

THE INTERSECTION OF PUBLIC ADMINISTRATION AND NONPROFIT ORGANIZATION RESEARCH: PERSPECTIVES ON GOVERNANCE NETWORKS AND SOCIAL EQUITY

XianChan Wang

Student Affairs Department, Baise University, Baise 533000, Guangxi, China.

Corresponding Email: wangxc0216@163.com

Abstract: This study aims to explore the intersection between public administration and nonprofit organization research, particularly from the perspective of governance networks and social equity. By analyzing their synergy and interaction in terms of theory, research themes, and methodology, the study employs systems theory, network theory, organizational theory, management theory, sociology theory, and economics theory. It utilizes qualitative, quantitative, and mixed research methods through literature reviews and theoretical analyses to reveal the significance of social equity, governance networks, organizational change, and public participation in the study of public administration and nonprofit organizations. The results indicate that the collaborative relationship between public administration and nonprofit organizations in social services, policy-making, and resource allocation is crucial for advancing social equity and justice. The conclusion asserts that interdisciplinary research and collaboration not only enhance governance efficiency but also provide important theoretical and practical guidance for future public services and social development.

Keywords: Public administration; Nonprofit organizations; Governance networks; Social equity; Interdisciplinary research; Organizational change; Public participation

1 INTRODUCTION

As social problems become increasingly complex and diverse, the theories and methods of a single discipline often prove inadequate in addressing public issues. To better address complex problems such as social equity, public participation, and resource management, the study of public administration and nonprofit organizations has increasingly moved toward integration. This integration not only provides researchers with a rich theoretical framework but also brings practical advantages through multi-stakeholder collaboration. Public administration focuses on government management and policy implementation, while nonprofit organizations are more concerned with the provision of social services and advocacy. In the current governance network, the relationship between government, market, and society is becoming more complex, and the role of nonprofit organizations is growing in importance, particularly in areas of social equity and resource distribution. Thus, exploring the intersection between public administration and nonprofit organizations has significant practical relevance.

In recent years, scholars have increasingly focused on how integrating theories and methods from different fields can achieve social equity and efficient governance. For instance, governance network theory posits that, in modern society, no single government institution can fully address public problems on its own, and the involvement of multiple stakeholders is required to enhance governance efficiency. [1]. At the same time, nonprofit organizations, as part of society, collaborate with governments to jointly shoulder social service responsibilities, contributing positively to the realization of social equity. The collaboration between public administration and nonprofit organizations in social governance is not only a critical direction for theoretical development but also a key basis for policy formulation and implementation.

This paper aims to analyze the intersection of public administration and nonprofit organization research, especially from the perspective of governance networks and social equity. It will explore the theoretical framework, research themes, and methodologies in this field, providing insights for future research and practice. The paper is structured as follows: First, it introduces the major theoretical frameworks, including systems theory, network theory, organizational theory, management theory, sociology theory, and economics theory. Next, it analyzes key research themes, such as social equity and governance networks. Following this, the paper discusses the impact of qualitative, quantitative, and mixed research methods on the field. Finally, it provides an outlook on future research trends.

2 THEORETICAL FRAMEWORK

The intersection between public administration and nonprofit organization research is based on multiple theoretical foundations. These theories provide a framework for understanding the relationship between the two fields and lay the groundwork for interdisciplinary collaboration. This paper explores the theoretical intersections from three key perspectives: systems theory and network theory, organizational theory and management theory, and sociology theory and economics theory.

2.1 Systems Theory and Network Theory

Systems theory and network theory are core frameworks in the study of public administration and nonprofit organizations. Systems theory posits that organizations or societies are interconnected wholes, with complex and dynamic relationships between their parts. It offers theoretical support for the collaboration between the public sector and nonprofit organizations. For example, the "New Public Management" theory in public administration emphasizes that governments should operate like businesses, focusing on improving efficiency and performance [2]. Similarly, nonprofit organizations, in serving society, analyze the internal collaboration and interaction between their departments using systems theory to ensure the rational allocation and efficient utilization of resources.

