Andrea Azizi Kifyasi
“Angels of God”?

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A History of China’s Medical Assistance in Post-Colonial Tanzania

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Acronyms and Abbreviations

AAPSO	Afro-Asian Peoples' Solidarity Organisation
AIDS	Acquired Immune Deficiency Syndrome
AMO	Assistant Medical Officer
APIs	Active Pharmaceutical Ingredients
ASF	*Agopuntura Senza Frontiere*
BCE	Before Common Era
BCG	Bacillus Calmette-Guérin
CACMS	China Academy of Chinese Medical Sciences
CCM	*Chama Cha Mapinduzi*
CCP	Chinese Communist Party
CE	Common Era
CHF	Community Health Fund
CMTs	Chinese Medical Teams
DMO	District Medical Officer
DTAM	Department of Traditional and Alternative Medicine
EAF	East Africana
ECNU	East China Normal University
EPI	Extended Program of Immunisation
FOCAC	Forum on China-Africa Cooperation
FYDP	First Five-Year Development Plan
GDP	Gross Domestic Product
GHSi	Global Health Strategies Initiatives
GPA	Global Programme on AIDS
HIV	Human Immunodeficiency Virus
ICT	Information Communication Technology
IMF	International Monetary Fund
ITM	Institute of Traditional Medicine
JMT	*Jamhuri ya Muungano wa Tanzania*
KPI	Keko Pharmaceutical Industries
MCT	Medical Council of Tanganyika
MD	Medical Doctor
MNH	Muhimbili National Hospital
MoH	Ministry of Health
MoU	Memorandum of Understanding
MTP	Medium-Term Plan
MUHAS	Muhimbili University of Health and Allied Sciences
MVI	Mabibo Vaccine Institute
MRC	Mbeya Records Centre
NACP	National AIDS Control Program
NATF	National AIDS Task Force
NCI	National Chemical Industries
NDC	National Development Corporation
NEC	National Executive Council
NGO	Non-Governmental Organisation

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NHIF	National Health Insurance Fund
NRC	National Records Centre
PHC	Primary Health Care
PRC	People's Republic of China
ROC	Republic of China
SAPs	Structural Adjustment Programs
SEP	Smallpox Eradication Programme
SFYDP	Second Five-Year Development Plan
SPA	Shandong Provincial Archives
SSC	South-South Cooperation
STD	Sexually Transmitted Disease
TAC	Technical Advisory Committee
TANU	Tanganyika African National Union
TAZARA	Tanzania-Zambia Railway
TB	Tuberculosis
TCM	Traditional Chinese Medicine
TMRU	Traditional Medicine Research Unit
TNA	Tanzania National Archives
TShs	Tanzanian Shillings
TYDP	Three-Year Development Plan
UN	United Nations
UNDP	United Nations Development Programme
UNGA	United Nations General Assembly
UNICEF	United Nations International Children's Emergency Fund
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organisation
URT	United Republic of Tanzania
US	United States
USD	United States Dollar
USSR	Union of Soviet Socialist Republics
UWATA	National Union of Traditional Healers
VMH	Village Medical Helper
WHA	World Health Assembly
WHO	World Health Organization
WHOA	World Health Organization Archives
WTO	World Trade Organization
WW I	First World War
WW II	Second World War
ZJU	Zhejiang University
ZNA	Zanzibar National Archives

Chapter One
Introduction

1.1 Contextualizing China's Medical Aid in Tanzania

On September 22, 2011, *Beijing Review*, a state-owned news magazine, published an article titled "Healing Angels from China: Medical Teams from China Fight Death and Disease in the Harshest Environments in Africa."[1] The article referred to "Healing Angels" in the context of the existing healthcare situation in Tanzania and how patients perceived the role of Chinese doctors. Likewise, on November 3, 2017, Wang Ke, the Chinese Ambassador to Tanzania, spoke at a farewell reception for the twenty-fourth batch of Chinese medical teams in Tanzania, acknowledging their missions in the country. She stated that the doctors embodied the spirit of "being fearless of hardship and dedicated to heal [sic] the wounded and rescue the dying with boundless love." She added that their sacrifices were acknowledged by many Tanzanians, who perceived them as "Angels of God and Angels in White [because of the way they dressed]."[2] These assertions from Chinese sources paralleled those of Tanzanian government-owned newspapers. On September 19, 1977, the *Daily News* published an article entitled "Chinese Doctors Praised."[3] Similarly, on August 30, 1991, the same newspaper featured "Kawawa Hails Chinese Doctors."[4] These articles all commended the work of Chinese doctors upon their departure after their contracts.

These delightful reflections on perceptions of the activities of Chinese doctors in Tanzania connect beautifully to Figure 5 (Chapter 3) of this book, which showcases a photograph taken in rural Tanzania during the 1970s. This photograph was featured in a 1998 documentary about the Chinese medical team from Shandong province. It depicts Chinese doctors travelling on foot to reach remote areas, underscoring how they distinguished themselves from other medical teams in Tanzania that preferred to operate in towns and cities. These positive portrayals of Chinese aid were frequently used diplomatically to bolster Sino-Tanzanian relations. Nevertheless, the praise and assertion that Tanzanians viewed Chinese doctors as "Angels of God" are thought-provoking and warrant critical examination to understand

1 Ding Ying, "Healing Angels from China: Medical Teams from China Fight Death and Disease in the Harshest Environments in Africa," *Beijing Review*, September 22, 2011, 14.

2 A speech by H. E. Wang Ke, Ambassador of China to Tanzania, at the Farewell Reception for the 24th Chinese Medical Team in Tanzania, Dar es Salaam, November 3, 2017.

3 "Chinese Doctors Praised," *Daily News*, 19, 1977, 3.

4 "Kawawa Hails Chinese Doctors," *Daily News*, August 30, 1991, 5.

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their context. Why, and during which historical period, did they perceive Chinese doctors as Angels of God? These questions, along with many others, prompted me to explore the history of China's medical assistance in Tanzania.

This study denotes that due to insufficient healthcare services, China's medical assistance to Tanzania and other independent African nations was crucial. Many African countries lacked adequate health facilities at the time of their independence and faced a shortage of trained medical personnel and essential medications. The number of qualified medical personnel, such as doctors, nurses, and midwives, did not keep pace with the soaring population and social demands. According to the World Health Organization (WHO) report, by 1962, 26 independent African countries had only 4,700 doctors (Africans and non-Africans), yielding a ratio of a single doctor to 18,000 people. Doctors of African origin were very few. For instance, in 1965, 26 independent African countries had approximately 1,700 African doctors. Worse still, some independent African states had no African doctors at all.[5] Diseases were rampant, and most countries sourced essential pharmaceuticals overseas for preventive and curative purposes.[6] Importing medicines from abroad was the primary cause of the scarcity of foreign currency, placing a heavy brake on the development speed while compromising the fight against diseases. Generally, health challenges in most independent African countries were thus to be tackled by establishing a ramified system of medical institutions to train medical personnel and build pharmaceutical industries to ensure a constant supply of preventive and curative medicines. However, given the limited economic resources, such endeavors could not easily be attained. Thus, the countries needed prompt medical assistance from friendly nations and multilateral supporters.

The healthcare situation was not different in Tanzania since, at independence, the country only had about 549 registered medical doctors, of which 400 were residents, serving a population of 10.4 million. Many registered resident doctors were Indians, while Africans numbered only twelve.[7] The workforce deficit in the health sector was also the case for the low level of medical personnel. At independence, the government had about 200 African medical assistants and less

5 "Paucity of Doctors and Nurses," *Ghanaian Times*, May 14–20, 1967.

6 Geoffrey Banda, Samuel Wangwe and Maureen Mackintosh, "Making Medicines: An Historical Political Economy Overview," in *Making Medicines in Africa: The Political Economy of Industrializing Local Health*, ed. Maureen Mackintosh, Geoffrey Banda, Paula Tibandebage and Watu Wamae (London: Palgrave Macmillan, 2016), 8.

7 Richard M. Titmuss, Brian Abel-Smith, George Macdonald, Arthur W. Williams, and Christopher H. Wood, *The Health Services of Tanganyika: A Report to the Government* (London: Pitman Medical Publishing, 1964), 180.

than 1,000 low-level healthcare personnel tasked with serving 98 hospitals, 22 rural health centers, and 975 village dispensaries.[8] With such inadequacies, healthcare provisions were problematic. As a result, life expectancy was 35 years for men and 40 years for women. The death rate was 47 out of 1,000 pregnant women who gave birth. Furthermore, the infant and child mortality rates were 40% to 50% before children reached the age of six.[9] These and many other health challenges prompted Tanzanian President Julius Nyerere to christen diseases among the three main "enemies" to the country's development, followed by ignorance and poverty. The government anticipated that a healthy and stable nation would be built if the "war" against diseases was fought successfully.[10] Nevertheless, a successful fight against the "enemies" required intense commitment, effort, and funds. Undeniably, the government's ambitions were difficult to achieve for a young and low-income country, making overseas assistance unavoidable.

Before the inception of China's medical assistance, traditional donors from the Global North were the dominant donors to the post-colonial Tanzanian government.[11] However, following the diplomatic strife in the mid-1960s, the Tanzanian government could not receive enough support from countries of the Global North, worsening the country's healthcare services and forcing its reliance on some powerful countries of the Global South. Largely, Cold War politics, a historical root of the post-Second World War global disconnect, prompted the mid-1960s diplomatic rifts between Tanzania and countries of the Global North. The Tanzanian government's diplomatic ties with the German Democratic Republic after its Union with Zanzibar, contrary to the Hallstein Doctrine of West Germany, and its stance on

8 Julius K. Nyerere, *Freedom and Development/ Uhuru na Maendeleo: A Selection from Writings and Speeches, 1968–1973* (Dar es Salaam: Oxford University Press, 1973), 293.

9 URT. *Report on the Fifty Years of Independence of Tanzania Mainland 1961–2011*, 105; "A Speech by Honourable D. N. M. Bryceson, M. P., Minister for Health, 1962," TNA. Acc. No. 450, Ministry of Health, File No. HE. 1172, Medical Development Plan; Nyerere, *Freedom and Development*, 294; "Letter from the Minister for Health, Honourable D. N. M. Bryceson to all Ministry Employees of May 18, 1964," TNA. Acc. No. 450, Ministry of Health, File No. HE. 1172, Medical Development Plan.

10 "Letter from the Minister for Health, Honourable D. N. Bryceson to all Ministry Employees, May 18, 1964," TNA. Acc. No. 450, Ministry of Health, File No. HE. 1172, Medical Development Plan; Phares G. M. Mujinja and Tausi M. Kida, *Implications of Health Sector Reforms in Tanzania: Policies, Indicators and Accessibility to Health Services* (Dar es Salaam: The Economic and Social Research Foundation (ESRF), 2014), 1; Julius K. Nyerere, "Foreword" in *History of the Medical Services of Tanganyika* by David F. Clyde (Dar es Salaam: Government Press, 1962), I.

11 Idrian N. Resnick, *The Long Transition: Building Socialism in Tanzania* (London: Monthly Review Press, 1981), 54; also see Jeannette Hartmann, "The Search for Autonomy and Independence: Foreign Policy and the Arusha Declaration," in *Re-thinking the Arusha Declaration*, ed. Jeannette Hartmann (Copenhagen: Axel Nielsen and Son, 1991), 155.

