Paired Assistance Policy and Regional Coordinated Development in the New Era: Based on the Micro Evidence of Cross-regional Investment of Listed Firms

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Abstract: *In the new era, the Paired Assistance Policy (PAP)—national governance mechanism with Chinese characteristics,—plays a key role in fostering regional coordinated development. Using data from China's A-share listed companies between 2013 and 2020, this study shows that PAP significantly encourages enterprise investment from supporting regions to paired cities, thereby contributing to addressing the "Lucas Paradox" of capital flow. This effect is more substantial among state-owned enterprises, in recipient regions with lower marketization levels, and in paired cities where industrial structures differ significantly. The policy works by exerting institutional pressure, lowering investment and operational costs in recipient regions, and improving firms' access to local information and complementary resources. Further analysis reveals that cross-regional investments under the PAP enhance the development quality of both recipient regions and the supporting enterprises themselves. Thus, these findings provide empirical evidence of PAP's role in regional coordinated development and offer theoretical and policy insights for refining the PAP in the new era.*

Keywords: *Paired assistance policy; Corporate cross-regional investment; Regional coordinated development; Marketization; Industrial structure difference*

JEL Classification Codes: G31; H53; I38

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1. Introduction

The Report to the 20th National Congress of the Communist Party of China (CPC) emphasized: "Pursuing high-quality development as our overarching task, we will...promote integrated urban-rural development and coordinated regional development, to effectively upgrade and appropriately expand China's economic output."[1] Thus, promoting regional development

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[1] *Hold High the Great Banner of Socialism with Chinese Characteristics and Strive in Unity to Build a Modern Socialist Country in All Respects — Report at the 20th CPC National Congress*, People's Publishing House, 2022.

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through effective policies is critical for advancing the Chinese modernization, achieving high-quality growth, and realizing common prosperity. Since the founding of the People's Republic of China in 1949, the country's regional development strategy has evolved through four stages, achieving significant milestones, securing a decisive victory in the fight against absolute poverty in 2020 (Hao and Zhang, 2023). The Paired Assistance Policy (PAP), as a national governance mechanism with Chinese characteristics, has served as a cornerstone for regional coordinated development. For instance, the *Guiding Opinions on Further Strengthening East-West Poverty Alleviation Collaboration* issued in 2016 by the General Office of the CPC Central Committee and the General Office of the State Council highlighted: "*Poverty alleviation collaboration and paired assistance between the eastern and western regions are major strategies for promoting regional coordination, synergy, and common development.*"[2] Since the 18th CPC National Congress in 2012, the PAP has been implemented more frequently and precisely, playing a vital role in poverty alleviation and regional balance (Wang, 2022). Enterprises, as key market actors, have been significant contributors, injecting vitality into these initiatives (Wang and Xie, 2022). For example, in 2020, Chinese enterprises invested over 140.206 billion yuan[3] in poverty alleviation collaboration projects between China's eastern and western regions, significantly boosting inter-regional economic interaction. However, the extant literature on the PAP has largely centered on its historical evolution, conceptual features, or overall achievements (Lin and Wang, 2021). Few studies explore the outcomes (Li et al., 2020) or behavioral patterns (Liu and Wei, 2017) of enterprise participation. Even less studied is how PAP policies shape cross-regional capital flows, especially via firms' cross-regional investments.

Capital, as a critical factor of production, significantly contributes to regional development disparities when its concentration varies across regions. Cross-regional capital flows, particularly through enterprise investments, help optimize resource allocation and reduce economic imbalances between regions (Wang and Xie, 2022). However, market segmentation in China imposes significant restrictions on enterprises seeking to invest across regions. As a result, scholars have primarily explored institutional factors that facilitate such investments, examining the recipient region's environment (Song and Huang, 2014), the relationship between the investing firm and the recipient region (Cao et al., 2018), and inter-regional dynamics (Yang et al., 2021). Yet, most studies have not fully addressed the "Lucas Paradox".[4] In China, the "siphoning effect" of more developed regions persists (Ma et al., 2020). Thus, directing capital to the less-developed areas remains a critical challenge for achieving regional coordinated development. The paired assistance policy, a distinctly Chinese governance mechanism, has also been instrumental in fostering deeper market integration between eastern and western regions and supporting the domestic circulation strategy. Moreover, understanding how paired assistance influences cross-regional capital flows is vital for refining this policy in the new era, promoting regional coordination, and advancing the

[2] *Guiding Opinions on Further Strengthening East-West Poverty Alleviation Collaboration Work* (Issued by the General Office of the CPC Central Committee and the General Office of the State Council), https://www.gov.cn/xinwen/2016-12/07/content_5144678.htm.

[3] Source: *China Poverty Alleviation Development Yearbook 2021*, Intellectual Property Publishing House, 2021.

[4] Introduced by Professor Robert Lucas in 1990, the "Lucas Paradox" questions why capital does not flow from wealthier to poorer regions.

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Chinese path to modernization in the long run. To address this research gap, this study examines the impact and mechanisms of the PAP on cross-regional capital flows through the lens of enterprise investments, offering new empirical evidence on how to encourage capital inflows to underdeveloped regions.

Drawing on the data on cross-regional subsidiaries of China's A-share listed companies from 2013 to 2020, we construct a choice set of potential target cities for enterprise investments and analyze the impact of PAP policies on firms' location decisions in the new era. The findings reveal the following: (1) PAP policies significantly shape firms' location choices for cross-regional investments, encouraging enterprises from supporting regions to invest in paired recipient cities. (2) This effect is more significant among state-owned enterprises (SOEs), in recipient regions with lower marketization levels, and where industrial structures differ significantly between paired cities. Notably, the policy promotes investment by exerting institutional pressure, lowering firms' investment costs, and improving access to local information and resources. (3) Economically, cross-regional investments under the PAP enhance total factor productivity (TFP) in recipient regions and improve the production efficiency of supporting enterprises, demonstrating that the policy fosters a win-win outcome for balanced regional development and common prosperity.

This study makes the following contributions: (1) While prior research on the PAP has focused on macro-level analyses and theoretical policy mechanisms, this paper provides an empirical analysis of its impact on cross-regional capital flows through enterprise investments, expanding the perspective and methodology of PAP studies. (2) From the perspective of China's unique governance mechanisms, this study explores factors influencing cross-regional capital flows, broadening the scope of research on enterprise investment behavior. It also dissects how the PAP shapes firms' location choices, offering new insights into addressing the "Lucas Paradox." (3) Practically, this study highlights the economic behavior and outcomes of enterprises as key participants in the PAP. It also provides theoretical support for deepening these policies to promote regional coordinated development in the new era, while offering insights for building a unified national market and boosting enterprise vitality.

2. Literature Review

2.1 Paired Assistance Policy

Since July 1979, when the CPC Central Committee approved Comrade Ulanhu's report at the National Border Defense Work Conference, establishing the framework for inland provinces and cities to provide paired assistance to border and ethnic minority regions, China has developed a diverse range of paired assistance practices nationwide. These include assistance to Xinjiang and Xizang, as well as poverty alleviation collaboration between eastern and western regions (Wang, 2022). Over the past four decades, the PAP has become a vital institutional mechanism for achieving common prosperity. Significantly, PAP practices have evolved into various forms and types based on the nature of assistance tasks, the pairing of assisting and recipient entities, and strategic objectives. Their scope has also expanded from border and ethnic minority regions to encompass poverty alleviation, major projects, emergency disaster relief, and epidemic prevention and control. Thus, the extensive implementation and significant achievements of the PAP have

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attracted considerable scholarly attention, with research primarily focusing on its historical evolution, conceptual characteristics, and contributions.

