Proceedings of ICEMGD 2025 Symposium: The 4th International Conference on Applied Economics and Policy Studies
DOI: 10.54254/2754-1169/2025.BJ24011

Redistribution, Incentives, and Educational Equity: An Institutional Economics Perspective on China's "Double Reduction" Policy

Xueying Xie

Department of Finance, Guangdong University of Finance, Guangzhou, China
2982718535@qq.com

Abstract: This paper examines China's 2021 "Double Reduction" policy through the lens of institutional economics and incentive theory, analyzing its implications for educational equity, efficiency, and resource allocation, The study identifies how institutional misalignments, particularly between policy goals and the exam. oriented evaluation system-undermine implementation. While the policy has achieved partial success in redistributing resources and shifting household educational expenditures, its long-term effectiveness remains constrained by structural rigidities, uneven governance capacity, and behavioral adaptations. The paper argues that improving institutional coherence, optimizing micro-level incentives, and reforming the education evaluation system are essential for achieving sustainable outcomes. These findings contribute to the growing literature on the economics of education and institutional policy design in transitional economies.

Keywords: Double Reduction, Institutional Economics, Resource Allocation Educational Equity, Incentive Mechanisms

1. Introduction

The "Double Reduction" policy, jointly issued in 2021 by the General Office of the CPC Central Committee and the State Council, represents a comprehensive intervention to alleviate student workloads in compulsory education while restructuring the after-school tutoring industry. This policy responds to widespread societal concerns about excessive educational competition and reflects the government's commitment to balancing equity and efficiency in basic education reform[1].

From an economic perspective, education constitutes a fundamental human capital investment mechanism that influences income structures, productivity, and inter-generational mobility[2]. The Double Reduction policy attempts to optimize the marginal output structure of educational resources through supply-side institutional reforms that reduce market-driven educational services while expanding public provision. These adjustments significantly impact the supply-demand dynamics of educational services, household investment behaviors, and government expenditure structures.

While existing studies have preliminary examined the Double Reduction policy from pedagogical and sociological perspectives, systematic assessments of its effects on educational resource allocation efficiency, equity outcomes, and micro-level behavioral responses from an

DOI: 10.54254/2754-1169/2025.BJ24011

institutional economics standpoint remain inadequate. This study fills this gap by evaluating the policy's resource redistribution effects and implementation challenges within an institutional economics and incentive theory framework, combining policy text analysis with case studies to propose optimization pathways for sustainable governance of basic education policies. The theoretical contribution of this study lies in situating the "Double Reduction" policy within frameworks of institutional intervention and behavioral incentives, enriching the economic analysis of education policies. Regarding policy recommendations, the paper proposes optimization pathways focusing on institutional coherence, micro-level incentives, and evaluation system reform, offering practical reference value.

2. The Double Reduction policy and educational resource allocation: structural imbalances and policy interventions

2.1. Structural imbalances in China's educational resource allocation

Prior to the Double Reduction policy, China's compulsory education system exhibited chronic disparities in resource distribution across urban-rural, regional, and inter-school dimensions. The China Education Statistics Yearbook [3] reveals that urban areas accounted for 5.2% of special-grade teachers compared to merely 1.3% in rural regions. In 2021, the per-student value of teaching equipment in urban primary schools was approximately 1.2 times that of rural schools, demonstrating significant spatial inequality in basic education resources.

Beyond quantitative disparities, the marginal output efficiency of resource utilization also varied substantially across regions. Hanushek demonstrates that identical educational inputs may yield dramatically different outputs across locations[4], with "high-input-low-output" allocation patterns reducing overall educational efficiency. Furthermore, the long-standing emphasis on "balanced input" rather than "performance-oriented" approaches in fiscal transfer mechanisms has resulted in inefficient spending in some underdeveloped regions, creating what Lu and Zhang term "efficiency lock-in" [5], [6]. Consequently, China's per-policy education system faced not merely resource scarcity but structural misallocation, presenting dual challenges of efficiency and equity.

2.2. The institutional logic of policy intervention

The Double Reduction policy essentially constitutes an institutional response to market failures in education, embodying characteristics of supply-side structural reform. Financially, it employs "corrective transfer payments" to enhance support for rural and under-performing schools, aiming to improve marginal output efficiency and reduce regional investment gaps.

