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Historical development of
Chinese Companies' involvement in Global Health

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A thesis

submitted in partial fulfillment of the
requirements for the degree of

Master of Public Health

University of Washington

2023

Thesis Committee:
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Program Authorized to Offer Degree:

Department of Global Health

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Abstract

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This study explores the intricate landscape of global health governance, driven by the imperative to address pressing challenges in funding, governance, and development. With a focus on Chinese companies' engagement, the research aims to uncover their role in advancing global health responsibility. Employing a robust methodology encompassing literature review, case studies, and key informant interviews, the study delves into China's unique context and the evolving role of corporations. The research uncovers the motivations, challenges, and strategies behind Chinese companies' participation in global health initiatives, shedding light on their contributions. By analyzing diverse case studies, the study elucidates the strategies adopted by

biopharmaceutical, infrastructure, and technology companies to align corporate social responsibility with global health goals. The research concludes by underscoring the significance of a collaborative multi-sector approach, envisioning a healthier and more equitable global health landscape. Despite inherent limitations, this study contributes valuable insights to the understanding of global health governance and the pivotal role of emerging actors like Chinese companies.

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ACKNOWLEDGEMENTS

I extend profound gratitude to those pivotal in this research journey. Foremost, my esteemed thesis committee members: Dr. Stephen Gloyd, whose expert guidance and Chairmanship molded this work; Ahoua Kone, whose insightful inputs as Member enriched this study's depth.

Appreciation resonates for my dedicated student adviser, Selam Yadetta, and Julie Brunett, whose mentorship honed this research's focus. Family and friends' unwavering support underpins this work, with special acknowledgment to my partner, Laura Chou, whose encouragement emboldened my journey.

I am indebted to Vice Professor Kun Tang and Dr. Qiwei He of Tsinghua University for enabling my foray into global health.

Gratefully,

Xinyi Zhai

Chapter 1. INTRODUCTION

1.1 Strengthening Global Health Governance for Sustainable Development

1.1.1 Global Health Security: Confronting Emerging Infectious Diseases

Emerging and re-emerging infectious diseases, such as COVID-19, Ebola virus, and Zika virus, underscore the paramount importance of global health security. These crises have laid bare vulnerabilities in global health systems. For example, the COVID-19 pandemic alone is estimated to have caused 15 million excess deaths worldwide according to the World Health Organization (WHO).¹ Over the past few decades, Ebola outbreaks have resulted in thousands of deaths, severely impacting the economic and social stability of the West African countries.² The Zika virus outbreak, infecting millions, poses significant health risks, particularly for pregnant women and newborns.³ Ensuring global health security is vital to safeguarding humanity against these unprecedented health challenges.

Emerging and re-emerging infectious diseases present a serious international health security threat with far-reaching implications for economic and social stability. These viruses transcend national borders, challenging health defenses and straining global public health systems. Shortages of medical resources and personnel, coupled with limited health infrastructure in many countries, underscore vulnerabilities in pandemic preparedness.^{4,5} Large-scale epidemics can overwhelm healthcare systems, compromising treatment for other health issues and amplifying global health security risks. Addressing these threats is imperative to safeguard global stability and security.

1.1.2 The Growing Global Disease Burden: Chronic Diseases, Climate Disasters, and Socio-Economic Impact

¹ Remes, J., Linzer, K., Singhal, S., Dewhurst, M., Dash, P., Woetzel, J., ... & Ramdorai, A. (2020). Prioritizing health: a prescription for prosperity. *Executive summary. McKinsey Global Institute Report*.

² Burns, R. B. (2023). A Pandemonium of Pandemics and Epidemics. In *The Human Impact of the COVID-19 Pandemic: A Review of International Research* (pp. 25-57). Singapore: Springer Nature Singapore.

³ Berube, D. M. (2023). Why Study Zika?. In *Pandemics and Resilience: Lessons we should have learned from Zika* (pp. 1-25). Cham: Springer International Publishing.

⁴ Jensen, N., Kelly, A. H., & Avendano, M. (2021). The COVID-19 pandemic underscores the need for an equity-focused global health agenda. *Humanities and Social Sciences Communications*, 8(1).

⁵ Brakefield, W. S., Olusanya, O. A., White, B., & Shaban-Nejad, A. (2023). Social determinants and indicators of COVID-19 among marginalized communities: a scientific review and call to action for pandemic response and recovery. *Disaster Medicine and Public Health Preparedness*, 17, e193.

The increasing global burden of chronic diseases, coupled with various factors like climate disasters, environmental health issues, food security challenges, and war, is seriously affecting global health. Noncommunicable diseases (NCDs), such as heart disease, stroke, cancer, diabetes, and chronic lung disease, account for 74% of all deaths worldwide.⁶ The number of disability-adjusted life years (DALYs) attributed to chronic diseases places a significant health and economic burden on individuals and society. Addressing these challenges is essential to mitigate the socio-economic impact on global health.⁷

Various climate hazards and environmental health issues are significantly impacting global health. The increasing frequency of extreme weather events due to climate change, along with pollution from air, water, and soil, leads to millions of illnesses and premature deaths annually.^{8,9} Food safety issues, wars, and humanitarian crises further exacerbate global health problems, with millions of people facing chronic hunger, malnutrition, and displacement.¹⁰ Moreover, global health issues incur substantial economic costs and labor losses, reaching trillions of dollars, and reducing the global workforce by approximately 4% per year due to chronic diseases and health problems¹¹. Addressing these challenges is crucial to safeguarding human well-being and promoting sustainable development.

1.1.3 Investments in Global Health : Building a Foundation for Sustainable Development and Prosperity

Healthy populations are fundamental to achieving sustainable development goals and fostering strong, inclusive, and sustainable socioeconomic systems. However, global health disparities exacerbate poverty and inequality, as the disease burden disproportionately affects the world's poorest. Communicable, maternal, neonatal, and

⁶ WHO, Overview of Noncommunicable diseases
, https://www.who.int/health-topics/noncommunicable-diseases#tab=tab_1

⁷ Harris, R. E. (2019). *Epidemiology of chronic disease: global perspectives*. Jones & Bartlett Learning.

⁸ Goshua, A., Gomez, J., Ery, B., Burke, M., Luby, S., Sokolow, S., ... & Nadeau, K. (2021). Addressing climate change and its effects on human health: A call to action for medical schools. *Academic Medicine*, 96(3), 324-328.

⁹ Fuller, R., Landrigan, P. J., Balakrishnan, K., Bathan, G., Bose-O'Reilly, S., Brauer, M., ... & Yan, C. (2022). Pollution and health: a progress update. *The Lancet Planetary Health*, 6(6), e535-e547.

¹⁰ Kemmerling, B., Schetter, C., & Wirkus, L. (2022). The logics of war and food (in) security. *Global Food Security*, 33, 100634.

¹¹ Bommer, C., Heeseemann, E., Sagalova, V., Manne-Goehler, J., Atun, R., Bärnighausen, T., & Vollmer, S. (2017). The global economic burden of diabetes in adults aged 20–79 years: a cost-of-illness study. *The lancet Diabetes & endocrinology*, 5(6), 423-430.

nutritional diseases create significant gaps, while non-communicable diseases and injuries also contribute to the challenges faced by those living in extreme poverty. Health problems not only increase healthcare expenses but also elevate living costs and unemployment risks, perpetuating the poverty cycle for vulnerable families. Addressing global health issues is essential to break the chains of poverty and ensure a prosperous future for all.

Implementing global health programs, including vaccinations, health education, and environmental protection, yields substantial benefits. These initiatives lead to reduced healthcare expenditures, enhanced productivity, and improved social welfare.^{12,13} Studies indicate that investing \$1 in health can generate an economic return of \$2 to \$4 in developing countries,¹⁴ highlighting the significant positive impact of global health interventions on socio-economic development and overall prosperity.

1.2 Addressing Global Health Governance: Embracing Multilateral Collaboration for Lasting Impact

1.2.1 Collaborative Global Health Governance: Uniting for Equitable and Sustainable Solutions

The essence of global health governance lies in collaborative efforts across boundaries to address global health challenges. It involves multiple stakeholders, such as national governments, international organizations, NGOs, the private sector, and communities, working together to protect, promote, and enhance global health. The ultimate goal is to achieve equitable, sustainable, and inclusive global health by strengthening health systems, improving services, controlling infectious diseases, promoting health, and coordinating emergency responses. Key aspects encompass policy development, resource management, information sharing, health monitoring,

¹² Nugent, R., Bertram, M. Y., Jan, S., Niessen, L. W., Sassi, F., Jamison, D. T., ... & Beaglehole, R. (2018). Investing in non-communicable disease prevention and management to advance the Sustainable Development Goals. *The Lancet*, 391(10134), 2029-2035.

¹³ Masters, R., Anwar, E., Collins, B., Cookson, R., & Capewell, S. (2017). Return on investment of public health interventions: a systematic review. *J Epidemiol Community Health*, 71(8), 827-834.

¹⁴ Remes, J., Linzer, K., Singhal, S., Dewhurst, M., Dash, P., Woetzel, J., ... & Ramdorai, A. (2020). Prioritizing health: a prescription for prosperity. *Executive summary. McKinsey Global Institute Report*.

capacity-building, and partnerships at various governance levels, ensuring effective coordination and integration of efforts for global health improvements.

1.2.2 Addressing Global Health Inequities: Bridging the Development Deficit and Resource Imbalance

The development deficit in global health is a pressing concern that manifests through the uneven distribution of health resources across regions and topics, exacerbating health inequities worldwide. This disparity poses significant challenges to achieving the goals set out in the 2030 Agenda for Sustainable Development and reflects a decline in the Human Development Index for the first time in 30 years.¹⁵ One of the most striking consequences of the global development deficit is the inequitable distribution of health resources, leading to disparities in health outcomes. According to the WHO, approximately half of the global population lacks access to basic health-care services, and the majority of these individuals reside in low-income and lower-middle-income countries.¹⁶ In some regions, the availability of healthcare facilities and professionals is highly imbalanced,¹⁷ making it challenging for people in certain areas to access quality healthcare services. The repercussions of this unequal resource allocation are further pronounced during public health crises, such as the current COVID-19 pandemic¹⁸, which has exposed the fragility of health systems, particularly in low- and middle-income countries. These vulnerabilities hinder effective responses to global health emergencies, leaving millions of people at heightened risk.

Commercial factors exert a significant influence on health resource allocation and decision-making, with implications for the accessibility and affordability of health services.¹⁹ These commercial determinants can have far-reaching effects on individuals' ability to access essential healthcare. For instance, the pricing of

¹⁵ Hicckel, J. (2020). The sustainable development index: Measuring the ecological efficiency of human development in the anthropocene. *Ecological economics*, 167, 106331.

¹⁶ World Health Organization. (2018). Integrating palliative care and symptom relief into primary health care: a WHO guide for planners, implementers and managers.

¹⁷ Kingma, M. (2018). *Nurses on the move: Migration and the global health care economy*. Cornell University Press.

¹⁸ Kooli, C. (2021). COVID-19: Public health issues and ethical dilemmas. *Ethics, Medicine and Public Health*, 17, 100635.

¹⁹ Kickbusch, I., Allen, L., & Franz, C. (2016). The commercial determinants of health. *The Lancet Global Health*, 4(12), e895-e896.

pharmaceutical products driven by commercial interests may result in some individuals being denied access to life-saving medications.²⁰ The structure and design of health insurance systems, as well as commercial insurance models, also play a pivotal role in determining whether people can avail themselves of appropriate healthcare services.²¹ Moreover, the sway of commercial interests and market forces extends to the realm of medical research, new drug development, and innovation, potentially diverting attention and resources away from research and treatment for certain diseases.^{22,23}

1.2.3 Bridging the Governance Deficit in Global Health: Strengthening Multilateral Collaboration and Corporate Engagement

Challenges arise from evolving economic power imbalances and inadequacies in adapting the global governance system²⁴, impacting representation and inclusivity.²⁵ Asymmetries in power within multilateral institutions affect decision-making in global health governance, while unclear conceptualizations of the right to health and imbalanced power structures pose additional hurdles. Sovereign states face limitations in effectively managing health crises, including politicization, fragmented coordination, and bilateral approaches to multilateral mechanisms.^{26,27} Such challenges can hinder information-sharing and coordination, impacting overall effectiveness in addressing global public health emergencies.²⁸ Diverse responses to health crises also reveal varying governance values, exposing weaknesses in the existing global public

²⁰ McKee, M., & Stuckler, D. (2018). Revisiting the corporate and commercial determinants of health. *American journal of public health, 108*(9), 1167-1170.

²¹ Lee, K., & Freudenberg, N. (2022). Public health roles in addressing commercial determinants of health. *Annual Review of Public Health, 43*, 375-395.

²² Gilmore, A. B., Fabbri, A., Baum, F., Bertscher, A., Bondy, K., Chang, H. J., ... & Thow, A. M. (2023). Defining and conceptualising the commercial determinants of health. *The Lancet, 401*(10383), 1194-1213.

²³ Friel, S., Collin, J., Daube, M., Depoux, A., Freudenberg, N., Gilmore, A. B., ... & Mialon, M. (2023). Commercial determinants of health: future directions. *The Lancet, 401*(10383), 1229-1240.

²⁴ Burch, S., Gupta, A., Inoue, C. Y., Kalfagianni, A., Persson, A., Gerlak, A. K., ... & Zondervan, R. (2019). New directions in earth system governance research. *Earth system governance, 1*, 100006.

²⁵ Zürn, M. (2018). *A theory of global governance: Authority, legitimacy, and contestation*. Oxford University Press.

²⁶ Marten, R., & Smith, R. D. (2018). State Support: A Prerequisite for Global Health Network Effectiveness: Comment on "Four Challenges that Global Health Networks Face". *International journal of health policy and management, 7*(3), 275.

²⁷ Lencucha, R., & Bandara, S. (2021). Trust, risk, and the challenge of information sharing during a health emergency. *Globalization and Health, 17*(1), 1-7.

²⁸ Myers, N. (2021). Information sharing and community resilience: toward a whole community approach to surveillance and combatting the "infodemic". *World Medical & Health Policy, 13*(3), 581-592.

health governance system, especially without specialized international institutions and binding rules.^{29,30}

However, robust global health governance relies on conceptual and value consensus within the international community, forming the foundation for effective cooperation and coordination in addressing global health challenges. Sovereign states play a crucial role in global health governance, but the complexity of major health emergencies demands active involvement from diverse stakeholders, including the private sector. Shared identity and values drive collective action through international health organizations and cooperation platforms, exemplified by the United Nations Sustainable Development Goal 3.³¹ Emphasizing corporate social responsibility and engaging social enterprises can further strengthen financial support for global health initiatives, contributing to the achievement of SDGs.³²

1.2.4 Overcoming Funding Challenges in Global Health Governance

Global health governance is hampered by funding deficits, with gaps in sustainable development funding and uneven resource allocation. Low-income and lower-middle-income countries face substantial financing gaps for achieving the SDGs, leading to an annual investment deficit of billions.³³ Governments are grappling with fiscal deficits due to increased spending on relief and stimulus during the pandemic, posing challenges to healthcare resource allocation and preparedness for future health crises.^{34,35}

Imbalances in global health funds distribution further exacerbate health inequalities, as most expenditures concentrate in high-income countries, leaving low-income and

²⁹ Alvarez, J. E. (2020). The WHO in the Age of the Coronavirus. *American Journal of International Law*, 114(4), 578-587.

³⁰ Habibi, R., Hoffman, S. J., Burci, G. L., de Campos, T. C., Chirwa, D., Cinà, M., ... & Yamin, A. E. (2020). The Stellenbosch consensus on legal national responses to public health risks: clarifying article 43 of the International health regulations. *international organizations law review*, 19(1), 90-157.

³¹ Khetrapal, S., & Bhatia, R. (2020). Impact of COVID-19 pandemic on health system & Sustainable Development Goal 3. *The Indian journal of medical research*, 151(5), 395.

³² ElAlfy, A., Palaschuk, N., El-Bassiouny, D., Wilson, J., & Weber, O. (2020). Scoping the evolution of corporate social responsibility (CSR) research in the sustainable development goals (SDGs) era. *Sustainability*, 12(14), 5544.

³³ Stenberg, K., Hanssen, O., Edejer, T. T. T., Bertram, M., Brindley, C., Meshreky, A., ... & Soucat, A. (2017). Financing transformative health systems towards achievement of the health Sustainable Development Goals: a model for projected resource needs in 67 low-income and middle-income countries. *The Lancet Global Health*, 5(9), e875-e887.

