WEP
Warwick
Evans
Publishing

Transactions on Economics, Business and Management Research
ISSN: 2960-1789, eISSN: 2960-2254 | Volume 15
MEEA 2025

The Economic Growth Effect of National-level New Areas: Empirical Evidence from Chinese Cities

Xianpeng Su*

Nanjing University of Science and Technology, China

*Corresponding author: xianpeng_su@163.com

Abstract. As a crucial regional development strategy in China, the actual policy effects of National-level New Areas require rigorous scientific evaluation. This paper, based on a panel dataset of Chinese cities from 2003 to 2021, treats the establishment of these new areas as a quasi-natural experiment. By employing a Difference-in-Differences (DID) model, we strictly identify the causal effect of this policy on urban economic growth. The research finds that the establishment of National-level New Areas has a significant overall promotional effect on the economic growth of their host cities,confirming the policy's macroeconomic effectiveness.However,further heterogeneity analysis reveals a clear regional divergence in the policy's impact: its stimulating effect on the economy is far stronger in the eastern region than in the central and western regions. This conclusion not only provides core empirical evidence for a comprehensive evaluation of the National-level New Area policy but also offers important insights for optimizing future regional policy layouts, promoting regional coordination, and fostering high-quality development.

Keywords: National-level New Area; Economic Growth; Difference-in-Differences Model.

1. Introduction

As a major strategic initiative to promote regional economic development in specific periods, National-level New Areas in China are comprehensive functional zones established with the approval of the State Council, designed to undertake significant national development and reform missions. Since the establishment of the first new area in 1992, China has successively approved the creation of 19 National-level New Areas. Their geographical distribution is extensive, covering the eastern, central, western, and northeastern regions, making them a key policy instrument influencing China's regional economic landscape.

The construction history of National-level New Areas is closely intertwined with China's reform and opening-up process, and their evolution can be broadly divided into three stages. The first stage was marked by the establishment of the Shanghai Pudong New Area in 1992, which played the role of a "pioneer" and "experimental plot" for reform and opening-up during China's exploratory phase of building a socialist market economy, setting a benchmark for opening to the outside world. The second stage is represented by the Tianjin Binhai New Area, established in 2006. It was tasked with exploring a new path for reform and opening-up after China had preliminarily established a market economy system and joined the World Trade Organization. The third stage began after 2010. To address the challenges of the Chinese economy entering a "new normal" and reforms entering a "deep-water zone," the establishment of National-level New Areas accelerated significantly. Areas such as the Chongqing Liangjiang New Area and the Gansu Lanzhou New Area were approved, forming a layout that covers major economic blocs. Notably, the Hebei Xiong'an New Area, established in 2017, was endowed with the special strategic status of a "millennium strategy and national affair," signifying that the strategic positioning of National-level New Areas had reached a new height in the new era.

From the trajectory of policy evolution, it is evident that National-level New Areas are not merely engines for local economic growth but are, on a deeper level, intricately linked with the overall strategic plan for coordinated regional economic development. Given the significant strategic mission and substantial policy resources invested in these new areas, a core scientific question arises: Has this

Content from this work may be used under the terms of CC BY-NC 4.0 licence (https://creativecommons.org/licenses/by-nc/4.0/).
Published by Warwick Evans Publishing.

large-scale regional development policy effectively promoted economic growth in its host cities? Are there regional disparities in its policy effects? A prudent answer to this question is not only crucial for accurately assessing the growth dynamics of the relevant regions but also holds profound theoretical and practical significance for optimizing the nation's future spatial layout and policy design.

Therefore, this paper aims to conduct a systematic empirical test of the aforementioned issues. Based on city-level panel data from China, this study will employ the Difference-in-Differences (DID) model as its primary identification strategy to precisely estimate the net effect of the establishment of National-level New Areas on urban economic growth. Building on this, the study will further investigate the potential heterogeneity of this policy effect between China's eastern and central/western regions. Through this research, we hope to provide reliable empirical evidence for the scientific evaluation of the policy effectiveness of National-level New Areas and to offer valuable policy references for advancing their strategic goal of high-quality development.

