

Retraction

Retracted: Analysis of Academic Cooperation Network for Returnee Faculty Members to Realize Value from the Perspective of Economics

Discrete Dynamics in Nature and Society

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

- [1] Y. Zhu, F. Li, C. Qin, W. Zhang, and J. Wen, "Analysis of Academic Cooperation Network for Returnee Faculty Members to Realize Value from the Perspective of Economics," *Discrete Dynamics in Nature and Society*, vol. 2021, Article ID 2994123, 8 pages, 2021.

Research Article

Analysis of Academic Cooperation Network for Returnee Faculty Members to Realize Value from the Perspective of Economics

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Drawing on theories of social network and knowledge absorption, this paper examines the direct influence of returnee faculty members (RFMs) over college research performance (CRP) from three aspects, namely, the intensity of cooperative relationship (ICR), research influence (RI), and acquisition capability of heterogeneous knowledge (ACHK). In addition, the authors tested the regulating effect of ICR. The results show that RI of RFMs has a significant positive effect on CRP, ACHK has no significant effect on CRP, and ICR has a significant negative effect and a major regulating effect on CRP.

1. Introduction

With the dramatic changes in global science, technology, and economy, China has successively launched a series of policies to attract talents. Under these policies, more and more overseas talents have returned and worked in domestic universities [1]. According to the existing researches, the returnees refer to teachers who have obtained doctoral degrees overseas (including those in Hong Kong, Macau, and Taiwan) and have returned to work in the country. Therefore, this article defines the returnee as teachers whose birthplace is in Mainland China (excluding Hong Kong, Macau, and Taiwan), and they have obtained a doctorate degree out of Mainland China (including Hong Kong, Macau, and Taiwan) and are now working full-time in universities and research institutions of mainland [1]. The data based on the survey of Chinese university teachers showed that RFMs played a unique role in university scientific research, discipline construction, talent cultivation, public service and international exchange, and cooperation. The survey also indicated that RFMs continued on their abroad research even they returned home [2]. Overall, RFMs played a positive part in the teaching, research, and public

service and facilitated the development of international academic exchange [2–4].

At the same time, RFMs' separation from the local academic environment and the systematic differences between domestic and foreign scientific research result in the dilemma of RFMs' academic choice between internationalization and localization, as well as the problem of "academic hard landing" [5, 6]. In order to solve these problems, the home universities are taking initiatives to deal with the dilemma but with little effect. How to effectively evaluate RFMs' spillover effect, and thus take more specific talent management measures to enhance quality and efficiency of returnees' management, has become a new challenge in optimizing higher education resource allocation and improving the professional level on talents' management [7, 8].

With the ever-deepening globalization of knowledge, scientific research cooperation has become a common phenomenon around the world. As the social network theory has been applied in various fields, some scholars have begun to investigate the relationship between faculties' research cooperation and universities' research performance from the perspective of the structural characteristics of scientific research cooperation. RFMs tend to complete their

scientific research in the dynamic process of cooperation and exchange with other foreign scholars. A large number of studies have confirmed that scientific research cooperation can make up for the individual researcher's deficiencies, thereby improving their scientific research performance [9]. Changes in scientific cooperation relations will bring about different scientific research performance [10, 11]. Scholars pointed out that scientific research performance is not only affected by the research environment, but also by the collaborative research team [12, 13]. In the process of research cooperation, RFMs formed a scientific research team by communicating and interacting with other researchers to share knowledge and data resources. The transfer, dissemination, and diffusion of knowledge in the process of cooperation enable team members to finally generate scientific production and improve scientific research performance [14, 15].