³⁴ Zhao, W., Yin, C., Hua, T., Meadows, M. E., Li, Y., Liu, Y., ... & Fu, B. (2022). Achieving the Sustainable Development Goals in the post-pandemic era. *Humanities and Social Sciences Communications*, 9(1), 1-7.

³⁵ Kentikelenis, A., & Stubbs, T. (2022). Austerity Redux: The Post - pandemic Wave of Budget Cuts and the Future of Global Public Health. *Global Policy*, 13(1), 5-17.

lower-middle-income countries underfunded. Funding mechanisms often prioritize crisis response over preventive measures, neglecting essential aspects of public health systems.³⁶ To bridge the funding gap, the participation of multiple actors, including the private sector, non-governmental organizations, and social enterprises, becomes crucial. Their involvement can foster public-private partnerships, innovative financing models, and additional investment opportunities to strengthen global health governance and advance progress towards the SDGs.

1.3 Research Objectives

Global health governance faces deficits in funding, resource allocation, and governance efficiency. Concurrently, Chinese companies' engagement in global health is rising, introducing new opportunities and challenges. Understanding their involvement, historical progression, and impact in specific areas is vital for advancing global health governance.

This study addresses the research gap on Chinese companies' participation in global health. Exploring their historical development and contributions provides insights to enhance global health governance. Analyzing successful case studies uncovers best practices, benefiting other entities in global health initiatives. For Chinese companies, understanding their strengths and weaknesses optimizes strategies and boosts the impact of global health investments.

The research aims to achieve the following objectives:

Objective 1: Examine the historical progression of Chinese companies' engagement in the global health sector, understanding their development trajectory and motivating factors.

Objective 2: Identify specific areas in global health where Chinese companies have made significant contributions, revealing their roles and impact in global health governance.

³⁶ Sands, P., Mundaca-Shah, C., & Dzau, V. J. (2016). The neglected dimension of global security—a framework for countering infectious-disease crises. *New England Journal of Medicine*, 374(13), 1281-1287.

Objective 3: Analyze case studies of Chinese companies' involvement in global health initiatives, gaining insights into their successful strategies and challenges faced.

Objective 4: Extract valuable lessons and insights from the studied cases to provide guidance and recommendations for future global health endeavors.

Chapter 2. RESEARCH METHODOLOGY

2.1 Methodology

This research was a mixed-methods study, combining a systematic literature review with Key Informant Interviews (KII). The literature-based part of the study focused on peer-reviewed articles, books, and reports to explore the historical development of China's involvement in global health and the role of Chinese companies. The research also employed a case study approach, analyzing two pharmaceutical companies and two non-pharmaceutical companies. Additionally, two rounds of KII involving 23 participants from various backgrounds, including government agencies, think tanks, research institutions, and corporations, were conducted in a group discussion format. This provided a comprehensive understanding of different stakeholders' perspectives and experiences.

2.1.1 Literature Review

The data were collected through a systematic search of relevant databases, such as PubMed, Embase, and Web of Science, using appropriate keywords related to the study's research questions. Additionally, manual research of grey literature was conducted, including reports, policy documents, and websites of relevant organizations, such as the CSR reports of Chinese companies, World Health Organization (WHO), and China Medical Board.

The collected data were analyzed using thematic analysis to identify key themes related to the historical development of China's involvement in global health and the role of Chinese companies in this process. This research also used case study analysis to provide practical insights into the involvement of Chinese companies in global health initiatives.

2.1.2 Framework for Case Studies

(1) Case Selection: This research selected one pharmaceutical company and two non-pharmaceutical companies based on their significant impact on global health

initiatives. The selection considered their diverse sizes, industries, and types of contributions to global health, while ensuring access to relevant data.

(2) Data Collection: Data gathered for the selected companies encompassed their historical involvement in global health initiatives, contributions, impact, business models, strategies related to global health, and challenges and opportunities faced in this field. Multiple sources, including company reports, academic publications, media coverage, and interviews with stakeholders, contributed to the comprehensive dataset.

(3) Data Analysis: Adopting a qualitative approach, the research conducted thematic analysis to identify essential themes and patterns relevant to the research questions. This included exploring the factors driving and hindering Chinese companies' participation in global health initiatives, understanding the types of contributions they made to global health, and evaluating the impact of their involvement on global health outcomes.

2.1.3 Key Informant Interviews (KII)

The KII conducted as part of this research aimed to gather qualitative data and insights to understand the role of Chinese companies in global health responsibility. The interviews followed a structured approach to ensure consistency and comparability of the responses while allowing flexibility for participants to elaborate on their experiences and perspectives.

(1) Selection of KIs: KIs were selected based on their insights and involvement in the field of global health, international development, or corporate social responsibility. The pool of KIs included representatives from relevant government agencies such as the National Health Committees. The KII conducted as part of this research aimed to gather qualitative data and insights to understand the role of Chinese companies in global health responsibility. The interviews followed a structured approach to ensure consistency and comparability of the responses while allowing flexibility for participants to elaborate on their experiences and perspectives.

(2) **Interview Design:** The interviews were designed to cover various aspects of Chinese companies' involvement in global health. The questions were crafted to gather insights into the motivations, strategies, challenges, and contributions of these companies in addressing global health issues. Some example questions included:"

- What are the primary motivations for Chinese companies to engage in global health initiatives?
- How do Chinese companies assess and prioritize their global health responsibilities?
- What challenges do these companies encounter when participating in global health initiatives?
- How do they measure the impact and effectiveness of their efforts in improving global health?

(3) **Data Collection:** The interviews were conducted in two rounds to ensure thorough data collection. During the first round, participants were asked to share their experiences and perspectives on Chinese companies' involvement in global health. The second round of interviews allowed for follow-up questions and clarifications to gain a deeper understanding of specific topics.

(4) **Data Analysis:** The data collected from the interviews were transcribed and analyzed using qualitative data analysis methods. The analysis involved identifying themes, patterns, and commonalities in the responses provided by the KIs. The researchers used a systematic approach to code the data and identify key findings related to Chinese companies' global health responsibility.

(5) **Synthesis and Triangulation:** By synthesizing the case study results and KII, the study provided valuable insights into China's historical engagement in global health and the specific contributions and impact of Chinese companies on global health initiatives. Furthermore, the research identified implications derived from these findings for policy, practice, and future research in the field of global health. To

enhance the validity and reliability of the findings, the researchers used triangulation, which involved cross-referencing data from multiple sources. The data collected from the literature review, case studies, and KII were compared and contrasted to validate the conclusions drawn from each method.

2.2 Expected Outcomes:

This study provided a review of the historical development of China's involvement in global health and the specific contribution of Chinese companies. The study's findings were of interest to policymakers, researchers, and practitioners working in the field of global health. The study also provided practical insights into the involvement of Chinese companies in global health initiatives, which could inform future policies and strategies in this area.

Chapter 3. DEFINING CORPORATE GLOBAL HEALTH RESPONSIBILITY AS APPLICABLE TO CHINA' S NATIONAL CONDITIONS

3.1 Definition of Global Health Responsibility of Chinese Companies

3.1.1 The Role of the Private Sector in Global Health Governance and the Effectiveness of Public-Private Partnerships

In global health governance, the private sector encompasses a diverse range of non-governmental, for-profit, or not-for-profit entities involved in providing health-related goods and services.³⁷ It includes private enterprises, such as multinational corporations and local Small and Medium-sized Enterprises (SMEs), as well as non-profit Non-Governmental Organization (NGOs) and community-based organizations (CBOs).

Their roles span health service delivery, innovation and investment promotion, and collaborative efforts with other stakeholders for global health development.^{38,39} It contributes significantly to the global health workforce, supplying doctors, nurses, pharmacists, and other professionals.⁴⁰ In some countries, the private healthcare sector delivers approximately 50% or more of health services.⁴¹ Moreover, the private sector drives innovation and investment in health development, particularly in pharmaceutical research, medical technology, and new medicines.^{42,43} Such investments lead to improved quality and accessibility of health services, as recognized by the WHO.^{44,45}

³⁷ Asante, A. D., & Zwi, A. B. (2007). Public-private partnerships and global health equity: prospects and challenges. *Indian J Med Ethics*, 4(4), 176-180.

³⁸ Clarke, D., Doerr, S., Hunter, M., Schmets, G., Soucat, A., & Paviza, A. (2019). The private sector and universal health coverage. *Bulletin of the World Health Organization*, 97(6), 434.

³⁹ World Health Organization. (2006). *Working together for health: the World health report 2006: policy briefs*. World Health Organization.

⁴⁰ Liu, J. X., Goryakin, Y., Maeda, A., Bruckner, T., & Scheffler, R. (2017). Global health workforce labor market projections for 2030. *Human resources for health*, 15(1), 1-12.

⁴¹ Widdus, R. (2017). Public-private partnerships for health: their main targets, their diversity, and their future directions. In *Global health* (pp. 431-438). Routledge.

⁴² Horton, R. (2018). Offline: Global health and the private sector. *The Lancet*, 391(10136), 2196.

⁴³ West, D. M., Villasenor, J., & Schneider, J. (2017). Private Sector Investment in Global Health R&D: Spending Levels, Barriers, and Opportunities."

⁴⁴ Buse, K., & Waxman, A. (2001). Public-private health partnerships: a strategy for WHO. *Bulletin of the World Health Organization*, 79(8), 748-754.

⁴⁵ Christie, S., Chahine, T., Curry, L. A., Cherlin, E., & Linnander, E. L. (2022). The evolution of trust within a global health partnership with the private sector: an inductive framework. *International Journal of Health Policy and Management*, 11(7), 1140-1147.

Collaboration and partnerships between the private sector, governments, NGOs, and international agencies are essential components of effective global health governance. Public-private partnerships (PPPs) are cooperative arrangements between the government, the market, and the nonprofit sector. The government employs a command mechanism to provide public services, the market uses a price mechanism for goods and services, and the third sector offers public services or goods through a network mechanism.⁴⁶ PPPs share common characteristics, including private financing for capital and sometimes recurrent expenditures, bundling of outputs and activities in a single contract, and cost, risk, and benefit sharing between parties. Collaborating with the private sector and other stakeholders enhances the efficiency and effectiveness of health services by combining resources and knowledge.^{47,48} As COVID-19 Vaccines Global Access (COVAX), a super-PPP model, aims to address vaccine equity, its complex governance structure and challenges has also raised concerns over transparency, delivery failures, and perpetuation of inequality, and even more on the future of charity-based partnerships in global health. The debate around patent waivers for Covid-19 vaccines also reflects waning trust in the public-private partnership model, as various global voices seek alternative solutions.^{49,50}

3.1.2 Enterprises in the Context of Global Health Governance in China: Embracing Diverse Roles and Responsibilities

In the context of global health governance in China, the term "private sector" is typically referred to as "enterprises" (企业 in Chinese). This is because using the term "enterprises" better encompasses a wide range of business entities, including State-owned enterprises (SOEs). Many KIs find it more practical and suitable to use the term "enterprises" rather than "private sector" due to the national context of China.

⁴⁶ Ruckert, A., & Labonté, R. (2014). Public-private partnerships (PPPs) in global health: the good, the bad and the ugly. *Third World Quarterly*, 35(9), 1598-1614.

⁴⁷ Reich, M. R. (2018). The core roles of transparency and accountability in the governance of global health public-private partnerships. *Health Systems & Reform*, 4(3), 239-248.

⁴⁸ Mensah, G. A. (2016). New partnerships to advance global health research for NCD. *Glob Heart*, 11(4), 473-478.

⁴⁹ Storeng, K. T., de Bengy Puyvallée, A., & Stein, F. (2021). COVAX and the rise of the 'super public private partnership' for global health. *Global Public Health*, 1-17.

⁵⁰ Gostin, L. O., Moon, S., & Meier, B. M. (2020). Reimagining global health governance in the age of COVID-19. *American Journal of Public Health*, 110(11), 1615-1619.

This alignment with the Chinese context allows for smoother communication and understanding, as expressed by the interviewees.

Chinese SOEs in global health governance have distinct characteristics as compared to private enterprises.⁵¹ SOEs include enterprises funded or authorized by the state, such as nationally owned, collectively owned, and wholly state-owned enterprises. They possess the dual attributes of government-market, which means they are subject to government guidance and intervention while also bearing public responsibilities and social missions.⁵²⁵³ This unique duality allows SOEs to play a significant role in global health governance by both providing goods and services through market mechanisms and collaborating with governments to promote public health interests.⁵⁴⁵⁵

"In a system like China's, it might be better to understand SOEs as market subjects, regardless of their ownership, with the market economy being the determining factor. This perspective can provide a clearer understanding of their role,"

Researcher at China Development Research Foundation (CDRF)

The term "Chinese enterprises" encompasses limited liability companies and joint-stock companies registered in China, as well as Chinese enterprises registered overseas and operating internationally. These may also include foreign-owned or joint ventures registered in China. Some KIs emphasized the importance of diverse multinational companies actively participating in global health initiatives with China as their collaborative partner.

Regarding responsible behavior in global health, one of the KIs suggested examining how foreign subsidiaries and multinational corporations fulfill their health responsibilities in China. These enterprises operate in the domestic market as well as play an important role in the international arena and have a certain degree of influence

⁵¹ Lin, K. J., Lu, X., Zhang, J., & Zheng, Y. (2020). State-owned enterprises in China: A review of 40 years of research and practice. *China Journal of Accounting Research*, 13(1), 31-55.

⁵² Zahid, R. A., Saleem, A., & Maqsood, U. S. (2023). ESG performance, capital financing decisions, and audit quality: empirical evidence from Chinese state-owned enterprises. *Environmental Science and Pollution Research*, 30(15), 44086-44099.

⁵³ Hu, Y. Y., Zhu, Y., Tucker, J., & Hu, Y. (2018). Ownership influence and CSR disclosure in China. *Accounting Research Journal*, 31(1), 8-21.

⁵⁴ Bali, A. S., & Ramesh, M. (2017). Designing effective healthcare: Matching policy tools to problems in China. *Public Administration and Development*, 37(1), 40-50.

⁵⁵ Yu, M., He, S., Wu, D., Zhu, H., & Webster, C. (2019). Examining the multi-scalar unevenness of high-quality healthcare resources distribution in China. *International journal of environmental research and public health*, 16(16), 2813.

and participation in global health governance.^{56,57} He also underscores the significance of viewing China from the perspective of a developing country when assessing the responsibilities of pharmaceutical companies in the country.

Enterprises involved in global health extend beyond pharmaceutical and healthcare industries, encompassing various upstream and downstream sectors related to health, industries potentially impacting health, and enterprises committed to global health and sustainable development.^{58,59} KIs suggested that while pharmaceutical companies may bear a significant portion of global health responsibility due to their core business, other enterprises' responsibilities may also be linked to their core operations.

One of the KIs emphasized that companies in diverse fields can also assume global health responsibilities, aligning with China's focus on green and sustainable development and the UN Sustainable Development Goals (SDGs).

"It's actually possible that we now have not only pharmaceutical companies, but these companies in our other fields will actually have a healthy, social responsibility globally, internationally, just because of what our own country is now mentioning, our green development, sustainable development, and the UN SDG, including the current mainstreaming of OneHealth for global health. "

Director, Department of Global Health, School of Public Health, P University

Hence, in the Chinese context, the term "enterprises" is more comprehensive and applicable, covering all types of companies registered in China, including both private and state-owned, and encompassing various industries that impact global health, including pharmaceutical and healthcare sectors.

3.2 China's global health governance is government-led, with enterprises playing a supporting role

⁵⁶ van Cranenburgh, K. C., Arenas, D., & Albareda, L. (2017). Healthcare Provision of a Multinational Company Operating in Emerging Markets: Ethical motivations, benefits of healthcare investment and the impact on socially responsible investors. In *Innovative CSR* (pp. 241-263). Routledge.

⁵⁷ Ollong, K. A. (2016). Multinational corporations and the fight against malaria in Africa. *Journal of Pan African Studies*, 9(4), 318-341.

⁵⁸ Shiffman, J., & Shawar, Y. R. (2020). Strengthening accountability of the global health metrics enterprise. *The Lancet*, 395(10234), 1452-1456.

⁵⁹ Sharon, T. (2021). Blind-sided by privacy? Digital contact tracing, the Apple/Google API and big tech's newfound role as global health policy makers. *Ethics and information technology*, 23(Suppl 1), 45-57.