In the education labor market, the policy promotes teacher rotation programs and salary incentive mechanisms to address the structural imbalance of superior teacher resources concentrating in urban areas. Loyalka et al.demonstrate these measures enhance teacher allocation efficiency and narrow regional education quality gaps [7].

Regarding service provision, the policy compresses the after-school tutoring market to reduce "excessive competitive spending" in household education expenditures. However, without timely supplementation by public education services, this may inadvertently exacerbate difficulties for low-income families in accessing quality resources.

Moreover, the policy emphasizes shifting educational philosophy from "exam-oriented" to "competency-based" approaches, prioritizing comprehensive student development and non-cognitive skills that align with long-term human capital enhancement objectives. Collectively, these measures represent a systematic institutional effort to optimize resource allocation through fiscal redistribution, labor market adjustments, supply constraints, and conceptual guidance.

DOI: 10.54254/2754-1169/2025.BJ24011

3. Effectiveness evaluation of the Double Reduction policy

3.1. Marginal improvements in resource allocation

Post-implementation data shows increased fiscal resources flowing toward basic education, with rural per-student public expenditure growing at 7.5% annually (2021-2022), outpacing urban areas' 6.1% [3]. Concurrently, pilot teacher rotation mechanisms under the "county-managed school employment" system have begun addressing urban concentration of quality teachers.

However, increased funding doesn't automatically translate to improved outputs. Empirical studies confirm that marginal returns to educational investment are significantly lower in disadvantaged regions [5], consistent with Hanushek's [4] theory of diminishing returns. As the World Bank [8] notes, the effectiveness of educational spending in developing countries heavily depends on local governance capacity and institutional support. Thus, while the policy has achieved resource rebalancing, efficiency gains remain constrained without complementary institutional improvements.

3.2. Structural adjustments in household education investment

The policy has markedly altered household expenditure patterns. Recent surveys document that urban middle-class families significantly reduced spending on academic tutoring while increasing investments in programming, sports, and arts. This shift reflects human capital theory's dynamic allocation logic [2], where families reallocate resources in response to institutional changes.

However, responses vary substantially by socioeconomic status (SES). As Lareau notes, middle- and upper-class families leverage superior information access and cultural capital [9] to adapt strategies rapidly, while low-income families risk losing compensatory education pathways. This "structural adaptability gap" exacerbates redistribution imbalances, as the policy reduces overall burdens without effectively alleviating disadvantages for disadvantaged groups.

3.3. Preliminary changes in educational outputs and student development

Educational outputs serve as crucial metrics for policy evaluation. At this early stage, with national standardized test data yet to be released, preliminary evidence primarily comes from local studies. For instance, a pilot study conducted by a university affiliated education quality center in 2023 reported noticeable improvements in classroom participation, student self-management, and overall learning satisfaction in several provinces. It also suggested that after-school service participation rates were consistently high, exceeding 80% in most surveyed areas [10].

Regarding non-cognitive abilities, Shi and Liu's research demonstrates positive developments in students' sense of responsibility, learning motivation, and emotional regulation post-policy [11]. These findings align with Gutman and Schoon's longitudinal studies emphasizing the critical role of non-cognitive skills in educational returns, employ-ability, and social integration—particularly during basic education [12]. However, there is still no systematic evidence that cognitive achievement improves. To fully understand the policy's academic effects, longer-term data tracking and changes to the way teachers teach are needed.

3.4. Teacher behavioral responses and incentive mechanism adjustments

As key policy implementer, teachers' behavioral adaptations significantly determine outcomes. Post-policy, teachers' after-school service workloads increased substantially, yet most regions failed to establish corresponding performance-based incentives, according to internal reporting by a

DOI: 10.54254/2754-1169/2025.BJ24011

national education research institute [13]. This "incentive vacuum" has reportedly contributed to declining job satisfaction with some areas reporting teacher burnout.