Network theory, on the other hand, emphasizes the connections and interactions between organizations or individuals. In modern society, individual organizations often cannot independently solve complex public problems and must collaborate within networks to balance diverse interests. Governance network theory suggests that collaboration between governments, businesses, and nonprofit organizations is an effective way to address complex social issues. In public administration, network theory is widely used to analyze the operational models of governance networks, such as how governments collaborate with nonprofit organizations to improve the quality and coverage of public services [1][3]. In nonprofit organization research, network theory is used to analyze the ways different nonprofit organizations cooperate, ensuring resource sharing and information exchange to meet evolving social needs.

2.2 Organizational Theory and Management Theory

Organizational theory focuses on the structure, culture, and behavior of organizations, providing an important perspective for understanding the operations of the public sector and nonprofit organizations. The "New Public Management" theory in public administration draws on the flat organizational structures found in business management, emphasizing that governments should reduce hierarchical layers and enhance information flow to improve decision-making efficiency [2]. Meanwhile, nonprofit organizations can use organizational theory to analyze internal leadership, cultural atmosphere, and the execution of organizational goals, thereby enhancing their adaptability and innovation. In recent years, nonprofit organizations have played an increasingly important role in public services, with research emphasizing their innovation in organizational management [4].

Management theory further focuses on improving organizational efficiency and performance, offering guidance for management practices in both the public sector and nonprofit organizations. For example, performance management theory in public policy research proposes that governments should establish scientific performance evaluation systems to improve the efficiency of public sector operations [5]. Nonprofit organizations can draw on management theory to optimize resource allocation and service processes, ensuring that limited resources are maximally directed toward target populations. Integrating interdisciplinary management theories can effectively enhance the collaborative efficiency of public administration and nonprofit organizations, creating synergy.

2.3 Sociology Theory and Economics Theory

Sociology theory provides rich tools for analyzing social backgrounds, particularly in relation to social equity and citizen participation. Sociology theory examines social structures, culture, and behavior, and the "New Public Service" theory in public administration highlights the need for governments to focus more on citizen needs and promote public participation in decision-making processes [6]. Nonprofit organizations use sociology theory to analyze their roles in society and explore how they can promote social equity and justice through services and advocacy activities.

Economics theory, meanwhile, focuses on resource allocation and efficiency, providing valuable references for financial management in the public sector and nonprofit organizations. For instance, cost-benefit analysis in public policy research uses economic methods to assess the costs and benefits of policies, offering scientific evidence for resource allocation by governments [7]. Nonprofit organizations, facing challenges in efficiently utilizing resources to achieve social goals, can optimize their use of funds under the guidance of economics theory to maximize social impact. Additionally, economics theory offers a market-based management approach for collaboration between the public sector and nonprofit organizations, improving the efficiency and effectiveness of their social services.

By integrating systems theory, network theory, organizational theory, management theory, sociology theory, and economics theory, the intersection of public administration and nonprofit organization research gains systematic theoretical support. These theories not only provide a framework for understanding the relationship between the two fields but also lay the theoretical foundation for cooperative models in practical operations.

3 RESEARCH THEMES

In the intersection of public administration and nonprofit organization research, the key themes include social equity and justice, governance networks and collaboration, organizational change and innovative management, and public participation and civil society building. These themes reflect the common concerns of both fields in theory and practice and provide researchers with interdisciplinary perspectives for theoretical innovation and practical guidance.

3.1 Social Equity and Justice in Public Administration and Nonprofit Organizations

Social equity and justice are core issues shared by both public administration and nonprofit organizations. Public administration primarily promotes social equity through the formulation and implementation of public policies. For

example, governments implement policies related to public housing, healthcare, and education to alleviate poverty and reduce social inequality [6]. Nonprofit organizations, on the other hand, play an important role in filling gaps in public services and advocating for social justice. These organizations provide social services and advocate for equity, directly assisting vulnerable groups and protecting their basic rights.

Public administration and nonprofit organizations can form complementary relationships in promoting social equity. While government policies may encounter inefficiencies or imbalances in resource allocation during implementation, nonprofit organizations can address these gaps with their flexible mechanisms and diversified service approaches. For instance, nonprofit organizations integrate resources to provide targeted services to specific groups, directly influencing the realization of social equity. This collaborative relationship enhances the coverage and effectiveness of policies, helping to create a fairer social environment.

In some areas, nonprofit organizations also play an active role in advocating for policy reform to ensure the protection of disadvantaged groups. For instance, in the field of healthcare, nonprofit organizations promote more equitable distribution of medical resources by advocating for optimized resource allocation, thus contributing to social equity and justice [13].