Researchers mainly adopted the empirical methods of in-depth interviews, questionnaires, and text analysis to study the talents' mobility, performance appraisal, local adaptation, and the introducing policy concerned with RFMs, which confirmed the significance of overseas experience to promote teacher's teaching, scientific research, and professional development. However, the previous studies mainly focus on RFMs' local adaptation, their mobility, and their individual research performance, as well as the influencing factors [16]. There lacks organizational perspective to investigate the internal mechanism and approach of the influence of RFMs' research cooperation on the research performance. What are the composition and characteristics of RFMs' scientific research cooperation network [16]? How much influence does this network structure have on the improvement of the research performance of the university? These issues need further discussion and exploration [17, 18].

Therefore, based on the organizational perspective, this paper starts from RFMs' research cooperation network and intends to use the knowledge absorption theory [19], to build a Poisson regression model to explore the composition of RFMs' research cooperation network and its influence mechanism on the research performance and test the moderating effect of intensity of cooperative relationship. It provides theoretical and practical reference for improving the talent management level on RFMs, optimizing the scientific research cooperation relationship, and enhancing the scientific research performance of universities.

2. Related Work

The research on RFMs mainly focuses on the talent mobility, performance, local adaptation, and recruiting policies. In the field of talent mobility, several studies have pointed out that globalization, innovation of science and technology, commonness of innovation activities, and good policy of emerging economies provide a good career development opportunity for overseas talents backflow [20–23], enhance the transformation of the talent mobility from linear mode to triangular mode, intensify the aggregation effect of returnees' mobility, and promote the technological innovation

and progress of the country or region. For example, Wei found in his research that the university level, salary level, city level, city marketization degree, and per capita scientific research expenditure are the important "pulling" factors for the return of talents [24].

Scholars believed that RFMs acted as a bridge in terms of research exchanges and cooperation with abroad researchers. They also played a positive role in the teaching reform, academic research initiatives, and social service performances, which all result in a spillover effect [2, 4, 15]. Their local adaptation, the identification degree to the working atmosphere, and the cooperation frequency with overseas teachers, colleagues, or fellows have a significant positive influence on the RFMs' performance [25, 26].

The research on the local adaptation is focused on maintaining overseas academic contact, scientific research cooperation network building, and institution adaptation [5, 27]. The results show that the longer the RFMs stay in the home academic circles, the weaker their overseas identity will become. On the other hand, due to the geographical distance, academic level gap, and communication inconvenience [28, 29], it will become increasingly difficult to maintain the original overseas academic cooperation network for RFMs [30]. Meanwhile, because of the long separation from the local academic environment, RFMs do not have the resources and reputation that local scholars have already formed at least in the initial stage of their domestic academic career. The lack of corresponding academic background or connection with local teachers and peers has become an important obstacle to their local adaptation [31]. On institution adaptation, RFMs will easily fall in the framework of binary opposition between China and foreign countries, confront the dilemma choice of internationalization and localization, and encounter an academic "hard landing" due to the home and abroad systematic differences on the research problems, research paradigm, writing style, and language style [6]. As a result, they lack recognition on scientific research evaluation and promotion mechanism of the university [5]. In the face of huge life pressure and heavy assessment load, professional identity based on academic ideals and values often gives way to identity based on survival [32]. RFMs have a negative psychological and emotional output tendency on their personal life and work conditions [33, 34].

In terms of the recruiting policy, scholars mostly use methods such as text analysis, in-depth interview, and questionnaire survey to summarize the common characteristics of the recruiting policy for returnees and evaluate the advantages and disadvantages of the recruiting policy [10]. It shows that the recruiting policy has more commonness and less individuality, generally attaching more importance to material conditions than working environment, and has problems of mismatch [11, 35].

To sum up, great achievements have been made in related studies of RFMs, but there exist the following shortcomings: (1) the effects and spillover effects of overseas experience of RFMs on their teaching, scientific research, and professional development are mostly confirmed from the perspective of returnee teachers. However, there is still a

lack of theoretical research on deconstruction of the internal mechanism of RFMs' spillover effects from the perspective of university [9]. (2) The researches mainly focus on RFMs' mobility, performance, and local adaptation, but there is little research on the spillover effect and measurement method of RFMs' scientific research cooperation and none on the interaction of spillover effect and its influencing factors [10, 11]. (3) Less attention is paid to the impact of RFMs' scientific research cooperation on the research performance of universities. What are the structural characteristics of RFMs' research cooperation network? How do they affect the performance of university research? These issues need to be further discussed and explored.

