

The Third Mission of Chinese Higher Education: A Systematic Literature Review

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Abstract

The concept of the Third Mission (TM) has expanded the role of higher education institutions (HEIs) beyond teaching and research to include societal engagement, knowledge transfer, and regional development. While this concept has been extensively theorized and empirically examined in Western contexts, the Chinese context may interpret TM differently. This study presents a systematic literature review of peer-reviewed English- and Chinese-language research published between 2000 and 2025 to examine how the TM is conceptualized, institutionalized, and practiced in Chinese HE. Guided by PRISMA procedure, 32 studies were selected from an initial pool of 228 publications. The review is organized around three analytical dimensions: community engagement, institutional embedding, and the evolution of the TM within distinct context. The findings reveal that, unlike predominantly market-oriented Western models, China's TM is deeply embedded in state-led development strategies, ideological governance, and collective social objectives. The paper presents a context-sensitive analytical framework that advances theoretical understanding of the TM beyond Western paradigms and write a move compelling implication.

Keywords: Third Mission, Chinese Higher Education, Community Engagement, Institutional Embedding, Systematic Literature Review

Introduction

Over the past three decades, HEIs worldwide have experienced a profound redefinition of their societal roles. Beyond their traditional missions of teaching and research, HEIs are increasingly expected to contribute directly to economic development, social innovation, regional regeneration, and community well-being. This expanded role has been widely conceptualized as TM of universities (Laredo, 2007). The TM has become a central analytical lens in HE research, particularly in Europe and North America, where universities are framed as entrepreneurial actors, innovation hubs, and strategic partners in knowledge-based economies. The global adoption of the United Nations Sustainable Development Goals (SDGs) in 2016 has further intensified expectations for universities to address complex societal challenges, including poverty reduction, environmental sustainability, social equity, and responsible innovation (Swamy, 2018).

The theoretical foundations of TM scholarship are multi-layered and span macro-, meso-, and micro-level perspectives. At the macro level, the Knowledge Society Theory (Etzkowitz, 2015) positions universities as key drivers of innovation and economic growth in post-industrial societies. Building on this, the Quintuple Helix Model extends earlier innovation frameworks by incorporating civil society and the natural environment alongside academia, industry, and government, explicitly linking university engagement to sustainable development (Carayannis et al., 2022). This framework aligns closely with the SDG agenda by conceptualizing universities as embedded actors within complex socio-ecological systems (Liang, 2024). At the meso level, the Institutional Theory highlights how organizational norms, regulatory environments, and governance structures shape universities' responses to external pressures (DiMaggio & Powell, 1983), while Stakeholder Theory emphasizes the management of competing expectations among governments, industries, communities, and internal academic actors (Freeman, 1984). At the micro level, the Theory of Planned Behavior offers insight into how individual academics' attitudes, perceived norms, and perceived behavioral control influence participation in TM activities (Ajzen, 1991).

Drawing on these theoretical foundations, Western scholarship has identified several dominant TM implementation models. The Entrepreneurial University Model emphasizes commercialization, intellectual property, and spin-off creation (Etzkowitz, 2015). The Regional Innovation System (RIS) Model conceptualizes universities as anchor institutions driving regional competitiveness and territorial development (Cooke, 2001). The Mode 2 Knowledge Production Model highlights transdisciplinary, context-driven knowledge creation beyond traditional academic boundaries (Gibbons et al., 1994). Finally, the Engaged University Model foregrounds civic responsibility, social justice, and partnerships with marginalized communities (Boyer, 1996). Increasingly, these models are reframed through an SDG lens, with universities expected to demonstrate measurable contributions to goals such as quality education (SDG 4), decent work and economic growth (SDG 8), reduced inequalities (SDG 10), and sustainable cities and communities (SDG 11). Despite their differences, these models share core assumptions: institutional autonomy, market responsiveness, competitive funding, and relatively limited state steering.

TM scholarship remains heavily Western-centric. Dominant frameworks are largely grounded in liberal market economies characterized by decentralized governance and strong institutional autonomy. These assumptions raise questions about their applicability to non-Western HE systems shaped by strong state involvement, centralized governance, and distinct ideological foundations. Although the integration of SDGs into TM discourse has gained momentum, it has largely been theorized within Western policy contexts, leaving underexplored how sustainability goals are interpreted and enacted in alternative political economies and development trajectories.

Recent comparative studies have begun to challenge the universality of Western TM models. For example, research on Nordic welfare states, Southern European systems, and post-socialist contexts highlights the importance of historical legacies, public governance traditions, and policy-driven engagement (Pinheiro et al., 2017; Compagnucci & Spigarelli, 2020). They demonstrate that the TM is not a fixed set of activities but a socially and politically embedded institutional role. Despite these advances, China, home to the world's largest HE

system and a major actor in global development, remains marginal in international TM debates.