2. Theoretical Overview of National-level New Areas

2.1. Definition of National-level New Areas

Under the arrangement of the national overall strategy, the state establishes specific administrative regions that implement special opening-up policies, often spanning provincial-level administrative boundaries, and elevates their overall development and layout to the national level, thereby creating National-level New Areas. The reform and innovation within these new areas are interconnected with political, social, cultural, and environmental aspects, transcending the simple scope of economic system reform. The establishment of National-level New Areas is intended to facilitate the development of an export-oriented economy and the creation of a modern industrial system, embodying a major national economic mission.

2.2. Mechanism Analysis of National-level New Areas on Economic Development

2.2.1. Promoting Institutional Innovation

Whether through the effects of industrial agglomeration or the "first-mover" priority granted by the government, National-level New Areas provide an excellent platform and environment for institutional innovation. Through various innovations such as tax incentives and technological innovation systems, they guide the leading role of competitive industries, carry out advanced scientific and technological research, and at the same time, ensure the implementation of various policies, striving to enhance talent aggregation effects and achieve a favorable situation for collaborative innovation, thereby stimulating the sustainable development of the urban economy.

2.2.2. Promoting the Agglomeration of Production Factors

In terms of land use, by attracting enterprises with high-quality land resources and implementing preferential policies, some enterprises invest in and build factories in the new areas, leading to a substantial increase in local government fiscal revenue. Increasing the labor input into the new areas is beneficial to the economic development of the host region and the production of enterprises. The supply of capital can promote the development of high-level financial industries, which is of great significance to the construction and development of the new areas. Information sharing can reduce investment costs and optimize resource allocation, which can, to a certain extent, strengthen the production capacity to adapt to ever-changing consumer demands.

2.2.3. Guiding Technological Innovation

National-level New Areas serve as incubators for converting technological innovations into achievements and as industrial parks, helping to promote scientific and technological progress and innovative development strategies. The government's incentive policies focus on establishing enterprise-led technology property rights systems and emphasizing the cultivation of intellectual

property awareness among enterprises within the new areas, thereby continuing to explore and promote innovation-related policies.

2.2.4. Promoting Industrial Structure Upgrading

Through intervention, the governments of the new areas continuously promote the adjustment and reform of the industrial structure and implement macroeconomic fiscal policies. This not only allows for direct investment into the new areas but also increases financial resources through fiscal subsidies and tax incentives, guiding the adjustment of the industrial structure and realizing the multiplier effect.

3. Literature Review and Research Hypotheses

3.1. Literature Review

National-level New Areas, as a regional economic policy with Chinese characteristics, represent an advanced stage in the evolution of special economic zone policies that China has long implemented, such as Economic and Technological Development Zones and High-tech Industrial Development Zones[1]. National-level New Areas are classified as a major national regional economic policy, with a higher strategic positioning than other types of special economic zones. Existing research indicates that the establishment of National-level New Areas is generally conducive to stimulating regional economic growth[2]. Some empirical studies have also found that location-based policies like development zones in China have a significant positive impact on the economic growth of their host counties and cities[3]. Li and Shen found that when the target industries of a development zone align with the local comparative advantages, its positive effect on industrial upgrading is more pronounced[4]. Liu and Zhao discovered that the promotional effect of national high-tech zones on economic development shows diminishing marginal returns[5]. Howell's research found that within China's special economic zone policies, the effect of high-tech development zones on productivity improvement is significantly higher than that of economic and technological development zones, due to the differences in development strategies and target positioning of these two types of zones[6].

3.2. Research Hypotheses

The goal of constructing National-level New Areas is to form new poles of economic growth, promote comprehensive and coordinated regional economic development, and achieve high-quality development. As an important component of modern governance, National-level New Areas have always been a cornerstone for driving regional economic growth. Accordingly, we propose the following hypothesis:

H1: The establishment of National-level New Areas has a promotional effect on regional economic growth.

Meanwhile, the problem of unbalanced and inadequate regional development in China is prominent. The eastern region has a faster pace of urbanization, a higher level of urbanization, and more vigorous economic activities. In contrast, the central and western regions lag in economic system reform, and their economic development is constrained. By establishing National-level New Areas to drive urban economic growth, regional heterogeneity will form among different cities. Accordingly, we propose the following hypothesis:

H2: The promotional effect of National-level New Areas on the eastern region is more significant than that on the central and western regions.

