necessity of continuous, self-regulated professional development for teachers. In the Indonesian context, this shift is epitomized by the introduction of the *Kurikulum Merdeka* (Merdeka Curriculum), which demands not only a change in pedagogical content but a fundamental transformation in how teachers learn and adapt. To facilitate this massive undertaking, the Ministry of Education, Culture, Research, and Technology launched the *Platform Merdeka Mengajar* (PMM), a digital ecosystem designed to democratize access to high-quality training modules, teaching resources, and peer communities [1], [2]. The PMM represents a departure from traditional, top-down,

Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

seminar-based training towards a model of heutagogy, or self-determined learning, where teachers are expected to diagnose their own learning gaps and utilize digital resources to bridge them.

However, the promise of digital transformation often collides with the reality of the digital divide, particularly in a sprawling archipelago like Indonesia. While the PMM offers a standardized solution, the contexts in which it is deployed are far from uniform. Schools in semi-urban areas may possess adequate bandwidth and hardware, while those in remote or rural areas face significant infrastructural deficits. This disparity raises a critical managerial question: How can schools with limited technological resources effectively manage the implementation of a high-tech platform to ensure their teachers do not fall behind? As highlighted by Ulfah and Anwar [3], digital innovation in Islamic and general education is pivotal for improving learning quality, yet it requires a robust managerial framework to move beyond mere access to actual engagement.

The existing literature on teacher professional development has extensively covered the efficacy of digital platforms [4], [5]. However, there is a paucity of research focusing on the *management*—specifically the planning, organizing, actuating, and controlling (POAC)—of such platforms in resource-constrained settings. Previous studies often treat technology adoption as an individual acceptance issue, utilizing frameworks like the Technology Acceptance Model (TAM), rather than an organizational management challenge. This study argues that the success of PMM in schools like SDN Girimukti and SDN Pacet 1 depends less on the sophistication of the hardware and more on the sophistication of the management strategies employed by school leaders.

This research draws upon the theoretical framework of Education as a Practice of Liberation [6], which posits that education should empower subjects to transcend their limitations. In this context, the management of PMM is not merely an administrative task but an emancipatory act, freeing teachers in remote areas from geographic and professional isolation. Furthermore, the study integrates the concept of Kindness-Based Leadership [7], hypothesizing that in high-stress environments characterized by technological anxiety, the principal's empathetic support is a crucial variable in sustaining teacher motivation.

The urgency of this research is underscored by the observation that without effective management, the PMM could inadvertently widen the gap between well-resourced and under-resourced schools. Teachers in schools like SDN Girimukti might view the platform as an administrative burden rather than a tool for growth if they are left to navigate connectivity issues alone. Conversely, effective management strategies—such as the SWOT analysis approach suggested can convert these threats into opportunities for collaborative growth.

Therefore, this study aims to dissect the managerial processes involved in implementing PMM in two distinct elementary schools. By comparing SDN Pacet 1, which represents a school with moderate facilities, and SDN Girimukti, which faces severe technological limitations, this research seeks to uncover resilient management strategies that can be replicated in similar contexts across the Global South. The focus is on how principals plan for digital integration despite scarcity, how they organize limited human and technical resources, how they execute training mandates, and how they control or evaluate the outcomes to ensure genuine academic capacity building.

Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

2 Method

To provide a comprehensive analysis of managerial processes within their naturalistic contexts, this study adopts a qualitative case study approach, aiming for the thick description articulated [8]. The research design facilitates a comparative analysis across two distinct educational environments in Pacet District, Cianjur Regency, West Java. The locus comprises SDN Pacet 1, representing a site with moderate digital readiness due to adequate infrastructure, and SDN Girimukti, which serves as a resource-constrained counterpoint located in a remote area with significant connectivity limitations. This comparative framework enables the identification of diverse managerial patterns in response to the Platform Merdeka Mengajar (PMM) mandate.

Participants were selected via purposive sampling to ensure a holistic representation of the management hierarchy, involving two school principals, one school operator, and ten teachers ranging from digital natives to digital immigrants. Data triangulation was rigorously employed through participant observation of teacher working groups (KKG) and infrastructure setups, alongside semi-structured interviews probing managerial strategies (POAC) and teacher psychological readiness. Furthermore, a documentation study analyzed operational plans (RKAS) and PMM Action Proof (Aksi Nyata) reports. The gathered data underwent analysis following the interactive model of Miles, Huberman, and Saldaña [9]—encompassing data condensation, display, and conclusion drawing—with findings validated through member checking to ensure empirical rigor.