The PAP's institutional framework has evolved through three phases: inception and exploration, consolidation and expansion, and intensification and refinement (Wang and Xie, 2022), with shifting goals and mechanisms at each stage (Wang, 2022). Thus, scholars diverge on its core traits. Some highlight its horizontal fiscal transfer role, framing it as a centrally orchestrated redistribution among peer-level governments (Shi and Fan, 2020). Others build on this fiscal perspective, casting PAP as "political reciprocity" between localities directed by central authority, which underscores its role in redistributing resources from richer to poorer areas—a dynamic sometimes colloquially described as "robbing the rich to help the poor (Li, 2015)." Most, however, emphasize intergovernmental collaboration, such as cross-regional resource pooling and policy alignment (Zhao, 2011). They hail PAP as the archetype of "prosperous regions assisting developing ones," propelling balanced growth and common prosperity (Zeng and Fan, 2019).

In the new era, the PAP has exhibited new characteristics: (1) Increased frequency: Since the 18th CPC National Congress in 2012, the frequency of PAP activation has surpassed the total of the previous 30 years. (2) Greater precision: Pairing relationships and responsibilities have become more clearly defined, with an integrated policy cycle encompassing decision-making, implementation, evaluation, and feedback established. From the perspective of policy application, the PAP has been implemented for the longest duration, across the widest spatial scope, and with the largest number of participants in the fields of poverty alleviation and the pursuit of common prosperity (Wang, 2022). Table 1 summarizes policy documents on paired assistance during the poverty alleviation campaign in the new era. Since 2013, the PAP has shifted its emphasis from "central government–led support" to "local government–driven assistance," with coordination refined down to the inter-city level. This transition has played an essential role in advancing the achievement of a moderately prosperous society. In 2016, President Xi Jinping emphasized the need to strengthen collaboration, further develop pairing assistance, improve pairing relationships, and establish evaluation indicators at the Symposium on East-West Poverty Alleviation Cooperation[5]. Following the comprehensive victory in eradicating absolute poverty, some scholars have empirically analyzed the macroeconomic effects of paired assistance, highlighting its positive role in driving economic growth in recipient regions (Wang, 2021).

TABLE 1. Overview of China's Policy Documents on Paired Assistance in the New Era

Time	Policy document	Key content
Nov 2012	*Notice on Carrying Out a New Round of Targeted Poverty Alleviation by Central Agencies and Relevant Departments*	Paired 310 central agencies with 592 poor counties
Feb 2013	*Guiding Opinions of the General Office of the State Council on Conducting Paired Assistance for Guizhou*	First time inter-city paired assistance was used for poor regions, designating 8 eastern cities to assist Guizhou Province

[5] "Accurately Addressing the Situation to Deepen and Enhance East-West Poverty Alleviation Collaboration", https://www. gov.cn/xinwen/2016-07/21/content_5093471.htm.

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Table 1 Continued

Time	Policy document	Key content
Aug 2013	*Implementation Plan for Central State Organs and Relevant Departments to Provide Paired Assistance to Southern Jiangxi and Other Former Central Soviet Areas*	Central ministries to provide paired assistance to 18 counties in Ganzhou (southern Jiangxi)
July 2014	*National Plan for Paired Assistance to the Three Gorges Reservoir Area (2014–2020)*	Paired Assistance to the Three Gorges Reservoir Area shifted from resettlement to coordinated development
Aug 2015	*Notice on Further Improving Key Poverty Alleviation Work*	Established the leading coordination mechanism for Targeted Poverty Alleviation
Dec 2016	*Guiding Opinions on Strengthening East-West Poverty Alleviation Collaboration*	Adjusted pairing arrangements; launched "Work Together Toward a Moderately Prosperous Society"
Jan 2017	*Action Plan for "Work Together for a Moderately Prosperous Society" Paired Assistance Campaign*	Further clarified the inter-city list for the "Work Together Toward a Moderately Prosperous Society" campaign, specifying exact cities
Mar 2017	*Work Plan for Paired Cooperation between Northeast China and Eastern Provinces*	Steadily advanced paired cooperation between the Northeastern Region and select Eastern provinces and cities
Apr 2021	*Work Plan for Central State Agencies and Relevant Departments to Provide Paired Support to Southern Jiangxi and Other Former Central Soviet Areas in the New Era*	Advanced paired assistance in the new era

Sources: Compiled by the author from the *Gazette of the State Council of the People's Republic of China* and policy documents on the National Rural Revitalization Administration's (NRRA) official website.

2.2 Corporate Cross-Regional Investment

Coordinated regional development is a cornerstone of China's current development strategy. Enterprises, as key players in economic geography, play a vital role in this process. By investing across regions—through setting up subsidiaries, mergers, or acquisitions—firms expand beyond their home markets. Such investments help companies expand their market presence and optimize resources while enabling the flow of production factors, such as capital and labor, across regions, thereby driving regional integration (Yang et al., 2021). Cross-regional investments create lasting economic ties through equity linkages, supporting the creation of a unified national market—a goal highlighted at the 20th CPC National Congress. However, market fragmentation remains a major obstacle to regional integration (Liu and Liu, 2023), raising the cost of enterprises operating across regions (Cao et al., 2015). Notably, research has primarily focused on how institutional environments shape cross-regional investment: (1) Formal Institutions: Drawing on institutional and transaction cost theories, studies show that regional institutional environments (Wang and Miao, 2015) and national industrial policies (Bu et al., 2017) heavily influence corporate investment decisions. For example, the Belt and Road Initiative (BRI) has boosted financing and outward foreign direct investment, making certain regions more attractive for cross-regional mergers and acquisitions (Wu et al., 2023). Industrial policies also help reduce market fragmentation, encouraging equity investments across regions (Bu et al., 2017). Additionally, high-speed rail has increased capital mobility, though it often concentrates capital in large cities (Ma et al., 2020). (2) Informal Institutions: Research also highlights the role of informal institutions, such as cultural affinity and social networks, which can compensate for deficiencies in formal institutions and shape investment patterns. For instance, trust between regions affects the frequency, scale, and success of mergers and acquisitions (Yang et al., 2021). Similarly,

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social networks tied to shared hometowns improve information sharing and resource integration, influencing cross-regional investment decisions (Zhang and Liu, 2022).