China represents a particularly compelling and underexplored case. Since the late 1990s, Chinese HE has expanded rapidly and has become a central instrument of national development, social governance, and political legitimation. Universities are explicitly mandated to serve national strategies related to poverty alleviation, regional development, environmental protection, and social stability-functions that extend well beyond teaching and research. The mechanisms through which universities contribute to sustainable development differ substantially from Western approaches. Importantly, these activities are rarely framed explicitly as TM in Chinese policy discourse. Instead, societal engagement is embedded within broader developmental mandates, ideological governance structures, and state-led strategic priorities.

Several structural characteristics distinguish China's HE system from Western liberal models. First, strong state steering situates universities within a hierarchical political-administrative system, where institutional priorities are closely aligned with national policy objectives. Second, ideological governance integrates socialist values, party leadership, and collective social goals into the core mission of universities, shaping how societal engagement is legitimized and evaluated. Third, centralized resource allocation mechanisms mean that funding, evaluation, and strategic direction are predominantly state-controlled rather than market-driven(Liang, 2024). Fourth, China's sustainability agenda, articulated through concepts such as ecological civilization and common prosperity, reflects ideological and developmental priorities that do not fully align with Western interpretations of the SDGs. These features suggest that societal engagement in China may be less a discretionary or entrepreneurial TM and more an intrinsic institutional obligation embedded in the historical and ideological foundations of Chinese HE.

These conditions raise critical questions that motivate this review, which define the core research phenomenon: the nature, manifestation and evolutionary trajectory of Chinese university-society engagement, and its alignment with the Western conceptualization of TM and SDG-oriented frameworks. Three interrelated questions guide the study. First, does the relationship between Chinese universities and communities differ fundamentally from Western TM, which typically framed as entrepreneurial, market-responsive and institutionally discretionary, given China's strong state steering, ideological governance and centralized resource allocation? Second, is TM implicitly embedded in Chinese HEIs' core missions despite lacking explicit policy labeling, and how do unique ideological and institutional foundations shape its implicit practice? Third, how has China's understanding and practice of university societal engagement evolved amid political reforms, market-oriented economic transformation, targeted policies such as poverty alleviation, ecological civilization and global SDG commitments? Answering these questions is imperative to clarify whether Western TM frameworks apply to non-Western contexts or require context-specific reconceptualization.

The study's rationale lies in existing literature gaps and China's unique empirical value. While growing research explores Chinese university-society relations, including industry collaboration, regional development, poverty alleviation, community service and environmental sustainability, it remains fragmented across disciplines, languages and

frameworks. English studies often apply Western TM models without sufficient contextualization, ignoring state power and centralized governance that define China's HE system. Chinese research focuses on policy implementation and case studies, lacking theoretical generalization and international discourse engagement. Critically, no systematic review has synthesized this literature through a comparative, theory-informed lens to examine TM's conceptualization, practice in China and alignment with global SDG-oriented models. Addressing this gap advances pluralized understandings of university-society relations and informs non-Western HE systems' sustainability engagement.

This article addresses this gap through a systematic literature review of peer-reviewed research on the TM in Chinese HE published between 2000 and 2025. Rather than assessing China against Western benchmarks, the study adopts a context-sensitive approach that conceptualizes the TM as a socially, politically, and ideologically embedded institutional role. The analysis is organized around three interrelated dimensions: community engagement, examining how Chinese HEIs interact with external stakeholders and integrate sustainability objectives; institutional embedding, analyzing how the TM is incorporated into governance structures, policy frameworks, and evaluation systems; and mission evolution, tracing how political, ideological, and developmental contexts have shaped university-society engagement in China over time.

The study makes three contributions to international HE scholarship. First, it offers the first comprehensive synthesis of English- and Chinese-language research on the TM in Chinese HE. Second, it advances a context-sensitive reconceptualization of the TM that challenges the universalization of Western and SDG-oriented models, highlighting the need for pluralized understandings of university-society relations. Third, it provides an analytical framework that informs future comparative research, policy development, and institutional strategy in China and other non-Western HE systems engaged in sustainable development.

Methodology

This study adopts a systematic literature review (SLR) methodology to examine how TM of HEIs in China has been conceptualized, institutionally embedded, and transformed over time. The review follows the PRISMA 2020 guidelines (Page et al., 2021) to ensure transparency, methodological rigor, and reproducibility. To operationalise PRISMA within the specific domain of TM scholarship, we applied the six-stage analytical process devised by Compagnucci and Spigarelli (2020), which has been widely used in studies of university societal engagement. This framework enables a structured yet theory-sensitive synthesis of heterogeneous literature while allowing for contextual adaptation to non-Western HE systems.