4. Empirical Analysis

4.1. Model Specification and Variable Description

4.1.1. Model Specification

A review of relevant materials reveals that China's policy for approving the establishment of National-level New Areas tends to favor provincial capitals and municipalities, with most being established between 2006 and 2016. The earliest National-level New Area is the Shanghai Pudong New Area, established during the initial phase of building a socialist market economy and before China's accession to the WTO. Its internal and external institutional environment at the time of its establishment differs significantly from that of subsequent new areas. Therefore, this study excludes the Shanghai Pudong New Area from the sample, selecting panel data from 2003 to 2021 for 3 municipalities and 26 provinces and autonomous regions (excluding Tibet), totaling 29 cities. These cities are divided into a "treatment group" and a "control group." The "treatment group" includes cities in China where National-level New Areas have been established, while the "control group" consists of cities where no new areas have been established. In the model, a policy dummy variable, Treat, is set to indicate whether a city has implemented the policy of establishing a National-level New Area. The "treatment group" is assigned a value of 1, and the "control group" is assigned a value of 0. Furthermore, according to the establishment year of each National-level New Area, a time dummy variable, Period, is set to distinguish between the time before and after the policy implementation. "Before establishment" is assigned a Period value of 0, and "after establishment" is assigned a Period value of 1. Based on this, a Difference-in-Differences model is constructed:

$$lngdp_{i,t} = \beta_0 + \beta_1 did_{i,t} + \gamma X_{i,t} + \varphi_t + \mu_i + \varepsilon_{i,t} \quad (1)$$

In equation (1), $lngdp_{i,t}$ is the dependent variable, representing the logarithm of the regional GDP of city i in year t. $did_{i,t}$ is the core explanatory variable of the model, which is the interaction term of the two dummy variables Treat and Period. Its coefficient is used to estimate the effect of the National-level New Area policy on regional economic growth. $X_{i,t}$ is a set of control variables, φ_t represents time-fixed effects, μ_i represents city-fixed effects, and $\varepsilon_{i,t}$ is the random error term. β_1 is the core estimated parameter of this paper, representing the net effect of National-level New Areas on economic growth. If β_1 is positive, the establishment of National-level New Areas promotes regional economic growth; otherwise, it does not have a promotional effect.

4.1.2. Variable Description

The dependent variable in the model, $lngdp_{i,t}$, is the logarithm of regional GDP, used to measure the level of regional economic growth. The core explanatory variable, $did_{i,t}$, reflects the establishment of the National-level New Area policy, taking a value of 0 or 1. To ensure the credibility of the empirical results, other factors affecting economic growth must be controlled. Considering that in economics, investment, consumption, and government expenditure have an impact on the level of economic development, this paper, referencing relevant literature, selects these variables as control variables. They reflect corporate investment behavior, resident consumption behavior, and the role of government expenditure on regional economic growth, respectively. They are measured by the logarithm of fixed asset investment, the logarithm of total retail sales of consumer goods, and the logarithm of government fiscal expenditure.

4.1.3. Data Sources

The data on city GDP, total fixed asset investment, total retail sales of consumer goods, and total government fiscal expenditure used in this study are sourced from the annual "China City Statistical Yearbook." A balanced panel dataset for 29 cities from 2003 to 2021 was ultimately obtained.

4.2. Analysis of Empirical Results

4.2.1. Descriptive Statistics Analysis

The statistical characteristics of each variable are shown in Table 1. The results show that the average value for measuring economic growth across cities is 8.112, with a standard deviation of 1.0491, indicating significant disparities in economic development levels among different regions. For the control variables, the standard deviations are also large, suggesting considerable differences in investment, consumption, and government expenditure levels across localities.

Table 1. Descriptive statistics for the main variables

Variable	Observations	Mean	SD	Min	Max
lngdp	551	8.112	1.049	4.976	10.603
lninvest	551	7.645	1.119	4.448	9.986
lnconsume	551	7.276	1.083	4.152	9.620
lngovern	551	6.040	1.188	2.948	8.919

4.2.2. Baseline Regression Results

The baseline regression results are shown in Table 2. The results indicate that the impact coefficient of establishing a National-level New Area on regional economic growth is 0.029, and it is significant at the 5% level. This suggests that, from a national perspective, the establishment of National-level New Areas plays a promotional role in local economic growth. The regression results for the control variables show that investment, resident consumption, and government expenditure levels have a positive relationship with regional economic growth at the 1% significance level. Thus, Hypothesis H1 is supported.