3 Result

3.1. Strategic Planning and Organizational Architecture: Navigating Scarcity through Design

The first phase of management, Planning, at both schools began with a confrontation with reality. At SDN Girimukti, the planning process was fundamentally different from the standard procedures outlined in national guidelines. The Principal engaged in what can be described as Frugal Strategic Planning. Recognizing the severe limitations in internet connectivity, the planning did not aim for real-time, synchronous usage of the PMM. Instead, the school management adopted an asynchronous batching strategy. The planning documents revealed a schedule where teachers were not required to access PMM daily, but were allocated specific download windows when they could visit areas with better signal strength (often the Principal's home or a local Wi-Fi hotspot) to download materials for offline study. This aligns with the Deep Learning-Based Planning Model discussed, where planning must be deeply contextualized to be effective. The planning at SDN Girimukti was less about digital compliance and more about logistical feasibility [10], [11].

At SDN Pacet 1, the planning was more ambitious but equally strategic. The Principal utilized a SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats) as a diagnostic tool [3]. The identified Weakness was not the lack of hardware, but the Digital Literacy Gap between senior and junior teachers. Consequently, the planning phase involved a curriculum design for *internal* training. The school did not just plan to *use*

Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

PMM; they planned *how to learn* to use PMM. This meta-cognitive planning approach involved setting specific targets for module completion that were tiered based on the teacher's initial digital competency. The planning documents at SDN Pacet 1 showed a differentiated target system: Digital Immigrants (senior teachers) were given longer deadlines to complete the Merdeka Curriculum topics compared to their Digital Native counterparts.

Organizing resources in both schools required a restructuring of traditional roles. The study found that both schools implicitly created a new organizational layer: the Digital Catalyst Team. In SDN Girimukti, this was not a formal decree but an organic organization of human resources. One younger teacher who possessed a personal laptop and a strong data plan was unofficially designated as the PMM Hub. The Principal organized the workflow such that this teacher acted as the bridge, downloading videos and projecting them during collective study sessions. Assertion regarding school management in preventing issues (in this case, technological exclusion); management is about placing the right people in the right critical junctures [12].

Furthermore, the organization of time was critical. Both schools restructured their weekly working groups (KKG). Previously dedicated to administrative filing, these sessions were reorganized into PMM Clinics. The management allocated specific budgets—however meager—for data packages and snacks during these clinics. This organizational decision signaled to the teachers that PMM training was work, not homework. By formalizing the time and space for PMM, the management legitimized the struggle of learning a new technology. The organizational structure at SDN Pacet 1 was more formalized, with a decree (SK) appointing a PMM Coordinator whose sole KPI was to ensure every teacher had an active and accessible belajar.id account. This structural formalization reduced the anxiety of teachers who previously felt overwhelmed by login issues and interface navigation.

3.2. Implementation Dynamics: Overcoming Inertia through Scaffolding and Collaboration

The Actuating (Implementation) phase is where the strategic plans encountered the friction of daily reality. The narrative data from both schools reveals that the implementation of PMM was a psychological journey as much as a technical one.

In SDN Giri Mukti, the implementation was characterized by Communal Scaffolding. Because the internet signal was too weak for individual streaming, the teachers engaged in collective viewing. They would gather around a single laptop connected to a mobile hotspot to watch the training videos on the PMM. This necessity bred a unique form of collaborative learning. The narrative of Self-Regulated Learning (*Pelatihan Mandiri*) was transformed into Community-Regulated Learning. As they watched the videos together, the pause button became the most valuable tool. Teachers would pause the video to debate a concept or translate the high-level language of the modules into the local context of their rural students. This dynamic aligns with Vygotsky's Zone of Proximal Development, where the collective intelligence of the group allowed individual teachers to grasp concepts they would have failed to understand in isolation. The implementation here proved that social cohesion can compensate for digital disconnection. The Principal of SDN Giri Mukti acted as a participant-observer, sitting with the

Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

teachers, not to supervise, but to learn, thereby flattening the hierarchy and encouraging open dialogue about their difficulties.