The first stage of the review involved the formulation of research questions and corresponding search queries. Guided by persistent gaps in Western-centric TM literature and by debates on the distinctiveness of Chinese HE, the review was structured around three research questions. These questions address how university-community engagement is conceptualized in Chinese HE and how it differs from dominant Western interpretations (RQ1), the extent to which the TM is institutionally embedded within Chinese HEIs under a distinct ideological and governance framework (RQ2), and how the conceptualization of the TM in China has evolved over time (RQ3). Based on these questions, search queries were developed

to capture both explicit references to TM and functionally equivalent concepts commonly used in Chinese scholarship, such as university social responsibility, community engagement, regional development, and innovation ecosystems.

The second stage focused on defining inclusion and exclusion criteria to delineate the scope of the review. Only peer-reviewed journal articles and high-quality conference papers were considered, as these represent the core channels through which validated scholarly knowledge on HE is disseminated. Studies were included if they addressed TM activities, community engagement, institutional governance, or regional development in HE, with a specific focus on China or comparative analyses involving Chinese HEIs. Publications written in either English or Chinese and published between 2000 and 2025 were included to capture the emergence and institutionalization of the TM in China over a sustained period of reform and policy transformation. Non-academic reports, opinion pieces, and publications without accessible full texts were excluded, as were studies unrelated to university-society engagement.

In the third stage, a systematic database search was conducted across multiple academic databases, including Web of Science, Scopus, Google Scholar, and the China National Knowledge Infrastructure (CNKI) using volunteer activity and other terms with combinations of TM, Chinese HE, community engagement, institutional embedding. The inclusion of both international and Chinese databases was essential to mitigate Western publication bias and to ensure comprehensive coverage of domestically grounded research. Following the PRISMA 2020 guidelines, an initial search yielded 228 records across four databases. After removing 46 duplicates, 182 records were retained for title and abstract screening, during which 70 records were excluded for lack of relevance. The remaining 112 full-text articles were assessed for eligibility, resulting in the exclusion of 80 studies due to misalignment with the research questions or insufficient methodological quality. Ultimately, 32 studies were included in the final systematic review. The overall selection process is documented in a PRISMA flow diagram (Figure 1).

The fourth stage involved downloading the full texts of the selected publications and systematically extracting relevant data. For each study, bibliographic information, research objectives, methodological approaches, and key findings were recorded. Particular attention was paid to how each publication conceptualized the TM, the institutional mechanisms through which societal engagement was enacted, and the temporal or policy context in which these activities were situated. Data extraction was guided by a structured coding framework to ensure consistency across studies.

The fifth stage consisted of descriptive analysis, which provided an overview of the characteristics of the reviewed literature. This analysis examined publication trends over time, disciplinary and journal distribution, and dominant thematic emphases. The descriptive findings helped contextualize the development of TM scholarship in Chinese HE and informed the subsequent interpretive synthesis.

In the sixth and final stage, a thematic analysis was conducted to generate an analytical synthesis aligned with the three research questions. Using NVivo qualitative analysis software, publications were coded into three overarching analytical dimensions:

community engagement, institutional embedding, and evolution over time. The coding process followed a hybrid deductive-inductive logic. Deductively, the analysis was guided by the conceptual structure of the research questions and by Compagnucci and Spigarelli (2020)'s framework for TM research. Inductively, new sub-themes were identified to capture China-specific features, such as state-led governance, ideological mandates, and policy-driven forms of community engagement. Such approach enabled a nuanced interpretation of how the TM in Chinese HE both parallels and departs from dominant Western models.

Together, these six stages ensured a systematic, transparent, and theoretically informed review process, providing a robust methodological foundation for analyzing the distinct configuration of the TM in Chinese HE.

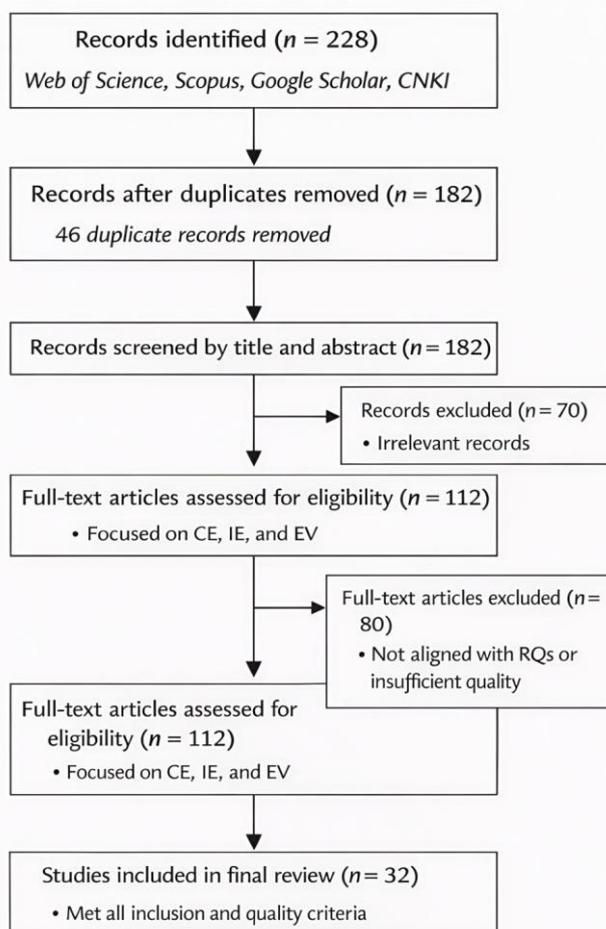


Figure 1 . PRISMA Flow Diagram of the Literature Selection Process.