3.2.1 China's Role in Global Health Governance: From Follower to Leader

In a rapidly changing international landscape with intensified contests among multiple parties, China, as the largest developing country, is compelled to enhance its role in global health governance, expanding its influence and transforming from a "follower" into a "leader", as said by one of the KIs.

In the realm of global development and international politics, health has assumed a paramount position, prompting the growing significance of global health governance as a crucial aspect of China's non-traditional security sector.^{60,61} The COVID-19 pandemic has further accentuated this importance.⁶² China's response to the pandemic has been marked by extensive humanitarian aid, supplying vast quantities of medical supplies and vaccines to numerous countries and international organizations.⁶³ The leadership vacuum and economic challenges faced by the USA and EU, combined with China's resilient economy and global health diplomacy, also indicates a potential shift in hegemonic status in favor of China in the post-pandemic world.⁶⁴

China's involvement in global health governance is also driven by its commitment to building a human health and wellness community, safeguarding the interests of both China and other developing countries worldwide, and demonstrating its role and international influence as a major power.^{65,66} Establishing stronger interest connections with developing countries through the application of advanced domestic technology is considered vital in navigating the complex and challenging international

⁶⁰ Youde, J. (2018). China's role in global health governance. In *Routledge handbook on the politics of global health* (pp. 172-180). Routledge.

⁶¹ Caballero-Anthony, M. (2018). *Negotiating governance on non-traditional security in Southeast Asia and beyond*. Columbia University Press.

⁶² Saha, S., & Chakrabarti, S. (2021). The non-traditional security threat of COVID-19 in South Asia: an analysis of the Indian and Chinese leverage in health diplomacy. *South Asian Survey*, 28(1), 111-132.

⁶³ Sun, S., Xie, Z., Yu, K., Jiang, B., Zheng, S., & Pan, X. (2021). COVID-19 and healthcare system in China: challenges and progression for a sustainable future. *Globalization and Health*, 17(1), 1-8.

⁶⁴ Gauttam, P., Singh, B., & Kaur, J. (2020). COVID-19 and Chinese global health diplomacy: Geopolitical opportunity for China's hegemony?. *Millennial Asia*, 11(3), 318-340.

⁶⁵ Erie, M. S. (2020). Introduction to the symposium on legal dimensions of chinese globalization: China and global health governance. *The Chinese Journal of Comparative Law*, 8(2), 281-303.

⁶⁶ Husain, L., & Bloom, G. (2020). Understanding China's growing involvement in global health and managing processes of change. *Globalization and health*, 16(1), 1-10.

political environment.^{67,68} The goal is to create a new form of community and foster closer ties with the interests of developing countries.⁶⁹

"The use of domestic advanced and applicable technology to better tighten the interest links with developing countries complex and severe international political situation, the need for Chinese enterprises to go abroad more and more need to doctrine positive externalities, the formation of a new form of community, and closer to the interests of developing countries linked."

Researcher, Academy of International Trade and Economic Cooperation, Ministry of Foreign Affairs

President Xi Jinping has emphasized the significance of fostering a community of human health on various international platforms, proposing significant initiatives and measures to strengthen global public health development. This active engagement in global health governance is considered crucial for shaping a responsible and respected image for China, emphasizing common human needs, and garnering respect on the global stage.

"In global health governance, fulfilling health responsibilities can demonstrate a country's responsible image and contribute to shaping a respectable China. Prioritizing common human needs is essential for gaining respect and enhancing our global image. Engaging actively in global health initiatives is a key aspect of China's role in the community of human destiny, which is integral to creating a respected and admired nation."

Director, Foreign Languages Office of China

3.2.2 China's Diverse Modalities of Foreign Health Aid: Priorities, Challenges, and Centralized Decision-Making

⁶⁷ Wang, J., Abdullah, A. S., Ma, Z., Fu, H., Huang, K., Yu, H., ... & Yang, L. (2017). Building capacity for information and communication technology use in global health research and training in China: a qualitative study among Chinese health sciences faculty members. *Health Research Policy and Systems*, 15, 1-11.

⁶⁸ Hayden, C. (2016). Technologies of influence: The materiality of soft power in public diplomacy (section overview). In *The Routledge Handbook of Soft Power* (pp. 207-222). Routledge.

⁶⁹ Killeen, O. J., Davis, A., Tucker, J. D., & Meier, B. M. (2018). Chinese global health diplomacy in Africa: Opportunities and challenges. *Global health governance: the scholarly journal for the new health security paradigm*, 12(2), 4.

China's foreign aid management is centralized in the central government.⁷⁰ The National Development and Reform Commission (NCCA) plays a key role in formulating guidelines, policies, and reforms for foreign aid, while the Ministry of Commerce (MOFCOM) and other implementing departments oversees the specific implementation of aid projects. The Ministry of Foreign Affairs coordinates with diplomatic needs and proposals. Embassies and consulates stationed abroad is responsible for managing and supervising foreign aid projects in their respective countries. An inter-ministerial coordination mechanism for foreign aid ensures cohesive decision-making. Despite these mechanisms, there is no explicit policy document detailing the role of enterprises in foreign health assistance. The focus has been on government-led aid initiatives.⁷¹

Funding for health aid projects has been channeled through various means, including non-reimbursable assistance, preferential loans, global development, and South-South funds, benefiting numerous developing countries.^{72,73} Ensuring the sustainability of these programs and investments is a crucial consideration for China to effectively support global health initiatives and the need for proactive measures to tackle corruption risks, fostering cultural sensitivity and understanding, and maintaining robust monitoring and evaluation practices to enhance the impact and effectiveness of health aid initiatives.^{74,75}

" ... need to address the sustainability of our funding and resources for these programs. This includes ensuring the sustainability of the programs themselves, as well as the sustainability of the investments made. Additionally, we should explore the possibility of implementing programs that allow for non-targeted donations over time to support global health initiatives."

⁷⁰ Zhang, J. (2015). China's new foreign policy under Xi Jinping: towards 'Peaceful Rise 2.0?'. *Global Change, Peace & Security*, 27(1), 5-19.

⁷¹ Lu, N. (2018). *The dynamics of foreign-policy decisionmaking in China*. Routledge.

⁷² Dreher, A., & Fuchs, A. (2015). Rogue aid? An empirical analysis of China's aid allocation. *Canadian Journal of Economics/Revue canadienne d'économique*, 48(3), 988-1023.

⁷³ Dreher, A., Fuchs, A., Parks, B., Strange, A., & Tierney, M. J. (2021). Aid, China, and growth: Evidence from a new global development finance dataset. *American Economic Journal: Economic Policy*, 13(2), 135-174.

⁷⁴ Isaksson, A. S., & Kotsadam, A. (2018). Chinese aid and local corruption. *Journal of Public Economics*, 159, 146-159.

⁷⁵ Dreher, A., Fuchs, A., Parks, B., Strange, A. M., & Tierney, M. J. (2018). Apples and dragon fruits: The determinants of aid and other forms of state financing from China to Africa. *International Studies Quarterly*, 62(1), 182-194.

China's foreign aid encompasses a diverse range of modalities, including complete sets of projects, general materials, technical cooperation, human resources development, foreign aid medical teams, emergency humanitarian assistance, foreign aid volunteers, and South-South cooperation assistance fund projects. While health care has garnered increasing national attention and resources, it remains a relatively small proportion of overall foreign aid.⁷⁶

“We have the impression that our foreign aid is more focused on the field of health care, which has been receiving increasing national attention and a rising proportion. However, when compared to other sectors, health care projects still constitute a relatively small majority of the overall foreign aid.”

Deputy Director , China Chamber of Commerce for Import and Export of Medicines and Health Products (CCCMP)

Previous health assistance has mainly focused on "hard investments" in rebuilding hospitals and infrastructure projects with quick-impact, livelihood-oriented outcomes, with less emphasis on scientific and technological empowerment.⁷⁷ The COVID-19 pandemic has underscored the importance of strengthening the recipient countries' health systems and resilience.^{78,79}

3.2.3 The Evolving Role of Chinese Enterprises in Foreign Aid: Combining Trade, Investment, and Aid for Global Impact

With the progress of the reform and opening-up process, Chinese enterprises have witnessed continuous improvement in their capacity, providing renewed momentum to China's foreign aid efforts.^{80,81} As many governmental institutions acknowledge their

⁷⁶ Dreher, A., Fuchs, A., Hodler, R., Parks, B., Raschky, P., & Tierney, M. J. (2016). Aid on demand: African leaders and the geography of China's foreign assistance. *Centro Studi Luca d'Agliano Development Studies Working Paper*, (400).

⁷⁷ McDade, K. K., Kleidermacher, P., Mao, W., & Yamey, G. (2021). Estimating Chinese Bilateral Aid for Health: An Analysis of AidData's Global Chinese Official Finance Dataset.

⁷⁸ Dalglish, S. L. (2020). COVID-19 gives the lie to global health expertise. *The Lancet*, 395(10231), 1189.

⁷⁹ Telias, D., & Urdinez, F. (2022). China's foreign aid political drivers: lessons from a novel dataset of mask diplomacy in Latin America during the COVID-19 pandemic. *Journal of Current Chinese Affairs*, 51(1), 108-136.

⁸⁰ Zhang, D., & Smith, G. (2017). China's foreign aid system: structure, agencies, and identities. *Third World Quarterly*, 38(10), 2330-2346.

⁸¹ Varrall, M. (2016). Domestic actors and agendas in Chinese aid policy. *The Pacific Review*, 29(1), 21-44.

significance in COVID-19 epidemic response,⁸² enterprises not only provide robust support to the government's aid endeavors but also enhance the diversity and methods employed in foreign aid.

"With the recognition of their importance in epidemic response by governmental institutions like China International Development Cooperation Agency (CIDCA), enterprises have emerged as strong supporters of the government's aid efforts, while also contributing to the diversification and enhancement of foreign aid approaches and techniques."

*Researcher, Academy of International Trade and Economic Cooperation, Ministry of
Foreign Affairs*

The transition from complete sets of projects in the past to supplying medical materials in recent times has expanded the possibilities for foreign aid implementation.^{83,84} China experienced the highest increase in UN procurement volume among supplier countries, with a total procurement value of \$1.016 billion. It jumped from 20th place in 2019 to 3rd place in 2020 in the ranking of supplier countries, making outstanding contributions to improving the accessibility of global medical products.⁸⁵ However, Enterprises supplying medical aid materials may face challenges, such as the lack of information feedback mechanisms, hindering clear understanding of aid utilization and impact in recipient countries.

"Enterprises providing aid through foreign aid find it completely unclear how their products are used, the duration of their use, and the current status in the recipient country, lacking any effective communication."

Deputy Director, CCCMP

⁸² Zhaohui, L. (2022). China's Foreign Aid and International Development Cooperation in a COVID-19 Pandemic World. *China Int'l Stud.*, 92, 25.

⁸³ Liao, J., Cheng, F., Harris, A., & Xu, D. (2018). The new face of China's foreign aid: where do we go from here?. *The Lancet*, 392(10148), 636.

⁸⁴ JIN, N. (2017). Health human resource development cooperation in China's foreign aid: situation analysis and improvement strategies. *Chinese Journal of Health Policy*, 68-75.

⁸⁵ The United Nations Office for Project Services (UNOPS) has officially released the Annual Statistical Report on United Nations Procurement for the year 2020 (ASR), <http://camdi.org/news/10230>

Notably, the government has started recognizing the significance of amalgamating aid, trade, and investment,⁸⁶ which will further propel China's foreign aid towards a deeper and more comprehensive level of development. Combining trade, investment, and aid, Chinese enterprises play a crucial role in aid programs, offering advanced technologies and products to support recipient countries' development while pursuing business opportunities and returns. Many KIs have mentioned during the discussion that, by harnessing market forces, China's foreign aid meets the development needs of recipient countries and promotes internationalized development and cooperation for enterprises, fostering sustainable and long-term impacts of foreign aid.

3.3 Chinese Companies in Global Health Engagement

3.3.1 Corporate Social Responsibility and Global Health: Unveiling China's Philanthropic Landscape

Corporate Social Responsibility (CSR) refers to the responsibility of enterprises beyond profit-making, encompassing legal obligations to shareholders and employees as well as responsibilities towards consumers, the community, and the environment. It emphasizes the creation of value for society during the production process and underscores the contribution made to the environment and society.^{87,88} Studies have shown that Chinese companies, particularly pharmaceutical companies, have shown increased awareness of social responsibility, but there is still significant room for improvement in their understanding of the concept, the quality of information disclosure, and addressing environmental and innovation-related issues.⁸⁹

The scale of corporate philanthropy in China is also noteworthy, and social responsibility is gaining momentum. Private enterprises and entrepreneurs are at the forefront of philanthropy, as highlighted in the Chinese State Council's Opinions on

⁸⁶ Fon, R., & Alon, I. (2022). Governance, foreign aid, and Chinese foreign direct investment. *Thunderbird International Business Review*, 64(2), 179-201.

⁸⁷ Rangan, K., Chase, L., & Karim, S. (2015). The truth about CSR. *Harvard Business Review*, 93(1/2), 40-49.

⁸⁸ Sheehy, B. (2015). Defining CSR: Problems and solutions. *Journal of business ethics*, 131, 625-648.

⁸⁹ 李阳阳.(2021).利益相关者视域下医药企业社会责任研究(硕士学位论文,昆明医科大学).<https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202201&filename=1021141215.nh>

promoting the development of the private economy.^{90,91} While Chinese philanthropists have shown focus in specific areas like precision poverty alleviation, emergency disaster relief, education, and domestic healthcare issues, global health concerns have received comparatively less attention.^{92,93}

When addressing global health responsibilities, considerations must include protecting the health and safety of overseas Chinese nationals and collaborating with local governments, communities, and people to genuinely benefit local populations. Strengthening corporate social responsibility can be achieved through public opinion, social organizations, international law, public exposure, and partnerships with non-governmental organizations or family foundations linked to capital.

"If you want to do it (CSR in global health), you must consider the local needs and how it can really benefit the local people."

Researcher, T University

3.3.2 Motivations and Drivers for Chinese Companies' Engagement in Global Health

Understanding the motivations behind Chinese companies' engagement in global health is vital for sustainability. Carroll's Pyramid of Social Responsibility⁹⁴ guides companies in fulfilling their social responsibilities, covering economic, legal, ethical, and charitable aspects.

(1) Economic Motivations

Chinese companies' engagement in global health is driven by a variety of economic motivations. They view participation in the global health sector as a means to develop market and business links overseas, especially as China transforms into a capital

⁹⁰ Chen, Z., & Cao, Y. (2016). Chinese private corporate philanthropy: Social responsibility, legitimacy strategy, and the role of political capital. *Chinese Sociological Review*, 48(2), 108-136.

⁹¹ Yao, Z., Zhang, Z., & Ma, J. (2023). Party branches, policy perception and corporate social responsibility: Evidence from Chinese private enterprises. *Frontiers in Psychology*, 13, 1048060.

⁹² Noronha, C., Tou, S., Cynthia, M. I., & Guan, J. J. (2013). Corporate social responsibility reporting in China: An overview and comparison with major trends. *Corporate Social Responsibility and Environmental Management*, 20(1), 29-42.

⁹³ Marquis, C., & Qian, C. (2014). Corporate social responsibility reporting in China: Symbol or substance?. *Organization science*, 25(1), 127-148.

⁹⁴ Baden, D. (2016). A reconstruction of Carroll's pyramid of corporate social responsibility for the 21st century. *International journal of corporate social responsibility*, 1(1), 8.

exporter. Amidst a global trade war, maintaining competitiveness and exploring new markets becomes crucial for Chinese companies.⁹⁵ By fulfilling global health responsibilities, companies not only prioritize profitability but also consider the positive externalities of China's economic development on the world stage. The government's support and policy measures further create a conducive environment for Chinese enterprises to play a more active role internationally.⁹⁶

"Pharmaceutical innovation in China is undergoing significant changes, and international expansion is becoming more prominent on the agenda due to increasing price pressure. The country provides incentives to encourage companies to venture into global markets."

Researcher, CDRF

Additionally, Chinese companies recognize the significance of promoting technology development and product diffusion in the global health sector. They invest in research and development and engage in medical supplies, digital technology applications, and drug development, aligning these activities with their core business objectives, as many KIs indicated during the interview. This integration of global health with their main business showcases their commitment to fulfilling social responsibility and contributes to sustainable business development and global health. Furthermore, participation in global health allows companies to address challenges like breaking down trade barriers and standards restrictions, fostering cooperation among enterprises, governments, and international organizations.