3. Research Hypotheses

Taking the returnee faculty members (RFMs) of a college as the objects, this paper integrates the theories of social network and knowledge absorption to analyze the direct influence of returnee faculty members (RFMs) over college research performance (CRP) from three aspects, namely, the intensity of cooperative relationship (ICR), research influence (RI), and acquisition capability of heterogeneous knowledge (ACHK). Besides, the regulating effect of ICR was also investigated.

Social network theory regards social structure as a network of interpersonal relationships [36]. Individual is called "node" in the structure. Each node in the network represents an actor, the line segments represent interpersonal relationships, and individuals are connected through interdependent relationships. Knowledge absorptive theory was originated from Cohen and Levinthal's research of the impact of R&D investment on enterprise technology level [19]. They believed that absorptive capacity is an indirect response capacity. Because of the enhancement of R&D investment, the company's ability to learn new technologies will also be improved; that is, the ability to acquire, integrate, and transform external resources and technologies will be enhanced. Cohen and Levinthal called the indirect effect as corporate absorption capacity, and they clearly defined the denotation and connotation of absorption capacity, namely, the identification, digestion, and application.

3.1. Relationship between RFMs ICR and CRP. Existing studies have shown that innovation requires a broad mind and divergent thinking in a small organization with a loose and relaxed culture [37]. Engaging in scientific research, RFMs should have a keen sense of social phenomena and divergent thinking, such as to study actual social problems and propose suitable countermeasures. Compared with corporate organizations, the colleges of RFMs are small and loosely organized. Therefore, CRP carries many of the features of explorative innovation. According to Granovetter's "the strength of weak ties," the research cooperation between RFMs that frequently communicate with each other and maintain a close cooperative relationship tends to suppress research performance. If ICR is too high, RFMs are too closely correlated, and their views and opinions will

gradually converge [38]. Then, the collective will view things one-sidedly and focus too much on experience. Bounded by experience, RFMs will solely integrate the existing knowledge and ignore the exploration of new knowledge. As a result, it would be impossible to improve the research performance of the organization. If ICR is relatively low, RFMs will be loosely coupled and unlikely to be rigid in thoughts and behaviors. In this case, the collective will focus continuously on heterogeneous knowledge, which contributes to CRP improvement. On this basis, the following hypothesis was put forward.

H1. RFMs ICR has negative impacts on CRP: the higher RFMs ICR, the lower CRP.

3.2. Relationship between RFMs RI and CRP. According to the data on the research cooperation network of RFMs, RFMs with many research results cooperate more frequently with other teachers than those with a few research results. This type of RFMs is often the core members of research cooperation. With rich social capital, they occupy the central position and have a great say in the cooperative organization [39]. During the cooperation with other teachers, RFMs with many research results and strong research ability spread the new ideas and theories, which were acquired by them during the stay overseas, to the college [40]. The flow of knowledge is governed by these members, facilitating the knowledge acquisition and use by other teachers [38]. The exchange between these RFMs and other key teachers is a collision of ideas. The results of the exchange will be integrated to the research, promoting the research performance of the entire college. On this basis, the following hypothesis was put forward.

H2. RFMs RI has positive impacts on CRP: the higher RFMs RI, the higher CRP.

3.3. Relationship between RFMs ACHK and CRP. Previous research has shown that a strong ACHK benefits the explorative innovation [1] and promotes the research performance [41, 42]. In this research, RFMs and domestic teachers need to acquire heterogeneous knowledge through research cooperation. More importantly, the two sides must absorb and transform this knowledge. During the research cooperation, domestic college teachers and RFMs could establish correlations via "middlemen" to obtain the heterogeneous knowledge from the other side and thus nurture a strong competitive strength [43]. RFMs with a strong ACHK can fully utilize this strength through research cooperation and link up teacher groups with different knowledge backgrounds. In this way, the entire faculty of the college will access richer knowledge and resources and effectively enhance CRP. On this basis, the following hypothesis was put forward.