Note. CE = Community Engagement; IE = Institutional Embedding; EV = Evolution over time.

Results

This section presents the findings of the systematic literature review through both descriptive and thematic analyses, addressing the three research questions concerning the

conceptualization, institutional embedding, and evolution of the TM in Chinese HE. Drawing on 32 peer-reviewed studies, the analysis integrates Western theoretical perspectives with China-focused empirical research to reveal convergences and distinctive patterns.

Descriptive Analysis of the Included Studies

Temporal Distribution

The 32 studies spanned from 2000 to 2025, reflecting the maturation of TM research. Foundational works (e.g., Bringle & Hatcher, 2000; Laredo, 2007; Jongbloed et al., 2008) established conceptual and normative frameworks, while a marked increase in publications is observed post-2015, coinciding with intensified policy attention to societal engagement, innovation, and sustainability. China-focused studies predominantly appear after 2010, indicating that the TM discourse emerged later in China but expanded rapidly in response to national development strategies and HE reforms.

Geographical Distribution

As summarized in Table 2, the dataset maintains a balanced yet analytically purposeful composition: 20 studies from Western contexts (Europe, North America, and comparative research) and 12 studies focusing on China. Western literature provides theoretical models, governance analyses, and empirical evaluations of university-community partnerships, while Chinese studies offer context-sensitive insights into policy-driven engagement, regional development, and ideological embedding. Such distribution allows a systematic comparison between global TM discourses and localized Chinese adaptations.

Table 1

List of the 32 peer-reviewed journal articles on which the SLR is based.

Study	Year	Country Context /	Dimension	Key Relevance to This Review
Bringle & Hatcher	2000	USA	IE	Foundational model of service-learning institutionalization informing Western TM embedding
Laredo	2007	France	EV	Conceptual redefinition of the TM beyond teaching and research
Jongbloed et al.	2008	Netherlands	CE	Introduces university-community interdependencies shaping engagement logics
Moore & Ward	2010	USA	IE	Mechanisms for integrating engagement into academic roles and reward systems
Schuetze	2012	Canada	CE	Positions community engagement as a core university mission
Ćulum et al.	2013	Croatia	IE	Institutional responses to new societal expectations
Rolfo & Finardi	2014	Italy	CE	Faculty attitudes and organizational arrangements for TM activities
Benneworth et al.	2015	Sweden	IE	Tensions between policy pressure and institutional autonomy
Koryakina et al.	2015	Portugal	IE	Managerial perceptions of barriers to TM implementation
Trippl et al.	2015	UK / Austria / Sweden	EV	Comparative models linking universities and regional development

Brown	2016	UK	CE	Limits of entrepreneurial engagement in peripheral regions
Rosli & Rossi	2016	UK	IE	Misalignment between funding incentives and TM goals
Kitagawa	2017	UK	CE	Regional governance contexts shaping engagement practices
Pinheiro et al.	2017	Europe (Comparative)	EV	Global TM discourse versus national imperatives
Di Berardino & Corsi	2018	Italy	IE	Evaluation and disclosure of TM activities
De La Torre et al.	2019	UK	CE	Stakeholder prioritization in university engagement
Compagnucci & Spigarelli	2020	International	EV	Comprehensive synthesis of TM constraints and potentials
Knudsen et al.	2021	Denmark	CE	Multi-level forms of engagement beyond commercialization
Salomaa & Charles	2021	Finland	IE	Structural funds as instruments for institutional embedding
Haj Taieb	2024	Europe	EV	Measurement frameworks for TM performance
Wang et al.	2013	China	IE	Early evidence of Chinese universities' adoption of TM logic
Cai & Liu	2015	China	CE	Universities' roles in regional innovation systems
Su et al.	2015	China	IE	Government-driven university-industry linkages
Liu et al.	2011	China	EV	Evolution of China's national innovation policy framework
Liu & Huang	2018	China	IE	Triple Helix adaptation in the Chinese context
Shi & Ji	2019	China	EV	Historical evolution of university missions in China
Li & Eryong	2020	China	EV	Value-based logic of the modern Chinese university
Marginson & Yang	2022	China / Comparative	EV	Comparison of collective versus individual outcomes
Chen et al.	2023	China	CE	Student volunteering as community-oriented engagement
Liang	2024	China	IE	Policy investment and institutional sustainability
Xiao & Du	2024	China	CE	Education for sustainability as societal engagement
Zhang et al.	2025	China	CE	University-rural partnerships for sustainable development

Note: CE = Community Engagement, IE = Institutional Embedding, EV = Evolution over time.