Southern Rhodesian (Zimbabwean) independence following the 1965 Ian Smith's Unilateral Declaration of Independence, ruined diplomatic relations with these big powers of the Global North, vanishing economic, social and political assistance to the country.[12] The diplomatic crisis severely hurt the health sector since all medical workers from Britain working in the country departed immediately after the dispute. Similarly, Tanzanians pursuing health-related courses in several medical colleges under Bonn and London government scholarships returned home, and later, the government sent them to Soviet medical colleges.[13] Global Cold War politics prompted global connections and disconnections, forcing low-income countries to ally with either the East or the West to qualify for economic, political, social, and technological assistance.

Diplomatic rifts between Tanzania and donors of the Global North made the government cautious about accepting foreign aid. As a result, in 1967, the Tanganyika African National Union's National Executive Council endorsed the Arusha Declaration, which spearheaded the adoption of socialist and self-reliance policies.[14] Under the Declaration, the Tanzanian government was determined to shift the nation from aid dependency to self-sufficiency. It perceived loans and aid from countries of the Global North as imperialistic and less promising to turn recipient countries self-reliant. In contrast, the government perceived China's loans and aid as worthy, development-friendly, consistent with the country's self-reliance agenda,

12 Guido Magome, "Self-Reliance Makes Stronger and Faster Pace," *Daily News*, February 1, 1978, 5–6; Kapepwa I. Tambila, "Aid from the Recipient's Point of View: The Tanzania Experience," in *Diplomacy and Development: Proceedings of the 10th International Conference of Editors of Diplomatic Documents*, ed. Marc Dierikx (The Hague: Institute of Netherlands History, 2010), 82; George Roberts, "Politics, Decolonization, and the Cold War in Dar es Salaam c. 1965–72" (PhD diss., University of Warwick, 2016), 87; Paul Bjerk, *Building a Peaceful Nation: Julius Nyerere and the Establishment of Sovereignty in Tanzania, 1960–1964* (New York: University of Rochester Press, 2015), 214; Thomas Burgess, "The Rise and Fall of a Socialist Future: Ambivalent Encounters Between Zanzibar and East Germany in the Cold War," in *Navigating Socialist Encounters: Moorings and (Dis) Entanglements Between Africa and East Germany during the Cold War*, eds. Eric Burton, Anne Dietrich, Immanuel R. Harisch, and Marcia C. Schenck (Berlin: Walter de Gruyter, 2021), 176–177.

13 Resnick, *The Long Transition*, 57; Magome, "Self-Reliance Makes Stronger and Faster Pace," 5–6; John Iliffe, *East African Doctors: A History of the Modern Profession* (Cambridge: Cambridge University Press, 1998), 200; "Wanafunzi nao Watarudishwa toka Ujerumani," *Ngurumo*, Machi 19, 1965, 1; Eric Burton, "Decolonization, the Cold War and Africans' routes to overseas education, 1957–1965," *Journal of Global History* 15, no. 1 (2020) 185.

14 Paul Bjerk, "Agency and the Arusha Declaration: Nyerere, NUTA, and Political Discourse in Tanzania, 1966–7," *The Journal of African History* 64, no. 3 (2023): 369.

and not meddling in internal affairs.[15] Against the preceding background, the Chinese government began providing different kinds of assistance in post-colonial Tanzania, with the health sector among the beneficiaries. Yet, China's medical assistance in post-colonial Tanzania implies that development aid has not only flowed from the Global North – or "core" – to the Global South, the so-called periphery, but also from the South to the South.[16] In this regard, China's assistance also reflected the practice of South-South cooperation (SSC), which prioritized the exchange of resources, technology, experience, and knowledge among countries of the Global South. Such exchanges were executed at bilateral, multilateral, regional, or interregional levels and organized and coordinated by Southern countries. Through the SSC, countries of the Global South worked together to find solutions to common development challenges. It became possible for country members to work together since they had a supposedly shared history and challenges.[17]

Historically, Tanzania was not the first country to receive China's aid. Instead, the Chinese government began aiding Global South nations, touching economic, social and political aspects since the 1950s. Vietnam and North Korea were the first socialist countries to receive China's aid in 1950. It further assisted other countries of the South, including Egypt, Morocco, Sudan, and Guinea, after the Bandung Conference of 1955.[18] However, throughout the 1950s, medical assistance

15 Julius K. Nyerere, "TAZARA – from a Caricature of a "Chinese" Railway to "Our" Railway," A Speech at the Handing-over of the Tanzania-Zambia Railway (TAZARA) to Tanzania and Zambia Kapiri Mposhi, Zambia: July 14, 1976, in *Freedom and Liberation: A Selection from Speeches 1974–1999*, ed. The Mwalimu Nyerere Foundation (Dar es Salaam: Oxford University Press (T)., 2011), 97; Resnick, *The Long Transition*, 131; Rwekaza Mukandala, "From Proud Defiance to Beggary: A Recipient's Tale," in *Agencies in Foreign Aid: Comparing China, Sweden and the United States in Tanzania*, eds. Goran Hyden and Rwekaza Mukandala (New York: St. Martin's Press, 1999), 38; Paul Tiyambe Zeleza, "Dancing with Dragon: Africa's Courtship with China," *The Global South* 2, no. 2 (Fall 2008): 174.

16 The terms "Global South" and "Global North" serve as alternatives to "Third World/Developing Countries" and "Developed Countries." The conceptual framework section of this chapter offers a fuller explanation.

17 See Isaline Bergamaschi and Arlene B. Tickner, "Introduction: South-South Cooperation Beyond the Myths–A Critical Analysis," in *South-South Cooperation Beyond Myths: Rising Donors, New Aid Practices?* ed. Isaline Bergamaschi, Phoebe Moore and Arlene B. Tickner (London: Palgrave Macmillan, 2017), 1–2; Meibo Huang, "Introduction: South-South Cooperation and Chinese Foreign Aid," in *South-South Cooperation and Chinese Foreign Aid*, ed. Meibo Huang, Xiuli Xu and Xiaojing Mao (Singapore: Palgrave Macmillan, 2019), 1.

18 Mohon Shajalal, *et al.*, "China's Engagement with Development Assistance for Health in Africa," *Global Health Research and Policy* 2, no. 24 (2017): 2, https://doi.org/10.1186/s41256-017-0045-8; Ai Ping, "From Proletarian Internationalism to Mutual Development: China's Cooperation with Tanzania, 1965–95," in *Agencies in Foreign Aid: Comparing China, Sweden and the United States in Tanzania*, ed. Goran Hyden and Rwekaza Mukandala (New York: St. Martin's Press,

was not a part of China's aid to the South. From the outset, the Chinese government executed its aid through cash, materials, project building, and technical cooperation. In 1964, Chinese Premier Zhou Enlai explained that the Chinese government's assistance was aimed at strengthening the socialist camp, promoting the struggle for political independence, and supporting the attainment of self-reliance endeavors in newly independent African countries.[19] However, Zhou did not mention the political and economic benefits the Chinese government aimed to accrue under the "foreign aid" umbrella. The diplomatic struggle between the People's Republic of China (PRC) and Taiwan – officially the Republic of China (ROC), the Sino-Soviet disputes, and its ambitions to spread Maoism following the Great Proletarian Cultural Revolution (1966–1976) prompted China's assistance to countries in the Global South. China used aid as a bargaining chip to win allies and markets for manufactured goods, promote Maoism, and turn the recipient country's political elites into a vanguard for its quest for admission to the United Nations General Assembly (UNGA).[20] For instance, it only supplied loans and grants to countries that had forged diplomatic relationships with Beijing, putting its "aid with no strings attached" principle in question.[21] Therefore, China's assistance to countries in the Global South was a reciprocal process.

Although China began aiding countries of the Global South in 1950, it was not until 1963 that medical assistance was provided for the first time. Algeria became the first country to receive aid after experiencing an acute shortage of medical personnel, marking the beginning of China's medical assistance to Africa, Latin America, Asia, and Southern Europe.[22] The lack of sufficient medical personnel in

1999), 165–166; Li Anshan, "China's New Policy toward Africa," in *China into Africa, Trade, Aid, and Influence,* ed. Robert I. Rotberg (Washington DC: Brookings Institution Press, 2008), 2.

19 Menghua Zeng, "An Interactive Perspective of Chinese Aid Policy: A Case Study of Chinese Aid to Tanzania," (PhD diss., University of Florida, 1999), 93–94; Ai, "From Proletarian Internationalism," 170.

20 Andrea Azizi Kifyasi, "Communist China's Medical Assistance versus Nationalist China's Agricultural Aid to Africa and the Politics of Recognition, 1961–1971," in *Africa-China-Taiwan Relations, 1949–2020*, ed. Sabella Ogbobode Abidde (Lanham: Lexington Books, 2022), 219; Tianbiao Zhu, "Nationalism and Chinese Foreign Policy," *China Review* 1, no. 1 (Fall 2001): 10.

21 The principles, among others, underscored China's commitment to promoting self-reliance to aid recipient countries. See "Eight Principles for Economic and Technical Aid Contended by Premier Zhou Enlai when Answering Questions from Reporters of the Ghana News Agency on January 15, 1964 in Ghana," available in *Afro-Asian Solidarity against Imperialism: A Collection of Documents, Speeches and Press Interviews from the Visits of Chinese Leaders to Thirteen African and Asian Countries* (Peking: Foreign Languages Press, 1964), 149.

22 Li Anshan, *Chinese Medical Cooperation in Africa: With Special Emphasis on the Medical Teams and Anti-Malaria Campaign* (Uppsala: Nordiska Afrikainstitutet, 2011), 9; George T. Yu, "Sino-Africa Relations: A Survey," *Asian Survey* 5, no. 7 (Jul. 1965): 327.

many African countries made the Chinese Medical Team (CMT) frontier a more dominant form of medical assistance than others, such as building hospital infrastructures, donating drugs and medical equipment, constructing pharmaceutical factories, training health personnel, and controlling malaria.[23]

Between 1966 and 1977, the Chinese government provided medical assistance and other economic and political support to several African countries, laying a solid foundation for Sino-African relations.[24] As a result, in October 1971, UN member countries endorsed the proposal of restoring China's legitimate seat in the UNGA, with 26 African countries voting in favor of recognizing the legal status of the Chinese government.[25] However, from 1978 to 1995, the Chinese government reduced its assistance to African countries, consistent with its reform and opening-up policy, which focused on economic gains rather than political benefits. The newly adopted policy declined significantly China's foreign aid to African countries.[26] Li Anshan notes that from 1979 to 1980, no Chinese medical teams were sent to Africa. Although the program resumed in 1981, there was no increase in the number of teams from 1988 to 1995.[27] Driven by political, diplomatic and economic reasons, China renewed its engagement in Africa and resumed its assistance to the continent in the 1990s.[28] The Forum on China-Africa Cooperation (FOCAC) deepened China's roots in Africa, while China utilized its forum to provide various forms of assistance, including medical aid, to several African countries.[29] Formed in 2000, the FOCAC promoted bilateral ties and cooperation between China and Africa through dialogue.

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23 Peilong Liu, *et al.*, "China's Distinctive Engagement in Global Health," *Lancet* 308 (August 2014): 795.

24 Li, *Chinese Medical Cooperation in Africa*, 9.

25 David H. Shinn, "China-Africa Ties in Historical Context," in *China-Africa and an Economic Transformation*, ed. Arkebe Oqubay and Justin Yifu Lin (London: Oxford University Press, 2019), 66; Timothy S. Rich and Sterling Recker, "Understanding Sino-African Relations: Neocolonialism or a New Era?" *Journal of International and Area Studies* 20, no. 1 (2013): 63.