"In the supply chain, we are moving away from some countries in the international arena. This is crucial for global health, where China, supported by the government, can work with both the government and the business community to strengthen industry connections. The business community can play a role in facilitating these connections."

Deputy Director, CCCMP

⁹⁵ Kapustina, L., Lipková, L., Silin, Y., & Drevalov, A. (2020). US-China trade war: Causes and outcomes. In *SHS Web of Conferences* (Vol. 73, p. 01012). EDP Sciences.

⁹⁶ Luo, Y., Xue, Q., & Han, B. (2010). How emerging market governments promote outward FDI: Experience from China. *Journal of world business*, 45(1), 68-79.

While economic motivations drive their engagement, the lack of clear mechanisms for returns on business investments in the public health market remains an issue that companies need to address.^{97,98}

(2) Compliance Motivations

CSR is closely tied to the legal and regulatory framework in developing countries, impacting the investment decisions of multinational corporations (MNCs). Meeting legal responsibilities is crucial as failure to do so can lead to costly litigation and damage to a company's brand image. In the global health sector, legal compliance is essential for Chinese companies, ensuring their business activities are safeguarded against potential legal risks and liabilities.⁹⁹ Complying with legal requirements not only supports smooth operations but also enhances a company's credibility and reputation on an international scale. Rule-compliant companies in the global health sector are more likely to collaborate successfully, ensuring the sustainability of joint projects.¹⁰⁰

Global trade in pharmaceuticals plays a significant role in global health. While it fosters pharmaceutical research and development, facilitating the spread of medical technologies and medicines worldwide, there are also challenges to be addressed. High drug prices can burden medical costs, and the circulation of generic and counterfeit drugs requires effective measures.^{101,102} Achieving sustainable development in global pharmaceutical trade necessitates a balanced approach. Studies also highlight that Chinese pharmaceutical companies' overall CSR performance, particularly in the environmental aspect, positively influences their financial indicator.¹⁰³

⁹⁷ Jamison, D. T., Summers, L. H., Alleyne, G., Arrow, K. J., Berkley, S., Binagwaho, A., ... & Yamey, G. (2013). Global health 2035: a world converging within a generation. *The lancet*, 382(9908), 1898-1955.

⁹⁸ Garrett, L. (2017). The return of infectious disease. In *Global Health* (pp. 71-84). Routledge.

⁹⁹ Chen, Y. C., Hung, M., & Wang, Y. (2018). The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China. *Journal of accounting and economics*, 65(1), 169-190.

¹⁰⁰ Kao, E. H., Yeh, C. C., Wang, L. H., & Fung, H. G. (2018). The relationship between CSR and performance: Evidence in China. *Pacific-Basin Finance Journal*, 51, 155-170.

¹⁰¹ Schoonveld, E. (2016). *The price of global health: drug pricing strategies to balance patient access and the funding of innovation*. Routledge.

¹⁰² Howitt, P., Darzi, A., Yang, G. Z., Ashrafian, H., Atun, R., Barlow, J., ... & Wilson, E. (2012). Technologies for global health. *The Lancet*, 380(9840), 507-535.

¹⁰³ Yang, M., Bento, P., & Akbar, A. (2019). Does CSR influence firm performance indicators? Evidence from Chinese pharmaceutical enterprises. *Sustainability*, 11(20), 5656.

"Pharmaceutical companies are doing their best corporate social responsibility by doing well in their own enterprises and doing well with their products."

Director, National Health Commission (NHC)

Furthermore, non-pharmaceutical trade impacts the health sector during globalization. Trade in food and chemicals can lead to health issues such as obesity and pollution, with chemical pollution causing millions of deaths annually.^{104,105}

"From a foreign aid perspective, environmental and social responsibility plays a significant role in evaluating companies for projects. Large infrastructure and mining companies, for example, are assessed for their impact on the environment and community health. It's essential to consider these factors in perspective while determining the scope of the project."

WC, Researcher, Institute for International Development Cooperation, Research Institute for International Trade and Economic Cooperation, Ministry of Commerce

Addressing these challenges is essential, especially when evaluating companies' foreign aid projects, taking into account environmental and social responsibilities in addition to other considerations.

(3) Ethical Motivation

Carroll's argument highlights that enterprises not only face ethical expectations but also have an obligation to do what is right, just, and fair, with ethics permeating the entire CSR pyramid. In the context of Chinese companies' engagement in global health, this ethical responsibility becomes crucial. By focusing on employee health and local public health issues, these companies can reduce risks associated with production disruptions due to illness, ensuring stable operations and fulfilling their ethical responsibilities.¹⁰⁶

¹⁰⁴ Naidu, R., Biswas, B., Willett, I. R., Cribb, J., Singh, B. K., Nathanail, C. P., ... & Aitken, R. J. (2021). Chemical pollution: A growing peril and potential catastrophic risk to humanity. *Environment International*, 156, 106616.

¹⁰⁵ Malley, C. S., Hicks, W. K., Kulyenstierna, J. C., Michalopoulou, E., Molotoks, A., Slater, J., ... & Robinson, T. P. (2021). Integrated assessment of global climate, air pollution, and dietary, malnutrition and obesity health impacts of food production and consumption between 2014 and 2018. *Environmental Research Communications*, 3(7), 075001.

¹⁰⁶ Prah Ruger, J. (2020). Positive public health ethics: toward flourishing and resilient communities and individuals. *The American Journal of Bioethics*, 20(7), 44-54.

"Companies can mitigate risks by prioritizing public health, especially in sectors like mining and diamond mining. For these companies, the health of their employees is crucial as it directly impacts productivity and minimizes work disruptions caused by sick leaves or absences."

Chairman of CSR consulting company

Moreover, participation in global health initiatives not only helps Chinese companies mitigate potential risks but also plays a vital role in shaping their corporate image and the business environment.¹⁰⁷ Improving the business environment and providing a conducive atmosphere for enterprises will foster their globalization efforts.¹⁰⁸

Through their active involvement in global health, Chinese companies can build a positive and reputable image in the international arena, contributing to sustainable branding and establishing themselves as responsible global players. By avoiding price competition models and promoting fair market practices, these companies can enhance the perception of Chinese products abroad, leading to further growth and cooperation opportunities in the global health sector.

(4) Philanthropic Motivations

In modern economies, the public expects enterprises to balance "charitable and commercial giving" in fulfilling their social contract, thereby becoming recognized as "good corporate citizens." CSR for global health can significantly contribute to achieving the SDGs in the health sector.¹⁰⁹ By investing in research and development, supporting vaccine and drug production, and enhancing health infrastructure, companies can positively impact global public health, reported by KIs from the private sector background. Furthermore, some of KIs from governmental background indicated that collaborations with governments, non-profit organizations, and international bodies further promote the development of public health initiatives.

¹⁰⁷ Liu, Y., Lee, J. M., & Lee, C. (2020). The challenges and opportunities of a global health crisis: the management and business implications of COVID-19 from an Asian perspective. *Asian Business & Management*, 19, 277-297.

¹⁰⁸ Gurnani, R. M. (2015). Globalization and ethical challenges. *The Business & Management Review*, 5(4), 116.

¹⁰⁹ Agarwal, N., Gneiting, U., & Mhlanga, R. (2017). *Raising the bar: Rethinking the role of business in the Sustainable Development Goals*. Oxfam.

Chinese enterprises, in their pursuit of global health engagement, not only prioritize profitability but also consider the positive externalities of China's economic development on the international stage, enhancing China's image and showcasing their commitment to global health concerns.

"Chinese enterprises are now focusing on sustainable branding to enhance their global image. This approach enables them to establish effective international communication and integrate Chinese and foreign discourse systems. Recognizing the need to catch up in the world of brand building, Chinese companies see sustainable branding as a valuable opportunity to close the gap and gain a competitive edge in the global market."

Director, Foreign Languages Office of China

Through active participation in global health endeavors, companies also strengthen their sustainable branding efforts, creating a favorable global image for Chinese enterprises.¹¹⁰ By focusing on sustainable branding, Chinese companies can bridge the gap between Chinese and foreign discourse systems and quickly catch up in the world of international brand building. Such endeavors not only bolster China's global communication and integration but also demonstrate Chinese enterprises' dedication to responsible practices on the international platform.

3.3.3 Obstacles and Solutions: Challenges Faced by Chinese companies in Global Health Engagemen

Chinese enterprises have distinct advantages in the pharmaceutical and health industry, including strong supply and industrial chains, as well as KIise in new technologies.^{111,112} This enables them to offer practical and cost-effective solutions, especially in developing countries. Despite challenges, China's pharmaceutical foreign trade has shown resilience due to supportive policies and robust capabilities. The "Belt

¹¹⁰ Zhang, S., Peng, M. Y. P., Peng, Y., Zhang, Y., Ren, G., & Chen, C. C. (2020). Expressive brand relationship, brand love, and brand loyalty for tablet pcs: Building a sustainable brand. *Frontiers in psychology*, 11, 231.

¹¹¹ Shan, S., Luo, Y., Zhou, Y., & Wei, Y. (2019). Big data analysis adaptation and enterprises' competitive advantages: the perspective of dynamic capability and resource-based theories. *Technology Analysis & Strategic Management*, 31(4), 406-420.

¹¹² Weng, F., Zhu, J., Yang, C., Gao, W., & Zhang, H. (2022). Analysis of financial pressure impacts on the health care industry with an explainable machine learning method: China versus the USA. *Expert Systems with Applications*, 210, 118482.

and Road" countries provide significant collaboration opportunities in healthcare, given their emerging markets and healthcare needs.^{113,114} Chinese companies' extensive global networks facilitate their engagement in the global health sector, allowing them to provide assistance and support.

"Our enterprises have notable comparative advantages in the health sector, particularly in offering practical and cost-effective solutions that cater to the specific needs of developing countries."

Deputy Director, CCCMP

Moreover, these enterprises are increasingly participating in global public procurement and investment activities, contributing to international affairs.^{115,116} By capitalizing on their strengths and pursuing international partnerships, Chinese companies play a vital role in addressing global health challenges.

Enterprises encounter several challenges when engaging in global health initiatives. Firstly, many companies lack a systematic and scaled approach, leading to fragmented efforts and limited impact. While some prominent companies excel in global health, others need to develop a sense of proactive engagement and focus resources on sustainable and effective projects.

"We need to avoid scattered and uncoordinated efforts in healthcare initiatives, and instead focus on planning and systematizing projects to create impactful and branded solutions."

Director, Foreign Languages Office of China

Secondly, accessing products can be difficult, particularly when it involves standards and regulations.

¹¹³ Chow-Bing, N. (2020, November). COVID-19, Belt and Road Initiative and the Health Silk Road: Implications for Southeast Asia. In *4th NACAI International Symposium* (p. 34).

¹¹⁴ Tambo, E., Khayeka-Wandabwa, C., Muchiri, G. W., Liu, Y. N., Tang, S., & Zhou, X. N. (2019). China's Belt and Road Initiative: Incorporating public health measures toward global economic growth and shared prosperity. *Global Health Journal*, 3(2), 46-49.

¹¹⁵ Cao, F., Li, R., & Cao, X. (2022). Implementation of sustainable public procurement in China: An assessment using quantitative text analysis in large-scale tender documents. *Frontiers in Environmental Science*, 10, 947962.

¹¹⁶ Arrowsmith, S., Butler, L. R., La Chimia, A., & Yukins, C. (Eds.). (2021). *Public procurement regulation in (a) crisis?: Global lessons from the COVID-19 pandemic*. Bloomsbury Publishing.

"Chinese companies are actively exploring the potential benefits of nutritional kits for child nutrition in developing countries, but government concerns over standards and regulations remain a significant consideration."

Professor, P University

Joint efforts between the government and enterprises are essential to address concerns and facilitate market entry, especially in high-end markets like Europe and the United States, or emerging markets with weak infrastructure.¹¹⁷ Lastly, corporations face weak discourse communication in the field of global health, which hinders their image and influence.¹¹⁸ Strengthening communication strategies is crucial to enhance the perception and role of enterprises in fulfilling global health responsibilities.¹¹⁹ Addressing these challenges will contribute to the effective and impactful participation of enterprises in the global health sector.

3.4 Enhancing Synergy: Integrating Foreign Aid for Health and Corporate Responsibilities in Global Health Governance

3.4.1 Distinct Approaches: Foreign Aid for Health vs. Corporate Social Responsibility

In many cases, foreign aid for health and CSR operate as separate entities, with government-led health aid and independent CSR efforts by companies.^{120,121} However, to enhance efficiency and effectiveness, a "division and integration" approach is needed.¹²² Both governments and enterprises play crucial roles in global health governance, and mechanisms for collaborative cooperation should be established. Governments must determine health responsibilities while considering common security, clarifying the respective roles of government and business, and allocating

¹¹⁷ Sinha, M., & Sheth, J. (2018). Growing the pie in emerging markets: Marketing strategies for increasing the ratio of non-users to users. *Journal of Business Research*, 86, 217-224.

¹¹⁸ Sugg, C. (2016). Coming of age: Communication's role in powering global health. *London: BBC Media Action*.

¹¹⁹ Yurui, L., Xuanchang, Z., Zhi, C., Zhengjia, L., Zhi, L., & Yansui, L. (2021). Towards the progress of ecological restoration and economic development in China's Loess Plateau and strategy for more sustainable development. *Science of The Total Environment*, 756, 143676.

¹²⁰ Lamb, S., Jennings, J., & Calain, P. (2017). The evolving role of CSR in international development: Evidence from Canadian extractive companies' involvement in community health initiatives in low-income countries. *The Extractive Industries and Society*, 4(3), 614-621.

¹²¹ Holmes, M., Banda, D., & Chawansky, M. (2015). Towards sustainable programme design? An examination of CSR initiatives within a Zambian SFD NGO. *International Journal of Sport Management and Marketing*, 16(1-2), 36-51

¹²² .Asante Antwi, H., Zhou, L., Xu, X., & Mustafa, T. (2021, April). Beyond COVID-19 pandemic: an integrative review of global health crisis influencing the evolution and practice of corporate social responsibility. In *Healthcare* (Vol. 9, No. 4, p. 453). MDPI.

resources effectively. Establishing a clear mechanism with defined responsibilities and authority is essential.

"The clear distinction of responsibilities and rights between government and enterprises, along with the identification of their respective roles, requires a harmonious combination and collaborative policy system design in the field of global health."

*Researcher, Academy of International Trade and Economic Cooperation, Ministry of
Foreign Affairs*

To ensure synergy between foreign aid for health and corporate responsibilities, roles and functions of stakeholders should be clearly defined to avoid duplication and conflict. Policy support and guidance should encourage companies to proactively assume social responsibility and engage in global health initiatives, supported by incentive mechanisms to motivate active participation. Strengthening communication and cooperation between foreign aid and corporate responsibilities will foster a collaborative atmosphere, encouraging Chinese enterprises to take on global health responsibilities. This approach will lead to an efficient and cohesive global health governance mechanism.

3.4.2 Exploring Integration: Motivation, Area, Mechanism in Global Health

(1) Motivation Integration: Advancing Global Health for People's Well-being

The integration of government and business in the dynamics of global health revolves around the common goal of promoting global people's well-being and health security. To achieve this, a corporate responsibility framework should prioritize the health and well-being of all people.¹²³

"Let's not box ourselves in with a definition of what we want to do first, but let's create a framework and a way of doing this CSR, that is more conducive to bringing health and well-being to all people, in our own way."

¹²³ Nunes, A. R., Lee, K., & O'Riordan, T. (2016). The importance of an integrating framework for achieving the Sustainable Development Goals: the example of health and well-being. *BMJ global health*, 1(3), e000068.

The allocation of resources for government aid programs should be viewed from the perspective of maintaining global health security, with a focus on effective resource allocation and synergistic action between government assistance and business projects.¹²⁴ Utilizing the KIise of the professional sector is essential in providing guidance for foreign aid and corporate responsibility, bridging the gap between diplomatic and professional logic. Moreover, shifting from "on-the-ground practice" to "strategic cooperation" allows for a more holistic approach in meeting recipient countries' needs and forming integrated strategic planning. Motivational integration in global health governance contributes to the common goal of enhancing global health security for the well-being of all.

(2) Area Integration : Leveraging Resources and Prioritizing Areas of Concern

In pursuit of effective participation in global health, a focused and systematic approach for prioritizing area for effort is essential for government and enterprises.¹²⁵ Careful selection of key areas of concern, along with a thorough understanding of existing resources and strengths, is vital to avoid resource dispersion and optimize engagement in international assistance and CSR.