Table 2. Result of basic regression

	lngdp
did	0.029**
	(0.01)
lninvest	0.060***
	(0.02)
lnconsume	0.279***
	(0.02)
lngovern	0.359***
	(0.04)
N	551
adj. R^2	0.994

Note: Standard errors in parentheses* p < .1, ** p < 0.05, *** p < .01

4.2.3. Parallel Trends Test

To ensure the validity and reliability of the model, a parallel trends test was conducted, with the results shown in Figure 1. As can be seen from the graph, the results for the two years prior to policy implementation are not significant, meaning there was no significant difference between the treatment and control groups at that time. For the three years following policy implementation, the results remain insignificant. The results become significant starting from the fourth year after policy implementation, at which point a significant difference between the treatment and control groups emerges. This result also indicates that the impact of establishing a National-level New Area on the economy has a four-year lag.

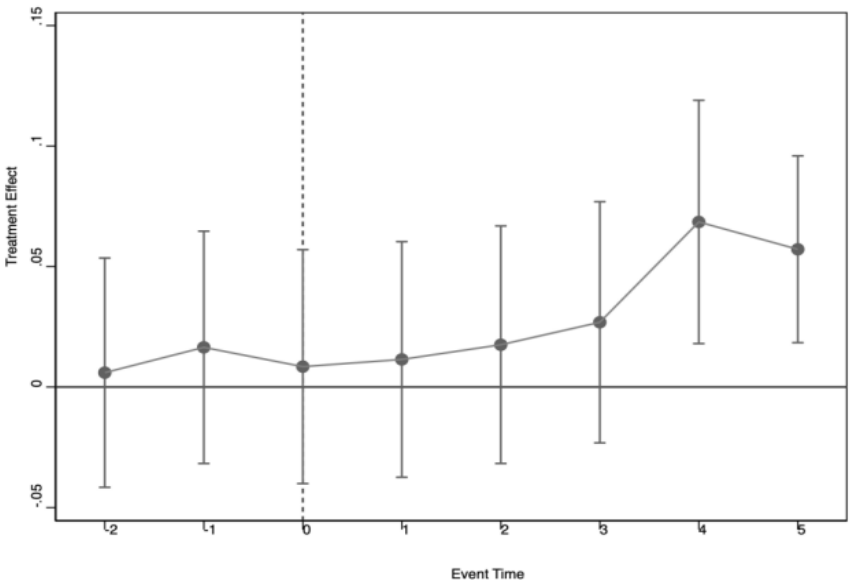

Fig. 1 Parallel Trends Test

Note: The figure plots event-study coefficients and their 95% confidence intervals. The pre-treatment coefficients are insignificant, satisfying the parallel trends assumption.

4.2.4. Heterogeneity Analysis

To verify whether there are differences in the economic impact of National-level New Areas on the eastern and central/western regions, a heterogeneity test was conducted. The regression results for the eastern and central/western regions are shown in Table 3. In the sample for the eastern region, the regression coefficient of the core explanatory variable is 0.061 and is significant at the 1% level. This indicates that the establishment of National-level New Areas has a significant effect on promoting economic growth in the eastern region. In the sample for the central and western regions, although the policy effect is positive, it is not significant, and the magnitude of the coefficient is smaller compared to that of the eastern region. Thus, the test results show that the policy effect of establishing National-level New Areas is more pronounced in the eastern region and plays a greater role in enhancing the local economic level. Thus, Hypothesis H2 is supported.

Table 3. Heterogeneity Analysis

	East lngdp	West lngdp
did	0.061***	0.003
	(0.02)	(0.02)
lninvest	0.112***	0.055*
	(0.02)	(0.03)
lnconsume	0.417***	0.191***
	(0.04)	(0.03)
lngovern	-0.054	0.516***
	(0.06)	(0.05)
N	190	361
adj. R^2	0.997	0.992

Note: Standard errors in parentheses* p < .1, ** p < 0.05, *** p < .01

4.2.5. Robustness Checks

(1) Placebo Test

To verify that the conclusions of this paper are not affected by other unobservable factors, a placebo test is necessary. The specific procedure is as follows: randomly select 266 observations as the

pseudo-treatment group and the remaining 285 as the pseudo-control group from the entire sample, perform the baseline regression, and extract the coefficients and standard errors of the core explanatory variable. A kernel density plot of the core explanatory variable is then generated, as shown in Figure 2. It can be seen that the estimated coefficients are mostly concentrated around 0, and the vast majority are not significant and are far from the true value. This implies that the policy effect of National-level New Areas on economic growth has not been affected by other unobserved factors, and the empirical conclusion is robust.