Thematic Analysis

Community Engagement: From Reciprocal Partnership to Developmental Service (RQ1)

Community engagement (CE) represents a central dimension of the TM, capturing the interface between universities and external stakeholders. In Western scholarship, CE is predominantly conceptualized as a reciprocal and relational process grounded in mutual benefit, knowledge co-creation, and collaborative problem-solving. Seminal works emphasize long-term, sustained partnerships between universities and local communities, industries, non-profit organizations, and governmental agencies (Jongbloed et al., 2008; Schuetze, 2012). Engagement is frequently embedded in teaching and research practices, notably through service learning, outreach initiatives, and co-creation of research projects (Bringle & Hatcher, 2000; Moore & Ward, 2010). Regional innovation perspectives extend this conceptualization,

positioning universities as facilitators within broader innovation ecosystems and mediators of knowledge flows (Brown, 2016; Kitagawa, 2017). These studies also underscore persistent tensions, such as balancing entrepreneurial ambitions with peripheral regional constraints and negotiating autonomy with accountability requirements (Pineiro et al., 2017).

In contrast, Chinese HE conceptualizes CE less as voluntary collaboration and more as an institutionalized, policy-driven responsibility. The notion of service to society operates as a normative mandate, tightly coupled with national and regional development priorities. Chinese universities are expected to contribute to economic modernization, rural revitalization, poverty alleviation, and cultural preservation, reflecting a state-directed and collectively oriented engagement model (Cai & Liu, 2015; Chen et al., 2023; Zhang et al., 2025; Wang et al., 2013). Empirical studies document extensive involvement in technology transfer, policy advisory, rural education initiatives, student volunteerism, and community-based social innovation (Liang, 2024; Xiao & Du, 2024; Zhang, Yu, & Tian, 2025). Unlike Western CE, which often privileges co-creation and mutual benefit, Chinese engagement prioritizes compliance with governmental directives, long-term social outcomes, and alignment with strategic development goals.

Despite these differences, emerging research indicates convergence in some aspects. Student-centered initiatives and sustainability-oriented partnerships demonstrate a gradual adoption of globally recognized engagement principles, such as reciprocity, participatory governance, and socially responsive curricula (Xiao & Du, 2024; Zhang et al., 2025). Moreover, universities increasingly integrate international benchmarking, particularly in areas like service learning, social entrepreneurship, and cross-sector collaborations (Li et al., 2020; Spencer-Oatey et al., 2017). Nevertheless, structural and cultural hierarchies, along with centralized administrative oversight, continue to constrain horizontal collaboration, limiting bottom-up initiative relative to Western norms. In sum, the analysis of 14 CE-focused studies reveals a dual logic: while Western institutions frame engagement as a partnership-driven process, Chinese universities operationalize engagement primarily as a strategic instrument of state-defined societal objectives.

Institutional Embedding: Governance, Incentives, and Organizational Alignment (RQ2)

Institutional embedding (IE) captures the degree to which TM activities are formalized within universities' governance structures, strategic plans, and incentive mechanisms. In Western contexts, embedding the TM often faces persistent challenges due to the dual pressures of teaching and research priorities. Several studies highlight misaligned performance-based funding schemes, managerial ambiguity, and tensions between institutional autonomy and external accountability (Rosli & Rossi, 2016; Koryakina et al., 2015; Benneworth et al., 2015). Disclosure practices remain uneven, with societal impact frequently undervalued compared to quantitative outputs such as patents, spin-offs, or research metrics (Di Berardino & Corsi, 2018; De La Torre et al., 2019). Governance models in Western HEIs tend to be decentralized, granting autonomy to individual faculties and encouraging bottom-up engagement initiatives, though this sometimes results in fragmented or uneven implementation of CE activities.

Chinese universities, by contrast, display a high degree of top-down formalization of the TM. Institutional embedding is systematically implemented through national strategic plans,

Party-led governance, targeted funding, and performance indicators linked to societal service and regional contributions (Wang et al., 2013; Su et al., 2015; Liang, 2024). Dedicated offices or units coordinate engagement activities, and faculty evaluations often include metrics reflecting contribution to societal goals (Liang, 2024; Liu & Huang, 2018). These structures ensure alignment with national development objectives, particularly in areas such as rural education, innovation-driven development, and social governance. Nevertheless, studies also note that embedding is predominantly instrumental: faculty engagement is frequently compliance-driven, emphasizing short-term measurable outputs rather than long-term societal transformation (Liu & Huang, 2018; Li & Eryong, 2020). Cultural integration and academic recognition of CE remain limited, contrasting with Western calls for normative embedding and valorization of engagement (Moore & Ward, 2010).