3.2 Governance Networks and Cross-Sector Collaboration

Governance networks and collaboration are crucial themes in the study of public administration and nonprofit organizations. In modern society, single government agencies often find it difficult to solve complex public problems on their own and need to collaborate with businesses, nonprofit organizations, and other actors to form governance networks that jointly address social challenges [2]. Governance network theory emphasizes that collaboration between different sectors can create more flexible governance models, improving the efficiency and quality of public services.

Within governance networks, nonprofit organizations often serve as key partners, participating in the formulation and implementation of public policies. Public administration can more effectively address public issues through collaboration with nonprofit organizations, especially when resources are limited. For instance, in the area of environmental governance, nonprofit organizations provide technical support, education, and advocacy to promote public participation, helping governments achieve their environmental protection goals [1].

Furthermore, cross-sector collaboration through governance networks can enhance transparency and participation in decision-making processes. By working with nonprofit organizations, public administration can gain a better understanding of the needs and opinions of various social groups, allowing for the formulation of policies that are more responsive to public demands. In governance networks, the government acts as a policymaker, while nonprofit organizations serve as both implementers and watchdogs. Their collaboration helps to develop more comprehensive and sustainable policy solutions [3].

3.3 Organizational Change and Innovative Management

Organizational change and innovative management are key avenues for improving the performance of public administration and nonprofit organizations. Government agencies, when faced with increasingly complex social problems, need to continually reform their organizational structures to improve administrative efficiency and the quality of public services. For instance, the application of information technology in public administration has led to the adoption of more intelligent and streamlined management models, resulting in the development of e-government and smart city initiatives [8].

Similarly, nonprofit organizations must innovate in their management practices to enhance their impact on social services. Nonprofit organizations can adopt new technologies and management models to increase their adaptability and service efficiency. For example, some nonprofit organizations have used social media and other modern communication tools to improve public engagement and advocacy efforts, thereby expanding their social influence [14]. In addition, nonprofit organizations need to continuously reform their internal management practices to improve transparency and flexibility, allowing them to better respond to changes in the external environment.

Through interdisciplinary research, public administration and nonprofit organizations can draw on each other's management experiences and theoretical frameworks to achieve the goals of organizational change and innovative management. Nonprofit organizations can benefit from public administration's performance management theories to optimize their resource allocation and evaluation systems, while governments can learn from the flexible management practices of nonprofit organizations to enhance the adaptability and responsiveness of public services [5].

3.4 Public Participation and Civil Society Building

Public participation and the building of civil society are important themes in the intersection of public administration and nonprofit organization research. In public administration, public participation refers to the involvement of citizens in the decision-making process of public affairs, enhancing the responsiveness of public policies and social recognition [9]. Nonprofit organizations play a vital role in promoting public participation. They mobilize the public to participate in social affairs through community organizations, public education, and advocacy activities, contributing to the development of civil society.

In modern governance systems, public administration has strengthened the role of citizens in policymaking by establishing public consultation and feedback mechanisms. For example, some government agencies use public

hearings and online platforms to gather public opinions, ensuring that policies better respond to public needs. Meanwhile, nonprofit organizations, by mobilizing community resources, help governments gain a deeper understanding of grassroots needs, improving policy implementation effectiveness [15]. The role of nonprofit organizations in building civil society is particularly evident in their work with vulnerable groups. By giving these groups a greater voice, nonprofit organizations can prompt governments to pay more attention to their needs and provide appropriate responses. For instance, some nonprofit organizations strengthen citizens' sense of social responsibility and participation awareness through community service, advocacy, and educational activities, thereby promoting civil society development. This cross-sector collaborative model of public participation helps to improve the inclusiveness and transparency of social governance [7].

4 METHODOLOGY

In the intersection of public administration and nonprofit organization research, a diversity of research methods is essential for a deep understanding of complex social issues. Qualitative research, quantitative research, and mixed-method research are widely applied in both fields, providing vital support for interdisciplinary collaborative studies. Additionally, comparative research methods serve as valuable tools for identifying the strengths and applicability of different governance models.

4.1 Qualitative Research Methods

Qualitative research methods focus on exploratory and descriptive studies, emphasizing an in-depth understanding of participants' experiences and the underlying mechanisms of social phenomena. Case studies, participant observation, and in-depth interviews are commonly used qualitative methods in the research of public administration and nonprofit organizations.