26 Peter J. Buckley, Jeremy Clegg and Hi Tan, "Knowledge Transfer to China: Policy Lessons from Foreign Affiliates," *Transnational Corporations* 13, no. 1 (April 2004): 31; Yanzhong Huang, "Pursuing Health as Foreign Policy: The Case of China," *Indiana Journal of Global Legal Studies* 17, no. 1 (Winter 2010): 111; Li, "China's New Policy toward Africa," 7; Giles Mohan and Marcus Power, "New African Choices? The Politics of Chinese Engagement," *Review of African Political Economy* 115, no. 23–42 (2008): 29, https://dx.doi.org/10.1080/03056240802011394.

27 Li, *Chinese Medical Cooperation in Africa*, 11.

28 Xu Yi-Chong, "Chinese State-owned Enterprises in Africa: Ambassadors or Freebooters?" *Journal of Contemporary China* 23, no. 89 (March 2014): 826; Huang, "Pursuing Health as Foreign Policy," 128.

29 Li Anshan *et al.*, *FOCAC Twelve Years Later: Achievements, Challenges and the Way Forward* (Uppsala: Nordiska Africainstitutet 2012), 20.

The preceding exposition shows that China's assistance to countries of the Global South, particularly in Africa, has a long and varied history, with its economic, technological, and political assistance running parallel to the provision of medical aid. Indeed, its assistance was in line with the SSC agenda, which, among other things, aimed to promote self-reliance and sustainability in the health sector of Southern countries as a means of reducing dependencies on countries in the Global North.[30] Through SSC, Southern countries anticipated neutralizing Northern technological and scientific influence by exchanging resources, technology, and knowledge.[31] Their attempts challenged the existing knowledge from the Global North and demonstrated the ability of countries in the Global South to produce and communicate knowledge among themselves. Southern countries with relatively robust medical institutions, such as China and Cuba, were among the first to provide medical aid to other countries, facilitating the exchange of medical knowledge and experiences.[32]

1.2 The Argument

This book examines the significance of China's medical assistance for the development of Tanzania's health sector within the framework of South-South cooperation, using post-colonial Tanzania as its focal point. It critically discusses a range of major Chinese-funded health projects since Tanzania's independence. It analyses how Chinese medical assistance contributed to nation-building agendas in Tanzania and promoted South-South medical knowledge production, exchanges, and self-sufficiency within Tanzania's health sector.

This work contributes to research on SSC, particularly by examining economic, political, and knowledge entanglements that emerged from bilateral relationships among Southern countries. Despite a historical engagement of some

30 Margaret Blunden, "South-South Cooperation: Cuba's Health Programmes in Africa," *International Journal of Cuban Studies* 1, no. 1 (June, 2008): 33; Li Anshan, "From 'How Could' to 'How Should': The Possibility of a Pilot U.S.-China Project in Africa," in *China's Emerging Global Health and Foreign Aid Engagement in Africa*, ed. Xiaoqing Lu Boyton (Washington: Center for Strategic and International Studies, CSIS, 2011), 43.

31 Meibo, "Introduction: South-South Cooperation and Chinese Foreign Aid," 1; Paschal B. Mihyo, "Practical Problems in the South-South Development Cooperation: Some Experiences Involving Tanzania," *Law and Politics in Africa, Asia and Latin America*, 25, no. 2 (2. Quarterly, 1992); 225.

32 See, for instance, Robert Huish and John M. Kirk, "Cuban Medical Internationalism and the Development of the Latin American School of Medicine," *Latin American Perspectives* 34, no. 6 (Nov. 2007): 77–92, https://doi.org/10.1177/0094582x07308119; Li, "From 'How Could' to 'How Should.'"

powerful countries of the Global South in aiding post-colonial African governments, studies examining development aid to the continent mainly focused on the assistance provided by traditional donors of the Global North, such as IMF, WB, USAID, EU Aid and the like with many claiming that the assistance was less effective.[33] Thus, a few studies have examined the assistance provided by some peripheral countries of the Global South to independent African states, limiting our understanding of the implications of such assistance to the continent's development. While some scholars have studied Chinese economic and political assistance to African countries in the post-colonial period, China's engagement in Africa's health sector remains neglected. Besides filling the prevailing research lacuna, this book further adds insights into ongoing debates on "Theory from the South", which underscores Southern countries' roles in scientific developments that challenged the supposed monopoly of the Global North on science and innovation.[34] The work examines how medical assistance provided by some economically powerful countries in the Global South promoted innovations in medical knowledge and challenged the hegemony of medical knowledge from the Global North. The emergence of donor countries from the Global South network has not been adequately studied as a shift away from the dominance of Northern and formerly colonizing powers.

Generally, this book argues that despite some positive effects, China's medical assistance did not reliably promote the development of Tanzania's health sector. The assistance provided was executed under idealistic motives of South-South solidarity, which promised to promote self-dependence on the part of the newly independent nations. Yet, its execution was hampered by several drawbacks, which affected its efficiency and sustainability. China's medical aid, which political elites in Tanzania generally perceived as "unconditional" and "emancipatory," created unforeseen dependencies, leading to the collapse of most projects funded by the Chinese government. For instance, the two pharmaceutical industries supported by the Chinese government in 1968 were handed over to the Tanzanian government, which lacked both sufficient skilled pharmaceutical personnel and effective

33 William Easterly, *The Whiteman's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good* (New York: The Penguin Press, 2006); Dambisa Moyo, *Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa* (New York: Farrar, Straus and Giroux, 2009); Sebastian Edwards, *Toxic Aid: Economic Collapse and Recovery in Tanzania* (Oxford: Oxford University Press, 2014); Carol, Lancaster, *Aid to Africa: So Much to Do, So Little Done* (London: University of Chicago Press, 1999); Severine M. Rugumamu, *Lethal Aid: The Illusion of Socialism and Self-Reliance in Tanzania* (Trenton, NJ: Africa World Press Inc, 1997).

34 See Jean Comaroff and John L. Comaroff, "Theory from the South: or, how Euro-America is Evolving toward Africa," *Anthropological Forum* 22, no. 2 (July 2012): 113–131 http://dx.doi.org/10.1080/00664677.2012.694169.

management capacity to operate them. Moreover, there was no reliable source of pharmaceutical raw materials (Chapter 5). Similarly, as will be shown in Chapter 3, the Chinese medical team program, which commenced in 1968, prioritized clinical care rather than fostering medical knowledge exchanges with local medical personnel. Research and treatment programs in traditional Chinese medicine further prompted the spread and practice of Chinese medicine instead of imparting medical knowledge to traditional Tanzanian medicine practitioners and researchers (Chapter 4). Therefore, throughout this study, it will be seen that despite the merits of China's aid, especially in counteracting the dominance of medical assistance and knowledge from the Global North, there was a significant gap between "promise" and "practice". Rather than creating a basis of skills, infrastructures, and materials on which it could have functioned more autonomously and sustainably, Chinese assistance worked as a short-term relief to long-term deficiencies within Tanzania's health sector.

1.3 Situating China's Medical Assistance in the Historiographic Review

The existing research literature shows that training local medical workers was not a priority of the colonial governments. However, the increasing health challenges, the limited number of medical workers in the colonies, and the colonial ambitions to popularize biomedicine prompted colonial administrations to launch medical training for at least a few Africans from 1900 onwards. David F. Clyde, Randall M. Packard, John Iliffe, Hellen Tilley and Stacey A. Langwick provide insights into how colonial authorities introduced and popularized biomedicine in Africa while undermining the survival of the existing indigenous medical practices and approaches.[35] Clyde and Iliffe discuss how colonial experts imparted Western medical knowledge to a few Africans who worked as medical assistants, sanitary inspectors, dispensers, and tribal dressers.[36] A study by Iliffe and Langwick went further by examining how medical training progressed in

35 David F. Clyde, *History of the Medical Services of Tanganyika* (Dar es Salaam: Government Press, 1962); Randall M. Packard, *A History of Global Health: Interventions into the Lives of Other Peoples* (Baltimore, MD: Johns Hopkins University Press, 2016); Iliffe, *East African Doctors*; read the Introductory Chapter in Helen Tilley, *Africa as a Living Laboratory, Empire, Development and the Problem of Scientific Knowledge, 1870–1950* (United States of America: University of Chicago Press, 2011); Stacey A. Langwick, *Bodies, Politics, and African Healing: The Matter of Maladies in Tanzania* (Bloomington, IL: Indiana University Press, 2011).

36 Clyde, *History of the Medical Services of Tanganyika*, 117; Iliffe, *East African Doctors*, 40.

post-colonial East Africa, showing how the new governments invested in training medical personnel.[37] Thus, the advent of Chinese medical training on the continent collided with existing medical knowledge systems shaped by the former colonial power and other surviving and adapting knowledge systems. Still, existing scholarship has not yet shown how the Chinese medical training curriculum challenged the prevailing training system. The ways and the extent to which Chinese medical knowledge was imparted to the local medical workers require further investigation to identify its broader implications for post-colonial Tanzania's health sector.

This work also contributes to studies on Tanzanian socialism in the postcolonial period. Scholars have examined, for instance, the implications of the policies for economic activities such as agriculture, industry, and commerce, reporting nuanced observations.[38] Other studies investigated the impact of the policies in light of the environmental harm that was done through such projects. They show that socialist policies went hand in hand with the villagization scheme, which interfered with existing land-use patterns and disrupted ecological relationships between people and their natural environment, leading to environmental degradation.[39] Generally, the available research literature criticizes socialist policies in

37 Iliffe, *East African Doctors*; Langwick, *Bodies, Politics, and African Healing*.

38 Several scholars studied the implications of Ujamaa policies in the development of agriculture, industries, commerce and rural transformation. For instance, Idrian Resnick maintains that under the Ujamaa policies, the government perceived industrialization as a critical economic take-off, and invested much in it while fewer efforts were made to produce and improve skilled manpower to run the established industries; as a result, many industries collapsed. See Resnick, *The Long Transition*. Yet, several scholars maintain that under Ujamaa policies, the rural transformation was arduous since the vision of the policies was not interpreted and adopted by officials and peasants; thus, the policies ended in futility. See, for instance, Priyal Lal, *African Socialism in Postcolonial Tanzania: Between the Village and the World* (New York: Cambridge University Press, 2015); Jannik Boesen, Birgit Storgard Madsen, and Tony Moody, *Ujamaa–Socialism from Above* (Uppsala: Scandinavian Institute of African Studies, 1977). Further studies maintain that villagization policies implemented by the government under Ujamaa policies were a burden o rural communities' livelihoods since they reduced farming activities. See for instance, Maxmillian J. Chuhila, "Agrarian Change and Rural Transformation in Tanzania: Ismani, Circa 1940–2010," *UTAFITI* 14, no. 1 (2019): 1–23; Michaela von Freyhold, *Ujamaa Villages in Tanzania: Analysis of a Social Experiment* (London: Heinemann Educational Books, 1979); Andrew Coulson, *Tanzania a Political Economy* (New York: Oxford University Press, 1982); James C. Scott, *Seeing Like a State*, (London: Yale University Press, 1998); and Louis Putterman, "Tanzania Rural Socialism and Statism Revisited: What Light from the Chinese Experience?" in *Re-Thinking the Arusha Declaration* ed. Jeannette Hartmann (Copenhagen: Axel Nielsen and Son A/S, 1991).