2.3 Literature Review

Existing research on the PAP offers valuable insights into its mechanisms, content, and outcomes, but focuses mainly on government-to-government interactions. In practice, market actors, such as companies, play a vital complementary role. While some recent studies have explored how firms participate in paired assistance, most are case studies that examine the impact on local firms in supported regions (Yao and Niu, 2021) or on the firms that are assisting (Li and Ling, 2021). No large-sample empirical studies have systematically explored how companies engage in paired assistance or the mechanisms driving their involvement. With China's focus on achieving common prosperity, paired assistance faces new demands and goals. Thus, a key challenge is balancing government–led regulation with market-driven resource allocation to promote coordinated regional development (Wang and Xie, 2022). Corporate cross-regional investment is a critical tool for this. While studies have examined these investments through the lens of formal and informal institutions, many findings are constrained by the "Lucas Paradox," in which capital flows primarily from less-developed to more-developed regions. To address balanced regional development, it is crucial to explore how companies from developed areas can be encouraged to invest in less-developed ones. This paper bridges this gap by investigating how the PAP facilitates regional coordination via corporate cross-regional investment, aiming to provide new empirical evidence on channeling capital to underdeveloped areas, thereby contributing to both regional integration and common prosperity in China.

3. Research Hypotheses

3.1 Paired Assistance Policy and Firms' Cross-Regional Investment

A firm's decision to invest across regions, especially by establishing subsidiaries, is a critical strategic choice that shapes its market footprint and overall development trajectory (Zhang and Liu, 2022). It also constitutes a key mechanism driving inter-regional capital flows (Guo and Wang, 2003). Existing studies show that the "siphon effect" of developed regions and the persistence of the "Lucas Paradox" continue to channel capital toward already prosperous areas, thereby widening regional economic disparities (Ma et al., 2020). Against the backdrop of China's goal to achieve common prosperity, the PAP has emerged as a significant national strategy for promoting coordinated, synergistic, and shared regional development. Notably, it strengthens inter-regional cooperation, optimizes industrial spatial distribution, expands internal and external openness, and operationalizes the principle that "those who prosper first help those who lag behind" to achieve the goal of common prosperity.[6] Therefore, we propose that the PAP, by improving resource allocation and market coordination , helps mitigate the Lucas Paradox and shape firms' location choices in cross-regional investment.

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[6] *Guiding Opinions on Further Strengthening East-West Poverty Alleviation Collaboration Work* (Issued by the General Office of the CPC Central Committee and the General Office of the State Council), https://www.gov.cn/xinwen/2016-12/07/content_5144678.htm.

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First, the PAP first encourages firms from supporting regions to invest in recipient regions by combining policy incentives with institutional pressure. Under the policy framework, the central government establishes accountability and incentive–constraint mechanisms for local authorities. Specific local governments are also paired with underdeveloped areas and assigned concrete responsibilities, timelines, and performance requirements (Wang, 2022), which in turn creates substantial political pressure on supporting governments to deliver tangible results. Since firms' cross-regional investment represents an essential channel for achieving balanced development, local governments often respond by deploying preferential policies or administrative guidance to steer corporate investment toward paired regions. Firms, in turn, tend to comply with PAP-related expectations to secure access to governmental resources and enhance their organizational legitimacy, thereby strengthening their motivation to invest in designated recipient cities (Chang et al., 2021).

Second, the PAP reduces investment uncertainty and lowers transaction and operational costs, thereby improving firms' willingness to invest across regions. Regional institutional disparities persist in China, particularly in marketization progress, which is often measured by the degree to which factor prices, innovation activities, and market transactions operate free of administrative intervention. Recipient regions, typically characterized by lower levels of economic development and marketization, often face stronger local protectionism and more intensive government involvement in firm activities. Consequently, this raises the cost of doing business for outsiders and suppresses investment intentions (Yang et al., 2018). As PAP implementation becomes increasingly sophisticated, however, intergovernmental agreements and joint coordination mechanisms reinforce the responsibilities of paired governments (Wang, 2022). These arrangements push recipient-region authorities to introduce supportive measures—such as investment facilitation tools and trade-friendly policies—that mitigate institutional uncertainty and increase the likelihood of firms committing to investment (Liu et al., 2022).

Finally, the PAP helps firms identify and utilize recipient regions' resource endowments—particularly complementary resources—thereby strengthening investment incentives. Industrial agglomeration and natural or human resource endowments are central factors shaping firms' cross-regional investment and location decisions (Hu et al., 2018). China's resource distribution exhibits east-west disparities. The PAP recipient areas, mostly located in the western region, boast abundant natural and cultural resource endowments. However, market segmentation, limited market orientation in resource development, and outsiders' informational disadvantages often constrain firms' ability to access and evaluate local resource opportunities (Cao and Jia, 2020). By serving as an institutional bridge between eastern and western regions, the PAP enables paired governments to explore mutual resource advantages and industrial complementarities jointly. This process also reduces information asymmetry, deepens firms' understanding of the investment environment, and enhances their access to cross-regional resources, ultimately increasing the likelihood of investment in recipient regions (Zhang and Liu, 2022).

In summary, the PAP simultaneously imposes policy incentives and institutional pressure on firms in supporting regions while lowering both investment and resource acquisition costs in recipient areas. These combined forces encourage firms to undertake cross-regional investment in

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their paired cities. Accordingly, we propose:

H1: The Paired Assistance Policy (PAP) prompts firms to invest in their home region's paired recipient city, thereby influencing their cross-regional location choices.

3.2 Moderating Effects

The PAP establishes a channel for inter-regional capital flows, encouraging firms in supporting regions to invest in recipient areas. Building on the preceding analysis, we further investigate the underlying mechanisms by examining how firm ownership, the degree of marketization in recipient regions, and differences in industrial structure between paired cities moderate this effect.

3.2.1 Firm ownership

State-owned and non-SOEs differ substantially in mission, value orientation, strategic objectives, and their relationship with government, all of which shape how they perceive and respond to PAP-related incentives and institutional pressures. First, compared with non-state-owned firms, SOEs play a strategically significant role in aligning with national development policies (Liu and Wei, 2017). For example, SOEs typically bear greater political responsibility in investment decisions such as international expansion (Duanmu, 2014). As a major national initiative to promote coordinated regional development, the PAP therefore exerts stronger institutional pressure on SOEs to participate in fostering economic growth in paired recipient regions. Second, the involvement of Party organizations in SOE governance enhances SOEs' ability to understand and align with Party principles and policy directives (Ma et al., 2012). Initiated by the CPC Central Committee and the State Council and executed by local governments, the PAP carries a distinct political mandate (Wang, 2022). As a result, SOEs are more attuned to the strategic importance of the PAP than private enterprises and exhibit greater initiative in developing their paired cities.

Based on this reasoning, we propose:

H2: The positive effect of the PAP on firms' cross-regional investment location choices is stronger for state-owned enterprises than for non-state-owned enterprises.

3.2.2 Marketization level of recipient regions

Firms' cross-regional investment decisions are closely shaped by the degree of marketization in the destination region (Yang et al., 2018). Accordingly, we argue that the extent to which the PAP promotes such investment varies with the recipient region's level of market development. First, marketization reflects the extent of administrative intervention by local governments in business activities (Yu et al., 2010). High-marketization regions boast stronger legal systems, property-rights safeguards, and market infrastructure—slashing transaction costs and boosting efficiency for outside investors. In contrast, lower marketization is often associated with evident local protectionism and heavier interference in the real economy, thereby heightening institutional uncertainty and raises entry barriers (Yang et al., 2018). Under such conditions, the government pairing arrangements and supportive policies embedded in the PAP help counter these uncertainties, providing greater institutional protection for firms engaging in cross-regional investment. Second, marketization also reflects the development of local market intermediaries. In regions with low marketization, firms rely more heavily on external networks and social ties to

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obtain market information, ensure rule enforcement, and secure contract execution (Peng and Luo, 2000). Consequently, this reliance weakens the likelihood of investment from external firms (Yang et al., 2018). In such contexts, the PAP functions as an essential bridge linking supporting and recipient regions, more effectively reducing information asymmetry than in more market-oriented regions. In summary, in recipient regions with lower marketization and less developed institutional environments, the PAP plays a more substantial compensatory role in facilitating firms' investment into recipient regions. Based on this reasoning, we propose**:**

H3: The positive effect of the PAP on firms' cross-regional investment is stronger when the recipient region exhibits a lower level of marketization.