In contrast, the implementation at SDN Pacet 1 faced the challenge of Technological Resistance among senior teachers. While the facility existed, the motivation was variable. Here, the implementation strategy relied heavily on Peer-Tutoring Mentorship. The management paired tech-savvy junior teachers with senior teachers. This was not merely technical support; it was emotional support. Senior teachers expressed deep insecurity about breaking the computer or clicking the wrong button. The junior mentors provided the Kindness-Based Leadership described by Suherman et al. [13] at a peer level. They patiently guided the seniors through the User Interface (UI) of the PMM. The implementation was gamified to some extent; the Principal acknowledged teachers who received Green Checks (certificates of completion) in the school WhatsApp group. This social recognition fueled the Actuating function.

However, implementation was not without severe obstacles. In SDN Giri Mukti, during the rainy season, the signal often disappeared entirely, halting progress for days. The management's response was to shift focus to the Action Proof (*Aksi Nyata*) component of the PMM, which requires offline implementation in the classroom. Teachers focused on designing lesson plans (*Modul Ajar*) offline, documenting them with photos, and waiting for better weather to upload them. This adaptability demonstrates a high level of Managerial Resilience. The implementation dynamics proved that the PMM is not a monolithic tool; its usage is fluid. Teachers in both schools reported that the Independent Training feature increased their academic capacity specifically in understanding the philosophy of the Merdeka Curriculum. They moved from being passive recipients of the curriculum to active interpreters.

A significant finding in the implementation phase was the role of Environmental Method integration. As suggested by Hanan et al. [14], technology should harness environmental methods. In SDN Pacet 1, teachers used PMM modules to design project-based learning activities that utilized the school environment. The PMM provided the theory, but the implementation happened in the school garden. This bridging of the digital-theoretical with the physical-practical was a key success indicator of the implementation phase. The teachers realized that PMM was not a distraction from teaching, but a repository of ideas *for* teaching.

3.3. Systematic Surveillance and Evaluative Feedback Loops: From Compliance to Capacity

The final managerial function, Controlling (Supervision and Evaluation), underwent a significant transformation in the context of PMM. Traditionally, supervision in these schools meant checking lesson plans for administrative completeness. With PMM, supervision evolved into Digital Pedagogical Auditing.

At SDN Pacet 1, the Principal utilized the Principal's Dashboard (Rapor Pendidikan) provided by the ministry to monitor teacher progress. However, the study found that the principal went beyond the metrics. The controlling function involved Qualitative Feedback Sessions. Once a month, the Principal would select a topic from a recently completed PMM module and ask teachers to demonstrate how they applied it in class. This moved the control mechanism from Did you watch the video? to Did the video change how you teach? This deep level of supervision ensures that the academic

Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

capacity is actually being built, not just simulated. The Principal acted as a curator of quality, reviewing the Action Proof (*Aksi Nyata*) uploads before they were submitted to the national platform. This quality control step prevented the submission of plagiarized or substandard work, protecting the professional reputation of the school.

In SDN Giri Mukti, the controlling function was less data-driven and more Dialogic. The Principal held reflection circles. Teachers were asked to share one specific insight they gained from PMM that week. The control was social; if a teacher had not engaged with the platform, they would have nothing to share. This created a gentle peer pressure. The evaluation also focused on the barriers. The management tracked which devices were failing and which teachers were consistently struggling with access. This data was used to advocate for resources from the local education office (Dinas Pendidikan).

The study also found a crucial link between PMM completion and Performance Appraisal (E-Kinerja). The integration of PMM certification into the formal performance review system was the hard control mechanism. Teachers at both schools understood that their capacity building was linked to their career progression. However, the interviews revealed that the teachers valued the intrinsic rewards—feeling more competent and confident in the classroom—more than the administrative points. This shift indicates a successful internalization of the value of professional development.

Furthermore, the evaluation process highlighted the Sustainability of the capacity building. The management tracked whether the skills learned in the PMM (e.g., differentiated instruction) were sustained over the semester or if they faded after the module was finished. In SDN Pacet 1, the management observed a decay effect, where teachers reverted to old methods weeks after training. To counter this, the Principal introduced Refresher Sessions in the KKG, re-playing key segments of PMM videos to reinforce the concepts. This cyclical control mechanism ensures that capacity building is a continuous spiral, not a linear checklist [15]–[17].

In summary, the surveillance mechanisms at both schools were adapted to their contexts. SDN Pacet 1 leveraged data analytics and formal reviews, while SDN Giri Mukti leveraged social accountability and reflective dialogue. Both strategies achieved the managerial goal: ensuring that the PMM served as a genuine instrument for academic capacity enhancement.