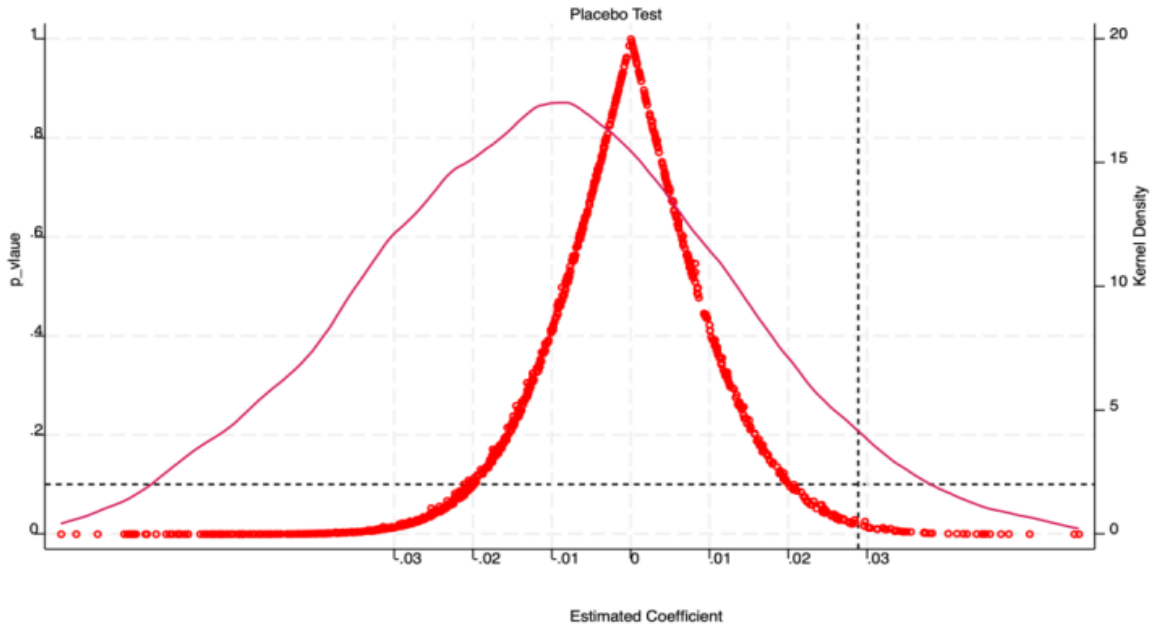

Fig. 2 Robustness Checks: Placebo Test

Note: The curve shows the distribution of coefficients from 500 random treatment assignments. The vertical line marks the true estimated coefficient, which lies far outside the placebo distribution.

(2) Impact of Other Location-based Policies

Cities where National-level New Areas are established often serve as national or regional centers and are frequently subject to multiple national-level location-based policies. To exclude the influence of these other policies, this paper focuses on two major types of national-level policies: Free Trade Zone (FTZ) policies and National Comprehensive Coordinated Reform Pilot Zone policies. To eliminate the interference of the aforementioned policies on the policy effect of National-level New Areas, this paper, referencing the research of Cao Qingfeng[7], sets up the following equation based on equation (1):

$$lngdp_{i,t} = \beta_0 + \beta_1 did_{i,t} + \beta_2 did01_{i,t} + \beta_3 did02_{i,t} + \gamma X_{i,t} + \varphi_t + \mu_i + \varepsilon_{i,t} \quad (2)$$

In equation (2), $did01_{i,t}$ and $did02_{i,t}$ represent the DID estimators for FTZs and National Comprehensive Coordinated Reform Pilot Zones, respectively. If city i established an FTZ in year t, then did01=1 for year t and subsequent years, and 0 otherwise. Similarly, if city i established a reform pilot zone in year t, then did02=1 for year t and subsequent years, and 0 otherwise. Table 4 reports the corresponding estimation results. It can be found that the National-level New Area still has a significant driving effect on the economic growth of the host city. Therefore, the promotional effect of National-level New Areas on the economic growth of the host city is indeed caused by the new area policy itself, not by other policies.