39 Idriss S. Kikula, *Policy Implications on Environment: The Case of Villagization in Tanzania* (Dar es Salaam: Dar es Salaam University Press, 1997); Yusufu Q. Lawi, "Tanzania's Operation Vijiji and Local Ecological Consciousness: The Case of Eastern Iraqwland, 1974–1976," *The Journal of African History* 48, no. 1 (2007): 69–93.

Tanzania, especially how the government implemented them, underscoring that they made little or no significant contribution to its self-reliance endeavors. Research has paid little attention to health as a significant field of African socialism and self-sufficiency. This book covers this gap by examining the implications of socialist policies on healthcare. Reviewing the Tanzanian government's attempts to establish a socialist healthcare system sheds light on the extent to which the policies adopted were, in one way or another, linked to Chinese interventions.

Scholars have documented the history of biomedical doctors in East Africa and provided some insights into socialist health policies in post-colonial Tanzania, including rural healthcare.[40] Others have studied the general practice of Tanzanian traditional medicine and the implications of the changing government policies for its development.[41] While these and other studies offer significant contributions to understanding Tanzania's colonial and post-colonial health systems, their approaches are both broad and general. They have not examined the implications of the socialist policies that the country adopted in 1967 to develop the healthcare system systematically. In addition, given their theoretical and methodological frameworks, existing studies have overlooked the extent to which South-South Cooperation influenced the production and circulation of medical knowledge. This work investigates how the low-income nation of Tanzania drew on Chinese aid and knowledge in its government endeavors to offer free healthcare, institutionalize traditional medicine, provide rural healthcare, and ban private health practices.

This work also draws from several studies on Cuban medical internationalism, showing that Cuban medical assistance operated under specific criteria. For instance, some recipient countries exchanged Cuban medical aid for resources or trade agreements. Yet, under the banner of "humanitarianism," the Cuban government provided free medical assistance to low-income countries and states affected by disasters such as floods and earthquakes.[42] Thus, the Cuban government

40 Iliffe, *East African Doctors*; Amon J. Nsekela and Aloysius M. Nhonoli, *The Development of Health Services and Society in Mainland Tanzania: A Historical Overview-Tumetoka Mbali* (Dar es Salaam: East African Literature Bureau, 1976).

41 Langwick, *Bodies, Politics, and African Healing*; Margunn M. Bech, *et al*., "Changing Policies and Their Influence on Government Health Workers in Tanzania, 1967–2009: Perspectives From Rural Mbulu District," *The International Journal of African Historical Studies* 46, no. 1 (2013): 61–103; Dalmas A. R. Dominicus and Takashi Akamatsu, "Health Policy and Implementation in Tanzania," *Keio J. Med.* 38, no. 2 (1989): 192–200; Gideon Kwesigabo, *et al*., "Tanzania's Health System and Workforce Crisis," *Journal of Public Health Policy* 33, no. 1 (2012): S35–S44.

42 See, for instance, Daniel Hammett, "Cuban Intervention in South African Health Care Service Provision," *Journal of Southern African Studies* 33, no. 1 (Mar. 2007): 63–81, https://doi.org/10.1080/03057070601136574; John M. Kirk, Cuban Medical Cooperation within ALBA: The Case of Vene-

reaped concrete benefits from its medical missions. The available literature on Chinese assistance to newly independent African nations does not adequately discuss the (desired) benefits that China might have gained from its long-term medical missions in the Global South.[43] This book provides a nuanced assessment of China's medical aid to Africa, seeking its motivations beyond a dichotomy of imperialist agendas versus more idealistic motives of Southern solidarity.

Several economic projects funded by the Chinese government in Africa during the 1960s and 1970s have sparked the interest of scholars. For instance, George Yu and Jamie Monson have investigated the Tanzania-Zambia Railway (TAZARA), which was among the most significant projects funded by the Chinese government in Southern countries.[44] Monson shows how socialist and capitalist visions of development competed during the Cold War period, as the TAZARA project coincided with the construction of the highway from Dar es Salaam to Zambia, funded by the US government. In the Chinese socialist vision, the railway project sought to alleviate Zambia's dependency on "capitalist" Rhodesian, white minority, Angolan, and South African rails and ports by promoting African nations' self-reliance.[45] This work examines the manifestation of similar ideological clashes in health projects funded by the Chinese government and traditional donors from the Global North in Tanzania, as well as the motivations behind Chinese medical aid, which the existing scholarship has neglected.

There is some research on the Chinese medical teams (CMTs) and pharmaceutical industries built by the Chinese, and much less on traditional Chinese medicines (TCMs) in Africa. Such works, however, are both broad and general in their approaches and do not show subtle changes in the funded projects over time. Fur-

zuela," *International Journal of Cuban Studies* 3, no. 2/3 (Summer/Autumn, 2011): 221–234; Jason K. Brandt, "Effects of Humanitarian Aid: A Cuban Case Study," (Master's diss., Naval Postgraduate School, Monterey California, September 2002); Julie M. Feinsilver, "Cuba's Medical Diplomacy," in *A Changing Cuba in a Changing World*, ed. Mauricio A. Font (New York: City University of New York, 2009); Julie M. Feinsilver, "Fifty Years of Cuba's Medical Diplomacy: From Idealism to Pragmatism," *Cuban Studies* 41 (2010): 85–104.

43 Read, for instance, Shuang Lin, *et al*., "China's Health Assistance to Africa: Opportunism or Altruism?" *Globalization and Health*, (2016): 1–5, https://doi.org/10.1186/s12992-016-0217-1; Li, *Chinese Medical Cooperation in Africa*; Peilong Liu, *et. al*., "China's Distinctive Engagement in Global Health," *Lancet* 384 (Aug. 2014): 793–804.

44 George T. Yu, "The Tanzania-Zambia Railway: A Case Study in Chinese Economic Aid to Africa," in *Soviet and Chinese Aid to African Nations,* ed. Warren Weinstein and Thomas H. Henriksen (New York: Praeger Publishers, 1980); Jamie Monson, *Africa's Freedom Railway: How a Chinese Development Project Changed Lives and Livelihoods in Tanzania* (Indiana: University Press, 2010).

45 Monson, *Africa's Freedom Railway*, 2.

thermore, they do not uncover the implications of Chinese medical aid in promoting self-reliance and South-South medical knowledge exchange. For instance, some existing literature has examined the activities of Chinese medical doctors in Africa without establishing the systematic history and contexts that gave birth to their interventions.[46] Yet, some medical aid projects funded by the Chinese government in Africa, such as the pharmaceutical industries, received little or no scholarly attention.[47] Most publications about Chinese medical assistance to the continent are not historical studies but rather from political science and anthro-

46 A general understanding of activities of the CMTs in Africa was studied by Li Anshan, "Chinese Medical Team Abroad for Assistance: History, Achievement and Impact," in *Future in Retrospect: China's Diplomatic History Revisited*, ed. Qin Yaqing and Chen Zhirui (Hackensack: World Century Publishing Corporation, 2016); Li, *Chinese Medical Cooperation in Africa*; Shu Chen *et al*., "Chinese Medical Teams in Africa: A Flagship Program Facing Formidable Challenges," *Journal of Global Health* 9, no. 1 (June 2019): 1–6 https://doi.org/10.7189/jogh.09.010311. Yanzhong Huang investigated the general implications of China's reform and opening-up policy to the CMT program. Yanzhong Huang, "Domestic Factors and China's Health Aid Programs in Africa," in *China's Emerging Global Health and Foreign Aid Engagement in Africa*, ed. Xiaoqing Lu Boyton (Washington: Center for Strategic and International Studies, CSIS, 2011); Huang, "Pursuing Health as Foreign Policy." Alicia Altorfer-Ong briefly examined the activities of CMTs in Zanzibar and mainland Tanzania from 1964 to 1970, two years after the inception of CMTs in mainland Tanzania. Read Chapter 5 in Alicia N. Altorfer-Ong, "Old Comrades and New Brothers: A Historical Re-Examination of the Sino-Zanzibari and Sino-Tanzanian Bilateral Relationships in the 1960s" (PhD diss., Department of International History, London School of Economics and Political Science, 2014), 230–273; Paul Kadetz and Johanna Hood, examined the role of the CMT program in fostering self-sufficiency in Madagascar's health sector. Paul Kadetz and Johanna Hood, "Outsourcing China's Welfare: Unpacking the Outcomes of Sustainable Self-Development in Sino-African Health Diplomacy," in *Handbook of Welfare in China* (Handbooks of Research on Contemporary China Series, ed. Beatriz Carrillo, Johanna Hood, and Paul Kadetz (Cheltenham: Edward Elgar Publishers, 2017).

47 A study by Geoffrey Banda, Samuel Wangwe and Maureen Mackintosh provides a brief overview of the historical development of pharmaceutical industries in Africa, Tanzania in particular. See Banda, Wangwe and Mackintosh, "Making Medicines." Brief information about Chinese-funded pharmaceutical industries can also be found in Gail A. Eadie and Denise M. Grizzell, "China's Foreign Aid, 1975–78," *The China Quarterly*, no. 77 (Mar. 1979): 217–234; Maulid Madeni, "The Effects of Privatisation on Performance of the Privatised Enterprises in Tanzania: Case Studies of Aluminium Africa (ALAF), Keko Pharmaceuticals Industries Limited (KPI), and Tanzania-China Friendship Textile Company (TZ-CHINA)," (Master's diss., University of Dar es Salaam, 2002); and Sophia Josephat Mwilongo, "Challenges Perceived by Local Pharmaceutical Manufacturers that Hinder Adequate Production of Essential Medicines in Tanzania," (Master's diss., Muhimbili University of Health and Allied Sciences, 2011).

pology, which have examined China's recent medical diplomacy, the practice of traditional Chinese medicine in private clinics and other political and anthropological issues.[48] This work provides a more differentiated assessment by investigating different forms of medical aid in-depth and zooming in on specific case studies. I examine aspects other studies have omitted, focusing on how these programs played out on the ground. I investigate the schemes closely in their historical contexts, and, on this basis, I provide a nuanced evaluation of the South-South knowledge production and its implications for the postcolonial politics of socialism and self-reliance.

Methodologically, available studies on Chinese medical aid have relied on oral testimonies, institutional and government reports, and personal observations as primary sources, neglecting archival sources almost entirely.[49] As a result, they have not considered the nuanced history of the emergence, development, and im-

48 Scholars from political science, international relations and anthropology who studied China's medical assistance include Gordon C. Shen and Victoria Y. Fan, "China's Provincial Diplomacy to Africa: Applications to Health Cooperation," *Contemporary Politics* 20, no. 2 (2014): 182–208, https://dx.doi.org/10.1080/13569775.2014.907993; Paul Kadetz, "Unpacking Sino-African Health Diplomacy: Problematizing a Hegemonic Construction," *St. Antony's International Review*, 8, no. 2 (2013): 149–172; Jeremy Youde, "China's Diplomacy in Africa," *China an International Journal* (March 2010): 151–163; Drew Thompson, "China's Soft Power in Africa: From the 'Beijing Consensus' to Health Diplomacy," *China Brief* 5, no. 21 (October 13, 2005): 1–5. Research on the practice of traditional Chinese medicine clinics was conducted by Elisabeth Hsu, "Medicine as Business: Chinese Medicine in Tanzania," in *China Returns to Africa: A Rising Power and a Continent Embrace*, ed. Alden C. Large D. and Soares de Oliveira R. (London: Hurst Publishers, 2008); Elisabeth Hsu, "The Medicine from China Has Rapid Effects: Chinese Medicine Patients in Tanzania," *Anthropology and Medicine* 9, no. 3, (2002): 291–314, https://dx.doi.org/10.1080/13648470216335; Elisabeth Hsu, "Chinese Medicine in East Africa and its Effectiveness," *IIAS Newsletter*, no. 45 (Autumn 2007): 22; Michael Jennings, "Chinese Medicine and Medical Pluralism in Dar es Salaam: Globalization or Glocalisation? *International Relations* 19, no. 4 (2005): 457–473, https://doi.org/10.1177/0047117805058535; Hilaire De Prince Pokam, "Chinese Medicine in Cameroon," *China Perspectives*, no. 3 (2011): 51–58.