4 Discussion

The findings of this study crystallize the argument that the Digital Divide in education is not merely a technological gap but a managerial one. The successful utilization of *Platform Merdeka Mengajar* (PMM) in resource-constrained environments like SDN Giri Mukti relies heavily on what can be termed Managerial Scaffolding.

Firstly, the study validates Anwar's proposition of education as a practice of liberation. By managing the PMM effectively, principals in these schools are liberating their teachers from the geographical isolation that typically hinders professional development in remote areas. The PMM becomes a portal to national standards of pedagogy. However, this liberation is contingent upon the Humanware (motivation, leadership, collaboration) rather than just the Hardware [16], [18], [19]. The Frugal Strategic

Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

Planning observed in SDN Giri Mukti demonstrates that management principles are universal but their application must be highly contextual.

Secondly, the role of the Principal as a Digital Pedagogical Leader is paramount. As emphasized leadership rooted in kindness and support is essential when navigating transitions. The anxiety caused by the forced digitization of training (PMM) could have led to resistance. However, by adopting a supportive, peer-tutoring approach, the principals transformed anxiety into agency [7]. This echoes theory on educational change: change is a process, not an event, and it requires emotional maintenance.

Thirdly, the study highlights the critical link between Digital Literacy and Academic Capacity. Digital innovation is the vehicle for quality improvement. This study adds that *management* is the driver of that vehicle. Without the organized Digital Catalyst Teams and structured PMM Clinics, the platform would remain an unused icon on a screen. The findings suggest that digital literacy is not just an individual skill but an organizational asset that must be managed and distributed.

Fourthly, the findings align with the Technology Acceptance Model (TAM) but add a Management layer. Perceived usefulness and ease of use [20] are not inherent to the PMM; they are *constructed* by the school management. By organizing collective viewing sessions (making it easier) and linking modules to classroom problems (making it useful), the management actively manipulates the variables of acceptance.

Finally, the Evaluation and Control mechanisms observed reflect a shift from administrative compliance to Substantive Accountability. The integration of environmental methods [14] and local wisdom into the Action Proofs shows that PMM is being indigenized. The management ensures that global/national standards are met through local applications.

5 Conclusion

The management of *Platform Merdeka Mengajar* (PMM) at SDN Girimukti and SDN Pacet 1 demonstrates that effective managerial strategies can significantly mitigate the limitations of technological infrastructure. The study concludes that: (1) Planning in remote contexts must prioritize asynchronous and batched access over real-time connectivity; (2) Organizing requires the mobilization of digital champions and the restructuring of time (KKG) to create collaborative learning spaces; (3) Actuating relies on peer-scaffolding and the blending of online resources with offline application; and (4) Controlling must shift from administrative policing to pedagogical mentorship.

The academic capacity of elementary school teachers is enhanced not by the platform itself, but by the collaborative culture the platform triggers when managed well. The implication for policy is clear: providing internet access is necessary but insufficient. The government must invest in training principals to be Digital Managers who can orchestrate human and technical resources creatively. Future research should explore the long-term impact of PMM-based training on student learning outcomes in remote areas to complete the cycle of evaluation.

Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

References

[1] Kemendikbudristek, 'Panduan Penggunaan Platform Merdeka Mengajar'. Jakarta, 2022.

[2] J. Hattie *et al.*, 'Peran Pendidikan Agama Islam dalam Membentuk Karakter Siswa di Era Digital', *J. Pendidik. Dasar*, vol. 2, no. 1, pp. 645–658, 2024, doi: 10.1080/13632431003663214.

[3] U. Ulfah and S. Anwar, 'Inovasi Digital dalam Pendidikan Islam: Meningkatkan Kualitas Pembelajaran dan Keterlibatan Mahasiswa', *ULUL ALBAB J. Pendidik. Agama Islam*, vol. 2, no. 1, pp. 58–76, 2024, doi: https://doi.org/10.30999/ululalbab.v2i1.3521.

[4] T. R. Guskey, 'Professional development and teacher change', *Teach. Teach. Theory Pract.*, vol. 8, no. 3, pp. 381–391, 2002, doi: 10.1080/135406002100000561.

[5] H. Borko, J. Jacobs, and K. Koellner, 'Contemporary approaches to teacher professional development', in *International Encyclopedia of Education*, vol. 7, no. 2, P. Peterson, E. Baker, and B. McGaw, Eds. Oxford: Elsevier, 2010, pp. 548–556. doi: 10.1016/B978-0-08-044894-7.00654-0.