"We can leverage our resources and strengths for our highly mission-oriented and internationally responsible participation, and we have identified our resource strengths and channels."

Researcher, Department of Health Strategy and Global Health Research, Center for Health Development Research, NHC

Prioritizing global hot topics, such as tropical diseases in developing countries, and promoting synergy between governments and enterprises in the public health sector and aid nexus can lead to more impactful action.^{126,127} Additionally, addressing

¹²⁴ Kieny, M. P., Bekedam, H., Dovlo, D., Fitzgerald, J., Habicht, J., Harrison, G., ... & Travis, P. (2017). Strengthening health systems for universal health coverage and sustainable development. *Bulletin of the World Health Organization*, 95(7), 537.

¹²⁵ World Health Organization. (2018). *Delivering global health security through sustainable financing: 26-27 July 2017, Seoul, Republic of Korea* (No. WHO/WHE/CPI/2018.38). World Health Organization.

¹²⁶ Chan, K. M., Boyd, D. R., Gould, R. K., Jetzkowitz, J., Liu, J., Muraca, B., ... & Brondízio, E. S. (2020). Levers and leverage points for pathways to sustainability. *People and Nature*, 2(3), 693-717.

medicine and health accessibility through policy guidance and financial intervention is crucial for developing countries. Defining social responsibility within the context of Chinese characteristics and needs, rather than simply applying Western standards, will lead to a more relevant and effective framework.

"We need to define our own standards of social responsibility in the context of global health, considering the unique roles we can play in today's society and international environment based on our country's needs and development."

Researcher, T University

Leveraging industrial strengths, especially in medical infrastructure, equipment, and the promotion of Chinese medicine globally, presents promising opportunities for both international and domestic responsibilities.

(3) Integration of Mechanism: Public-Private Partnerships (PPPs) in Advancing Global Health

The integration of governmental and corporate participation in global health necessitates policy coherence, considering the involvement of multiple departments and the need for internal and external coordination.¹²⁸

"Bringing companies together and integrating their resources through the PPP platform is crucial. It's not just about relying solely on companies themselves; it's about combining efforts and resources to lead, guide, and support them in advancing product technology development in global health."

Researcher, P University

The government should strengthen policy advocacy and involve enterprises in decision-making processes to enhance their participation in global health governance. Enterprises, on the other hand, can collaborate through public-private partnership

¹²⁷ World Health Organization. (2017). *Integrating neglected tropical diseases into global health and development: fourth WHO report on neglected tropical diseases*. World Health Organization.

¹²⁸ Strasser, S., Stauber, C., Shrivastava, R., Riley, P., & O'Quin, K. (2021). Collective insights of public-private partnership impacts and sustainability: A qualitative analysis. *Plos one*, 16(7), e0254495.

platforms, pooling resources for localized production in developing countries and responding to health emergencies.¹²⁹

"In the future, by establishing a fund, the government and enterprises can each focus on their strengths and work together to efficiently address specific challenges for the benefit of patients."

Director, NHC

Jointly establishing funds and engaging in project cooperation with multilateral organizations can further enhance the role of Chinese medical products, technologies, and KIise in global health governance, providing high-quality and affordable solutions for the world.¹³⁰

3.4.3 Navigating Interests: Overcoming Challenges in Government-Enterprise Cooperation for Global Health

Government caution and low tolerance for error may limit the role of enterprises, making open communication channels essential for problem-solving and innovation. Additionally, interest avoidance is a significant consideration in government-enterprise collaboration, as each party may have distinct objectives and interests.¹³¹ Establishing close ties and involving both parties in policy formulation can help address potential conflicts.¹³²

"In our observation, government-related organizations are cautious with low tolerance for error, which restricts the incorporation of strategic considerations and issues faced by companies in policy design for developing overseas markets. This poses a challenge that needs to be addressed."

¹²⁹ Tambo, E., Ugwu, C. E., Guan, Y., Wei, D., & Xiao-Nong, Z. (2016). China-Africa health development initiatives: benefits and implications for shaping innovative and evidence-informed National health policies and programs in sub-Saharan African countries. *International Journal of MCH and AIDS*, 5(2), 119.

¹³⁰ Zhang, S., Chan, A. P., Feng, Y., Duan, H., & Ke, Y. (2016). Critical review on PPP Research—A search from the Chinese and International Journals. *International journal of project management*, 34(4), 597-612.

¹³¹ García, P. J. (2019). Corruption in global health: the open secret. *The Lancet*, 394(10214), 2119-2124.

¹³² Patnaik, S., Pereira, V., Temouri, Y., Malik, A., & Roohanifar, M. (2020). The dance of power and trust-exploring micro-foundational dimensions in the development of global health partnership. *Technological Forecasting and Social Change*, 156, 120036.

*WC, Researcher, Institute for International Development Cooperation,
Research Institute for International Trade and Economic Cooperation, Ministry of
Commerce*

Managing conflicts of interest is crucial, ensuring the public interest is prioritized, and business ethics are upheld to balance the needs of all stakeholders and maintain transparency in policy-making.^{133,134} Lastly, cultural differences must also be considered, as they can impact communication and understanding in global health cooperation.

¹³³ Brewis, A., & Wutich, A. (2019). *Lazy, crazy, and disgusting: stigma and the undoing of global health*. Johns Hopkins University Press.

¹³⁴ Mackey, T. K., Kohler, J. C., Savedoff, W. D., Vogl, F., Lewis, M., Sale, J., ... & Vian, T. (2016). The disease of corruption: views on how to fight corruption to advance 21 st century global health goals. *BMC medicine*, 14, 1-16.

CHAPTER 4: FROM PAST TO PRESENT: THE EVOLUTION OF CHINESE CORPORATE GLOBAL HEALTH RESPONSIBILITY

4.1 A Historical Perspective: Chinese Companies' Journey into Global Health

China's journey in the field of global health has been marked by significant progress, and the role played by Chinese enterprises in this realm should be duly acknowledged. Since the establishment of the People's Republic of China in 1949, Chinese companies have actively engaged in global health endeavors. Over time, their involvement has undergone notable transformations in both nature and scope. This research takes an objective and impartial approach to offer a comprehensive overview of Chinese companies' historical participation in global health, spanning from 1949 to the present day.

4.1.1. China Companies' Prioritization of Domestic Health Development and Early Involvement in Global Health (1949-1972)

After the founding of the People's Republic of China in 1949, the country prioritized the development of a robust domestic health system due to challenges like the scarcity of medical personnel, inadequate facilities, and prevalent health issues such as infectious diseases and malnutrition.¹³⁵ During this period, the government took a leading role in health sector governance, and some foreign aid programs were initiated. After joining the WHO in 1972,¹³⁶ China actively participated in global health collaborations with international agencies to improve health standards within its borders. However, during this phase, Chinese companies' involvement in global health was relatively limited, with their primary focus on producing and supplying essential medicines and vaccines for the domestic market.¹³⁷

¹³⁵ Wilenski, P. (1976). *Delivery of health services in the People's Republic of China*. IDRC, Ottawa, ON, CA.

¹³⁶ World Health Organization. (2008). *World Health Report 2008 (The) Chinese*. World Health Organization.

¹³⁷ Liu, P., Guo, Y., Qian, X., Tang, S., Li, Z., & Chen, L. (2014). China's distinctive engagement in global health. *The Lancet*, 384(9945), 793-804.

After the founding of New China in 1949, significant milestones in Chinese companies' involvement in global health included the establishment of Northeast Medicine as the first pharmaceutical company,¹³⁸ the organization of the China Pharmaceutical Company in 1950 for the production and supply of basic medicines, and the provision of medical assistance to the DPRK in the early 1950s.^{139,140} In 1963, China sent its first medical team to Algeria,¹⁴¹ and the establishment of the China-Algeria Friendship Hospital in 1964 marked a crucial moment in China's foreign medical aid efforts. Additionally, in 1972, the China National Pharmaceutical Company was assigned the responsibility of supplying medical commodities for medical teams abroad and foreign aid, following a division of labor between the Ministry of Commerce and the Ministry of Health.¹⁴²

4.1.2 From Local to Global - Chinese Companies' Expansion in Global Health (1978-2013)

Since China's reform and opening-up policy in 1978, Chinese companies have actively engaged in the global health sector.^{143,144} In the 1980s, China commenced exporting essential medicines and medical equipment to other developing nations, leading to the emergence of prominent Chinese pharmaceutical firms.¹⁴⁵ In the 1990s, Chinese companies expanded internationally, bolstering their competitiveness through joint ventures with foreign partners and the adoption of advanced technologies.¹⁴⁶ International organizations have played a crucial role in supporting Chinese pharmaceutical manufacturers in recent years, facilitating the rapid development of globally essential drugs and vaccines, and enhancing quality management standards and production capacity through technical and financial assistance.¹⁴⁷

¹³⁸ 王铁崖,《中国现代医药工业史》(第一卷),人民卫生出版社,2012年。

¹³⁹ 黄雪莲,陈欣欣.历史不会忘记的西南援朝医疗队[J].中国口腔医学信息,2008,17(1):1-4.

¹⁴⁰ 薛金梓.抗美援朝战争与新中国防疫事业发展[J].兰台世界,2021.

¹⁴¹ 李安山.中国援外医疗队的历史,规模及其影响[D],2009.

¹⁴² 中国医药公司编.中国医药工业史稿[M].上海社会科学院出版社出版,1990

¹⁴³ Jing, X., Peilong, L., & Yan, G. (2011). Health Diplomacy in China. *Global health governance*, 4(2).

¹⁴⁴ World Health Organization. (2015). People's Republic of China health system review. *Health systems in transition*, 5(7).

¹⁴⁵ Rao, P. M. (2008). The emergence of the pharmaceutical industry in the developing world and its implications for multinational enterprise strategies. *International Journal of Pharmaceutical and Healthcare Marketing*, 2(2), 103-116.

¹⁴⁶ Dong, H., Bogg, L., Rehnberg, C., & Diwan, V. (1999). Drug policy in China: pharmaceutical distribution in rural areas. *Social science & medicine*, 48(6), 777-786.

¹⁴⁷ Friede, M., Palkonyay, L., Alfonso, C., Pervikov, Y., Torelli, G., Wood, D., & Kiény, M. P. (2011). WHO initiative to increase global and equitable access to influenza vaccine in the event of a pandemic: supporting developing country production capacity through technology transfer. *Vaccine*, 29, A2-A7.

Chinese companies have achieved significant milestones in the global health sector during this period of time. In 1982, a pharmaceutical enterprise from Guangdong Province participated in the International Pharmaceutical Exhibition in Frankfurt, Germany, marking the first Chinese company to explore the international market. Subsequently, in 1992, China conducted its inaugural international tender for tuberculosis drugs, obtaining medicines at a substantially lower price.¹⁴⁸ In 2002, the country's exports of Chinese herbal medicines and proprietary medicines exceeded 100,000 tons for the first time.¹⁴⁹ The recognition of Artemisinin as a pharmaceutical product by the WHO in 2005 demonstrated China's commitment to international pharmaceutical quality standards.^{150,151} Moreover, in 2009, China's pharmaceutical industry reached a record-high cumulative output value of 1 trillion yuan. In 2013, the domestically produced live attenuated encephalitis B vaccine passed the WHO Prequalification, marking China's entry into the global vaccine supply chain.¹⁵² These milestones showcase the growing influence and contributions of Chinese companies in the global health arena.

4.1.3 Thriving in Global Health - China's Rising Presence (2013-present)

In response to intensified competition, multinational enterprises (MNEs) are increasingly looking to locate innovation activities in emerging economies in the South, transitioning them from low-value-adding operations to high-value-adding R&D operations.¹⁵³ In recent years, Chinese companies have taken this chance and have increasingly engaged in the global health sector, witnessing the emergence of numerous notable players in healthcare and biotechnology.¹⁵⁴ Policy support and

¹⁴⁸ 刘慧.联合国世界卫生组织的采购[J].中国政府采购,2003(8):4-8.

¹⁴⁹ 王莹洁, 张淑华. 中药出口: 艰难开拓[J]. 中国海关, 2013, 7.

¹⁵⁰ He, S. P., Tan, G. Y., Li, G., Tan, W. M., Nan, T. G., Wang, B. M., ... & Li, Q. X. (2009). Development of a sensitive monoclonal antibody-based enzyme-linked immunosorbent assay for the antimalaria active ingredient artemisinin in the Chinese herb *Artemisia annua* L. *Analytical and Bioanalytical Chemistry*, 393, 1297-1303.

¹⁵¹ 黄宝斌,许明哲,白东亭等.WHO药品预认证项目为我国药品生产企业的国际化开辟道路[J].中国医药工业杂志,2014,45(07):697-702.DOI:10.16522/j.cnki.cjph.2014.07.028.

¹⁵² Xu, M., Liang, Z., Xu, Y., & Wang, J. (2015). Chinese vaccine products go global: vaccine development and quality control. *Expert Review of Vaccines*, 14(5), 763-773.

¹⁵³ Zhao, S., Tan, H., Papanastassiou, M., & Harzing, A. W. (2020). The internationalization of innovation towards the South: A historical case study of a global pharmaceutical corporation in China (1993–2017). *Asia Pacific Journal of Management*, 37, 553-585.

¹⁵⁴ Zhao, J. (2012). Internationalization Strategies of Chinese Pharmaceutical Firms. In *Comparing High Technology Firms in Developed and Developing Countries: Cluster Growth Initiatives* (pp. 204-216). IGI Global.

investments have bolstered their prominence in the global health industry.¹⁵⁵ Notably, China Pharma has emerged as one of the world's leading pharmaceutical companies, offering a diverse range of innovative drugs and medical technologies. Collaborative efforts with international partners have further expanded the global presence and reputation of Chinese companies. As the global health industry continues to thrive, Chinese enterprises are gaining more influence and competitiveness in the international arena.¹⁵⁶

Notable milestones in recent years include the 2016 implementation of the internationalization strategy for Chinese preparations, focusing on expanding into developed and emerging pharmaceutical markets and enhancing export scale and product value. In 2017, Chinese companies demonstrated a trend of overseas mergers and acquisitions, exemplified by Fosun Pharmaceuticals' acquisition of GlandPharma and Impax, as well as Renfo Pharmaceuticals Group's acquisition of RiteDose, the largest U.S.-based BFS company.¹⁵⁷ Additionally, in 2018, China's oral bivalent live attenuated polio vaccine (bOPV) secured a long-term procurement order from UNICEF, marking a significant improvement in Chinese vaccine enterprises' quality management systems and corporate quality control laboratories.

4.2 Chinese Corporations' Evolution in Global Health Responsibility: Embracing CSR Three-Stage Theory

Chinese corporate global health responsibility aligns with CSR Three-Stage Theory proposed by American scholar Archie B. Carroll,¹⁵⁸ progressing from philanthropy (CSR 1.0) to strategic integration (CSR 2.0) and now towards collaborative and systemic approaches (CSR 3.0). By embracing this evolution, Chinese companies can play a significant role in addressing global health challenges, forming partnerships, leveraging technology, and contributing to sustainable health solutions worldwide.

¹⁵⁵ Wei, T., Clegg, J., & Ma, L. (2015). The conscious and unconscious facilitating role of the Chinese government in shaping the internationalization of Chinese MNCs. *International Business Review*, 24(2), 331-343.

¹⁵⁶ Grimes, S., & Miozzo, M. (2015). Big pharma's internationalization of R&D to China. *European Planning Studies*, 23(9), 1873-1894.

¹⁵⁷ 闫文萃. 中国医药企业的海外投资并购及未来发展趋势探究[J]. 中国市场, 2019(10):15+22. DOI:10.13939/j.cnki.zgsc.2019.10.015.

¹⁵⁸ Visser, W. (2016). 19. The future of CSR: towards transformative CSR, or CSR 2.0. *Research handbook on corporate social responsibility in context*, 339.

4.2.1 Chinese Corporate Global Health Responsibility 1.0

Chinese Corporate Global Health Responsibility 1.0 represents the initial stage where Chinese companies fulfill their social responsibility in the global health domain. At this stage, besides their economic duties, companies begin to address legal, ethical, and philanthropic responsibilities, showing awareness of global health issues and responding to society's expectations for enhanced corporate accountability through foundational public service efforts.¹⁵⁹

Key features of CSR 1.0 include prioritizing corporate citizenship, committing to social responsibility in global health, and contributing to improving global health outcomes rather than solely focusing on financial gains. Taxation is the primary means of correcting the externalities of corporate philanthropic donations, especially in corporate income tax, where China has also formulated corresponding tax policies to incentivize corporate donations.¹⁶⁰ Furthermore, companies adopt diverse methods of contribution, encompassing financial donations, material aid, technical assistance, among others, tailored to meet the specific needs of various regions and programs.