49 See, Shen and Fan, "China's Provincial Diplomacy to Africa"; Kadetz and Hood, "Outsourcing China's Welfare"; and Huang, "Domestic Factors and China's Health Aid Programs in Africa." Very few studies integrated some archival information but with limited oral testimonies from key respondents. See, for instance, Li, *Chinese Medical Cooperation in Africa,* and Altorfer-Ong, "Old Comrades and New Brothers." The lack of relevant sources limited the historical understanding of several Chinese-aided medical projects in Africa. For instance, Hsu and Jennings maintained that the activities of the Chinese doctors working under the TAZARA project influenced the positive reception of TCM clinics in Tanzania. At the same time, archival information I collected suggests that the activities of Chinese medical doctors and the practice of acupuncture therapy from 1968 onwards provided a chance for the penetration and positive perception of TCM clinics in the 1990s. See Hsu, "Chinese Medicine in East Africa," 22; Jennings, "Chinese Medicine and Medical Pluralism," 461.

plications of Chinese medical aid to the development of health sectors in recipient countries.

This work also pushes further the discussion about the manner in which and the extent to which countries of the Global South engaged in the fight against pandemics in other Southern countries, using the Chinese-funded HIV and AIDS research and treatment project in Tanzania as a focal point. To date, the contributions of Southern countries in combating pandemics have been largely overlooked by scholars, creating the impression that countries of the Global South have had little to offer in response to global health challenges. Studies into the global health campaign by Amy Patterson, Randall Packard, and John Iliffe underscore the roles of traditional global health partners such as the USA, the European Union (EU), the WHO, the World Bank, and the Bill and Melinda Gates Foundation.[50] Very little is currently known about China's multilateral engagement in global health from the turn of twenty-first century onwards following its domestic health crisis and economic interests in Africa where medical assistance has become an essential component of China's projection of soft power.[51] Although the available literature sheds some light on China's global health multilateralism, research has not yet examined China's bilateral entry into global health campaigns. Bilateral medical projects with individual countries in the Global South, funded by the Chinese government, are essential areas for research in the present work.[52]

50 See, for instance, Amy S. Patterson, *Africa and Global Health Governance: Domestic Politics and International Structures* (Baltimore, MD: Johns Hopkins University Press, 2018); Packard, *A History of Global Health*; John Iliffe, *The African AIDS Epidemic: A History* (Athens: Ohio University Press, 2006).

51 Stephen J. Morrison, "The Prospects for Engaging China with Global Health Issues," in *China's Capacity to Manage Infectious Diseases: Global Implications*, ed. Charles W. Freeman and Xiaoqing Lu (Washington DC: Centre for Strategic and International Studies, 2009); L. H. Chan, P. K. Lee and G. Chan, "China Engages Global Health Governance: Processes and Dilemmas," *Global Public Health* 4, no. 1 (January 2009): 1–30; https://dx.doi.org/10.1080/17441690701524471; Yanzhong Huang, "China's New Health Diplomacy," in *China's Capacity to Manage Infectious Diseases: Global Implications*, ed. Charles W. Freeman and Xiaoqing Lu (Washington DC: Centre for Strategic and International Studies, 2009); Matthew Brown, Bryan A. Liang, Braden Hale, and Thomas Novotny, "China's Role in Global Health Diplomacy: Designing Expanded U.S. Partnership for Health System Strengthening in Africa," *Global Health Governance* 6, no. 2 (Summer 2013): 1–18; Xu Jing, Liu Peilong and Guo Yan, "Health Diplomacy in China," *Global Health Governance* 4, no. 2 (Spring 2011): 1–12.

52 See, for instance, "Traditional Chinese Medicine has Great Prospects in Dealing with HIV/AIDS," *Xinhua News Agency*, September 25, 2003, "Traditional Chinese Medicine in Tanzania," *Xinhua News Agency*, October 15, 2006, Rodney Thadeus, "China to Help Dar Fight AIDS," *The African*, February 17, 2003, 3.

Scholars have debated South-South Cooperation in somewhat controversial terms. Some emphasize that China's current engagement was linked to the country's aim to exploit natural resources in low-income countries and that its growing need for these resources primarily renewed the strong relationship with Africa in the 1990s, referring to China's engagement as the "second colonization of the African continent."[53] By contrast, others argue that the increased cooperation between China and African governments has served mutual benefits, bolstering their arguments with statistics that reflect the extent to which African countries have benefited from collaboration with China, illuminating African agency in action. Scholarships for African students, medical assistance, infrastructure projects, economic investments, and trade relationships are prime examples of such positive effects.[54] The debate on China's recent influence in Africa has overlooked the possibility of Chinese humanitarianism and imperialist elements in its medical aid to Africa since its commencement in the 1960s. Likewise, the role of the African agency in Sino-African relations should be studied from the onset of the cooperation to discern its change and continuities.

1.4 Conceptual Framework

Conceptually, this work contributes to a growing body of literature engaging with "Theory from the South"; that is, initiatives in the Global South promoting knowledge generation and scientific innovation. "Theory from the South" can be described as a broad and diverse research agenda affecting different disciplinary fields that subscribe to the common goal of highlighting the Global South's contri-

53 See, for instance, Erica Downs, "The Fact and the Friction of Sino-African Energy Relations," *China Security* 3, no. 3 (2007): 46–48; Erica Downs, "The Chinese Energy Security Debate," *The China Quarterly* 177 (2004): 21–41; also see Ian Taylor, "China's Oil Diplomacy in Africa," *International Affairs* 82, no. 5 (2006): 937–959; Ian Taylor, "A Challenge to the Global Liberal Order? The Growing Chinese Relationship with Africa," in *Handbook of China's International Relations,* ed. Shaun Breslin (London: Routledge, 2010); Ali Zafar, "The Growing Relationship between China and Sub-Saharan Africa: Macro-Economic, Trade Investment and Aid Links," *The World Bank Research Observer* 22, no. 1 (Spring 2007): 103–130.

54 See Lucy Corkin, *Uncovering African Agency: Angola's Management of China's Credit Lines* (London: Ashgate Publishing Limited, 2013); Giles Mohan and Ben Lampert, "Negotiating China: Reinserting African Agency into China-Africa Relations," *African Affairs* 112, no. 446 (Dec 2012): 92–100; Obert Hodzi, "African Political Elites and the Making(s) of the China Model in Africa," *Politics and Policy* 48, no. 5 (2020): 887–907; Li, "China's New Policy toward Africa"; Liu *et al.*, "China's Distinctive Engagement in Global Health"; Wang Hongyi, "Sino-African Relations Enter a New Stage," *China International Studies* (Fall 2006): 33–48.

butions to various fields of science. Thus, it challenges the long-standing sophism that globally relevant knowledge has always emanated from European and North American countries and that Southern regions of the world have been on the receiving end, delivering – at best – raw data incorporated into sophisticated theories by researchers from the Global North. Indeed, it empowers countries that have been conventionally ill and perceived as peripheral, primitive, and underdeveloped. Scholars who subscribe to the Southern theory have emphasized how Southern countries became centers for the production and circulation of knowledge and innovation within the Southern world and beyond Southern borders, showing that countries of the Global South developed genuine and self-conscious modernity as well.[55] Consequently, Southern countries produced undisputed advancements in science and technology from the ancient to the modern periods. To be sure, the colonization of Southern countries had impeded knowledge production processes. Nevertheless, colonies remained critical sources of knowledge and innovation for the development of modern states of the Global North.[56]

The view that countries of the Global South have been the architects of science, technology, and innovation is not new, but it is rooted in older Afrocentric scholarship. Among others, Cheikh Anta Diop viewed Africans as genuine architects of Ancient Egypt's civilization, which then spread to the Global North and other parts of the South.[57] Theory from the South develops such thoughts further, building on previous criticism. In medical history, scholars such as Helen Tilley have discussed how the Global South became a source of "raw data" for the Global North – how treatments were tested and plant knowledge exported to Northern states. Tilley adds that much of the knowledge colonial authorities gathered from local experts and their experiences in the colonies has been unacknowledged or silenced.[58] Scholars under the "Theory from the South" umbrella, by contrast, seek to make visible the knowledge that has come from the South, and by doing that, they prove that the Global South was also a site of theory building, not just one of collecting raw data, such as botanical specimen.

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55 Jean Comaroff and John L. Comaroff, *Theory from the South: Or, How Euro-America is Evolving Toward Africa* (London: Paradigm Publishers, 2012); Clapperton Chakanetsa Mavhunga, "Introduction: What Do Science, Technology, and Innovation Mean from Africa?" in *What Do Science, Technology, and Innovation Mean From Africa*, ed. Clapperton Chakanetsa Mavhunga (Cambridge: Massachusetts Institute of Technology Press, 2017); Fran Collyer, Raewyn Connell, Joao Maia and Robert Morrell, *Knowledge and Global Power: Making New Sciences in the South* (Clayton: Monash University Publishing, 2019).

56 Comaroff, and Comaroff, "Theory from the South," 116; Mavhunga, "Introduction," 5.

57 See, for instance, Cheikh Anta Diop, *The African Origin of Civilization: Myth or Reality* (New York: Lawrence Hill and Company, 1974).

58 For detailed information, see Tilley, *Africa as a Living Laboratory*.

Admittedly, precisely defining the "Global South" and the "Global North" is problematic. The terms, however, are alternatives to denominations like "Third World or Developing Countries" and "Developed Countries." Using these terms signals the downfall of the tripartite and hierarchical division which dominated the Cold War period.[59] Julius K. Nyerere, then Chairman of the South Commission, defined Southern countries by referring to their interests, connections, and determinations in relation to the "underdeveloped" and the "highly developed" nations. In this regard, geography, ideology, and economic achievements are not decisive influences on identification, since countries such as China, India, Brazil, and South Africa have a per capita income higher than that of some countries of the Global North, such as Albania, Kosovo and Yugoslavia. Certainly, countries of the Global South were members of the Group of 77 (G-77) or the Non-Aligned Movement (NAM). They share basic characteristics such as being former colonies or protectorates, having a comparatively low GDP, and being excluded from international economic decision-making institutions such as the World Trade Organization (WTO), United Nations Conference on Trade and Development (UNCTAD), World Bank, and International Monetary Fund (IMF). In sum, these countries would be associated with the "periphery" and a lack of political and economic power from a perspective of World Systems Theory.[60] With such a view, I trace the initiatives made by countries of the Global South to facilitate the development of knowledge production following the Bandung Conference in 1955 and the Afro-Asian Peoples' Solidarity Organisation (AAPSO) instituted in 1957. Thus far, scholars have not linked these organizations with the ongoing "Theory from the South" debate. I examine how these movements, which were formed at the height of the Cold War, conceived and developed the idea of assisting one another in addressing several economic, political, social, and technological problems. Consequently, I use China's medical aid in Tanzania to examine the manifestations of the Southern solidarity agendas, considering that China was among the leading architects and sponsors of Afro-Asian movements and organizations.