Table 4. Robustness Checks: Results of the Test for the Impact of Other Place-Based Policies

	lngdp
did	0.029**
	(0.01)
did01	0.016
	(0.02)
did02	-0.030*
	(0.02)
lninvest	0.044**
	(0.02)
lnconsume	0.224***
	(0.02)
lngovern	0.415***
	(0.04)
N	551
adj. R^2	0.993

Note: Standard errors in parentheses* p < .1, ** p < 0.05, *** p < .01

5. Conclusion and Policy Suggestions

5.1. Research Conclusion

This paper employs a multi-period Difference-in-Differences model to systematically evaluate the economic growth effect of National-level New Areas. The research conclusions clearly indicate: First, the establishment of National-level New Areas has, on the whole, played a significant positive role in promoting the economic growth of their host cities, confirming their macroeconomic effectiveness as regional development engines. Second, the promotional effect of this policy exhibits significant regional heterogeneity; its stimulating effect on economic growth in the eastern region is much stronger than in the central and western regions. This suggests that the policy's effectiveness is profoundly influenced by the initial development conditions and institutional environment of the region.

5.2. Policy Suggestions

Based on the core conclusions above, to further promote the high-quality development of National-level New Areas and enhance regional coordination, this study proposes the following three policy recommendations:

First, deepen reform and innovation to enhance the development quality of new areas. The study confirms the positive role of National-level New Areas. The focus of future policy should shift from "quantitative expansion" to "qualitative improvement." At the national level, successful experiences should be continuously summarized and promoted. Through precise industrial planning and policy support, new areas should be guided to focus on strategic emerging industries and key core projects, building core platforms for independent innovation and industrial clusters, avoiding homogeneous competition, and truly leveraging their "pioneering and experimental" function in institutional innovation and industrial upgrading.

Second, implement a differentiated layout to optimize regional development strategy. Given the significant regional gap in policy effects, future site selection and resource allocation for new areas should avoid a "one-size-fits-all" approach. For the central and western regions, their carrying capacity and comparative advantages should be more cautiously evaluated, concentrating policy resources in regional central cities or city clusters with strong potential to ensure that new areas can form effective linkages with the existing urban system. Meanwhile, new areas in the central and

western regions should be granted greater autonomy in reform, encouraging them to explore development models that suit local conditions rather than simply replicating the eastern experience.

Third, improve the governance system to stimulate endogenous growth momentum. To ensure that policy dividends can be converted into sustainable economic growth, the modern governance model of new areas must be continuously improved. This includes establishing more efficient, transparent, and service-oriented management institutions, actively introducing and cultivating high-level management and technical talent, and creating a world-class business environment. By optimizing internal governance, the vitality of market entities can be effectively stimulated, thereby transforming external policy "blood transfusions" into the endogenous momentum for regional economic development.

Acknowledgements

The authors gratefully acknowledge the financial support from my tutor.

References

[1] Hao, S. Y., & Cao, Q. F. (2016). On National-level New Areas. Guizhou Social Sciences, (2), 26-33.

[2] Liu, T. E., Tian, X. B., & Cao, Y. (2019). Policy Effect Evaluation of National-level New Areas on Regional Economic Development: An Empirical Study Based on the Difference-in-Differences Method. Finance and Trade Research, (6), 24-35.

[3] Cheng, Y. (2014). Place-Based Policies in a Development Context-Evidence from China [R]. University of California Working Paper.

[4] Li, L. X., & Shen, G. J. (2015). Economic Development Zones, Regional Comparative Advantage, and Industrial Structure Adjustment. Economics (Quarterly), (3), 885-910.

[5] Liu, R. M., & Zhao, R. J. (2015). Have National High-tech Zones Promoted Regional Economic Development? A Test Based on the Difference-in-Differences Method. Management World, (8), 30-38.

[6] Howell, A. (2019). Heterogeneous Impacts of China's Economic and Development Zone Program. Journal of Regional Science, 59(5), 797-818.

[7] Cao, Q. F. (2020). The Driving Effect of National-level New Areas on Regional Economic Growth: Empirical Evidence from 70 Large and Medium-sized Cities. China Industrial Economics, (07), 43-60.