In synthesis, 11 studies on IE highlight two distinctive institutionalization pathways. Western HEIs operate under a market- and autonomy-oriented model, where governance is decentralized, incentives are often performance-based, and CE relies on voluntary faculty participation. Chinese universities operate under a state-coordinated, policy-led model, where engagement is strategically embedded, monitored, and evaluated as a central component of the institutional mission. Both systems face sustainability challenges: Western institutions struggle with coordination and recognition, whereas Chinese institutions contend with balancing instrumental compliance with authentic faculty motivation.

Evolution in a Distinct Ideological Context (RQ3)

The evolutionary and ideological dimension (EV) examines the historical and contextual development of the TM. In Western literature, the trajectory reflects a shift from one-way knowledge transfer and technology commercialization toward broader societal and sustainability-oriented missions (Laredo, 2007; Compagnucci & Spigarelli, 2020; Haj Taieb, 2024). Entrepreneurial universities, regional engagement, and cross-sector partnerships emerge gradually in response to market pressures, community expectations, and global sustainability discourse.

Chinese HE, in contrast, presents a more compressed and state-guided evolution. Rather than a sequential development from teaching to research to engagement, universities pursue multiple missions simultaneously, directed by strong governmental policies and ideological frameworks emphasizing collective welfare, national rejuvenation, and regional development (Shi & Ji, 2019; Li & Eryong, 2020; Marginson & Yang, 2022). The evolution of the TM in China is closely aligned with the ideological and policy environment: post-reform emphasis on economic modernization transitioned into integrated engagement with rural revitalization, social governance, and sustainability agendas (Liang, 2024; Xiao & Du, 2024; Zhang et al., 2025).

A hybridization of global and local influences is evident. Western Concepts such as the Triple Helix, entrepreneurial university, and innovation system foresight are selectively adapted to Chinese contexts, maintaining alignment with socialist governance and centralized planning (Liu et al., 2011; Piirainen et al., 2016). Recent studies indicate a rising focus on inclusive, sustainability-oriented, and socially equitable engagement, suggesting an evolving redefinition of the TM that transcends economic instrumentalism while remaining embedded

within political and ideological imperatives (Xiao & Du, 2024; Zhang et al., 2025; Chen et al., 2023).

Collectively, the 12 EV studies demonstrate that the TM in China has evolved as a politically embedded, ideologically mediated, and strategically coordinated mission, distinct from Western models yet increasingly interconnected with global HE discourses.

Discussion

This study has systematically examined 32 peer-reviewed publications addressing the TM of HE, integrating insights from Western conceptualizations with empirical evidence from Chinese universities. The findings illuminate both the convergences and divergences between global and Chinese perspectives, revealing distinctive characteristics of the TM in China and highlighting gaps in current research. This discussion synthesizes these insights, articulating the core uniqueness of Chinese HE's TM, and situates them within broader theoretical and policy debates, while identifying avenues for future research.

A key contribution of this review lies in elucidating the core distinctiveness of the Chinese TM. Unlike Western universities, where the TM often emerges as an exogenous extension of institutional activity responding to market demands, Chinese HE exhibits a markedly endogenous orientation. This is rooted in the ideological embedding of Marxist educational thought and the pervasive influence of state directives, rendering the TM an intrinsic institutional function rather than an optional or market-driven activity. Such ideological and policy-driven integration ensures that universities are not only centers of knowledge production but also active agents in national development agendas, including rural revitalization, poverty alleviation, social governance, and cultural preservation. The systemic alignment of HEIs missions with national priorities differentiates China from Western models, where engagement is typically discretionary, bottom-up, and mediated through faculty autonomy or market incentives.

The ideological embedding of manifests in three interrelated dimensions. First, the foundational uniqueness is evident in the normative basis of the TM. Chinese universities operate under a framework where the TM is inseparable from the broader educational and political ideology, creating an endogenous logic that shapes institutional decision-making, faculty motivation, and student engagement. Unlike Western contexts, where the mission may be framed in terms of regional innovation or entrepreneurial objectives (Brown, 2016; Kitagawa, 2017), Chinese universities' engagement is inseparable from national development imperatives (Cai & Liu, 2015; Liang, 2024). Such ideological undercurrent informs strategic priorities, governance mechanisms, and evaluation metrics, producing a system in which societal service is recognized as a core institutional obligation rather than an ancillary activity.

Second, the practice logic of the Chinese TM exhibits a distinctive state-driven and university-community collaborative model. Whereas Western models often rely on market signals, competitive funding, or faculty-initiated initiatives (Rosli & Rossi, 2016; Koryakina et al., 2015), Chinese universities implement TM activities through coordinated governance structures, top-down strategic plans, and policy-mandated programs (Wang et al., 2013; Su et al., 2015). Engagement is operationalized across multiple layers, from central university administrations to local faculties, and frequently involves partnerships with government agencies, industry, and civil society. Such multi-level coordination ensures coherence with

national and regional policy goals, particularly in contexts such as rural education, technology transfer, and community-based social development. In contrast to Western practices, where engagement outcomes are often measured in terms of commercialization, co-authorship, or regional knowledge flows, the Chinese model prioritizes societal impact, long-term developmental outcomes, and alignment with strategic national objectives.