3.2.3 Industrial structure differences between paired cities

From the perspectives of resource accessibility and comparative advantage, the relationship between the PAP and firms' cross-regional investment is further conditioned by the degree of divergence in industrial structure between paired cities. First, industrial clustering and inter-industry linkages are key determinants of firms' location choices (He et al., 2008). When the industrial structures of paired cities are similar, their factor endowments and industrial policies are likely to resemble one another, yielding comparable levels of industrial information (He et al., 2014) and reducing the information costs associated with investment. In contrast, when industrial structures differ substantially, especially where recipient cities possess underdeveloped or underutilized resources, firms face higher information costs in identifying and accessing external resources. In such cases, the PAP facilitates intensive interaction between local governments, enabling both officials and firms to uncover complementary resource endowments, thereby lowering the cost of acquiring heterogeneous or scarce assets and influencing firms' investment location choices. Second, based on the theory of comparative advantage, regional industrial development is constrained by knowledge and technological capacity (Zhang and Qiao, 2016). Recipient-city governments thus have a strong incentive to attract external capital to upgrade their industrial structures. In the current era, the PAP explicitly emphasizes leveraging regional comparative advantages (Wang and Xie, 2022) to avoid redundant investment and destructive competition stemming from industrial homogeneity (Hao and Zhang, 2023). Accordingly, when the industrial structures of paired cities diverge considerably, the PAP is more likely to stimulate cross-regional investment by meeting recipients' upgrading needs and by offering supporting-region firms a competitive environment with less direct rivalry and clearer avenues to capture comparative advantage. Based on this analysis, we propose:

H4: The positive effect of the PAP on firms' cross-regional investment is stronger when the industrial structures of the paired cities differ more substantially.

4. Research Design

4.1 Data Sources and Samples

This study examines A-share listed companies on the Shanghai and Shenzhen stock exchanges from 2013 to 2020, focusing on their cross-regional subsidiaries to assess how the PAP shapes firms' investment location choices. The rationale is as follows. First, consistent with prior literature

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(Zhang and Liu, 2022), establishing subsidiaries in other regions constitutes a principal form of cross-regional investment, and the subsidiary's registration location provides a clear indicator of the firm's geographic investment preference. Thus, we analyze the registered locations of listed firms' subsidiaries. Second, although the PAP has an early institutional foundation, its initial implementation was dominated by the "central government paired assistance" model. Since 2013, the policy has become increasingly refined, with the State Council's *Guiding Opinions on Paired Assistance for Guizhou* explicitly formalizing inter-city pairing for the first time. PAP policy documents released from 2013 onward also articulate clear targets and identify 2020 as the primary completion horizon. Hence, the period from 2013 to 2020 constitutes an appropriate observation window for this study.

We compile basic information on affiliated firms of A-share listed companies from 1998 to 2020 using the China Research Data Services Platform (CNRDS). Following Cao and Jia (2020), we exclude samples in which the parent company held less than 50% equity or where shareholding information was unclear, focusing on subsidiaries with parent ownership of 50% or more. We collect information on the province and prefecture-level city in which each subsidiary is registered and supplemented missing data using Baidu, Qichacha, and other sources. Existing studies mainly analyze firms' cross-regional investment location choices by counting the number of new subsidiaries established in different cities each year (Zhang and Liu, 2022). However, this method only includes cities chosen by firms for investment and cannot observe why firms did not choose certain cities, thereby omitting cities that were not selected (Cao and Jia, 2020). Therefore, following research on multinational investment location choices (Albino et al., 2018), we construct a set of potential investment locations for listed companies to analyze how the "pairing relationship between the listed company's registration city and the potential target city" affects firms' investment decisions in those target cities. Specifically, to account for industry- and year-specific factors in cross-regional investment, we construct a yearly set of potential target cities for each industry. We define these potential targets as all prefecture-level cities that received investment from any listed company within the same two-digit industry code in that given year (Albino et al., 2018). Because the study focuses on cross-regional investment, the city where the parent company is registered is excluded from that company's potential investment set. We then match the listed companies' actual cross-regional subsidiary data with the set potential target cities and determine whether each firm invested in each city. This produces a dataset structured as "Listed Company – Parent Registration City – Potential Target City – Year."

Using the policy documents in Table 1, we identify city–city pairing relationships and match them to the dataset to determine whether the parent company's registration city and the potential target city form a pairing. Meanwhile, we collect and compile firm-level basic information, financial data, corporate governance data, and executive information from the CSMAR database; social responsibility data for private listed companies from Hexun.com; and provincial and prefecture-level economic development data from the National Bureau of Statistics, the CSMAR database, and the China City Statistical Yearbook to control for other influencing factors. As this study focuses on the effects of local government pairing relationships, central SOEs, which are not under local government administration, are excluded. Finally, we remove samples with severe

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missing data and winsorize all continuous variables at the 1% level to mitigate the influence of extreme values. Based on this processing, the study obtained 7,087,640 observations for the period 2013–2020, covering actual investment data for 3,397 firms across 401 prefecture-level administrative units (prefecture-level cities, districts of municipalities, and province-administered counties).

4.2 Model Construction and Variable Definition

We construct the following econometric model to empirically test the impact of the Paired Assistance Policy on firms' cross-regional investment location choices:

$$Crosub_{i,j,t}=\alpha_0+\alpha_1\times Aid_{i,j,t\text{-}1}+\alpha_i\times\sum Control_{i,j,t\text{-}1}+\varepsilon_{i,j,t} \quad (1)$$

$$Crosub_{i,j,t}=\alpha_0+\alpha_1\times Aid_{i,j,t\text{-}1}+\alpha_2\times Aid_{ijt\text{-}1}\times Moderator_{i,j,t\text{-}1}+\alpha_i\times\sum Control_{i,j,t\text{-}1}+\varepsilon_{i,j,t} \quad (2)$$

Where: i denotes the listed company, j denotes the potential target city, and t denotes the year. $Crosub_{i,j,t}$ is the dependent variable; $Aid_{i,j,t\text{-}1}$ is the independent variable; $Control_{i,j,t\text{-}1}$ is the control variable vector; $\varepsilon_{i,j,t}$ is the error term; $Moderator_{i,j,t\text{-}1}$ represents the moderator variable; and $Aid_{i,j,t\text{-}1}\times Moderator_{i,j,t\text{-}1}$ is the key explanatory variable for the moderating effect. Given the large sample size, the high frequency of zero values in the dependent variable, and the inclusion of both firm and year fixed effects, we utilize the High-Dimensional Fixed Effects Panel Poisson Model (PPMLHDFE) for analysis (Correia et al., 2020). The variables are defined and measured as follows:

(1) Dependent Variable: Firm Investment in the City (*Crosub*): Following existing research (Albino et al., 2018), this variable is set as a dummy variable. It takes the value one if firm i establishes a subsidiary in city j in year t, and zero otherwise.