Case studies are often employed to analyze specific instances in public administration or nonprofit organizations, providing detailed descriptions of complex social phenomena. For example, in public administration, the "New Public Service" theory has utilized case studies to explore how governments can improve public service quality by listening to citizens' needs and enhancing their participation [6]. In nonprofit organization research, case studies help to analyze the internal operations of different organizations and their roles in providing social services. Through participant observation, researchers can deeply understand the internal culture and values of nonprofit organizations, especially how they enhance performance through innovative management in resource-limited contexts [14].

Qualitative research methods enable researchers to more closely analyze the collaborative models between public administration and nonprofit organizations, revealing the mechanisms and challenges of their interactions within governance networks. For example, the collaborative models between nonprofit organizations and governments may differ across countries or regions, and qualitative methods provide a deeper perspective for studying these differences [1].

4.2 Quantitative Research Methods

Quantitative research methods, through data collection and statistical analysis, help researchers uncover patterns and trends in social phenomena. In public administration and nonprofit organization research, quantitative methods are widely applied in policy evaluation, performance assessment, and public satisfaction surveys.

In public administration, quantitative research is often used to evaluate the effectiveness and efficiency of government policies. For instance, performance management theory uses quantitative indicators to assess the work efficiency of government departments, ensuring effective policy implementation [5]. Governments use surveys, statistical analysis, and economic models to evaluate the impacts of policies on different social groups, providing data to support policy optimization.

In nonprofit organization research, quantitative methods are also widely used to assess public satisfaction with organizational services. Through surveys, researchers can collect data on nonprofit organizations' performance in providing social services and draw conclusions through statistical analysis [7]. Moreover, quantitative research methods help nonprofit organizations evaluate the efficiency of resource allocation and optimize internal management processes. Interdisciplinary quantitative research provides a scientific basis for collaboration between public administration and nonprofit organizations. For example, government agencies can evaluate the efficiency of their collaborations with nonprofit organizations using data analysis and adjust their cooperation models based on the quantitative results. Nonprofit organizations, in turn, can use quantitative data to optimize their resource allocation strategies, improving the quality and efficiency of social services.

4.3 Mixed-Method Research

In recent years, mixed-method research has gradually become a mainstream approach in the study of public administration and nonprofit organizations. Mixed-method research combines the strengths of both qualitative and quantitative research, allowing researchers to understand complex social problems from multiple perspectives.

In public administration research, mixed-method research integrates qualitative and quantitative data to enhance policy evaluation. For example, research on participatory budgeting uses a combination of qualitative interviews and

quantitative surveys to explore the needs and preferences of the public regarding government budgets. This approach reveals both the subjective experiences of participants and the actual effects of policy implementation through quantitative analysis [8].

In nonprofit organization research, mixed-method approaches help researchers comprehensively assess organizational social impact. For instance, by combining case studies with statistical analysis, researchers can explore the social influence and audience reach of specific nonprofit organizations. This method not only analyzes the innovative models of nonprofit services but also quantifies their social and economic impact [14].

The application of mixed-method research enhances the depth of research and promotes interdisciplinary collaboration. Complex policy issues often arise in government-nonprofit collaboration studies, and a single research method may not fully capture these problems. Mixed-method research provides a more comprehensive framework through multidimensional data and theoretical analysis, delivering richer research outcomes [1].

4.4 Comparative Research Methods

Comparative research methods analyze the practices of different countries, regions, or organizations, revealing commonalities and differences in public administration and nonprofit organization collaborations. Cross-national comparative research is especially important, as it identifies the strengths and weaknesses of various governance models and provides policy makers and nonprofit organizations with useful insights.

In public administration, comparative research methods are commonly used to study different public management models across countries. For example, cross-national research on "New Public Management" theory has revealed the successes and failures of government reforms in different countries, helping researchers better understand global trends in public administration [4]. Through comparative analysis, researchers can identify how different political systems, social environments, and cultural contexts influence public administration reforms.

In nonprofit organization research, comparative methods are used to analyze the operational models and performance of different types of nonprofit organizations. For instance, through comparative research, scholars can explore the developmental paths of nonprofit organizations in various countries and examine their differences in resource acquisition, organizational management, and social service provision [7]. These comparisons provide valuable references for nonprofit organizations' cross-national collaborations or localized operations.