For instance, during the COVID-19 pandemic, Chinese enterprises demonstrated global health support by donating funds and materials to affected countries, providing medical equipment, protective materials, and medical masks to aid in the global anti-epidemic response.^{161,162} Additionally, executives' international experience positively influences corporate philanthropic donation speed, along with regional epidemic severity and financing constraints, ultimately improving financial performance.¹⁶³

4.2.2 Chinese Corporate Global Health Responsibility 2.0

¹⁵⁹ Zhang, D., Morse, S., & Ma, Q. (2019). Corporate social responsibility and sus

¹⁶⁰ 严晓芬.(2022).税收激励、慈善捐赠与企业社会责任研究(硕士学位论文,中南财经政法大学).<https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFDTEMP&filename=1022558187.nh>

¹⁶¹ Shen, H., Fu, M., Pan, H., Yu, Z., & Chen, Y. (2020). The impact of the COVID-19 pandemic on firm performance. *Emerging Markets Finance and Trade*, 56(10), 2213-2230.

¹⁶² 赵志成 & 于岩平.(2022).新冠疫情中旅游企业慈善捐赠行为研究. *现代商业*(18),144-147. doi:10.14097/j.cnki.5392/2022.18.037.

¹⁶³ 罗雨濛.(2022).新冠疫情中的中国速度-企业国际化经验、慈善捐赠速度及财务绩效(硕士学位论文,青岛大学).<https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202301&filename=1022771503.nh>

Chinese Corporate Global Health Responsibility 2.0 represents companies' proactive efforts to address global health issues by integrating them closely with their business strategy under the CSR 2.0 framework. At this stage, companies view global health responsibility as an essential component of their overall strategy. Global health responsibility is not treated as a separate social good activity but is seamlessly integrated into companies' day-to-day operations and management. By strategically leveraging their strengths and resources, companies can effectively tackle health challenges and contribute to sustainable development and social value creation.

Pharmaceutical companies, for example, focus on using their research and development capabilities to study new antibiotics and combat global antibiotic resistance.¹⁶⁴ Internet technology companies utilize their digital strengths to develop smart health monitoring devices, enhancing global health system surveillance and early warning against public health risks like infectious diseases.¹⁶⁵ Additionally, food companies form partnerships with non-profit organizations to fund healthy water projects in developing countries, addressing water resource issues, reducing pollution, and ultimately improving the hygiene and health of local communities.¹⁶⁶

4.2.3 Chinese Corporate Global Health Responsibility 3.0

Chinese Corporate Global Health Responsibility 3.0 represents a stage, where companies emphasize building partnerships and symbiotic relationships to jointly address global health issues and other social problems, fostering a shared social responsibility ecosystem that benefits both society and business. Chinese enterprises collaborate with their value chains and social networks, forming a unified value-sharing ecosystem. For example, Yili, the largest dairy company in China, has established a "Sustainable Development Supply Chain Global Network" through broad collaborations with 13 global strategic partners and initiated the Breast Milk Research Ecological Circle to strengthen the "innovation chain" by connecting top research

¹⁶⁴ 拱梅芳 & 付四海.(2018).国内外抗耐药复方抗生素研发的现状 & 开发策略. 中国抗生素杂志(01),15-21. doi:10.13461/j.cnki.cja.006149.

¹⁶⁵ 温丽 & 蔡永铭.(2018).基于搜索引擎数据的流感监测预警. 分子影像学杂志(02),207-211.

¹⁶⁶ 百事公司助力母亲水窖 20 周年 搭建西部女性发展之路人, 人民日报 (海外版)
<https://caijing.chinadaily.com.cn/a/202104/23/WS60826b3ea3101e7ce974b794.html>

resources domestically and internationally.¹⁶⁷ Those initiatives enable them to collectively address global health challenges, drive social innovation, and enhance sustainable development capabilities. Impact investing further supports their social responsibility goals, providing additional funding for innovative global health initiatives. However, challenges include limited investment diversity, incomplete social impact investment industry chain, and insufficient policy support.t.¹⁶⁸

Notably, in the field of global health, the active involvement of enterprises in multilateral global health governance mechanisms holds significant importance. Presently, the participation of Chinese enterprises in such mechanisms remains limited, with minimal presence observed in international or regional bilateral and multilateral initiatives.

(1) Multilateral mechanisms at the global level

At the international level, there are various global health governance mechanisms, such as the World Health Organization (WHO), World Trade Organization (WTO), United Nations Environment Programme (UNEP), and others, which play important roles in addressing global health challenges and promoting sustainable development. There are also a number of distinctive global health governance mechanisms that is between international organizations and enterprises, such as the Pharmaceutical Industry Partnership Project (MPP), the Anti-Malaria Project (MMV), and the Global Tuberculosis Alliance.

However, Chinese enterprises currently face limited direct cooperation channels within these mechanisms. Their participation in global health governance mechanisms, including international or regional bilateral and multilateral mechanisms, is relatively small. The challenges for Chinese companies seeking to participate in these mechanisms include navigating well-structured yet complex processes, understanding the five-step resource allocation framework, and addressing shortcomings in

¹⁶⁷ 陆小苹.(2023).伊利打造健康生态圈，让世界共享健康. 中国质量(02),34-37. doi:10.16434/j.cnki.zgzi.2023.02.004.

¹⁶⁸ 潘穗琳.(2019).社会影响力投资的中国实践与国际比较(硕士学位论文,上海外国语大学).<https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD201902&filename=1019126403.nh>

transparency, flexibility, and stakeholder participation to effectively influence resource distribution and contribute to global health initiatives.^{169,170}

(2) Multilateral global health governance frameworks with regional specificities

Currently, there are several multilateral global health governance frameworks at the regional level, including ASEAN (Association of Southeast Asian Nations), BRICS (Brazil, Russia, India, China, and South Africa), SCO (Shanghai Cooperation Organization)¹⁷¹, FOCAC (Forum on China-Africa Cooperation), and the BRI (Belt and Road Initiative).¹⁷² These mechanisms aim to promote health issues and cooperation within their respective regions, addressing various aspects of global health such as disease prevention, health services, and medical technology innovation.¹⁷³

By leveraging platforms, such as China Medical Health (Indonesia) Brand Exhibition (CHEXPO ASEAN 2019) organized by the Ministry of Commerce of China¹⁷⁴, Chinese enterprises could actively engaged in the global health sector strengthening cooperation with various countries, showcasing advanced products, gaining recognition, and promoting investment collaboration in the medical and health industries, thereby contributing to the advancement of global health initiatives.^{175,176}

Despite the presence of these regional mechanisms, Chinese companies have not fully embraced the opportunities for participation as desired, indicating potential untapped opportunities for collaboration and investment in the global health industry, which could be facilitated by the support of the Chinese government.

(3) National bilateral health collaboration

¹⁶⁹ Chi, Y. L., & Bump, J. B. (2018). Resource allocation processes at multilateral organizations working in global health. *Health policy and planning*, 33(suppl_1), i4-i13.

¹⁷⁰ Killeen, O. J., Davis, A., Tucker, J. D., & Meier, B. M. (2018). Chinese global health diplomacy in Africa: Opportunities and challenges. *Global health governance: the scholarly journal for the new health security paradigm*, 12(2), 4.

¹⁷¹ Lanteigne, M. (2018). Russia, China and the Shanghai Cooperation Organization: Diverging security interests and the 'Crimea effect'. *Russia's Turn to the East: Domestic Policymaking and Regional Cooperation*, 119-138.

¹⁷² Rudolf, M. (2021). China's health diplomacy during Covid-19: The Belt and Road Initiative (BRI) in action.

¹⁷³ Cao, J. (2020). Toward a health silk road: China's proposal for global health cooperation. *China Quarterly of International Strategic Studies*, 6(01), 19-35.

¹⁷⁴ CHEXPO ASEAN 搭建中国与东盟医疗健康合作桥梁，展会期间配套活动精彩纷呈 <http://www.cccmhpie.org.cn/Pub/9073/175589.shtml>

¹⁷⁵ Ramakrishnan, L., Aghamohammadi, N., Fong, C. S., Bulgiba, A., Zaki, R. A., Wong, L. P., & Sulaiman, N. M. (2018). Haze and health impacts in ASEAN countries: a systematic review. *Environmental Science and Pollution Research*, 25, 2096-2111.

¹⁷⁶ Guinto, R. L. L. R., Curran, U. Z., Suphanchaimat, R., & Pocock, N. S. (2015). Universal health coverage in 'One ASEAN': are migrants included?. *Global health action*, 8(1), 25749.

According to the estimation for Chinese bilateral aid for health, between 2000 and 2017, China funded 1339 health-related aid projects, mainly in sub-Saharan Africa, with a focus on medical services, basic health care, malaria control, and health infrastructure. Health systems strengthening was the top priority, making China the fifth-largest health aid donor to African countries during this period.¹⁷⁷ Therefore, it's large space also for enterprises fulfill its potential by partnering with governments in bilateral collaboration.¹⁷⁸ Governments can provide policy support and resources for enterprises to jointly promote health issues.

Chinese companies can also participate in global health by establishing bilateral cooperation with other countries on their own. Bilateral cooperation can promote technology exchanges, resource sharing and joint research and development in the field of health, thereby addressing global health issues more effectively.

4.3 Promoting Global Health and Accountability through ESG Reporting

Environmental, social and corporate governance (ESG) is a comprehensive concept encompassing a business's impact on society and the environment, rooted in principles of corporate social responsibility.¹⁷⁹ It integrates sustainability-related risk management and opportunities for all stakeholders, making it a core strategy for value creation with a positive societal and environmental impact.

4.3.1 Navigating Sustainability and Social Responsibility in Global Health

Health affairs, particularly in the pharmaceutical industry, can contribute to ESG strategies as a key link between the company and stakeholders, addressing environmental, social, and governance challenges for long-term sustainability and improved health outcomes.¹⁸⁰ Leveraging private sector ESG practices in One Health implementation can enhance response to public health threats and promote

¹⁷⁷ McDade, K. K., Kleidermacher, P., Yamey, G., & Mao, W. (2022). Estimating Chinese bilateral aid for health: an analysis of AidData's Global Chinese Official Finance Dataset Version 2.0. *BMJ Global Health*, 7(12), e010408.

¹⁷⁸ Guidry, J. P., Meganck, S. L., Lovari, A., Messner, M., Medina-Messner, V., Sherman, S., & Adams, J. (2020). Tweeting about# diseases and# publichealth: Communicating global health issues across nations. *Health communication*, 35(9), 1137-1145.

¹⁷⁹ Latapí Agudelo M.A., Jóhannsdóttir L., Davídsdóttir B. A literature review of the history and evolution of corporate social responsibility. *Int. J. Corp. Soc. Responsib.* 2019;4 doi: 10.1186/s40991-018-0039-y.

¹⁸⁰ Furtner, D., Hutás, G., Tan, B. J. W., & Meier, R. (2023). Journey from an Enabler to a Strategic Leader: Integration of the Medical Affairs Function in ESG Initiatives and Values. *Pharmaceutical Medicine*, 1-12.

collaborative solutions for endemic diseases, leading to improved preparedness, prevention, and rapid response during epidemics or pandemics.¹⁸¹

By incorporating global health into ESG criteria and measurement systems, companies are encouraged to address global health issues and enhance their social responsibility practices, thereby creating shared value. This approach not only advances global health but also improves a company's performance and reputation in the ESG dimension.¹⁸²

China's ESG engagement is shown to have a significant impact on reducing manager misconduct in listed firms.¹⁸³ During the COVID-19 pandemic, strong ESG performance was positively associated with short-term cumulative returns of CSI300 stocks, suggesting its potential as a valuable indicator for navigating away from negative risk during market-wide financial crises.^{184,185} The pandemic has also amplified the global health crisis and highlighted the significance of social factors in various sectors. Consumers and investors are now placing greater emphasis on the "Social (S)" dimension of ESG, and the concept of CSR has evolved into ESG evaluations.¹⁸⁶

4.3.2 Advancing Global Health through ESG Reporting: Ensuring Accountability and Standardization

In recent years, sustainability reporting has gained importance in enterprises, with increased attention and reporting on the topic, but stakeholders are concerned about the comparability and transparency of the disclosed information.¹⁸⁷ To promote companies' involvement in global health, China's State-owned Assets Supervision and Administration Commission (SASAC) requires corporations to report on their social responsibility and incorporate global health topics into ESG criteria.

¹⁸¹ de Oliveira, C. J. B., & Gebreyes, W. A. (2022). One Health: Connecting environmental, social and corporate governance (ESG) practices for a better world. *One Health*, 15.

¹⁸² Kalia, D., & Aggarwal, D. (2023). Examining impact of ESG score on financial performance of healthcare companies. *Journal of Global Responsibility*, 14(1), 155-176.

¹⁸³ He, F., Du, H., & Yu, B. (2022). Corporate ESG performance and manager misconduct: Evidence from China. *International Review of Financial Analysis*, 82, 102201.

¹⁸⁴ Broadstock, D. C., Chan, K., Cheng, L. T., & Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. *Finance research letters*, 38, 101716.

¹⁸⁵ Zhou, D., & Zhou, R. (2021). ESG performance and stock price volatility in public health crisis: evidence from COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 19(1), 202.

¹⁸⁶ Li, T. T., Wang, K., Sueyoshi, T., & Wang, D. D. (2021). ESG: Research progress and future prospects. *Sustainability*, 13(21), 11663.

¹⁸⁷ He, F., Du, H., & Yu, B. (2022). Corporate ESG performance and manager misconduct: Evidence from China. *International Review of Financial Analysis*, 82, 102201.

"Companies need to be accountable for including specific disclosures and adhering to norms related to global health in their activities. This includes incorporating global health-related provisions into normative and regulatory documents to ensure responsible practices in this area."

Researcher, Institute for International Development Cooperation, Research Institute for International Trade and Economic Cooperation, Ministry of Commerce

Companies are encouraged to disclose their global health-related activities, initiatives, and investments in their ESG reports, and the ESG philosophy serves as a motivating tool, offering incentives for positive actions in the field of global health.¹⁸⁸

Incorporating global health provisions in normative and regulatory documents further reinforces companies' commitment to global health issues and aligns with ESG principles. Studies also reveal substantial disparities in sustainability reporting practices among healthcare companies, emphasizing the necessity for a standardized policy to address the use of different frameworks and terminologies, rather than the lack of disclosure.¹⁸⁹

"ESG concepts serve as highly effective motivational tools. When companies engage in ESG disclosure and undergo assessments, they can receive corresponding investment returns from the stock market. Additionally, this disclosure generates a positive influence and goodwill among the public and society, making it a valuable tool to leverage."

Head of P Foundation

¹⁸⁸ El Khoury, R., Nasrallah, N., & Toumi, A. (2022). ESG and performance in public health-care companies: the role of disclosure and director liability. *Competitiveness Review: An International Business Journal*, 33(1), 203-221.

¹⁸⁹ Peterzens, I. (2020). Reviewing Sustainability: ESG Reporting in the Health Care Industry.

CHAPTER 5 CHINESE COMPANIES' GLOBAL HEALTH INITIATIVES: A CASE STUDY ANALYSIS

5.1 Practice-based analytical framework

5.1.1 Insights and Best Practices from Case Studies

These in-depth case studies offer valuable insights, best practices, and lessons learned, facilitating project optimization, problem-solving, and policy enhancement. By examining corporate and government responsibilities, as well as identifying bottlenecks and policy barriers, these case studies enable more effective and targeted solutions to address global health challenges. Comparing and analyzing cases across different areas also allows for the identification of common problems and the pursuit of collective solutions, contributing to the overall advancement of global health governance. Ultimately, these case studies play a crucial role in understanding the current state and future prospects of global health governance, providing targeted recommendations for continuous improvement and progress in this vital field.

5.1.2 Case study framework

(1) Motivation

The motivation behind business engagement in global health governance is rooted in companies' heightened awareness and concern for global health challenges, driven by a sense of corporate social responsibility and the desire to contribute to societal well-being.

(2) Issues

Corporate participation in global health governance encompasses diverse topics, such as healthcare, vaccine research, infectious disease control, and more, allowing for a comprehensive understanding of corporations' specific contributions, impacts, opportunities, and challenges in the global health arena.