Guarino et al. empirically confirm the positive correlation between teacher quality and student achievement [14], noting that instructional effort primarily depends on incentive structures and professional identity. Zhao and Wang's [15] fieldwork reveals that without adequate training and institutional support, many teachers perceive after-school services as "additional burdens," resulting in uneven instructional quality. The deeper contradiction lies in the persistent exam-oriented evaluation system, which structurally conflicts with the policy's "holistic development" philosophy. This misalignment may erode teachers' intrinsic motivation to embrace reforms, ultimately undermining policy implementation depth.

4. Institutional dilemmas and structural constraints in the implementation of the "Double Reduction" policy

4.1. Macro-level: misalignment between policy objectives and institutional logic

Although the "Double Reduction" policy aims to promote "quality-oriented education" and "equity-focused" approaches, significant institutional conflicts have emerged in practice. The policy's advocated goals demonstrate structural incompatibility with the operational logic of China's current education system. The education system continues to use examination scores as the core metric for student advancement, school evaluations, and teacher assessments, creating a highly exam-oriented incentive structure.

Fullan [16] describes this phenomenon as "policy incoherence," where new policies are superimposed on unreformed old systems, leading to "formal compliance but substantive resistance" during implementation. While surface-level changes like homework reduction and training institution restrictions are implemented, teaching content and pacing remain exam-focused, effectively neutralizing reform outcomes. Without simultaneous adjustments to institutional incentives, the "Double Reduction" policy cannot achieve substantive implementation.

4.2. Micro-level: lack of incentives and implementation deviations

At the micro level, the responses of key actors—teachers, parents, and local governments—reveal incentive deficiencies and implementation deviations.

For teachers, the policy requires them to take on more after-school services and personalized teaching tasks, but most regions have not established corresponding performance compensation mechanisms. This leads to "incentive fatigue" [14], which ultimately affects teaching quality.

For parents, especially middle-class families, maintaining their children's competitive edge has led them to turn to "underground tutoring" and "one-on-one private tutoring" to circumvent "Double Reduction" restrictions. "This behavior mirrors Lareau's finding that middle-class families consistently convert socioeconomic advantages into educational opportunities [9]".

For local governments, the fragmented "unclear division of responsibilities" in education governance has resulted in interpretive deviations and selective implementation during policy transmission. Some localities only superficially comply with central policies while implementing them perfunctorily in practice, severely undermining policy consistency and predictability [17].

4.3. Root cause: rigidity of the evaluation system and reform dilemmas

The fundamental limitation of the "Double Reduction" policy's effectiveness lies in the absence of reforms to the educational evaluation system. Currently, the National College Entrance

DOI: 10.54254/2754-1169/2025.BJ24011

Examination (Gaokao) remains the key criterion for student selection, school rankings, and teacher assessments, compelling all participants to allocate resources around "scores."

This "prisoner's dilemma"-style institutional structure means that even when parents and teachers recognize the necessity of "burden reduction," they cannot unilaterally abandon competitive strategies, creating a typical self-reinforcing mechanism. The more equity and burden reduction are emphasized, the more resources concentrate toward advantaged groups, structurally distorting reform objectives. Without addressing the core evaluation system, the "Double Reduction" policy is more likely to become a moderate form of institutional reproduction rather than substantive transformation.

5. Optimizing the "Double Reduction" policy: institutional pathways

5.1. Building a policy environment with institutional coherence

The effectiveness of the "Double Reduction" policy is constrained by its misalignment with existing institutional structures. To achieve substantive implementation, we must establish incentive-compatible mechanisms ("incentive compatibility").

First, we should construct a closed-loop governance system of "policy issuance-implementation-feedback-revision." As Bruns et al. [18] demonstrate, the effectiveness of educational accountability depends on whether feedback mechanisms accurately reflect implementation realities. For example, Hangzhou City in Zhejiang Province established a "Double Reduction Monitoring Platform" to collect real-time feedback from schools and parents, enabling dynamic adjustments to policy implementation rules, which significantly improved policy precision and effectiveness.

Second, we recommend establishing independent third-party evaluation institutions, such as local education research centers or non-profit organizations, to monitor policy implementation and prevent "symbolic compliance" behaviors. This helps enhance policy transparency and public trust.

Finally, we must strengthen inter-departmental coordination mechanisms. Education, finance, and human resources departments need to form collaborative linkages in teacher compensation, after-school services, and resource allocation to overcome fragmented implementation caused by bureaucratic silos [19].