H3. RFMs ACHK has positive impacts on CRP: the higher RFMs ACHK, the higher CRP.

3.4. Regulating Effect of RFMs ICR on the Relationship between RI and CRP. When RFMs ICR is large, college teachers frequently cooperate and communicate with each other.

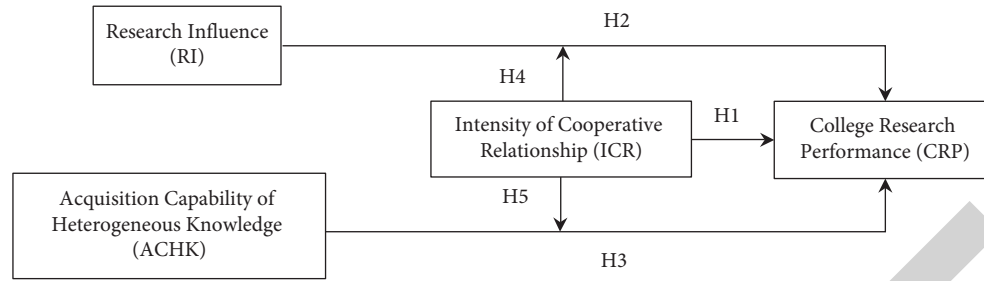


FIGURE 1: Research framework.

The frequent exchanges tighten their cooperative relationship. The higher the frequency, the richer the experience in integrating heterogeneous knowledge. According to the theory of knowledge absorption, the transformation and utilization of knowledge can significantly promote the ability to absorb external knowledge [44]. In a college, teachers are more likely to absorb knowledge easily, if they have an experience of heterogeneous knowledge integration. With the increase of RFMs ICR, the teachers communicate more frequently with each other, and the cost of knowledge acquisition decreases, creating more opportunities for knowledge integration. The teachers will accumulate the experience of knowledge integration and gain more ability to absorb knowledge [45]. Then, it would be easier to transform the advantage from RI improvement to the knowledge accumulation needed for CRP. Meanwhile, the teachers in research cooperation would have more new ideas and solve research problems with new theories. On this basis, the following hypothesis was put forward.

H4. RFMs ICR positively regulates the positive impacts between RI and CRP. RFMs ICR enhances the positive impacts between RI and CRP.

3.5. Regulating Effect of RFMs ICR on the Relationship between ACHK and CRP. The acquisition of heterogeneous knowledge helps teachers to broaden their horizon and apply new ideas to research. However, the ability of knowledge acquisition merely brings teachers the chances and paths for gaining heterogeneous knowledge, rather than ensuring that every teacher can effectively transfer, absorb, or use the knowledge [46]. It is the cooperative relationship that provides teachers the channels to obtain heterogeneous knowledge from each other. Studies have shown that, in the research environment of China, a close cooperative relationship boosts the willingness of RFMs to share knowledge [47]. The improvement of ICR makes it more possible for teachers to gain valuable knowledge. With a high ICR, teachers can concentrate on meaningful problems and work together to solve them. In addition, they can acquire a sustained competitive strength, by virtue of the ability to absorb and utilize knowledge. Then, the research resources will be transferred and absorbed thoroughly via ACHK. Therefore, a strong ICR could promote college teachers to acquire, absorb, and transform heterogeneous knowledge through research cooperation. On this basis, the following hypothesis was put forward.

H5. RFMs ICR positively regulates the positive impacts between ACHK and CRP. RFMs ICR enhances the positive impacts between ACHK and CRP.