(2) Independent Variable: Paired Assistance City *(Aid):* This is a dummy variable. It takes the value one if city j was a Paired Assistance Policy (PAP) city paired with firm i's home city in year $t\text{-}1$, and zero otherwise.

(3) Moderating Variables: ① Ownership Type (*SOE*): A dummy variable. It is one if firm i was a State-Owned Enterprise in year $t\text{-}1$, and zero otherwise. ② Recipient Marketization Level (*TMarket*): Measured by the marketization index of the province where city j is located in year $t\text{-}1$ (Wang et al., 2019). ③ Industrial Structure Difference (*SD*): This variable is constructed by borrowing from studies on industrial structure convergence (He et al., 2008). The formula is:

$$SD_{i,t\text{-}1}=1-\sum_{k=1}^{n}X_{i,k,t\text{-}1}X_{j,k}\Big/\sqrt{\sum_{k=1}^{n}X_{i,k,t\text{-}1}^2\sum_{k=1}^{n}X_{j,k,t\text{-}1}^2} \quad (3)$$

Where: $X_{i,k,t\text{-}1}$ is the proportion of industry k in the GDP of firm i*'s* home city in year t-1. $X_{j,k,t}$ is the proportion of industry k in the GDP of city j in year $t\text{-}1$. The value of $SD_{i,j,t\text{-}1}$ ranges between 0 and 1. A higher value indicates a greater difference in industrial structure between the two cities.

(4) Control Variables. Following existing studies, we control for the following variables. At the firm-level, we include firm size (*Size*), measured by the natural logarithm of total assets (Cao et al., 2018); firm age (*Age*), measured by the number of years since establishment; profitability (*ROA*), measured by return on assets; and leverage (*Lev*), measured by total liabilities divided by

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total assets (Yang et al., 2018). We also control for the proportion of independent directors (*Ind*) and the shareholding ratio of the largest shareholder (*Top1*). Because charitable donations are also a channel through which firms participate in paired assistance, we control for donation expenditure (*Donation*), measured as donation spending divided by operating revenue. In addition, we control for political connections of top executives (*PC*), measured by whether the firm's chairperson or general manager has served as a delegate to the National People's Congress or a member of the Chinese People's Political Consultative Conference (Cao et al., 2018); and investment experience (*Exp*), measured by whether firm *i* has previously invested in city *j* (Albino et al., 2018). At the regional level, we control for the poverty level of potential target city *j* (*Poverty*), measured by the number of poor counties within city *j*; the GDP gap (*GDPgap*) and GDP growth rate gap (*GDPggap*) between the target city and the listed firm's home city to account for economic differences (Zhang and Liu, 2022); the geographic distance between the two cities (*Dis*); and the marketization level of the listed firm's home city (*HMarket*) (Zhang and Liu, 2022). Firm fixed effects and year fixed effects are also included.

Table 2 presents the descriptive statistics and correlation analysis for the main variables. We compute the Variance Inflation Factor (VIF) for all variables. The mean VIF is 1.25. All individual VIF values are below 2.00, well under the commonly used threshold of 10, indicating that the model does not suffer from multicollinearity.

TABLE 2. Descriptive Statistics and Correlation Analysis

Variable	Mean	S.D.	1	2	3	4	5	6	7	8
1. Crosub	0. 024	0. 153	1							
2. Aid	0. 004	0. 065	0. 002	1						
3. SOE	0. 323	0. 468	**0. 003**	**-0. 014**	1					
4. Tmarket	8. 267	1. 829	**0. 052**	**-0. 062**	**-0. 013**	1				
5. SD	0. 082	0. 08	**0. 001**	**-0. 005**	**0. 040**	**0. 044**	1			
6. Size	22. 130	1. 317	**0. 106**	**0. 002**	**0. 365**	**0. 026**	**0. 052**	1		
7. Age	17. 880	5. 630	**0. 010**	**0. 003**	**0. 229**	**0. 065**	**-0. 053**	**0. 190**	1	
8. ROA	0. 033	0. 072	**-0. 001**	**0. 002**	**-0. 079**	**-0. 013**	**0. 009**	**-0. 007**	**-0. 087**	1
9. Lev	0. 428	0. 213	**0. 057**	**-0. 005**	**0. 288**	**0. 007**	**-0. 006**	**0. 501**	**0. 213**	**-0. 370**
10. Ind	0. 376	0. 053	**0. 003**	**0. 004**	**-0. 055**	**0. 011**	**0. 018**	**-0. 017**	**-0. 037**	**-0. 036**
11. Top1	0. 340	14. 61	**0. 003**	**-0. 002**	**0. 155**	**-0. 015**	**0. 028**	**0. 153**	**-0. 096**	**0. 154**
12. PC	0. 195	0. 396	**0. 009**	**-0. 006**	**-0. 158**	**-0. 009**	**-0. 046**	**0. 014**	**-0. 071**	**0. 048**
13. Donation	0. 0003	0. 001	**0. 006**	**-0. 003**	**-0. 088**	**0. 005**	**-0. 027**	**-0. 006**	**-0. 018**	**0. 081**
14. Exp	0. 025	0. 157	**0. 806**	**-0. 002**	**0. 011**	**0. 057**	**0. 004**	**0. 117**	**0. 020**	**-0. 011**
15. Poverty	1. 564	2. 763	**-0. 037**	**0. 073**	**0. 010**	**-0. 357**	**-0. 082**	**-0. 001**	**-0. 001**	**-0. 000**
16. GDPgap	2. 636	4. 636	**0. 031**	**-0. 007**	**0. 071**	**0. 164**	**0. 567**	**0. 086**	**-0. 028**	**0. 007**
17. GDPggap	2. 290	2. 300	**-0. 035**	**-0. 008**	**0. 037**	**-0. 164**	**0. 038**	**-0. 011**	**-0. 050**	**-0. 004**
18. Dis	1. 254	0. 733	**-0. 063**	**0. 029**	**-0. 004**	**-0. 441**	**0. 092**	**-0. 009**	**0. 012**	**-0. 011**
19. Hmarket	9. 317	1. 545	**0. 007**	**0. 040**	**-0. 238**	**0. 047**	**0. 011**	**-0. 072**	**-0. 037**	**0. 072**
Variable	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
10. Ind	**-0. 014**	1								

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Table 2 Continued

11. Top1	**0. 010**	**0. 044**	1							
12. PC	**-0. 046**	**0. 005**	**-0. 011**	1						
13. Donation	**-0. 111**	**0. 004**	**-0. 012**	**0. 079**	1					
14. Exp	**0. 064**	**0. 004**	-0. 001	**0. 007**	**0. 005**	1				
15. Poverty	**-0. 003**	**-0. 002**	**0. 001**	**0. 001**	**-0. 002**	**-0. 041**	1			
16. GDPgap	**0. 007**	**0. 013**	**0. 030**	**-0. 053**	**-0. 021**	**0. 034**	**-0. 123**	1		
17. GDPggap	**0. 022**	**-0. 013**	**0. 023**	**0. 001**	**0. 001**	**-0. 038**	**0. 027**	**0. 006**	1	
18. Dis	**0. 008**	**0. 012**	**-0. 002**	**-0. 011**	**0. 004**	**-0. 066**	**0. 044**	**-0. 068**	**0. 170**	1
19. Hmarket	**-0. 125**	**0. 030**	**-0. 009**	**0. 022**	**0. 004**	**0. 008**	**-0. 001**	**0. 030**	**-0. 123**	**-0. 092**

Note: All variable definitions and measurements are detailed in Table 1; bolded coefficients are significant at the 5% level or better.
Source: Authors' calculations.