5.2. Optimizing micro-level incentives and resource allocation structures

The implementation effectiveness of the "Double Reduction" policy ultimately depends on whether micro-level actors are motivated to take actions consistent with policy objectives.

For teachers, we should establish performance evaluation mechanisms tied to after-school service quality and increase the weight of "non-exam-oriented teaching" in compensation structures. Lavy's research shows that well-designed performance pay systems can significantly increase teacher engagement and student development of non-cognitive skills [20]. In one pilot district in Shanghai, the implementation of incentive mechanisms-such as after-school service quality subsidies linked to student satisfaction and curriculum innovation-was associated with a significant increase in teacher participation in just one year [21].

For parents, we need to improve accessibility to quality-oriented education resources to mitigate risks of "cultural capital reproduction." Internal survey data from a national policy research institution in 2022 suggested that low-income families encountered greater challenges in accessing quality education resources after the implementation of the "Double Reduction" policy,with participation rates significantly lower than those of high-income families [22].We recommend building regional education resource information platforms and providing "education consumption vouchers" to middle- and low-income families to promote educational equity.

DOI: 10.54254/2754-1169/2025.BJ24011

For local governments, we could link special transfer payments to "Double Reduction" implementation quality to enhance grassroots enforcement motivation. Simultaneously, establishing "local policy innovation funds" would encourage diverse approaches to after-school services and homework management.

5.3. Fundamental reforms to the education evaluation system

The education evaluation system is the key variable determining whether "Double Reduction" can achieve long-term governance. As long as the Gaokao remains the primary selection mechanism, the behaviors of schools, teachers, and parents will remain locked into the "score-focused" path dependence, creating a typical "Nash equilibrium" dilemma [23]: even when all parties recognize the necessity of burden reduction, individual rationality still drives collective "over-competition" in the absence of institutional safeguards.

First, we should construct a competency-oriented academic quality monitoring system, drawing on the OECD's PISA framework to incorporate non-cognitive indicators like critical thinking, collaboration skills, and emotional regulation. International experience shows that Finland's education system, which emphasizes process-based formative assessment despite having no national standardized tests, consistently performs well in PISA, demonstrating the positive correlation between diversified evaluation and education quality [24].

Second, for high school and college entrance examinations, we should explore a dual-track selection mechanism combining "scores + comprehensive qualities," increase the proportion of university autonomous admissions, and grant schools more autonomy in curriculum and teaching to gradually break the institutional lock-in of "score-only" evaluation.

Finally, we should establish a national "signaling mechanism" for education reform. Through policy releases, media communication, and social advocacy, we can guide the public to develop diversified conceptions of educational success. We recommend establishing "evaluation reform experimental zones" in selected cities, incorporating students' enquiry-based learning and community service achievements into advancement evaluation systems to promote a value transformation from "exam success" to "diversified growth."

6. Conclusion

The article systematically proposes deepening pathways for the "Double Reduction" policy across three dimensions: institutional environment construction, micro-level incentive optimization, and evaluation system reform. These three aspects are mutually supportive and progressively developed: the institutional environment provides foundational support for micro-level incentives; micro-level incentives promote behavioral adjustments and enhance policy implementation; while evaluation system reforms fundamentally reshape educational orientations and break path dependence. Only through coordinated advancement in all three dimensions can we truly achieve the long-term goals of the "Double Reduction" policy—building a more equitable, higher-quality, and sustainable basic education system.

From the perspectives of institutional economics and incentive theory, this paper analyzes the institutional logic and practical effectiveness of China's "Double Reduction" policy. The research finds that while the policy has achieved marginal improvements in resource reallocation, teacher allocation optimization, household education behavior adjustments, and non-cognitive skill development, it still faces deep-seated challenges including incentive misalignment, governance capacity disparities, and evaluation system rigidity.

However, this study has limitations including relatively short data periods and insufficient exploration of micro-level mechanisms. Future research could incorporate longer-term panel data to

DOI: 10.54254/2754-1169/2025.BJ24011

further assess the dynamic impacts of "Double Reduction" on educational equity and quality, while expanding empirical studies on household and local government behavioral responses to provide more granular evidence for policy optimization.