To sum up, three structural variables of RFMs research cooperation in colleges, namely, ICR, RI, and ACHK, were selected as explanatory variables. Then, the authors examined the direct influence of RFMs ICR, RI, and ACHK on CRP, separately. Further, the regulating effect of RFMs ICR on the relationship between RI and CRP and that between ACHK and CRP was investigated, respectively. Figure 1 presents the framework of this research.

4. Research Design

4.1. Data Acquisition and Description. To clarify the relationship between RFMs research cooperation and CRP, the authors collected the data on 193 RFMs working in X college (2009–2019), including the basic information (e.g., work number, gender, age, and department) and research information of the college (e.g., published papers). A research network was established based on the collected data.

4.2. Variable Measurement

4.2.1. Explained Variables

(1) **CRP.** As the explained variable, CRP refers to the research results of the college. It can be evaluated comprehensively with the number and quality of published papers. In this paper, the CRP score is calculated according to the papers published in the 206 Chinese journals and 408 foreign journals, all of which are recognized in the journal catalog of the college. The quality levels of these papers are rated as AAA and AA. AAA papers are scored four points, and AA are scored three points, while other Chinese and foreign journal papers with A level are scored two points, and the rest articles are counted as one point [38]. Due to the particularity of disciplines and schools, this method of evaluating scientific research performance is only applicable to this university, with the exception of other universities and natural disciplines. As far as this research is concerned, it has a little effect on the conclusions of this research by adopting the same journal standards and scoring methods to comprehensively evaluate the quantity and quality of papers.

4.2.2. Explanatory Variables

ICR ICR refers to the closeness of the correlations between teachers in research cooperation. In this paper, it is characterized by the density of the RFMs cooperation network in 2009–2019:

$$\text{density} = \frac{2l}{n(n-1)}, \tag{1}$$

where n is the number of teachers; l is the number of cooperations between RFMs and other teachers of the college in the writing of published papers; and $n^*(n-1)$ is the maximum number of possible cooperations between RFMs and other college teachers.

RI RI was measured by the centrality of RFMs cooperation network, that is, the relative centrality of the RFMs cooperation network from 2009 to 2019:

$$\text{RD} = \frac{d}{n-1}, \tag{2}$$

where n is the network scale and d is the number of coauthors (other teachers of the college) for the published papers of RFMs.

ACHK ACHK represents the structural holes in the research cooperation network of the college. Referring to [36], this paper characterizes the structural holes with betweenness centrality. The normalized betweenness centrality can be derived from the absolute betweenness centrality (AB_i):

$$AB_i = \sum_j^m \sum_k^m b_{jk}(i), \quad j \neq k \neq i, j < k, \tag{3}$$

where n is the number of edges between nodes j and k ; i is the third node; and $b_{jk}(i)$ is the probability of node i falling on an edge between nodes j and k , reflecting the ability of node i to control nodes j and k . Let $g_{jk}(i)$ be the number of edges between nodes j and k transverse by node i . Then, $b_{jk}(i)$ can be calculated by

$$b_{jk}(i) = \frac{g_{jk}(i)}{g_{jk}}. \tag{4}$$

According to [36], the star network has the maximum betweenness centrality: $n^2 - 3n + 2$. Therefore, the structural hole of node i can be measured by normalized betweenness centrality:

$$\text{RB}_i = \frac{2AB_i}{n^2 - 3n + 2}. \tag{5}$$

Each structural hole manifests the resource controlling degree of a node. If a node falls on the shortest edge between many other nodes, then this node will have a high betweenness centrality and act as a bridge in many parts of the network. Here, n represents the number of edges between teachers j and k ; $b_{jk}(i)$ represents the ability of teacher i to control the resource and coauthorship relationship between teachers j and k ; $n^2 - 3n + 2$ represents the maximum number of possible edges between teachers j and k in the network.

4.2.3. Control Variables. Referring to the previous studies on the factors affecting performance, this paper selects three dummy variables as the control variables: number of teachers, department, and RFM (yes/no).