A "Southern" perspective extends beyond a parochial analysis by dependency theorists, who view low-income countries as dependent on high-income nations for markets, capital equipment, consumption of goods and financing. Against this backdrop, they premised that the underdevelopment of the Southern countries was caused by such dependency and asymmetrical economic and political relationships with high-income countries of the Global North. In their view, the only

59 Comaroff and Comaroff, "Theory from the South," 126.

60 Julius K. Nyerere, "The Meaning of "Development" and of "The South"," in *Freedom, Non-Alignment and South-South Cooperation*, ed. The Mwalimu Nyerere Foundation (Dar es Salaam: Oxford University Press (T), 2011), 91–92; Comaroff and Comaroff, "Theory from the South," 127.

way for Southern countries to disentangle such "exploitative" relationships was through delinking their economic and political ties with the Northern countries.[61] With respect to "aid," for instance, the dominant perception has been that the only "donors" were Euro-American countries and multilateral financial institutions, such as the IMF and the World Bank – despite the decisive engagement of several Southern countries, including China, India, and Cuba. Consequently, neo-Marxist theory can be somewhat limiting by overlooking the possibility that some countries in the "periphery" provided aid to "peripheral" and "core" countries. Secondly, it leaves unanswered the question of what happens when a so-called peripheral country aids another peripheral country and whether this type of aid would also count as an example of exploitation. China's medical assistance to post-colonial Tanzania was an attempt by the "poor" to help the "poor". Capital and experiences flowed from the South to the South. While this work draws from Southern theory, it avoids a celebratory account by critically inquiring into the process through which SSC was instituted, the usefulness of the knowledge produced and circulated, and the benefits reaped by which stakeholder.

1.5 Methodological Opportunities and Challenges

While researching Sino-African relationships, George T. Yu wrote: "[S]tudying China in Africa is much like pursuing a dragon in the bush. The dragon is imposing, but the bush is dense."[62] Although Yu reached this conclusion in 1968, it remains relevant today. During my research, I encountered several opportunities and challenges, not least because China's aid was executed with high confidentiality. Identification of and access to both archival and oral historical testimonies required more time and patience than I had initially anticipated (see below). This work employed a qualitative approach, drawing from written and oral accounts. Sources were gathered during two long research trips conducted in Tanzania and China from January to July 2018 for the first phase and from February to July 2019 for the second phase. I used oral historical narratives, which I gathered in March 2016

61 See, for instance, Samir Amin, "A Note on the Concept of Delinking," *Review* 10, no. 3 (Winter 1987): 435–444; Samir Amin, *Delinking: Towards a Polycentric World* (London, New Jersey: Zed Books Ltd, 1990); Walter Rodney, *How Europe Underdeveloped Africa* (Washington DC: Howard University Press, 1982).

62 George T. Yu, "Dragon in the Bush: Peking's Presence in Africa," *Asian Survey* 8, no. 12 (Dec. 1968): 1025–1026.

when I first met Chinese medical doctors who worked in Tanzania in the 1990s and 2000s.[63] Their written and oral historical narratives complement each other to bring a history of China's medical assistance in post-colonial Tanzania.

My interview partners included medical workers, government officials, pharmaceutical technicians, and patients. Such diversity complicated the collection of historical narratives, as I interviewed respondents from different institutions and places. At the same time, it allowed me to meet respondents with different backgrounds and specialties who offered a variety of memories and narratives. Informants were first identified through the heads of departments from several relevant institutions from which China's medical aid was sourced and received. The heads of the departments introduced me to the senior employees who worked on the projects funded by the Chinese government. I interviewed five groups of respondents. Firstly, former members of Chinese medical teams (CMTs) from Shandong province who worked in Tanzania provided insights into the CMTs' history, how the teams operated their medical services, and how they introduced and exchanged medical knowledge with local medical workers. I also inquired about the challenges and achievements experienced, the distinctiveness of Western and Soviet medical workers, responses from Tanzanians, and the Chinese medical workers' perceptions of Tanzania's public health system. Initially, I anticipated that locating and talking to Chinese doctors who worked in Tanzania would be challenging. However, the Shandong Province Health Bureau connected me with retired and on-service medical doctors who worked in Tanzania from the 1970s to the 2000s.[64] Given the nature of the study and current critiques regarding China's engagement with African countries, Chinese medical doctors were hesitant to respond to sensitive questions inquiring about China's benefits from its medical missions. The doctors were also not ready to discuss the opportunities and privileges they received from the Tanzanian government. Instead, they were more willing to talk about the challenges they experienced on the ground and how they endured compared to other medical doctors from countries of the Global North and South working in Tanzania. However, interviews with medical doctors and health officials from Tanzania, as well as archival information from the Tanzania National Archives and the Shandong Provincial Archives, provided answers to more sensitive questions. While I interviewed Chinese witnesses in English, the Chinese doctors neither

63 I met the CMTs in Jinan City while pursuing my second master's at Zhejiang University.

64 With the assistance of the Institute of China Studies (ICS) of Zhejiang University (ZJU) and the Department of History of the East China Normal University (ECNU), I contacted the Health Bureau, which connected me with the doctors. I interviewed them at Jinan City in March 2016 and May 2019.

spoke English nor Kiswahili fluently, so an interpreter did all the transcriptions of the interviews for me.

Secondly, I interviewed former and current Tanzanian employees in pharmaceutical industries sponsored by the Chinese government. I inquired about how the industries were established, their goals, where employees attained their skills, the types of medical products they produced, the sources of pharmaceutical raw materials for the industries, and their contribution to the nation-building agenda of self-sufficiency. Locating and talking to workers within the pharmaceutical industry was challenging since the Mabibo Vaccine Institute collapsed in 1986, and its workers were reallocated to different departments. Thus, they could not be easily found for interviews. Similarly, the Keko Pharmaceutical Industries were privatized in 1997, and over 95% of its employees were replaced. Up to now, only one former employee has worked at Keko, while the rest are new and have less knowledge about the company's history. I interviewed one other former employee who worked with KPI from 1984 to 1997, and the former Minister for Industries, each of whom provided valuable insights about the industries. Furthermore, I used archival information and newspaper articles to complement oral historical narratives.

Thirdly, I collected information from patients who consulted the CMTs and TCM doctors in the Dar es Salaam Region. These people provided information on their perceptions of the new medical knowledge and the medical services Chinese doctors offered. Generally, patient interviews were the most sensitive aspect of my oral history work. For instance, it was challenging to locate patients treated by the CMTs, especially AIDS patients, given the prevailing stigma attached to affected persons in the community. Furthermore, many patients who attended the TCM clinic passed away, and the clinic collapsed in 2010. However, a retired local medical officer who worked at the clinic from 1987 to 2010 introduced me to an AIDS patient who had attended the clinic from 1990 to 2010. This patient was cooperative and responded openly to all of my research questions. Further insights regarding the clinical services offered by the CMTs were gathered from newspapers and archives, thereby complementing the oral historical narratives.

The fourth group of informants were medical personnel in the hospitals where CMT worked. I inquired about the practice of South-South knowledge production and circulation, the Chinese doctor-patient relationships, patients' satisfaction with the clinical services provided by Chinese doctors, the language proficiency of Chinese medical doctors and their general perceptions of the medical knowledge and ability of Chinese medical doctors. Locating local medical workers

who worked with the CMTs from the 1970s to the 1990s was challenging.[65] Thus, I interviewed medical workers who worked with Chinese doctors during the 2000s. Overall, they provided a clear understanding of the activities of Chinese doctors in Tanzania. Another challenge was the readiness of informants to spend a long time in discussions. Medical workers were busy with many patient appointments and could not be interviewed during their time off, since many also worked part-time in nearby private hospitals. Detailed information about the activities of Chinese doctors in Tanzania, gathered from the archives of Tanzania and China, was complemented by oral testimonies from local medical workers.

Lastly, I consulted retired and in-service officials from Tanzania's Ministry of Health, whom I asked about major Chinese-funded health projects in the country. These government officials were open to narrating the history of Chinese medical aid in the country. However, they hesitated to comment on the drawbacks of the funded projects, which hindered their sustainability. Moreover, some officials were unwilling to participate in the interviews and gave no significant reasons. Despite the challenges, information about health projects funded by the Chinese government was obtained from archives in China and Tanzania. At the end of the fieldwork, I collected 37 interviews at hospitals, government offices, coffee huts, and some respondents' residences.

Most of my primary sources are written documents from archives and libraries in Tanzania, Switzerland, and China. In the Tanzania National Archives (TNA), I consulted files containing annual reports from the Ministry of Health (MoH) and reports about the activities of the CMTs in Tanzania. In addition, I reviewed letters exchanged between the CMTs and the MoH, as well as between the Chinese government and the MoH, spanning the period from 1968 to 1977. Similar reports and letters covering the 1980s to 1990s could not be found. However, the available information was rich enough to reconstruct the history of the CMTs in Tanzania. It was easy to understand, for instance, places where the CMTs were distributed, the challenges they encountered, the way the MoH responded to the needs of the CMTs, the roles of the CMTs in medical knowledge exchange, and the perceptions of the activities of the CMTs by patients, political elites and medical officers from the MoH.

Furthermore, at the TNA, I accessed files containing essential details about the Chinese-funded pharmaceutical industries in Tanzania. The files contained production reports, demands for pharmaceutical raw materials, and letters exchanged between the management of the industries and the Ministries of Health

65 Many have retired, and others were transferred to other hospitals that were not easily accessible.

and Industries covering the period from 1968 to 1990.[66] The available sources helped me understand the kind of sponsorship that the Chinese government provided, the types of medical products produced by the industries, sources of pharmaceutical raw materials; challenges encountered by the industries, forces behind their establishment, the *modus operandi* for the pharmaceutical knowledge production and exchange, and the reasons behind their decline.

In the Dodoma National Records Centre (NRC), I consulted files containing letters exchanged between the MoH and the CMTs, memoranda of understanding and reports for the Chinese-funded HIV and AIDS research and treatment project covering the period from 2000 to 2010. The information obtained shed light on how the HIV and AIDS project was conceived and developed, and how it declined. Moreover, I analyzed reports on the practice of the socialist health system and other relevant government reports. In the Zanzibar National Archives (ZNA), I read letters exchanged between the CMTs and the MoH, and reports about Chinese medical teams in Zanzibar. While at the Mbeya Records Centre (MRC), I consulted reports and documents concerning the socialist health system and the activities of Chinese medical doctors in the Mbeya Region. This information helped trace the emergence, development and practice of the socialist health system, which existed after the Arusha Declaration of 1967. It was easy to examine how rural healthcare was executed and how the Chinese government influenced its practice in Tanzania. The reports further provided details about the forces behind the decline of the socialist health system and how cost-sharing in the health sector was conceived.