5. Empirical Analysis

5.1 Regression Results

Table 3 presents regression estimates of the PAP on firms' cross-regional investment siting. Column (1) reports the baseline without the key predictor. In Column (2), *Aid* is positive and significant at the 0.1% level, confirming that PAP pairings drive investment from supporting to recipient cities—supporting H1.

Column (3) shows the interaction *Aid* × *SOE,* which is positive and significant: state-owned firms respond more strongly to pairings than their private peers, supporting H2. Column (4) reveals *Aid* × *TMarket* negative and significant, indicating the PAP effect strengthens in low marketization recipient cities—consistent with H3. Column (5) displays *Aid* × *SD* negative and significant, meaning larger industrial structure gaps between paired cities amplify the policy's impact, supporting H4.

TABLE 3. Targeted Support Policy and Firm's Cross-Regional Investment

Variable	*Crosub*				
	(1)	(2)	(3)	(4)	(5)
Aid		0. 058** (0. 020)	0. 013 (0. 026)	0. 257** (0. 078)	-0. 038 (0. 041)
Aid × *SOE*			0. 117** (0. 038)		
Aid × *Tmarket*				-0. 028** (0. 011)	
Aid × *SD*					1. 022** (0. 372)
SOE	-0. 199*** (0. 011)	-0. 199*** (0. 011)	-0. 200*** (0. 011)	-0. 199*** (0. 011)	-0. 199*** (0. 011)
Tmarket	0. 020*** (0. 001)	0. 020*** (0. 001)	0. 020*** (0. 001)	0. 020*** (0. 001)	0. 020*** (0. 001)
SD	-0. 343*** (0. 019)	-0. 343*** (0. 019)	-0. 342*** (0. 019)	-0. 343*** (0. 019)	-0. 343*** (0. 019)

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Table 3 Continued

Variable	*Crosub*				
	(1)	(2)	(3)	(4)	(5)
Size	-0. 111*** (0. 005)	-0. 111*** (0. 005)	-0. 111*** (0. 005)	-0. 111*** (0. 005)	-0. 111*** (0. 005)
Age	0. 005 (0. 004)	0. 005 (0. 004)	0. 005 (0. 004)	0. 005 (0. 004)	0. 005 (0. 004)
ROA	0. 242*** (0. 026)	0. 242*** (0. 026)	0. 242*** (0. 026)	0. 242*** (0. 026)	0. 242*** (0. 026)
Lev	-0. 000 (0. 019)	-0. 000 (0. 019)	-0. 000 (0. 019)	-0. 000 (0. 019)	-0. 000 (0. 019)
Ind	-0. 173*** (0. 043)	-0. 174*** (0. 043)	-0. 174*** (0. 043)	-0. 173*** (0. 043)	-0. 174*** (0. 043)
Top1	0. 001* (0. 000)	0. 001* (0. 000)	0. 001* (0. 000)	0. 001* (0. 000)	0. 001* (0. 000)
PC	-0. 010 (0. 006)	-0. 010 (0. 006)	-0. 010 (0. 006)	-0. 010 (0. 006)	-0. 010 (0. 006)
Donation	-9. 999*** (2. 259)	-9. 999*** (2. 259)	-9. 989*** (2. 259)	-9. 999*** (2. 259)	-9. 986*** (2. 259)
Exp	5. 147*** (0. 007)	5. 147*** (0. 007)	5. 147*** (0. 007)	5. 147*** (0. 007)	5. 147*** (0. 007)
Poverty	-0. 017*** (0. 001)	-0. 017*** (0. 001)	-0. 017*** (0. 001)	-0. 017*** (0. 001)	-0. 017*** (0. 001)
GDPgap	0. 003*** (0. 000)	0. 003*** (0. 000)	0. 003*** (0. 000)	0. 003*** (0. 000)	0. 003*** (0. 000)
GDPggap	-0. 015*** (0. 001)	-0. 015*** (0. 001)	-0. 015*** (0. 001)	-0. 015*** (0. 001)	-0. 015*** (0. 001)
Dis	-0. 101*** (0. 002)	-0. 101*** (0. 002)	-0. 101*** (0. 002)	-0. 101*** (0. 002)	-0. 101*** (0. 002)
HMarket	-0. 006† (0. 004)	-0. 006† (0. 004)	-0. 006† (0. 004)	-0. 006† (0. 004)	-0. 006† (0. 004)
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Constant	-2. 551*** (0. 143)	-2. 552*** (0. 143)	-2. 552*** (0. 143)	-2. 552*** (0. 143)	-2. 550*** (0. 143)
Sample size	7 087 640	7 087 640	7 087 640	7 087 640	7 087 640
Pseudo R-squared	0. 601	0. 601	0. 601	0. 601	0. 601

Note: †, *, **, *** denote significance at 10%, 5%, 1%, and 0.1% levels, respectively; standard errors in parentheses.
Source: Authors' calculations.

5.2 Robustness Checks

5.2.1 Alternative model specification

We re-estimate using a Logit model; results appear in Table 4. Column (1) shows that *Aid* is positive and significant at the 5% level, thereby upholding H1. Columns (2)–(4) mirror the main findings, confirming all moderation hypotheses. Adding target city fixed effects (Table 5) yields consistent results, reinforcing robustness.

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TABLE 4. Robustness – Logit Regressions

Variable	*Crosub*			
	(1)	(2)	(3)	(4)
Aid	0. 203* (0. 082)	0. 000 (0. 034)	0. 640** (0. 244)	-0. 207 (0. 130)
Aid × SOE		0. 126† (0. 065)		
Aid × Tmarket			-0. 078* (0. 035)	
Aid × SD				3. 699** (1. 270)
Control variable	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Constant	-8. 616*** (0. 106)	-4. 332*** (0. 044)	-8. 518*** (0. 106)	-8. 615*** (0. 106)
Sample size	7 087 640	7 087 640	7 087 640	7 087 640
Pseudo R-squared	0. 668	0. 670	0. 668	0. 668

Note: †, *, **, *** denote significance at 10%, 5%, 1%, and 0.1% levels, respectively; standard errors in parentheses.
Source: Authors' calculations.