Since RFMs are appraised every three years, the time window for independent variables was set to three years. The time range for the explained variable was defined as 2010–2019 and that for explanatory variables as 2007–2016. Next, the proposed hypotheses were tested and analyzed empirically on the panel data of 193 RFMs in ten consecutive years.

5. Data Analysis and Results

5.1. Descriptive Statistics. Table 1 presents the mean, standard deviation, minimum, maximum, and correlation coefficient matrix of the explained and explanatory variables. The mean of CRP, ICR, RI, ACHK, and number of teachers was 2, 277.76, 0.002, 2.27, 0.19, and 1107.84, respectively. The variable inflation factors (VIFs) of the explanatory variables were all smaller than 10, an evidence for the nonexistence of the multicollinearity problem.

5.2. Regression Analysis. Taking CRP as the explained variable and RFMs ICR, RI, and ACHK as the explanatory variables, our models were regressed, and the results are displayed in Table 2.

Model 1 reflects the influence of the control variables on CRP. The results show that the number of teachers has a significant positive effect on CRP ($\beta = 0.13, p < 0.001$). The human capital of RFMs is the basic condition for the college to carry out research activities. Without the human capital of teachers, it is impossible to yield any research result. The more the teachers in the college, the better the research performance.

Model 2 provides the regression results on the influence of RFMs ICR, RI, and ACHK on CRP. The regression coefficient of ICR's effect on research performance was significantly negative ($\beta = -3.97, p < 0.001$), which verifies H1, stating that RFMs ICR has a negative correlation with CRP. Hence, the rising closeness of RFMs in cooperation suppresses the research performance, rather than promoting the performance. Further, the regression coefficient of IR on research performance was significantly positive ($\beta = 10.80, p < 0.001$), which verifies H2, stating that RFMs RI has a positive correlation with CRP. In addition, the regression coefficient of ACHK on research performance was positive but was not significant ($\beta = 1.48, p < 0.1$). Thus, H3 was falsified; that is, RFMs ACHK does not have a significant relationship with CRP.

Model 3 displays the regression results on how RFMs ICR regulates the relationship between RI and CRP. Specifically, the cross product between RI and ICR had a positive regression coefficient, which was relatively significant ($\beta = 0.32, p < 0.005$). As a result, H4 was proved valid; that is, RFMs ICR positively regulates the positive correlation between RI and CRP. When RFMs ICR is relatively large, RI has a strong positive impact on CRP.

TABLE 1: Data description and correlation coefficient matrix.

Variable	Mean	Std. dev.	Min	Max	CRP	ICR	RI	ACHK	Number of teachers	College	Dummy variables
CRP	2277.76	152.83	2090	2608	1.00						
ICR	0.002	0.003	0.001	0.05	0.03	1.00					
RI	2.27	0.73	0	33.33	-0.02	0.15	1.00				
ACHK	0.19	0.66	0.01	0.23	0.005	-0.42	-0.19	1.00			
Number of teachers	1107.84	424.14	22	1571	0.160	0.04	-0.39	0.02	1.00		
College	11.42	7.35	1	27	-0.01	0.02	0.01	-0.01	0.003	1.00	
Dummy variables	0.03	0.17	0	1	0.02	0.05	0.47	-0.15	-0.33	0.01	1.00

TABLE 2: Results of regression analysis.

Variable	CRP			
	Model 1	Model 2	Model 3	Model 4
ICR		-3.97*** (-3.43)	-5.08*** (-3.97)	-9.57*** (-2.60)
RI		10.80*** (3.17)	4.33 (0.93)	10.68*** (3.13)
ACHK		1.48 (0.46)	0.01 (0.27)	-0.04 0 (-0.81)
RI*ICR			0.32** (2.02)	
ACHK*ICR				0.03* (1.65)
Dummy variables	71.23*** (8.20)	66.42*** (7.03)	67.10*** (6.97)	66.01*** (7.37)
Number of teachers	0.13*** (18.08)	0.13*** (190.30)	0.13*** (15.83)	0.13*** (16.47)
College	-0.27 (-1.44)	-0.28 (-1.48)	-0.28 (-1.48)	-0.28 (-1.47)
Constant	2.22*** (57.38)	3.27*** (26.72)	4.11*** (36.35)	2.20*** (56.76)
F	326.87***	85.65***	69.38***	69.05***
Samples	11963	11963	11963	11963