Comparative research methods are also widely applied in studies of collaboration between public administration and nonprofit organizations. By comparing governance networks in different regions, researchers can identify the most effective collaborative models, providing theoretical support and empirical evidence for interdisciplinary research [15]. This method not only helps improve the quality of public services but also fosters policy innovation and social transformation.

5 CONCLUSION AND OUTLOOK

This paper systematically explores the intersection of public administration and nonprofit organization research, particularly from the perspective of governance networks and social equity. It analyzes the synergy and convergence between these two fields in terms of theoretical frameworks, research themes, and methodologies. Through the integration of systems theory, network theory, organizational theory, management theory, sociology theory, and economics theory, we gain a deeper understanding of the collaborative relationship between public administration and nonprofit organizations, providing theoretical support for interdisciplinary research between the two.

In terms of research themes, social equity and justice, governance networks and cross-sector collaboration, organizational change and innovative management, and public participation and civil society building are the main intersections between public administration and nonprofit organization research. These themes not only reflect the theoretical integration between disciplines but also provide researchers with new directions for exploring public governance and social service innovation. By analyzing how social equity manifests in both fields, we can better understand how multi-stakeholder collaboration enhances social justice. In governance networks and collaboration research, nonprofit organizations, as key members of governance networks, can work together with governments to solve social issues. Additionally, organizational change and innovative management, public participation, and civil society building provide new perspectives and pathways for improving public service quality and social governance.

In terms of methodology, qualitative, quantitative, and mixed research methods play essential roles in the study of public administration and nonprofit organizations. These methods not only offer researchers different perspectives for analysis but also lay a solid foundation for empirical research in interdisciplinary collaboration. Qualitative research methods delve into case studies and participants' experiences, revealing the complex collaborative mechanisms between public administration and nonprofit organizations. Quantitative research methods, through data analysis, demonstrate the effectiveness of policies and the performance of nonprofit organizations in social service provision. Mixed-method research combines the strengths of both qualitative and quantitative methods, offering researchers a more comprehensive framework for analyzing complex issues. Additionally, comparative research methods, by examining different countries, regions, or organizations, provide valuable practical references for policymakers and organizational managers.

5.1 Theoretical Contributions

This paper presents three major theoretical contributions through the exploration of the intersection between public administration and nonprofit organization research, particularly from the perspective of governance networks and social equity:

First, by combining systems theory and network theory, this paper reveals the complex interactive relationships between public administration and nonprofit organizations within governance networks. The research indicates that public administration and nonprofit organizations have evolved from a relationship of a single policy executor and overseer to governance network members collaboratively solving complex social problems. This theoretical contribution calls for further research into the cross-sector collaboration mechanisms within governance networks.

Second, the paper combines sociology theory and economics theory, emphasizing the importance of social equity and justice in the research of public administration and nonprofit organizations. Particularly in the areas of resource distribution and service provision, nonprofit organizations effectively fill the gaps in public services through collaboration with the government, thereby promoting the realization of social equity. This theoretical contribution provides valuable insights for future research in public service and social security fields.

Finally, the paper highlights the potential of mixed-method research in interdisciplinary studies within public administration and nonprofit organizations. Mixed-method research not only integrates the advantages of qualitative and quantitative research but also provides a solid foundation for multi-angle analysis of complex issues. In particular, when studying the implementation of public policies and social services, mixed-method research offers researchers more refined analytical tools.

5.2 Practical Implications

On the practical level, the findings of this paper provide several implications for the collaboration between public administration and nonprofit organizations:

First, the establishment and improvement of governance networks require close cooperation between governments and nonprofit organizations. Nonprofit organizations' flexibility and innovation in social services can effectively supplement government deficiencies in public service provision. Policymakers should encourage the participation of nonprofit organizations in the design and implementation of public service projects, enhancing the coverage and quality of social services through tighter cooperation mechanisms.

Second, nonprofit organizations should further leverage their unique advantages in resource integration and service provision for vulnerable groups in promoting social equity and justice. Governments can enact policies that encourage nonprofit organizations to play a larger role in sectors such as education, healthcare, and social security, jointly fostering a more equitable and just society.