I consulted health-related files at the WHO Archives (WHOA) in Geneva. I read several resolutions by the World Health Assembly (WHA), reports on activities of the Global Programme on AIDS (GPA), and reports on the WHO's campaign against smallpox and tuberculosis in Tanzania. These reports supplemented oral and archival information collected in China and Tanzania. Likewise, I consulted the Shandong Provincial Archive (SPA) in China. I accessed CMTs' mid-year and annual reports, as well as letters exchanged between the CMTs and the Shandong Health Bureau and between the Health Bureau and the central government of China. I also read documents by the CMTs narrating their activities in Tanzania. Reports about the activities of the CMTs in Tanzania were dense, covering the period from 1968 to 1990. The reports supplemented archival information from the 1980s and 1990s, which could not be found in Tanzania. The reports and letters helped me examine the forces behind China's medical assistance to Tanzania, challenges encountered by the CMTs, the way the provincial and central govern-

66 Information about the Keko plant was dense, while little was found for the Mabibo vaccine.

ment responded to the demands by the CMTs, roles played by the CMTs in promoting South-South knowledge production, circulation, and exchange, the continuities and change of the program and activities of the CMTs in Tanzania, as well as roles played by Traditional Chinese Medicine (TCM) experts in introducing and spreading TCM knowledge in post-colonial Tanzania. Most of the reports and letters were handwritten, and all of them were in Chinese. I hired two research assistants, fluent in both English and Chinese, to address the language barrier. The assistants translated the selected reports and letters for me. However, I was denied access to some reports, diaries, and letters that the custodians perceived as confidential. Generally, information gathered at SPA enriched the histories of the CMTs and TCM in Tanzania.

Newspapers, government reports, parliamentary proceedings, and relevant grey literature were gathered at the University of Dar es Salaam Main Library-East Africana (EAF), the Muhimbili University of Health and Allied Sciences Library, Tanganyika Library Services-East Africana (EAF), and libraries of the University of Basel, the Department of History and the Swiss Tropical and Public Health Institute. Newspaper articles, for instance, reported people's perceptions of the activities of the CMTs, evaluations of the practice of the socialist health system and articles about Tanzania's health situation in different historical periods. Grey literature and research work produced by postgraduate students at the University of Dar es Salaam and Muhimbili enriched my literature review and argument of the study.

The general challenge of archival materials was the incompleteness of the documents I perused. Some files lacked a sequential link to one another. Such cases were much more common at TNA due to the misallocation of the files. Some of the ordered files could not be found. This challenge limited a total follow-up of the activities of the CMTs, research and treatment progress at the HIV/AIDS clinic, as well as the progress of pharmaceutical industries funded by the Chinese government. However, I was able to cover many of these gaps through the use of other sources, including oral historical narratives, provincial archives, and public record centers.

1.6 Structure of the Book

Given the nature of the study, the monograph is organized thematically – focusing on specific medical projects – rather than strictly chronologically. The introductory chapter contextualizes China's medical assistance in Tanzania and locates the study in broader discussions of the available research literature. It also pro-

vides a conceptual and methodological orientation of the study. It offers a valuable introduction and follows up to succeeding chapters.

Chapter 2 discusses the emergence and practices of socialist health policies in Tanzania from 1967 to 1990, showing that the Tanzanian government benefited from Southern solidarity by learning and adopting health policies from other "peripheral" countries. Health policies that were initially practiced in China, such as free healthcare, rural healthcare, and the institutionalization of traditional medicine, were similarly implemented by the Tanzanian government soon after the endorsement of the Arusha Declaration in 1967. Nevertheless, this chapter also shows that the policies adopted were affected by several colonial legacies. For instance, the rural healthcare program was shaped by the experiences of the colonial administration and the Chinese government. Thus, the post-colonial Tanzanian government deployed colonial and Chinese health policies to align with its social, economic, and political contexts. This chapter maintains that the spread and adoption of China's health policies to Southern countries show that development policy not only flowed from the "core" to the "periphery" but was also communicated between supposedly peripheral nations.

Chapter 3 studies concrete projects funded by the Chinese government in Tanzania. It examines the emergence and development of Chinese medical teams (CMTs) in Tanzania from 1968 to 2010. This chapter shows that Africa was the first frontier for the Chinese government to exercise medical assistance before extending it to other countries of the Global South. It depicts the changes and continuities of China's foreign policy and its implications for the CMT program. Moreover, it analyses the roles played by the Chinese government in capacity building for Tanzania's health sector through training local medical workers and attending to patients. I argue in this chapter that the CMT program was a humanitarian mission, but at the same time, was driven by political and economic calculations. The program was a soft way of securing allies during the Cold War era and was vital to maintaining China's political and economic interests in Africa. Additionally, the ways in which the CMT program was executed only marginally promoted sustainability and self-dependency in Tanzania's health sector.

The fourth chapter examines how China's medical assistance to Tanzania promoted the spread of China's traditional medical knowledge. The chapter establishes how traditional Chinese medicine (TCM) was introduced, perceived, practiced, and developed in post-colonial Tanzania. While TCM was first introduced to the coast of East Africa by Chinese navigators as early as the fifteenth century, its development gained momentum in 1968 when China dispatched its first batch of TCM-trained medical teams to Tanzania. Furthermore, this chapter shows that HIV and AIDS TCM research and treatment programs further influenced the acceptance and practice of TCM in the country. I argue in this chapter that the practice,

spread, and acceptance of TCM knowledge in Tanzania were imperative for promoting medical knowledge from the Global South. The Southern countries perceived "South-South knowledge exchange" as an emancipatory undertaking against the dominance of "Northern" or "Western" biomedicine. Nevertheless, discussions in this chapter show that the good intentions of the South-South knowledge exchange could not successfully replace the dominance of medical knowledge from the Global North.

Chapter 5 discusses the emergence and development of Chinese-funded pharmaceutical industries in post-colonial Tanzania and retraces their implications for Tanzania's health sector. The chapter further discusses how pharmaceutical knowledge was communicated between Chinese and Tanzanian technicians in the context of South-South knowledge exchange and its implications in the development of pharmaceutical industries in Tanzania. I argue that Chinese-funded pharmaceutical industries were conceived under several constraints that hampered their operation and sustainability. Such circumstances intensified Tanzania's dependence on imported raw materials and foreign technical experts to sustain the factories.

The conclusion assesses the consistency and inconsistency of China's medical assistance in support of Tanzania's nation-building and self-reliance agendas. The findings of this study show that although the Tanzanian government anticipated that medical aid from China would distinctively promote the country's self-reliance agenda, the ways in which such assistance was provided failed to realize those expectations.

Chapter Two
Socialist Health System Practices in Tanzania, 1967–1995

2.1 Introduction

The preceding chapter hinted at the roles played by the South-South Cooperation (SSC) in promoting the production and circulation of medical knowledge and experiences within the Southern world. This chapter broadens the discussion and adds knowledge to studies on Tanzanian socialism by examining the influence of the Southern solidarity agenda on the diffusion of Chinese-related health policies in Tanzania. It identifies health policies the government learnt from China and assesses their practicality in a young and low-income country. The chapter discloses that from 1966 to 1977, the Tanzanian Ministry of Health (MoH) sent medical delegates to study China's health system. It illuminates that the practice of free healthcare, the institutionalization of traditional medicine, rural healthcare and the banning of private health services by the Tanzanian government were informed by the delegates' knowledge learned from China. Nevertheless, the chapter shows that colonial continuities marked some policies adopted. The government manipulated both colonial and Chinese health policies to make them fit into its social, economic and political plans. However, the economic crisis of the 1980s, which coincided with liberalization policies, affected the sustainability of the adopted socialist health policies. The chapter builds upon the argument that the adoption of Chinese health policies not only signaled that Tanzania was evolving toward the east but also manifested the resolve of Southern countries to encounter their social challenges by sharing knowledge and experiences among themselves.

2.2 Tanzanian Socialism: Learning from China?

Before 1967, the Tanzanian government had no clear ideology but positioned itself as a non-aligned country with neither capitalist nor socialist commitments. However, from the mid-1960s, the government adopted several policies connected to socialism. It introduced the Arusha Declaration in January 1967, which was endorsed by the National Executive Council (NEC) of Tanganyika African National

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Union (TANU), the ruling party, in February 1967.[1] To implement socialist policies, TANU laid down the principles of socialism in its constitution. It denounced class differentiation and postulated that all human beings were equal and had rights to dignity and respect. Endeavoring to ensure economic justice, TANU welcomed the government's effective control over the major means of production.[2] Definitely, the policies of TANU and the Arusha Declaration defined the government's social, economic and political path, which spearheaded two main principles, "socialism" and "self-reliance." Under socialism, the Declaration ought to eliminate the exploitation of "man by man" and consolidate the government's control of major means of production. According to the principle of self-reliance, the government was diffident to foreign grants, loans, private investments, and other forms of assistance, driving it into a dependent state. At the same time, it encouraged self-help schemes and local resources as primary agents of development.[3]

Socialism, loudly pronounced after the Arusha Declaration, draws its background from TANU's pamphlet drafted by President Julius Nyerere in 1962. Nyerere endeavored to make socialism TANU's ideology and socio-economic policy that would underpin the government's activity.[4] Indeed, at first, the ideology was about Nyerere's thoughts, and he wrote almost all the theoretical papers and books. Thus, it took time for officials at different administrative levels, party leaders and citizens to understand and implement the policy accordingly.[5] Characteristically, socialism, famously known as *Ujamaa* in Tanzania, was meant to be "Tanzanian socialism." Adopting the Kiswahili word *Ujamaa* deliberately aimed

1 C. G. Kahama, T. L. Maliyamkono and Stuart Wells, *The Challenge for Tanzania's Economy* (Dar es Salaam: Tanzania Publishing House, 1986), 31.

2 URT, *The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance (Dar es Salaam: Publicity Section* 1967), 1; Priya Lal, "Maoism in Tanzania: Material Connections and Shared Imaginations," in *Mao's Little Red Book: A Global History*, ed. Alexander C. Cook (New York: Cambridge University Press, 2014), 98.

3 URT, *The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance*, 1–4; also see Rune Skarstein and Samuel M. Wangwe, *Industrial Development in Tanzania: Some Critical Issues* (Uppsala: Scandinavian Institute of African Studies, 1986), 6.

4 Julius. K. Nyerere, *Ujamaa: Essays on Socialism* (Dar es Salaam: Oxford University Press, 1968), 8.

5 Maximillian Julius Chuhila, "'To Plan is to Choose:' Navigating Julius Nyerere's Economic and Political Thoughts, 1961–1980s," in *From African Peer Review Mechanisms to African Queer Review Mechanisms? Robert Mugabe, Empire and the Decolonisation of African Orifices*, ed. Artwell Nhemachane and Tapiwa V. Warikandwa (Bamenda: Langaa Research and Publishing CIG, 2019), 381; Priyal Lal, *African Socialism in Postcolonial Tanzania: Between the Village and the World* (New York: Cambridge University Press, 2015), 30; Idrian N. Resnick, *The Long Transition: Building Socialism in Tanzania* (London: Monthly Review Press, 1981), 82–87.

to root its meaning in traditional conceptions. Nyerere insisted that it used the African word "*Ujamaa*" to emphasize the adopted policy's Africanness. The literal meaning of *Ujamaa* was "family-hood." According to Nyerere, "socialism" meant the art of living and working together for communal benefits.[6] He added that Tanzanian socialism was based on the pre-colonial past with its unique design. In his words: "We are not importing a foreign ideology into Tanzania and trying to smother our distinct social patterns with it. We have deliberately decided to grow as a society out of our own roots, but in a particular direction and towards a particular kind of objective."[7] From Nyerere's words, Tanzanian socialism was founded on certain characteristics of a traditional social organization.