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Model 4 displays the regression results on how RFMs ICR regulates the relationship between ACHK and CRP. Specifically, the cross product between ACHK and ICR had a positive regression coefficient, which was relatively significant ($\beta = 0.03$, $p < 0.01$). As a result, H5 was proved valid; that is, RFMs ICR positively regulates the positive correlation between ACHK and CRP. With the increase of RFMs ICR, ACHK exerts a stronger positive impact on CRP.

In summary, H3 is the only hypothesis that is not verified. RFMs ACHK does not directly affect CRP. RI has a significantly positive impact on CRP. ICR has a significantly negative impact on CRP and significantly regulates the relationship between RFMs research cooperation and CRP.

5.3. Robustness Test. To test the robustness of our models, the samples of 2009 were removed, and the remaining samples were tested repeatedly. The regression results (Table 3) show that the parameter estimations of all models were basically the same as the previously mentioned analysis. Therefore, our research results have a strong explanatory power.

TABLE 3: Robustness test results.

Variable	CRP			
	Model 1	Model 2	Model 3	Model 4
ICR		-5.52*** (-3.67)	-3.90** (-2.14)	-4.98 (-1.36)
RI		11.50*** (3.07)	19.35*** (3.11)	11.05*** (3.07)
ACHK		0.01 (0.36)	0.02 (0.56)	0.02 (0.37)
RI*ICR			0.72* (-1.68)	
ACHK*ICR				0.05* (1.76)
Dummy variables	105.94*** (12.06)	97.58*** (10.08)	90.63*** (9.36)	66.01*** (7.37)
Number of teachers	0.20*** (26.25)	0.19*** (23.06)	0.20*** (22.66)	0.19*** (23.05)
College	-0.25 (-1.28)	-0.25 (-1.47)	-0.24 (-2.55)	-0.25 (-1.26)
Constant	2.03*** (57.38)	2.05*** (26.72)	2.04*** (143.03)	2.05*** (142.22)
F	491.75***	160.46***	142.15***	141.59***
Samples	11259	11259	11259	11259

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

6. Conclusions

Taking the RFMs in a college as the objects, this paper studies the influence of RFMs ICR, RI, and ACHK on CRP and the regulating effect of ICR on the relationship between RI and CRP and that between ACHK and CRP. The empirical results show that RFMs ICR has a significantly positive effect on CRP, RI has a significantly negative effect on CRP, and ACHK does not have any significant effect on CRP. Further investigation shows that ICR significantly regulates the influence of ICR over CRP.

The closer the cooperation relationship, the better the scientific research performance. Therefore, university administrators should attach great importance to the direct cooperation between RFMs and other local teachers. Targeted management decisions are also needed to better carry out scientific research. For example, university administrators need to encourage RFMs to establish academic cooperation with local teachers, offer RFMs more exchanging opportunities with other teachers, and provide platforms for academic cooperation.

This paper studied RFMs scientific research cooperation and the measurement method from the perspective of universities. It showed that RFMs scientific research cooperation has spillover effects, thus generating more scientific output. The research cooperation between RFMs and domestic teachers benefited the knowledge acquisition and integration in the university and enhanced its research performance. This research only selects three explanatory variables (ICR, RI, and ACHK) and three control variables: number of teachers, department, and RFM (yes/no). However, the results of research cooperation could be affected by various features and the core-peripheral structure of the research team. Therefore, the future research will examine the influence of other relevant factors on CRP from new perspectives.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Disclosure

The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Conflicts of Interest

The authors declare that they have no conflicts of interest regarding the publication of this paper.

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