References

[1] State Council of the People's Republic of China. (2021). Opinions on further reducing the burden of homew ork and off-campus training for students in compulsory education. http://www.gov.cn/zhengce/2021-07/24/cont ent_5627132.htm

[2] Heckman, J. J., & Lochner, L. J. (2000). Rethinking myths about education and training: Understanding the sources of skill formation in a modern economy. In S. Danziger & J. Waldfogel (Eds.), Securing the future: Investing in children from birth to college (pp. 47–83). Russell Sage Foundation.

[3] Ministry of Education of the People's Republic of China. (2022). China Education Statistics Yearbook 2021. People's Education Press. [In Chinese].

[4] Hanushek, E. A. (2003). The failure of input-based schooling policies. The Economic Journal, 113(485), F64–F98. https://doi.org/10.1111/1468-0297.00099

[5] Lu, M., & Zhang, Y. (2022). Efficiency lock-in and education resource allocation in underdeveloped regions. Journal of China Education Development, 12(3), 45–59. [In Chinese].

[6] UNESCO. (2020). Global education monitoring report 2020: Inclusion and education – All means all. https://unesdoc.unesco.org/ark:/48223/pf0000373718

[7] Loyalka, P., Sylvia, S., Liu, C., Chu, J., & Rozelle, S. (2019). Pay by design: Teacher performance pay desi gn and the distribution of student achievement. Journal of Labor Economics, 37(3), 621–662. https://doi.org/ 10.1086/701935

[8] World Bank. (2020). World development report 2018: Learning to realize education's promise. World Bank Publications. https://doi.org/10.1596/978-1-4648-1096-1

[9] Lareau, A. (2011). Unequal childhoods: Class, race, and family life (2nd ed.). University of California Press.

[10] [10] Tsinghua University Center for Basic Education Quality Monitoring. (2023). Survey report on the implementation of the Double Reduction policy in pilot provinces. [Unpublished internal report].

[11] Shi, Y., & Liu, C. (2021). The impact of the "Double Reduction" policy on non-cognitive skill development in primary school students. Journal of Educational Development, 18(4), 33–49. [In Chinese].

[12] Gutman, L. M., & Schoon, I. (2013). The impact of non-cognitive skills on outcomes for young people. Education Endowment Foundation. https://educationendowmentfoundation.org.uk

[13] Chinese Academy of Educational Sciences. (2022). Annual report on basic education reform in China. [Unpublished internal report]. [In Chinese].

[14] Guarino, C. M., Santibañez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. Review of Educational Research, 76(2), 173–208. https://doi.org/10.3102/0034654 3076002173

[15] Zhao, Y., & Wang, Q. (2022). Teacher workload and professional identity under the Double Reduction policy. Contemporary Education Review, 14(2), 76–91. [In Chinese].

[16] Fullan, M. (2007). The new meaning of educational change (4th ed.). Teachers College Press.

[17] Tan, C. (2020). Policy implementation and local discretion in Chinese education governance. International Journal of Educational Development, 78, 102249. https://doi.org/10.1016/j.ijedudev.2020.102249

[18] Bruns, B., Filmer, D., & Patrinos, H. A. (2011). Making schools work: New evidence on accountability reforms. The World Bank. https://doi.org/10.1596/978-0-8213-8679-8

[19] Andrews, M., Pritchett, L., & Woolcock, M. (2017). Building state capability: Evidence, analysis, action. Oxford University Press.

[20] Lavy, V. (2009). Performance pay and teachers' effort, productivity, and grading ethics. American Economic Review, 99(5), 1979–2011. https://doi.org/10.1257/aer.99.5.1979

[21] Author-collected data based on local reports by Shanghai Municipal Education Commission. (2022). [Unpublished internal source].

[22] China Development Research Foundation. (2022). Survey on the impact of Double Reduction policy on family education investment. [Unpublished internal report].

[23] Schelling, T. C. (1978). Micromotives and macrobehavior. W. W. Norton & Company.

[24] Sahlberg, P. (2015). Finnish lessons 2.0: What can the world learn from educational change in Finland? Teachers College Press.