TABLE 5. Robustness – Target City Fixed Effects

Variable	*Crosub*			
	(1)	(2)	(3)	(4)
Aid	0. 043† (0. 025)	-0. 025 (0. 028)	0. 314*** (0. 077)	-0. 071† (0. 041)
Aid × SOE		0. 144*** (0. 040)		
Aid × Tmarket			-0. 042*** (0. 010)	
Aid × SD				0. 938* (0. 378)
Control variable	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
City fixed effects	Yes	Yes	Yes	Yes
Constant	-2. 348*** (0. 150)	-2. 350*** (0. 150)	-2. 622*** (0. 143)	-2. 621*** (0. 143)
Sample size	7 087 640	7 087 640	7 087 640	7 087 640
Pseudo R-squared	0. 604	0. 604	0. 604	0. 604

Note: †, *, **, *** denote significance at 10%, 5%, 1%, and 0.1% levels, respectively; standard errors in parentheses.
Source: Authors' calculations.

5.2.2 Alternative target city sets

We further test robustness by altering the potential-city pool. First, we broaden it industry-neutrally to include every prefecture-level city ever invested in by any listed firm, generating 8,486,305 observations. Table 6 confirms results align with the baseline. Second, we narrow the set to prefecture-level cities that contain poverty counties; Table 7 shows that the hypotheses hold firm.

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TABLE 6. Robustness – Expanded City Set

Variable	*Crosub*			
	(1)	(2)	(3)	(4)
Aid	0. 105*** (0. 025)	0. 058† (0. 033)	0. 283** (0. 099)	0. 018 (0. 048)
Aid × SOE		0. 124* (0. 050)		
Aid × Tmarket			-0. 025† (0. 013)	
Aid × SD				0. 926* (0. 433)
Control variable	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Constant	-4. 498*** (0. 177)	-4. 498*** (0. 177)	-4. 498*** (0. 177)	-4. 496*** (0. 177)
Sample size	8 486 305	8 486 305	8 486 305	8 486 305
Pseudo R-squared	0. 572	0. 572	0. 572	0. 572

Note: †, *, **, *** denote significance at 10%, 5%, 1%, and 0.1% levels, respectively; standard errors in parentheses.
Source: Authors' calculations.

TABLE 7. Robustness Check – Restricted Target City Set

Variable	*Crosub*			
	(1)	(2)	(3)	(4)
Aid	0. 068** (0. 025)	0. 004 (0. 035)	0. 011* (0. 005)	0. 000 (0. 001)
Aid × SOE		0. 089† (0. 048)		
Aid × Tmarket			-0. 001* (0. 000)	
Aid × SD				0. 010† (0. 006)
Control variable	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Constant	-1. 995*** (0. 358)	-2. 200*** (0. 363)	0. 021*** (0. 005)	0. 022*** (0. 004)
Sample size	1 569 092	1 569 092	1 569 092	1 569 092
Pseudo R-squared	0. 591	0. 592	0. 821	0. 821

Note: †, *, **, *** denote significance at 10%, 5%, 1%, and 0.1% levels, respectively; standard errors in parentheses.
Source: Authors' calculations.

5.2.3 Alternative outcomes

Following prior work, we analyze the model using alternative dependent variables: (1) *FCrosub* – 1 if firm *i* makes its first investment in city *j* in year *t*, else 0 (Zhang and Liu, 2022). (2) *NCrosub* – the count of new subsidiaries established by firm *i* in city *j* in year *t* (Zhang and Liu, 2022). (3) *RCrosub* – the proportion of new subsidiaries in city *j* divided by firm *i's* total cross-

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regional openings in year *t* (0 if firm *i* made no cross-regional openings in year *t*; Cao and Jia, 2020). Table 8 reports uniformly positive and significant *Aid* coefficients, reinforcing that the PAP pairing relationship consistently promotes firm investment in the paired location.

TALBE 8. Robustness – Alternative Outcomes

Variable	*FCrosub*	*NCrosub*	*RCrosub*
	(1)	(2)	(3)
Aid	0. 263* (0. 109)	0. 204* (0. 095)	0. 441** (0. 166)
Control variable	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Constant	1. 086† (0. 598)	-4. 553*** (0. 728)	0. 821 (1. 187)
Sample size	7 087 640	7 087 640	7 087 640
(Pseudo) R-squared	0. 138	0. 346	0. 158

Note: †, *, **, *** denote significance at 10%, 5%, 1%, and 0.1% levels, respectively; standard errors in parentheses.
Source: Authors' calculations.

5.3 Further Analysis: Effects on High-Quality Development

While our core findings establish that the PAP channels investment from supporting to recipient regions, directing capital to underdeveloped areas, the broader economic consequences of these investment flows remain underexplored. We now assess their impact on development quality in both recipient cities and supporting firms.

5.3.1 Firm's cross-regional investment and recipient-city productivity

We posit that PAP-facilitated investment boosts recipient TFP through two channels: direct capital injection and signaling effects that attract further investment (Zhou et al., 2023), and the spillover of technology, knowledge, and information (Li et al., 2020). Thus, we expect PAP-driven investment to boost recipient cities' total factor productivity (TFP).

Following Wang (2021), we use a Difference-in-Differences (DID) approach to examine the impact of the PAP on the development quality of recipient cities. The sample includes prefecture-level cities that contain poverty counties paired under the PAP (treatment group) and other prefecture-level cities in the same province (control group). We collect economic development data for all cities from 2010 to 2020. We construct two variables: *Treatcity* and *Postaid*. *Treatcity* is a dummy variable equal to 1 if the city is in a PAP-linked poverty county during the study period (treatment group), and zero otherwise. *Postaid* is a dummy variable equal to 1 after the city forms a pairing relationship with an assisting region, and zero otherwise. We also construct the variable *Nonlocal* and include the interaction *Treatcity* × *Postaid* × *Nonlocal* in the DID model to test the effect of nonlocal firms' investment under the PAP on the high-quality development of recipient cities. *Nonlocal* is measured as the number of subsidiaries established in city *j* in year *t* by nonlocal listed firms. The dependent variable is Total Factor Productivity (*TFPcity*). Since shifting from factor-driven growth to TFP-driven growth is essential for achieving high-quality economic

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development (Yang, 2015), TFP is a key indicator of regional economic performance (Yang et al., 2018). We employ Stochastic Frontier Analysis (SFA) to estimate prefecture city-level TFP, as it accommodates random error and thus better controls for measurement error and uncertainty (Tang et al., 2022), with real GDP as the output indicator and capital stock (calculated using the perpetual inventory method) and total employment as input indicators.

Table 9, Column (1): *Treatcity* × *Postaid* is positive and significant—PAP pairings enhance efficiency. Column (2): the triple interaction *Treatcity* × *Postaid* × *Nonlocal* is also positive and significant, confirming cross-regional investment as a key mechanism elevating recipient TFP. This underscores PAP's role in balanced, high-quality regional growth.

TABLE 9. PAP Investment and Recipient-City Development

Variable	*TFPcity*	
	(1)	(2)
Treatcity	-0. 011† (0. 006)	-0. 059*** (0. 014)
Postaid	-	-
Treatcity × *Postaid*	0. 011* (0. 005)	-0. 005 (0. 012)
Treatcity ×*Nonlocal*		0. 003 (0. 003)
Postaid ×*Nonlocal*		-
Treatcity ×*Postaid* × *Nonlocal*		0. 013*** (0. 003)
Control variable	Yes	Yes
Province fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Constant	0. 243** (0. 085)	0. 221* (0. 091)
Sample size	858	858
R-squared	0. 950	0. 952

Note: †, *, **, *** denote significance at the 10%, 5%, 1%, and 0.1% levels, respectively; standard errors are reported in parentheses.
Source: Authors' calculations.