(3) Competency

Capacity-building is essential for enterprises' meaningful engagement in global health governance, encompassing financial investment, human resources, and industrial development, which collectively determine their role and influence in addressing global health challenges.

(4) Partnerships

Business engagement in global health governance is strengthened through collaborative partnerships with various stakeholders, such as international organizations, non-governmental organizations, and other institutions, creating a broader arena for enhanced influence and participation.

(5) Impact

Corporate engagement in global health governance encompasses diverse dimensions, including technology, finance, social profiling, and systematic strategies, requiring coherence in actions and vision to achieve meaningful contributions and influence.

5.2. Biopharmaceuticals China Pharmaceutical Group Ltd.

China National Pharmaceutical Group Corporation (hereinafter referred to as "Sinopharm", 国药集团) is a state-owned enterprise managed by the State-owned Assets Supervision and Administration Commission of the State Council. It operates in the life and health sector and is recognized as a national innovative enterprise. With a comprehensive pharmaceutical and healthcare business, Sinopharm has a significant presence in China and Asia, owning the entire industry chain of the healthcare sector, including research, manufacturing, logistics, retail, medical services, and international operations.¹⁹⁰ It boasts over 1,600 subsidiaries.¹⁹¹

5.2.1 Motivation

Sinopharm's involvement in global health governance is influenced by a convergence of economic, regulatory, ethical, and philanthropic considerations. It is pertinent to

¹⁹⁰ (2023).中国最早的工商一体国药集团. 开卷有益-求医问药(07),79-80.

¹⁹¹ Sinopharm-Sinopharm.com>About Us>Group Profile(sinopharm.com) <http://www.sinopharm.com/1073.html>

note that this account reflects Sinopharm's articulated perspective and should be presented as such. For instance, as per information available on their official website, Sinopharm underscores its commitment to human welfare as a guiding force in its engagement with global health governance.¹⁹² This perspective echoes an active effort to address global health challenges and align with the fundamental principles governing global health initiatives. Moreover, Sinopharm's participation is strategically linked to economic imperatives. Operating as a publicly listed central enterprise specialized in the life and health sectors, Sinopharm is attuned to the potential economic advantages that participation in global health initiatives offers. This encompasses an expansion of market presence and enhancement of brand reputation.

Furthermore, the alignment with national disease prevention and control strategies underscores Sinopharm's adherence to regulatory and ethical parameters, a stance that bears significance in the landscape of responsible global health engagement. This support affords Sinopharm the requisite resources and policy endorsement to effectively partake in global health governance. Lastly, philanthropic values assume a role in Sinopharm's engagement, manifest through its multifaceted global health initiatives and resource allocation. It is important to underscore, however, that these motivations are rooted in Sinopharm's expressed position rather than being unequivocally stated truths.

5.2.2 Issues

Sinopharm is active in global health governance by focusing on key areas such as global vaccine supply and research and development, providing medical material support to countries in need, contributing to health financing and charitable giving, and promoting health infrastructure development. For instances, The company has supplied essential medical materials, including epidemic prevention supplies and medical equipment, to 129 countries worldwide. Sinopharm has provided significant financial

¹⁹² 韩福恒. 秉承“爱与责任” 为人民做好药[N]. 中国财经报,2023-07-27(003).

and material support for global health by mobilizing a special fund of more than RMB 6 billion and donating more than RMB 600 million in cash, medicines and vaccines.¹⁹³

Through these initiatives, Sinopharm contributes to global health security, equity, and disease prevention and control research, making a significant impact on the improvement and progress of global health governance.

5.2.3 Competency

Sinopharm's remarkable capability base in global health governance encompasses financial strength, industrial capacity, and anti-epidemic performance. As a major enterprise involved in global health initiatives, Sinopharm ranks 80th on the list of the world's top 500 enterprises and 1st among global pharmaceutical companies, demonstrating its robust financial position and comprehensive strength.¹⁹⁴

The company's strong industrial capacity and scientific innovation in the pharmaceutical field are evident through its numerous drug production approvals and authorized patents, as well as its ongoing research and development efforts in critical areas.¹⁹⁵ The Group has cumulatively obtained more than 3,260 drug production approvals and holds a large number of authorized patents (including invention patents) of more than 2,340.¹⁹⁶

Moreover, Sinopharm's exceptional performance during the COVID-19 epidemic showcased its ability to organize scientific research, develop diagnostic tools, and produce vaccines swiftly. Sinopharm was the first to provide a 22-pronged respiratory test kit for identifying pathogens, the first to develop a nucleic acid molecular test kit for the coronavirus, the first to launch a plasma treatment program for recovered patients, and the first to develop plasma-specific immunoglobulin and inactivated vaccine for the new coronavirus.¹⁹⁷

¹⁹³ Demonstrating Sinopharm's Responsibility in the Great Examination of Anti-epidemic War - Sinopharm's "White Paper on Social Responsibility to Combat the New Crown Pneumonia Epidemic" is Re-released_News_Group News_Sinopharm Group - Sinopharm (sinopharm.com) , <http://www.sinopharm.com/s/1223-4126-38605.html>

¹⁹⁴ 谭峰.(2022).做强做优做大,做精做专做实 国药集团步入世界一流企业新阶段——专访国药集团党委书记、董事长刘敬桢. 国资报告(07),57-60.

¹⁹⁵ 原诗萌 & 谭峰.(2022).国药炼成记——走出竞争领域央企发展之路. 国资报告(07),44-56.

¹⁹⁶ 张晓熙 & 肇晖.(2022).国药集团国药控股:争做医药流通业高质量发展的引领者. 上海医药(23),1-2+32.

¹⁹⁷ (2022).抗击疫情 国药在行动. 中国现代中药(12),2290+2535-2536.

5.2.4 Partnerships

Sinopharm actively engages in global health governance through partnerships at various levels, including global multilateral mechanisms, regional health governance frameworks, and national bilateral collaborations. These partnerships underscore the company's dedication to fostering global health cooperation and promoting public health advancement across different contexts.

At the global level, Sinopharm's COVID-19 vaccine has obtained critical approvals from United Nations (UN) agencies, including its inclusion in the COVAX initiative.¹⁹⁸ As the first COVID-19 vaccine developed by a non-Western country to receive WHO support and listed on the Emergency Use Listing, Sinopharm's vaccine has been recognized for its safety, efficacy, and quality. This recognition has enabled its widespread deployment in developing countries, facilitated by UNICEF's long-term agreement with Sinopharm to supply the vaccine on behalf of COVAX.¹⁹⁹ The donation of 300,000 doses of the "Sinopharm" COVID-19 vaccine by China to the UN further highlights the country's commitment to supporting global vaccination efforts and multilateral health initiatives.²⁰⁰

Furthermore, Sinopharm's participation in the Belt and Road Initiative has expanded its trade and cooperation networks with more than 60 countries along the Belt and Road, as well as trade relations with over 120 countries and regions worldwide. This involvement demonstrates the company's dedication to fostering region-specific collaborations and leveraging opportunities provided by regional initiatives to strengthen global health cooperation. Additionally, international certifications obtained for Sinopharm's products from reputable organizations have bolstered the competitiveness of its industrial products in the global market, solidifying its position as a key player in global health governance.²⁰¹

5.2.5 Impact

¹⁹⁸ “为多国开了‘绿灯’！”国药疫苗获紧急认证，联合国为此重磅发声_腾讯新闻 (qq.com), <https://new.qq.com/rain/a/20210508A030O300#>:

¹⁹⁹ 儿基会与中国国药集团签署新冠疫苗供应协议 || 1 联合国新闻 (un.org), <https://news.un.org/zh/story/2021/07/1087832>

²⁰⁰ 中国向联合国捐献 30 万剂“国药”新冠疫苗 || 1 联合国新闻 (un.org), <https://news.un.org/zh/story/2021/09/1091242>

²⁰¹ 从引进来到走出去，国药集团国际化历程 (cccshpie.org.cn) <https://www.cccshpie.org.cn/Pub/9209/174013.shtml>

Sinopharm recognizes the economic benefits of participating in global health initiatives, such as market expansion and brand reputation enhancement through vaccine development and supply globally. Sinopharm also complies with government support and national disease prevention and control efforts, obtaining necessary resources and policy backing to carry out global health initiatives effectively. It also demonstrates its commitment to human welfare by actively contributing to global public health needs through medical material support and health fund mobilization. By aligning with the core principles of global health initiatives, Sinopharm solidifies its reputation as a socially responsible entity, contributing positively to global health governance.²⁰²²⁰³

Despite its significant contributions, Sinopharm faces certain limitations. Resource allocation remains a challenge, potentially resulting in uneven support to different regions or countries. Moreover, as the global pharmaceutical field is highly competitive, Sinopharm must actively compete with other international pharmaceutical companies, improve innovation capabilities, and enhance competitiveness to maintain and expand its influence in global health governance.

5.3 Haier Biomedical

Haier Group (海尔集团), founded in 1984, is a global leader in providing solutions for better living and digital transformation. With a user-centric approach, it has established numerous R&D centers, research institutes, manufacturing centers, and sales networks worldwide. Its subsidiary, Haier Bio (海尔生物医疗), focuses on the R&D, production, and sales of biomedical cryogenic storage devices, contributing to the development of an the Internet of Things (IoT) technology ecology based on IoT transformation.

5.3.1 Drivers

As a prominent player in the global market, the company recognizes the economic potential in the field of global health. Emphasizing scientific and technological

²⁰² (2022).全球最具价值医药品牌 TOP25 发布 国药集团蝉联亚洲首位. 中国现代中药(05),939.

²⁰³ (2022).以责任担当成就国药集团品牌辉煌. 企业文明(06),24-26.

innovation and aligning with the "14th Five-Year Plan," Haier Bio strategically positions itself to capitalize on opportunities in the expanding biosafety and medical services sector, enhancing its market presence and reputation. Haier Bio utilizes cutting-edge ultra-low temperature storage technology, diversified capabilities, and a global distribution network to meet market demands and enhance its brand influence, leading to substantial growth with revenue quadrupling and profits increasing by 15 times by 2021.²⁰⁴

In addition to economic motivations, Haier Bio demonstrates a strong commitment to social responsibility by actively adhering to the principles of the United Nations Global Compact (UNGC) and establishing the "LIFE" social responsibility system.²⁰⁵ This compliance-driven approach ensures ethical conduct and sustainable development practices throughout the company's operations, fostering responsible engagement in global health governance.

5.3.2 Issues

Key global health issues emphasized by Haier Bio's initiatives as shown on their website²⁰⁴, revolve around vaccine cold chain and storage, as well as biomedical research and sample preservation. Addressing these challenges is essential to improve global health outcomes and facilitate scientific advancements in medicine.

With the global attention on public health prevention and immunization efforts, ensuring the safe storage and distribution of vaccines has become a critical global health priority. Haier Bio, through its high-quality medical solutions and equipment, actively supports upgrading the cold chain system and improving vaccine storage conditions. This issue is especially crucial in the context of initiatives like COVAX, where equitable access to vaccines across the globe is a priority.²⁰⁶ The company's investment in constructing Cold Chain Equipment Showrooms and vaccine safety

²⁰⁴ 立足“生命科学+医疗创新”新战略周期，海尔生物未来前景如何？-海尔集团官网 (haier.com) https://www.haier.com/press-events/news/20220328_178166.shtml

²⁰⁵ Wise Respect for Life, Guardian of Health - Haier Biologicals Releases 2021 Annual Corporate Social Responsibility Report|Haier Biologicals_Sina Finance_Sina.com. Haier Bio 2022 Social Responsibility Report.pdf (haier.com) Haier Biomedical (haierbiomedical.com)

²⁰⁶ 海尔生物医疗用户使用场景, https://www.haierbiomedical.com/cn/?lang=zh_CN

technology training classrooms in Nigeria demonstrates its commitment to addressing this challenge and contributing to global immunization efforts.²⁰⁷

The advancement of medicine and scientific research heavily relies on the preservation and security of biological samples. Haier Bio's deep cryogenic refrigerator stationed in the biological laboratory of Frederick II University of Naples exemplifies the importance of proper storage for valuable biological samples.²⁰⁸ With the growing importance of genetic research, personalized medicine, and drug development, maintaining the integrity and safety of biological samples is crucial, in promoting scientific advancements and finding solutions to pressing global health issues.

5.3.3 Competency

Haier Bio's active engagement in global health governance is firmly grounded in its substantial financial investment, dedicated focus on human resources, and robust industrial development. With significant R&D investment amounting to RMB236 million in 2021, representing an impressive 57% year-on-year increase and accounting for 11.12% of revenue,²⁰⁹ the company has built innovation platforms and secured numerous patents, exemplifying its commitment to technological advancements.

Furthermore, Haier Bio incentivizes innovation through a patent reward mechanism, fostering a culture of internal ingenuity and continuous development. Leveraging its new species of IoT technology ecology, the company aims to provide IoT biotechnology solutions, spanning critical areas like blood safety, vaccinations, biospecimen banks, medicines, and reagents, creating a substantial impact on global health. With an extensive network comprising 35 industrial parks, 138 manufacturing centers, and 126 marketing centers across the globe,²¹⁰ Haier Bio has firmly established its presence in the international health landscape, allowing it to effectively participate and contribute to global health initiatives. Nonetheless, the company also

²⁰⁷ 海尔生物研究报告：生命科学+医疗创新的数字方案提供商 - 报告精读 - 未来智库 (vzkoo.com) <https://www.vzkoo.com/read/2022042120e782d48fdc03fbb2ae8ae1.html>

²⁰⁸ 海尔生物深度研究报告：从低温存储小细分走向生物安全大市场.pdf (vzkoo.com) <https://www.vzkoo.com/document/efc1d022c68a6e2ed71ec61dcd43de13.html>

²⁰⁹ 海尔生物（688139）研究报告：生物安全全球龙头，物联网与生命科学服务打开成长新空间.pdf (vzkoo.com) <https://www.vzkoo.com/document/202203256cfc7f8074615ec110ce7418.html>

²¹⁰ 海尔生物大事记, https://www.haierbiomedical.com/zh_CN/aboutUs?lang=zh_CN

faces challenges such as intense global competition and navigating diverse regulatory frameworks, necessitating the need to continually enhance its scientific and technological capabilities to maintain its competitive edge.

5.3.4 Partnerships

Haier Bio actively participates in global health governance through multilateral mechanisms and partnerships. Additionally, the company's overseas direct sales focus on the vaccine sector and have established long-term collaborations with over 20 international organizations, earning recognition from prominent entities like WHO.²¹¹ Despite potential fluctuations in revenue due to pricing and project schedules, Haier Bio's successful bid for the GAVI 5-year sponsorship plan. The company also engages with international initiatives like COVAX and Cold Chain Equipment Optimization Platform (CCEOP), demonstrating its commitment to global health. By providing specialized equipment and intelligent solutions for constructing the Champion Vaccine Cold Chain and collaborating with esteemed organizations such as the Pasteur Institute and the WHO, Haier Bio contributes to enhancing healthcare infrastructure and promoting equitable access to health services in less-developed countries.

Additionally, Haier Bio actively participates in national health programs and projects in various countries. In 2020 and 2021, Haier Bio added 118 and 208 new overseas distributors, respectively, surpassing a total of 500 distributors,²¹² accelerating its market penetration and enhancing its responsiveness to customer demands in international markets. Another example of Haier Bio's national bilateral health collaboration is its investment in the construction of a 600m Haier Cold Chain Equipment Showroom in Nigeria, along with six vaccine safety technology training classrooms.

5.3.5 Impact

²¹¹ 海尔生物（688139）研究报告：生命科学和医疗创新双翼驱动，打开成长新纪元.pdf (vzkoo.com) <https://www.vzkoo.com/document/20220824b20e2a34963cfa4bab58ce89.html>

²¹² 海尔生物（688139）研究报告：技术筑就壁垒，生命科学与医疗创新两翼齐飞.pdf (vzkoo.com) <https://www.vzkoo.com/document/2022120194f669099844cede746b901e.html>

Starting with compliance, the company actively responds to international initiatives and collaborates with global health governance frameworks. Advancing to the efficiency, Haier Bio provides specialized equipment and IoT-driven intelligent solutions, yielding tangible and positive impacts on global healthcare infrastructure and services. Finally, the company integrates social responsibility into its core values and long-term vision, actively participating in global public welfare actions and fulfilling its social responsibility commitments.

However, the company may encounter challenges related to cultural differences and varying regulatory requirements in different regions. To address these limitations, Haier Bio should strengthen partnerships and enhance scientific and technological capabilities to maintain its position as a key player in global health initiatives.