Third, the cognitive and evolutionary trajectory of the TM in China reflects a unique ideological and policy-driven logic. Rather than following a linear path from knowledge transfer to entrepreneurial activity to societal engagement, the Chinese TM has evolved under the simultaneous influence of state priorities, ideological imperatives, and emerging global norms. Empirical studies indicate a progressive path from a focus on national economic needs toward multi-dimensional value integration and, more recently, global engagement and sustainability considerations (Li & Eryong, 2020; Xiao & Du, 2024; Zhang et al., 2025). This trajectory contrasts with Western universities, which typically evolve from market-driven regional engagement to entrepreneurial expansion and then toward multi-value societal contributions (Laredo, 2007; Compagnucci & Spigarelli, 2020). In China, this evolution is compressed, centrally coordinated, and ideologically mediated, producing a hybrid model that simultaneously addresses local, national, and global demands, while maintaining alignment with socialist governance principles.

Since the 2010s, there has been a notable surge in the number of studies on the TM by Chinese scholars, accompanied by a distinct shift in research focus from Chinese-contextualized concepts such as volunteer services to the adoption of the Western-derived TM framework. A key driver behind this shift lies in the intense research pressure faced by Chinese academics: domestic academic journals have approached saturation in terms of publication capacity, prompting scholars to align their research with Western terminology systems, particularly the TM concept. Such strategic adaptation aims to enhance the international accessibility of their work, thereby securing more opportunities for publication in foreign journals and gaining greater recognition within the global academic community.

While these characteristics underscore the unique institutionalization of the TM in China, the review also identifies critical gaps in existing research. First, there is a notable lack of theoretically grounded frameworks that account for China's endogenous and ideologically embedded model. Much of the existing literature applies Western evaluative constructs such as technology transfer, entrepreneurship, and market-oriented impact metrics without adapting them to the Chinese context. This limits the explanatory power of current models and constrains their relevance for policy and practice. Second, scholarly understanding of the mechanisms that drive the cognitive evolution of TM remains notably underdeveloped. Although studies document the chronological expansion of the TM, few examine the dynamic interplay between ideological frameworks, state policy instruments, and emergent societal needs that collectively shape institutional and faculty perceptions of the TM. This static approach restricts insights into the underlying drivers of change, hindering the development of predictive or prescriptive models for institutional adaptation. Third, existing studies provide limited guidance on localized implementation strategies. While global frameworks are often cited, their applicability across diverse Chinese HEIs ranging from elite Double First-Class universities (targeting the development of world-class universities and disciplines) to provincial teaching-oriented institutions, remains unclear. Variations in institutional capacity,

regional development levels, and policy responsiveness require tailored implementation approaches, yet current research offers limited differentiation or evidence-based guidance in this regard.

These gaps carry significant implications for both research and practice. From a theoretical perspective, future studies should prioritize the development of China-specific frameworks that integrate ideological, policy, and socio-economic dimensions. Such frameworks could elucidate how universities reconcile competing missions, embed societal engagement institutionally, and adapt dynamically to shifting national priorities. Empirically, longitudinal and mixed-method approaches could capture the co-evolution of policy, ideology, and practice, revealing pathways for sustainable integration of the TM. Practically, understanding these mechanisms is critical for designing implementation strategies that are sensitive to institutional hierarchies, regional contexts, and policy environments, thereby enhancing both effectiveness and societal relevance.

Finally, the synthesis of 32 studies demonstrates that Chinese HE occupies a dual space: it is simultaneously informed by global TM discourses and deeply embedded within domestic ideological and policy structures. This duality produces a model that is globally legible yet locally grounded, combining adaptive learning from Western innovation and engagement practices with the strategic imperatives of national development. Recognizing this hybridity is essential for scholars and policymakers seeking to evaluate, guide, or extend the TM in China. Moreover, it suggests that the TM should be approached as a contextually contingent construct, shaped by historical, political, and cultural conditions, rather than a universal template imported from Western HE systems.

Conclusions and Future Avenues for Research

This systematic literature review has provided a comprehensive synthesis of research on the TM of universities, with particular emphasis on Chinese HE, situating it within a comparative global perspective. By integrating insights from 32 peer-reviewed studies across Western and Chinese contexts, this review has addressed three interrelated research questions: the conceptualization of community engagement (RQ1), the institutional embedding of the TM (RQ2), and the evolution of the TM within distinctive ideological and policy contexts (RQ3). The analysis reveals that while Chinese universities selectively draw upon global models such as the Triple Helix and entrepreneurial university frameworks, their TM is uniquely shaped by domestic policy priorities, governance structures, and ideological imperatives. This distinctiveness generates both context-specific practices and potential lessons for Western HE systems navigating societal engagement challenges.