5.3.2 The impact of cross-regional investment under the paired assistance policy on supporting firms' high-quality development

Firms are the main drivers of regional development. To further examine the role of paired assistance in promoting coordinated regional development, we also assess how cross-regional investment affects the quality of development of supporting firms. Unlike charitable donations and other one-off support, establishing subsidiaries is a strategic, long-term commitment that goes beyond mere policy compliance; it is an investment intrinsically linked to the firm's own development trajectory. China's vast territory and abundant resources mean that cross-regional expansion is an essential strategy for firms seeking sustainable development within a unified national market (Song and Huang, 2014). When supporting firms in establishing subsidiaries in recipient cities, the paired assistance policy helps reduce cross-regional market-entry costs, enables firms to leverage local resources and markets more effectively, and allows them to benefit from

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competitive advantages such as technological leadership. Therefore, we argue that investment by supporting firms in paired recipient cities contributes to improving their development quality.

Following Li and Ling (2021), we also adopt a DID approach to examine the impact of the paired assistance policy on supporting firms. The initial sample comprises all listed firms located in regions tasked with providing paired assistance, and we collect data on these firms from 2010 to 2020. To ensure the feasibility of the DID design, we exclude firms that lack data before the policy announcement and those with missing values, resulting in 19,878 observations from 2,603 listed firms, among which 172 firms invest in paired cities (treatment group). Based on this, we construct the DID variables: *Treatfirm* equals 1 if a firm invests in a paired city (treatment group), and zero otherwise; *Postinv* equals 1 after the firm invests, and zero otherwise. Firm-level total factor productivity (*TFPfirm*), a key indicator of high-quality firm development (Li et al., 2021), is used as the dependent variable and is calculated using the LP method following Lu and Lian (2012). Since cross-regional investment is an endogenous strategic decision, we additionally apply PSM to match treatment and control firms, using the control variables from the main model and a 1:2 nearest-neighbor matching method to reduce endogeneity. After matching, we obtained 4,019 observations, including 1,512 treatment and 2,507 control observations. The regression results based on both the full sample and the matched sample are shown in Table 10. The DID interaction coefficient *Treatfirm* × *Postinv* is significantly positive in all specifications, indicating that investment by supporting firms in paired assistance cities improves their own production efficiency. Existing research finds that paired assistance promotes upgrading among recipient-city firms (Yao and Niu, 2021). Our findings show that participating in paired assistance also enhances the efficiency of supporting firms, further confirming the policy's micro-level economic effects. We argue that investing in paired cities—an important form of participation in poverty alleviation—boosts firm confidence, lowers tax burdens (Li and Ling, 2021), and enables access to complementary inter-regional resources, thereby improving the efficiency of supporting firms.

TABLE 10. The Impact of Cross-Regional Investment under the Paired Assistance Policy on Supporting Firms

Variable	*TFPfirm*	
	(1)	(2)
Treatfirm	-	-
Postinv	-0. 636*** (0. 105)	-2. 856*** (0. 316)
Treatfirm × *Postinv*	4. 903*** (0. 202)	4. 979*** (0. 203)
Control variable	Yes	Yes
Firm fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Constant	-0. 712 (1. 010)	-6. 952 (12. 095)
Sample size	19 878	4 019
R-squared	0. 477	0. 597

Note: †, *, **, *** denote significance at the 10%, 5%, 1%, and 0.1% levels, respectively; standard errors are reported in parentheses.
Source: Authors' calculations.

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6. Conclusions and Implications

As China strides toward socialist modernization, coordinated regional development stands as a linchpin for the "dual circulation" strategy—where domestic markets drive growth while engaging the world—and a cornerstone for high-quality advancement and the realization of common prosperity (Hao and Zhang, 2023). Following the 18th Party Congress in 2012, China's comprehensive triumph over absolute poverty has spotlighted the Paired Assistance Policy (PAP). This signature Chinese institutional innovation powerfully tackles regional disparities with great efficacy (Wang, 2022). This study explores how the PAP influences firms' cross-regional investment decisions, thereby illuminating its pivotal role in addressing the Lucas Paradox. Drawing on PAP policy directives and A-share listed firms' subsidiary data from 2013–2020, we demonstrate that pairings decisively channel investment from supporting to recipient cities. This promotional impact surges for SOEs, is amplified in recipient regions with low marketization, and is most evident where paired cities exhibit stark contrasts in industrial structure. The PAP achieves this through three primary mechanisms: deploying policy incentives and institutional pressure; significantly reducing investment and resource acquisition hurdles for firms; and sharpening firms' grasp of recipient markets and complementary assets. Zooming out, PAP-fueled investment elevates recipient-city TFP while supercharging the efficiency of supporting firms, establishing a resounding mutual gain. Far from being merely a charitable endeavor or a forced redistribution, the PAP is demonstrated to be a masterstroke of "more prosperous regions assisting less developed regions," engineering balanced growth and advancing the goal of a shared future.

This paper makes several theoretical contributions. First, by focusing on the micro level of firm investment, it expands the research on paired assistance. Through empirical analysis, we provide firm-level evidence on how PAP influences capital flows and promotes coordinated regional development. We uncover the mechanisms through which PAP affects firms' cross-regional investment. Second, by analyzing how this distinctive Chinese national governance mechanism affects firms' investment behavior, the paper enriches institution-based research on cross-regional investment. Whereas existing studies mainly examine industrial policies or regional institutional environments, this paper centers on PAP, thereby broadening the analytical boundaries of investment behavior and offering Chinese evidence to address the Lucas Paradox.

Policy and Practical Implications: This study provides key insights for promoting coordinated regional development and informing corporate cross-regional investment decisions. First, in the new era, the PAP remains a vital engine for balanced regional development. Governments should deepen the PAP during rural revitalization and common prosperity, actively encouraging firms from more prosperous regions to invest in less developed areas. This requires crafting a regional development model that blends state guidance, market dominance, and universal participation by market entities—thereby supercharging the breadth of domestic circulation. Second, the PAP must fully explore the resource complementarity between paired cities and refine city matching criteria. By forging robust cross-regional industrial alliances, the policy can effectively catalyze the industrial upgrading and transformation of recipient regions. Third, the PAP should promote regional advancement not only through economic support—the model of "more prosperous regions assisting less developed regions"—but also by driving the "advanced leading the less advanced" in areas such as governance standards and business climates. Markets must be fused to dismantle

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inter-regional barriers, thereby reducing the cost and risk of firms' cross-regional investment. Concurrently, local authorities in recipient regions must aggressively enhance their business environment and proactively attract more top-tier investors. Fourth, firms in more prosperous areas should actively seize PAP openings, strategically identify the characteristics and diversity of the domestic market's resources, and harness policy incentives to widen their domestic investment horizons. In doing so, they can emerge as the main force driving regional coordinated development and high-caliber economic growth.

Limitations and Future Directions: Our study focuses on investment location choice, bypassing essential decisions about investment scale, sector, or broader corporate strategies. Additionally, the study neglected other strategic decisions by the firms. Thus, future inquiries could drill into finer investment data or probe the PAP's effects through the lenses of corporate social responsibility or strategic partnerships, further illuminating firm-driven regional harmony. CE

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