[6] S. Anwar, 'Education as a Practice of Liberation: A Synthesis of Freire's and Habermas' Philosophical Contributions to Emancipatory Consciousness', *AIM J. Islam. Educ. Manag.*, vol. 2, no. 3, pp. 228–247, 2024.

[7] U. Suherman *et al.*, 'Implementing a Kindness-Based Leadership Strategy in Islamic Elementary Education', *EDUKASIA J. Pendidik. dan Pembelajaran*, vol. 6, no. 1, pp. 281–292, 2025, doi: https://doi.org/10.62775/edukasia.v6i1.1384.

[8] Clifford Geertz, *Abangan, Santri, Priyayi dalam Masyarakat Jawa*. Jakarta: Pustaka Jaya, 1983.

[9] M. B. Miles, A. M. Huberman, and J. Saldana, *Qualitative Data Analysis, A Methods Sourcebook*. London: SAGE Publications, Inc, 2014.

[10] S. Subaidi, J. Arsyad, and A. Y. Kisworo, 'Empowering Islamic Values: The Role of Madrasah Head Leadership in Extracurricular Enrichment', *Al-Tanzim J. Manaj. Pendidik. Islam*, vol. 8, no. 2, pp. 624–634, 2024, doi: 10.33650/al-tanzim.v8i2.8268.

[11] L. Akbar and N. Imaniyati, 'Gaya Kepemimpinan Transformasional Kepala Sekolah Terhadap Kinerja Guru', *J. Pendidik. Manaj. Perkantoran*, 2019, doi: 10.17509/jpm.v4i2.18012.

[12] A. A. Amalina, 'Dampak Kebijakan Perubahan Kurikulum 2013 Ke Kurikulum Merdeka', *Jamp J. Adm. Dan Manaj. Pendidik.*, vol. 7, no. 1, p. 113, 2024, doi: 10.17977/um027v7i12024p113.

[13] N. Sulastri, S. Anwar, U. Suherman, and E. S. Cipta, 'Deep Learning-Based Planning Model for Islamic Education in Indonesian Integrated Schools', *EDUKASIA J. Pendidik. dan Pembelajaran*, vol. 5, no. 2, pp. 645–658, 2024, doi: https://doi.org/10.62775/edukasia.v5i2.1734.

[14] A. Hanan *et al.*, 'Harnessing Technology for Environmental Method: Cultivating High Order Thinking Skills for Sustainable Maritime Development Knowledge', in *IOP Conference Series: Earth and Environmental Science*, 2023, vol. 1265, no. 1, p. 12004. doi: 10.1088/1755-1315/1265/1/012004.

Journal of Science and Education (JSE)
Vol 6, Special Collection 2.1, March 2026, Pages 1-9
ISSN: 2745-5351 (Media Online)
DOI: https://doi.org/10.58905/jse.v6i2.1.716

[15] P. Mayangsari *et al.*, 'Analisis Permasalahan Guru Dalam Implementasi Kurikulum Merdeka Di Sekolah Dasar', *J. Inov. Eval. Dan Pengemb. Pembelajaran*, vol. 4, no. 2, pp. 285–293, 2024, doi: 10.54371/jiepp.v4i2.415.

[16] C. A. Wolters *et al.*, 'Effects of self-guided stress management interventions in college students: A systematic review and meta-analysis', *J. Basicedu*, vol. 5, no. 1, p. 75, 2020, doi: 10.1007/s11423-020-09821-1.

[17] R. S. Habibah, T. Ruhimat, and M. Supriatna, 'Strategi Pembelajaran Multiliterasi Untuk Mengembangkan Berpikir Kritis Siswa Madrasah Tsanawiyah', *Edusentris*, vol. 5, no. 3, p. 155, 2019, doi: 10.17509/edusentris.v5i3.302.

[18] M. Azizah, J. Sulianto, and N. Cintang, 'Analysis of Critical Thinking Skills of Elementary School Students in Learning Mathematics Curriculum 2013', vol. 35, 2018.

[19] N. M. Maryati, H. Hidayat, N. Sulastri, and S. Anwar, 'School Management in Preventing Bullying in Primary Schools', *J. Innov. Res. Prim. Educ.*, vol. 4, no. 4, pp. 1891–1903, 2025, doi: https://doi.org/10.56916/jirpe.v4i4.1770.

[20] F. D. Davis, 'Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology', *MIS Q.*, vol. 13, no. 3, pp. 319–340, 1989, doi: 10.2307/249008.