5.4 China Railway Construction Group

China Railway Construction Group Corporation (CRCC, 中国铁道建筑集团有限公司) is a mega construction enterprise formerly known as the Railway Corps of the Chinese People's Liberation Army (PLA). It is now under the administration of the State-owned Assets Supervision and Administration Commission of the State Council (SASAC). CRCC is a powerful and large-scale integrated construction group, listed on the Shanghai and Hong Kong stock exchanges, with a registered capital of 13.58 billion yuan.²¹³

5.4.1 Motivation

CRCC's multifaceted motivations, including compliance with international standards through its participation in the UNGC and its philanthropic commitment to giving back to society, combine to fuel the company's engagement in global health initiatives. Firstly, the company's economic motivations are evident in its efforts to harmonize with local communities and create employment opportunities during project construction. By promoting social responsibility and gaining recognition from partners

²¹³China Railway Construction Corporation Corporate Profile(crc.cn). <https://www.crc.cn/col/col1569/index.html>

and local communities, CRCC enhances its reputation, potentially leading to future business opportunities and sustainable growth.

Secondly, CRCC's ethical motivations are reflected in its adherence to the new development concept, prioritizing the economic and social development of the country and the well-being of the people.²¹⁴ This commitment drives the company's focus on providing comprehensive services and striving to become a world-class integrated construction industry group, which aligns with the broader goal of contributing positively to societal advancement.

5.4.2 Issues

CRCC's corporate social responsibility is multifaceted and aligned with industry characteristics and government needs. The company's economic contributions are significant, generating substantial profits and taxes that contribute to the state's financial revenue and national development. Furthermore, CRCC actively creates employment opportunities, absorbing over one million social laborers annually, which plays a crucial role in addressing social employment challenges and ensuring stability.²¹⁵

Regarding global health, CRCC's responsibility extends beyond borders. The company is involved in health infrastructure construction worldwide, exemplified by its work in building the headquarters of the African Center for Disease Control and Prevention for the African Union in Africa, bolstering local health prevention and disease control capacities. CRCC actively participates in disaster relief and emergency assistance on a global scale, sending rescue teams and providing aid to disaster-stricken areas, such as in Nigeria. Additionally, the company donates medical supplies and constructs "square cabin hospitals" in various countries, aiding in epidemic response efforts and enhancing local medical capabilities.²¹⁶

²¹⁴ China Railway Construction Corporation Social Responsibility (crcc.cn), <https://www.crcc.cn/col/col1564/index.html>

²¹⁵ China Railway Construction Corporation Responsibility Report 2021 Social Responsibility Report (crcc.cn), https://www.crcc.cn/art/2022/5/12/art_38629_3745763.html

²¹⁶ China Railway Construction Corporation Responsibility Report 2022 Social Responsibility Report (crcc.cn), https://www.crcc.cn/art/2023/6/25/art_38629_4511839.html

5.4.3 Competency

CRCC, with its diverse business scope covering engineering, investment, and industrial development, takes an active role in the global health sector. Through its "Overseas Prioritization" strategy,²¹⁷ the company invests in overseas markets, including medical and healthcare infrastructure. Emphasizing social responsibility and disaster relief, CRCC swiftly responds to emergencies, providing vital support to affected communities. Leveraging its extensive capabilities and commitment to harmonious development, CRCC contributes significantly to the advancement of medical facilities and healthcare infrastructure on a global scale.

5.4.4 Partnerships

In the realm of global health, CCRC has demonstrated its commitment through multilateral assistance and cooperation, donating epidemic prevention materials to 21 countries and regions outside China, supporting epidemic prevention and control efforts in these nations. Additionally, CCRC's partnerships with local governments and organizations in countries like Nigeria, Angola, and Trinidad and Tobago have led to the construction of vital epidemic response facilities, showcasing effective collaboration in addressing the challenges of the pandemic.²¹⁸

CCRC's dedication to protecting Chinese-funded enterprises and nationals has been evident through its donation of medical supplies, establishment of employee health centers, and implementation of contingency plans. These measures have contributed to reinforcing epidemic prevention efforts and facilitating the orderly resumption of overseas projects. CCRC's active involvement in various aspects of global health demonstrates its commitment to partnership and philanthropy, making a significant impact on improving global health outcomes.

5.4.5 Impact

²¹⁷ 中国铁建股份有限公司 海外发展 (crcc.cn), <https://www.crcc.cn/col/col42301/index.html>

²¹⁸ 心手相牵 命运相连——共建人类卫生健康共同体的世界回响-新华网 (xinhuanet.com)http://www.xinhuanet.com/world/2020-11/21/c_1126768966.htm

CRCC holds a prominent position in the global construction industry, with a vast international presence, making it an influential player in the global health field. Its participation in the "Belt and Road" initiative has led to the creation of a robust overseas operation system, allowing for extensive collaboration potential in global health. CRCC's focus on providing high-quality infrastructure and promoting economic and social development along the "Belt and Road" has earned it a stellar reputation as "Built in China," contributing significantly to social and economic advancement.

However, while CRCC's projects have contributed to infrastructure development, the article lacks specific mention of attention to community health and the environment, potentially leaving room for improvement in sustainable health measures. To ensure the construction of healthy human communities, it is crucial to prioritize community health during project implementation. Additionally, while CRCC has actively promoted the "Belt and Road," tailored strategies to address the diverse health needs of different countries and regions have not been clearly outlined. To enhance the effectiveness and sustainability of global health cooperation, it is essential to develop targeted health programs and projects tailored to the specific needs of each region.

5.5 Alibaba Group

Alibaba Group Holding Limited, or Alibaba (阿里巴巴集团), is a diverse ecosystem comprising companies in various sectors such as China and international commerce, local life services, Cainiao, cloud services, digital media, and entertainment, among others. As one of the world's largest retailers, Alibaba operates in B2B trading, online retailing, third-party payment, and cloud computing services.²¹⁹

5.5.1 Drivers

As a leading retailer and digital technology platform, the company recognizes the economic potential in addressing global health challenges, leading to new business opportunities and revenue streams. By actively assuming social responsibility and

²¹⁹ Schmuck, R., & Benke, M. (2020). An overview of innovation strategies and the case of Alibaba. *Procedia Manufacturing*, 51, 1259-1266.

engaging in global health initiatives, Alibaba can enhance its reputation and credibility, demonstrating compliance with international standards and ethical practices. Moreover, the company's commitment to philanthropy and ethical behavior drives its genuine desire to make a positive impact on global health by leveraging its resources and technological innovations.²²⁰ Through these motivations, Alibaba aims to contribute to global health improvements and create sustainable solutions that benefit individuals and communities worldwide.²²¹

5.5.2 Issues

Alibaba actively engages in key global health issues through a range of impactful initiatives. It enhances access to essential medicines and vaccines during health emergencies, rapidly distributing over 100 million epidemic prevention supplies to 146 countries through e-World Trade Platform (e-WTP), bolstering global health response capabilities.²²² The company fosters global collaboration and preparedness by sharing China's best practices in epidemic control through its Global COVID-19 Practice Sharing Platform. Alibaba's advanced AI and big data analytics accelerate drug research, identifying potential therapeutic drugs more efficiently, and improving global health outcomes. Moreover, Alibaba demonstrates its commitment to global health by establishing a RMB 1 billion medical supplies fund, supporting procurement during crises, and actively engaging in philanthropic efforts, aiding humanitarian, disaster relief, and public health initiatives, ultimately enhancing global health resilience.

5.5.3 Competency

Alibaba's international commercial retail business operates globally, facilitating cross-border cooperation opportunities in the global healthcare sector.²²³ Notably, Alibaba's digital technology platform advantage empowers information dissemination, data analysis, and intelligent logistics, enabling digital and intelligent solutions and

²²⁰ ESG-Alibaba Group (alibaba.com), <https://ali-home.alibaba.com/esg#esg-reports>

²²¹ Yun, J. J., Zhao, X., Park, K., & Shi, L. (2020). Sustainability condition of open innovation: Dynamic growth of alibaba from SME to large enterprise. *Sustainability*, 12(11), 4379.

²²² Gao, X., Xu, J., & Liu, H. (2021). Current Status of Healthcare and Available E-Health Solutions in China. *E-Business in the 21st Century: Essential Topics and Studies*; World Scientific Pub. Co. Inc.: Singapore, 169-199.

²²³ Shen, H. (2021). *Alibaba: Infrastructuring global china*. Routledge.

support for global health affairs. Additionally, Cainiao, Alibaba Group's logistics platform, offers supply chain solutions and international freight forwarding services, strengthening Alibaba's logistics and supply chain support in the global health sector with 15 overseas distribution centers and an intelligent customs clearance system at more than 60 ports worldwide. These capabilities demonstrate Alibaba's comprehensive engagement encompassing financial investment, human resources, and industrial development, enhancing its role in the global health landscape.

5.5.4 Partnerships

At the global level, Alibaba's the Global MediXchange for Combating COVID-19 (GMCC) initiative,²²⁴ co-sponsored with the Jack Ma Foundation, serves as a multilateral global health governance platform. It includes centers tailored to regional needs, like the consultation center for overseas Chinese, providing support during health emergencies. Leveraging AI and big data capabilities, GMCC's technology-assisted epidemic response center aids global health institutions in research and response efforts. Additionally, Alibaba's cooperation with the Global Health Drug Discovery and Development Center (GHDDI) exemplifies national bilateral health collaboration,²²⁵ developing an AI stable and efficient international supply chain and pharmaceutical cold chain services, enabling anti-epidemic assistance to 150+ countries, including COVID-19 vaccine distribution.²²⁶

5.5.5 Impact

Alibaba Group's impact on the global health sector is multi-faceted and beneficial, thanks to its Klise in e-commerce, retail, technology, and logistics. The conglomerate's comprehensive solutions and Cainiao Logistics' pharmaceutical cold chain capabilities contribute positively to global health and anti-epidemic efforts. By collaborating with governments, public welfare organizations, and medical institutions, Alibaba effectively provides medical supplies and epidemic prevention materials to countries

²²⁴ Sun, S., Xie, Z., Yu, K., Jiang, B., Zheng, S., & Pan, X. (2021). COVID-19 and healthcare system in China: challenges and progression for a sustainable future. *Globalization and Health*, 17(1), 1-8.

²²⁵ 全球健康药物研发中心 (ghddi.org), <http://www.ghddi.org/en/home>

²²⁶ Alfonso, V., Boar, C., Frost, J., Gambacorta, L., & Liu, J. (2021). E-commerce in the pandemic and beyond. *BIS bulletin*, 36(9), 1-9.

and regions worldwide, actively participating in the global health fight against the epidemic.

However, Alibaba Group's impact on global health also has some limitations. As a global company, it faces challenges related to logistics and supply chain management, especially during natural disasters and epidemics, which can affect the efficiency and accessibility of medical supplies in affected regions. In some remote or developing countries, limited logistics facilities and infrastructure may restrict Alibaba's reach and effectiveness in addressing health challenges. Additionally, while Alibaba actively participates in global health initiatives, ensuring sustainable and long-term impacts requires continued commitment and collaboration with diverse stakeholders beyond immediate crises.

CHAPTER 6 SUMMARY: PROMOTING GLOBAL HEALTH RESPONSIBILITY: STRATEGIES AND COLLABORATIVE EFFORTS FOR A HEALTHIER WORLD

6.1 Summary

In conclusion, this study underscores the significance of adopting a multi-sector approach to address the intricate challenges within global health governance, encompassing funding, governance, and development. By leveraging the innovation, resources, and social responsibility inherent in corporations, the aim is to forge a future marked by improved health, equity, and sustainability. This collaborative framework seeks to bridge the gap between the public and private sectors and engage a diverse spectrum of stakeholders. This study delves into the realm of Corporate Global Health Responsibility, contextualized within China's unique circumstances. It unveils the pivotal role played by the government in steering global health governance, supplemented by the supportive participation of enterprises. It advocates for a harmonized integration of foreign aid and corporate responsibilities, fostering a cohesive and effective global health governance landscape.

Moving forward, an exploration of the historical trajectory of Chinese enterprises in global health is unveiled. From its nascent stages as a domestic pharmaceutical industry to its current aspiration for global leadership, Chinese corporations have showcased their capacity for innovation, investment, and collaboration. This journey lays a solid foundation for their anticipated roles in the dynamic future of global health. This study also examines the dynamic involvement of Chinese companies in global health initiatives. Employing a practice-based analytical framework, the chapter meticulously dissects the factors driving motivation, participation, competencies, cooperation, and influence. Through in-depth case studies, the strategies employed by key biopharmaceutical, infrastructure, and technology companies are unveiled, reflecting their dedication to addressing global health challenges while aligning with corporate social responsibility.

The study acknowledges its inherent limitations. The concentration on specific Chinese companies and selected key informants may limit the generalizability of findings to the broader landscape of Chinese corporate engagement in global health. Constraints in data availability, particularly for private entities, may influence the depth of analysis. Potential biases during the selection process and subjective nuances in qualitative data analysis are acknowledged. The temporal scope of the study might not encapsulate the most recent global health developments, and external factors beyond the research's purview could exert influence on outcomes.

Despite these acknowledged limitations, the study aspires to offer a nuanced perspective on the role of Chinese corporations in global health responsibility. Its overarching aim is to contribute valuable insights to the understanding of global health governance amidst the emergence of novel actors on the global stage.

6.2 Discussion

6.2.1 Clarifying responsibilities for global health: planning, governing and leading

To advance global health responsibility, the issuance of strategic documents and incentive policies will define the direction and timeframe for enterprises to actively participate. Setting initiative goals and assessing progress will drive corporations to fulfill their responsibilities, promoting medical research, health facility development, and equitable medical resource access. Establishing a governance mechanism will ensure efficient decision-making and resource support. Strengthening legal systems and regulations, aligning with international norms, and integrating global health responsibilities into reporting requirements will enhance transparency and credibility. Governments' cooperation with enterprises, particularly in public health, will be vital, while high-level recognition will encourage positive action and enhance the industry's reputation.

6.2.2 Fulfilling global health responsibilities: initiative, leadership and innovative collaboration

Enterprises are urged to proactively embrace global health responsibility, recognizing its alignment with their interests. Demonstrating initiative and leadership, they must address conflicts of interest transparently and focus on fulfilling unmet needs through innovative solutions. Collaborating with governments, non-profit organizations, and other partners, enterprises can collectively promote global health responsibility and amplify their contributions. Leveraging overseas resources and learning from successful experiences, enterprises can play a vital role in advancing global health, positively impacting communities worldwide.

6.2.3 Advancing responsibility for global health: synergizing development for multiple benefits

Cross-institutional cooperation is essential for achieving comprehensive global health responsibility, benefiting all stakeholders involved. Governments and enterprises must actively support and promote the facilitative role of large foundations and other institutions, fostering project cooperation, resource sharing, and information exchange. By leveraging their strengths, foundations, guilds, chambers of commerce, and international organizations create synergistic effects to effectively implement global health responsibilities.

Strengthening collaboration with esteemed international organizations like WHO is crucial to driving progress in global health responsibilities. Enterprises' active participation in global health initiatives, partnerships, and policy development further advances the cause. Guilds and chambers of commerce play a key role in operationalizing global health responsibilities within the industry, promoting standardized corporate practices and continuous improvement. Collaborating with various stakeholders, they develop industry targets and action plans. Foundations support global health responsibility through financial aid, program collaboration, and knowledge sharing, fostering innovation and program evaluation. Together, these cross-institutional efforts form a powerful collective force, advancing global health responsibility and contributing to a healthier and more equitable world.

6.2.4 Enforcing Responsibility for Global Health: Research, Piloting and Scaling Up

In order to effectively promote global health responsibility, comprehensive research on core issues like conflict of interest, corporate governance, responsibility, and ethics is essential to provide feasible recommendations for policymakers, enterprises, and the public. Establishing a collaborative platform through academic conferences, seminars, and joint projects encourages cooperation and exchange among stakeholders, fostering collective efforts in addressing global health responsibility. Universities and research institutes can strengthen partnerships to integrate KIise and consolidate global health responsibility's practice and development.

Implementing pilot projects, publishing research results, and summarizing best practices enhance credibility and visibility, encouraging broader support and participation. Disseminating the concept through courses, workshops, and lectures influences the behavior and decisions of various stakeholders to align with global expectations. Lastly, investing in talent development through systematic training and education cultivates KIs, CSR researchers, and business ethics educators who play pivotal roles in driving global health responsibility's implementation and advancement.

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