A key conclusion is that the TM in China embodies foundational, operational, and cognitive uniqueness. Ideologically, Chinese universities integrate the TM into their core educational mission, rooted in Marxist educational principles and aligned with state developmental strategies, rather than adopting it as an external, market-driven initiative. Consequently, universities actively contribute to rural revitalization, poverty alleviation, ecological sustainability, and social governance, reflecting both national priorities and global sustainability agendas such as the United Nation's 2030 Agenda on Sustainable Development Goals. Unlike Western contexts, where community engagement is largely reciprocal and

voluntary, Chinese engagement is strategically orchestrated and policy-driven, fostering long-term societal impact while embedding national development objectives into HE practice.

Operationally, the TM in China follows a state-guided and university-community collaborative model. Activities are coordinated through dedicated offices, strategic planning, and evaluation systems linked to governmental priorities, exemplifying an integration of multi-level stakeholder engagement under institutionalized governance. Initiatives in regional coordination, particularly under China's rural revitalization and ecological civilization frameworks, demonstrate how universities mobilize academic expertise to support agricultural modernization, environmental protection, and social innovation in rural areas. Such an approach illustrates a synergy between HE and national development policy, highlighting an applied model of engagement that extends beyond traditional knowledge transfer, entrepreneurship, or localized service prevalent in Western universities.

Cognitively, the evolution of the TM in China presents a distinct trajectory. While Western institutions often evolve sequentially from regional service to entrepreneurial and then to multi-value societal engagement, Chinese universities follow a compressed and multi-dimensional path, guided by policy, ideology, and a systematic need to be globally relevant by prescribing benchmarks. The progression from prioritizing state-led economic modernization, to fostering university-industry-government collaboration, and toward integrating sustainability, social inclusion, and international engagement reflects a hybridized understanding of the TM. This evolution aligns with China's broader socio-ecological objectives, including SDGs-related sustainability, ecological civilization policies, and regional equity initiatives, positioning universities as central actors in addressing societal and environmental challenges while advancing national development strategies.

Despite these insights, the literature also reveals persistent gaps. First, theoretical frameworks capturing the endogenous and ideologically embedded nature of the Chinese TM remain underdeveloped. Existing studies often adapt Western evaluation metrics, focusing on knowledge transfer, entrepreneurship, and commercialization, without fully accounting for China-specific imperatives such as policy alignment, ideological integration, and contribution to SDGs and rural revitalization. Second, understanding of the dynamic mechanisms driving cognitive and organizational evolution remains limited. Existing research primarily provides static descriptions, leaving unexplored how ideology, state policy, ecological and socio-economic imperatives collectively shape the development of the TM. Third, implementation strategies have insufficient specificity. While policy directives are often universal, the operational realities differ markedly between elite Double First-Class universities, local applied institutions, and institutions in ecologically sensitive or rural regions, necessitating context-sensitive approaches to resource allocation, stakeholder engagement, and performance evaluation.

Addressing these gaps offers clear avenues for future research and practical application. Developing theoretically robust, China-specific frameworks can capture the interaction of ideology, policy, and practice while accommodating institutional and regional heterogeneity. Longitudinal and mixed-method studies could elucidate the dynamic interplay between policy, socio-economic priorities, and environmental sustainability, providing insights into adaptive TM practices and cognitive evolution. Comparative research examining China and Western

systems may further identify transferable strategies for embedding the TM, particularly in sustainability, community engagement, and regional development, while illustrating the limits of one-size-fits-all models.

Furthermore, the integration of China's TM with SDGs, ecological civilization policies, and rural revitalization initiatives underscores its relevance for global HE. By operationalising the TM as a vehicle for environmental stewardship, social inclusion, and regional innovation, Chinese universities offer models for systemic, policy-aligned engagement that can inform Western institutions seeking to enhance societal impact under complex socio-political and environmental constraints. Future studies should explore the mechanisms through which HE can simultaneously advance national priorities, sustainability goals, and global knowledge exchange, emphasizing cross-sectoral collaboration and longitudinal societal outcomes.

In conclusion, this systematic review establishes that the TM in Chinese HE is both globally informed and locally embedded, characterized by ideological integration, state-guided collaborative practice, and a multi-stage, policy-mediated evolutionary trajectory. While substantial progress has been made in conceptualizing and institutionalizing the TM, future research should focus on developing China-specific theoretical models, elucidating dynamic evolutionary mechanisms, and designing context-sensitive implementation strategies. Such efforts will not only advance scholarly understanding but also enhance the capacity of universities to contribute meaningfully to national and regional development, ecological sustainability, and the SDGs, offering transferable lessons for HE systems worldwide.

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