Third, public administration and nonprofit organizations should draw from each other's organizational management experiences, continuously pursuing organizational change and innovation. Nonprofit organizations can adopt public administration's performance management systems to optimize their internal management processes and improve resource utilization efficiency. Governments, on the other hand, can learn from the innovation mechanisms of nonprofit organizations to enhance the adaptability and responsiveness of public services.

5.3 Future Research Directions

Although this paper provides a comprehensive discussion of the theoretical and practical aspects of the intersection between public administration and nonprofit organizations, some areas warrant further exploration:

First, the issue of collaboration between public administration and nonprofit organizations in cross-national governance networks requires more empirical research to reveal the differences in collaboration models across countries and regions. This will help provide more systematic solutions to global governance challenges.

Second, with the rapid development of information technology, the collaborative models between public administration and nonprofit organizations are constantly evolving. Future research should focus on the application of digital technology in improving the efficiency and quality of public services, particularly how technological tools can be used to enhance the transparency of governance networks and diversify public participation.

Finally, future studies should continue to explore the roles of public administration and nonprofit organizations in the realization of social equity, especially in the context of globalization, where the cross-border flow of resources and the diverse needs for social services present new challenges and opportunities for collaboration between these two fields.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

FUNDING

Baise University Undergraduate Teaching Reform Project in Higher Education: "Research and Practice on the Digital and Intelligent 'Innovation and Entrepreneurship' Education Training Model in Application-Oriented Universities Based on OBE Concept" (2023JG18).

REFERENCES

- [1] Bodin Ö, Mancilla García M, Robins G. Reconciling conflict and cooperation in environmental governance: a social network perspective. *Annu Rev Environ Resour*, 2020, 45(1): 471-495.
- [2] Wang H, Ran B. Network governance and collaborative governance: a thematic analysis on their similarities, differences, and entanglements. *Public Manag Rev*, 2021, 25(6): 1187-1211.
- [3] Farazmand A, editor. *Global encyclopedia of public administration, public policy, and governance*. Springer Nature; 2023.
- [4] Bryhinets OO, Svoboda I, Shevchuk OR, et al. Public value management and new public governance as modern approaches to the development of public administration. *Revista San Gregorio*, 2020, 1(42): 205-214.
- [5] Roy S, Bahuguna PC, Rawat N. Performance management in public sector organizations: A bibliometric analysis. *Int J Organ Leadership*, 2023, 12(Special Issue): 115-141.
- [6] Qian W, Liu H, Pan F. Digital economy, industry heterogeneity, and service industry resource allocation. *Sustainability*, 2022, 14(13): 8020.
- [7] Soelton M, Noermijati N, Rohman F, et al. Improving the performance of nonprofit organizations? *Acad Strateg Manag J*, 2021, 20: 1-13.
- [8] Rakšnys AV, Valickas A, Vanagas R. Challenges of creation and implementation of collaborative innovations in public sector organisations. *Public Policy Adm*, 2020, 19(1): 9-21.
- [9] Trein P, Biesbroek R, Bolognesi T, et al. Policy coordination and integration: A research agenda. *Public Adm Rev*, 2021, 81(5): 973-977.
- [10] Vu TA, Plimmer G, Berman E, et al. Performance management in the Vietnam public sector: The role of institution, traditional culture and leadership. *Int J Public Adm*, 2022, 45(1): 49-63.
- [11] Nkrumah Agyabeng A, Preko A. A stakeholder analysis of government policy intervention in the Ghanaian slum communities. *Hous Care Support*, 2021, 24(2): 41-53.
- [12] Kuhlmann J. Mechanisms of policy transfer and policy diffusion. In: *Handbook of policy transfer, diffusion and circulation*. Edward Elgar Publishing, 2021, 43-57.
- [13] Yang MX, Niu SR. Chromosome karyotyping by G-banding in peripheral blood lymphocyte cultures of 5309 couples with adverse reproductive history. *J Youjiang Med Coll Nationalities*, 2019, (5): 520-522.
- [14] Huang N, Liu YP, Xu ZF, et al. Study on the relationship between syndrome differentiation types, tongue features, and gastroscop results in active peptic ulcer. *J Youjiang Med Coll Nationalities*, 2018, (5): 466-468, 471.
- [15] Rao ZF, Chen JY, Zhao LY, et al. Comparison of ultrasound-guided microwave ablation and laparoscopic resection for benign thyroid nodules. *J Youjiang Med Coll Nationalities*, 2018, (6): 583-585.