Thus, the socialist policy adopted in 1967 extended and modified traditional social relations to meet life challenges in the twentieth-century world. Drawing from traditional social living patterns, Nyerere aimed to create something unique from the prominent socialist architects.[8] Scholars contested Nyerere's claims that *Ujamaa* was distinct from other forms of socialism practiced in Asia and Europe. J. L. Kanywany underscores that nothing was purely African about *Ujamaa* besides its linguistic expression. In his view, many of the statements in the manifesto were taken from Asian and European socialist convenors.[9] I extend this claim by showing how Nyerere adopted several ideas and practices from Maoism.

Tanzanian socialism was arguably founded on the view that capitalism was undesirable for the economic, social and political development of Tanzania and Africa, as, for instance, seen in the fact that there were few indigenous capitalists in independent African countries to conceive and maintain a capitalist economy. Nyerere opposed reliance on foreign capitalists to develop a capitalist economy in Tanzania, arguing that they would threaten African countries' sovereignty through unbearable conditions.[10] Unfortunately, a full-blown socialist state was also unattainable to low-income African countries. However, Nyerere was intrigued by Maoism, which, unlike Marxism-Leninism, maintained that the peasantry possessed socialist consciousness

6 Julius K. Nyerere, *Nyerere on Socialism* (Dar es Salaam: Oxford University Press, 1969), 28; "Mwalimu Defines Socialism," *The Nationalist*, August 28, 1967, 1; Paul Bjerk, *Building a Peaceful Nation: Julius Nyerere and the Establishment of Sovereignty in Tanzania, 1960–1964* (New York: University of Rochester Press, 2015), 98.

7 Julius K. Nyerere, *Freedom and Unity/Uhuru na Umoja: A Selection from Writings and Speeches* 1952–1965 (Dar es Salaam: Oxford University Press, 1966), 28.

8 Nyerere, *Nyerere on Socialism*, 28.

9 J. L. Kanywany, "Theoretical Problems of Ujamaa," in *Re-Thinking the Arusha Declaration* ed. Jeannette Hartmann (Copenhagen: Axel Nielsen and Son A/S, 1991), 45.

10 Severine M. Rugumamu, *Lethal Aid: The Illusion of Socialism and Self-Reliance in Tanzania* (Trenton, NJ: Africa World Press, 1997), 122–123.

and so were the revolutionary vanguard in pre-industrial nations rather than proletariats.[11] Furthermore, Nyerere argued that socialism – unlike capitalism – had roots in traditional African social organization. Nyerere envisioned that African countries would maintain self-reliance and develop human equality and dignity for all people through socialism.[12]

At the same time, the Tanzanian socialist ideology adopted many of its ideas from China. On his first visit to China in 1965, Nyerere was impressed by several observations, including the Chinese people's commune system, self-reliance, and frugality.[13] Nyerere visited China for the second time in 1968 and postulated that he had "come to China to learn [. . .]. The last three days have confirmed my conviction that we have a lot to learn from China."[14] Nyerere perceived China's social, economic, and political policies as a perfect path to sustainable development, arguing that other Southern countries should learn from China.[15]

Notwithstanding its immature economy, the Chinese government adopted a socialist policy soon after the 1949 Revolution. Contrary to the view that a full-blown socialist nation could not exist in low-income countries, the policy practice in China showed promising results and gave courage to other countries to follow suit. In his third trip to China in April 1974, Nyerere reaffirmed that the practice of socialism in China had inspired his regime. He argued:

> Two things convince me that socialism can be built in Africa and that it is not a Utopian vision. For capitalism is ultimately incompatible with the real independence of African states. The second thing which encourages me is China. It is because it appears to me that, among the millions of unique individuals in this society, there has been created a spirit of working together for the good of the community and the country. China is providing an encouragement and an inspiration for younger and smaller nations which seek to build socialist societies.[16]

11 Maurice Meisner, "Leninism and Maoism: Some Populist Perspectives on Marxism-Leninism in China," *The China Quarterly*, no. 45 (Jan.-Mar. 1971): 18.

12 Julius K. Nyerere, *The Rational Choice, a Speech Delivered on his behalf by the First Vice President Aboud Jumbe in Khartoum in the 1970s*, 3.

13 "Fast Growing Sino-Tanzanian Friendship: China Hails President Nyerere's State Visit," *Peking Review*, February 26, 1965, 7; Sebastian Edwards, *Toxic Aid: Economic Collapse and Recovery in Tanzania* (Oxford: Oxford University Press, 2014), 75; Martin Bailey, "Tanzania and China," *African Affairs* 74, no. 294 (Jan. 1975): 41.

14 "President Nyerere's Speech at the Farewell Banquet he Gave in Peking on June 21," *Peking Review*, June 28, 1968, 8.

15 "President Nyerere's Speech at the Farewell Banquet he Gave in Peking on June 21," *Peking Review*, June 28, 1968, 8.

16 "President Nyerere Ends Visit to China," *Peking Review*, April 5, 1974, 7.

The preceding expositions testify that Tanzanian socialism adopted some Maoist practices. Nevertheless, Nyerere denied these allegations, underscoring that the policy was based on the needs of the people, not on Chinese philosophy.[17] He added that claims of copying the policies from Moscow and Beijing subscribe to the view that Africa, and in this case, Tanzania, lacked agency and had nothing to contribute to the world and that all good things came from elsewhere. However, Nyerere admitted that adopting some ideas from other places was not a sin, provided that the government learned and proceeded to think and not to copy.[18] In 1974, when Nyerere visited China, he underscored that learning from China did not mean he would implement its policies uncritically. He told Mao Zedong: "We shall not flatter you by trying to make an exact copy of what we see. But I hope we shall be good pupils who learn and then apply their lessons to their own situation."[19] In this regard, Nyerere did not limit himself to the Chinese. Instead, he learned policies from China and other socialist and non-socialist countries and molded them to fashion "socialism with Tanzanian characteristics."

Subsequent sections discuss how Tanzania and China faced similar health challenges at independence. Both countries encountered medical dependencies, unequal provision of health services between the haves and the have-nots, rural and urban areas, and other social disparities. These commonalities allowed for the practical exchange of knowledge and experiences.

2.3 Free Healthcare, 1967–1988

Under the German and British colonial governments in Tanganyika, health services to the indigenous population were not provided free of charge, as patients in all hospital grades were required to pay for the service. In some instances, the colonial governments offered free healthcare to deprived communities. In most cases, colonial healthcare services were extended to only a few areas, preferentially in the production zones, settlers' habitations, and a few business towns and cities. Worse still, the services were racially segregated, Europeans enjoying first-class healthcare, Indians, Arabs and colored people the second, and Africans the third.[20] Thus, the post-colonial Tanzanian government inherited a capitalist-oriented healthcare system characterized by an unequal distribution and provision of healthcare services.

17 "Nyerere's Stress on Self-reliance," *The Nationalist*, April 9–15, 1967.

18 Nyerere, *Freedom and Unity/Uhuru na Umoja*, 47–48.

19 "Chairman Mao Meets Nyerere," *Peking Review*, March 29, 1974, 9.

20 Kjell J. Havnevick, *et al.*, *Tanzania: Country Study and Norwegian Aid Review* (Moss: A/S Repro-Trykk, 1988), 15.

Nevertheless, it did not promptly undo colonial health policies. Instead, it made some adjustments to accommodate patients with low income. For example, in 1962, the government issued hospital fees for patients attending government hospitals. The costs varied depending on the grades of hospitals. Grade I outpatients were charged Tshs. 20 per day, while grade III outpatients paid Tshs. 2. The government offered free health services to outpatients in Grade IV hospitals.[21]

Costs for inpatient services varied depending on the status of the hospital and grade. For instance, grade I inpatients admitted to Princess Margaret (now Muhimbili), Mount Meru (Arusha), and Tanga hospitals were charged Tshs. 60 per day, while grade I inpatients admitted to all other hospitals paid Tshs. 50 per day. Similarly, grade II inpatients admitted to the same hospitals mentioned above paid Tshs. 35 per day, while grade II inpatients admitted to all other hospitals paid Tshs. 30 per day. Such variances were not noticed in grade III inpatients since they all paid Tshs. 6 per three days in all hospitals. As it was to outpatients, grade IV inpatients received free healthcare in all hospitals.[22] Additionally, half the standard fee was charged for children under the age of 14. When the child was an infant so young that it was considered desirable on medical grounds to admit the mother also, a single fee at adult rates was charged. The antenatal registration fee for attendance at grade I outpatient sessions was charged Tshs. 60. The mentioned fee covered all the outpatient examinations and investigations.[23] Generally, the 1962 health policy brought slight changes to the delivery of health services in Tanzania. It gave grade IV patients, both inpatients and outpatients, a chance to get free health services in public hospitals and sections. However, the policy retained health service grades and fees as introduced by the colonialists. Offering health services in grades maintained social inequalities between the haves and the have-nots, which was inconsistent with the socialist policies.

While on his first visit to China in February 1965, President Nyerere was impressed by China's healthcare policies and devised a socialist approach to healthcare. After Nyerere's visit, the MoH set plans to learn more about China's health system, which, after its Great Proletarian Cultural Revolution, had made significant strides to ensure equality in healthcare service provisions. Thus, from 1966 onwards, the Tanzanian government sent a delegation of medical doctors to

21 The schedule did not include Grade II hospitals as they were discontinued. More information is available in "Government Hospital Fees, a General Notice, July 1, 1962," TNA. Acc. No. 450, Ministry of Health, File No. HEM/20/14, Private Practice Policy.

22 "Government Hospital Fees, a General Notice, July 1, 1962," TNA. Acc. No. 450, Ministry of Health, File No. HEM/20/14, Private Practice Policy.

23 "Government Hospital Fees, a General Notice, July 1, 1962," TNA. Acc. No. 450, Ministry of Health, File No. HEM/20/14, Private Practice Policy.

China for a study tour. Several aspects of the Chinese health policy, including free healthcare, enthused the delegates. The MoH considered free healthcare essential and consistent with the government's socialist policies.[24] Subsequently, after the Arusha Declaration, the country's national health policies emphasized the need to provide equitable and sufficient health services to all citizens. The socialist government perceived hospital fees as illegitimate since they consolidated social disparities and restrained access to healthcare services for low-income communities. Therefore, under Tanzania's socialist health system, the government provided free inpatient and outpatient clinical services in all government health facilities.[25] The Free healthcare maintained access to essential health services, enabling the country to have a healthy community and a serviceable labor force needed for national development.

Undeniably, free healthcare was burdensome to the Tanzanian government, which had to allocate sufficient funds to purchase and distribute medicines and medical equipment. From 1970 to 74, the health sector's share in the total government expenditure ranged from 6 to 6.9%. Initially, the government could afford the costs because the population was relatively small, not more than 13 million people. Yet, the increase in population raised costs for free healthcare. For instance, spending for the health sector rose to more than 7% of the total government expenditure from 1975 to 77, following the increase in population from 13.171 million in 1970 to 16.498 million in 1977 (Table 1). From 1978 to 1989, the government budget records show that the soaring population, which increased from 15.976 million in 1975 to 22.611 million in 1987, overwhelmed the government's ability to afford free healthcare. Its spending on the health sector fell from 7.1% in 1975/76 to 4.0% in 1987/88 (Table 1). The annual increase in population raised government expenditure to an unbearable burden, leading to the official discontinuation of the service in 1988. Other factors which crippled the country's ability to afford free healthcare services include high debts, droughts, decreased donor funding, diseases, oil crises, and devaluations.[26]

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24 Xiaoping Fang, *Barefoot Doctors and Western Medicine in China* (New York: University of Rochester Press, 2012), 29; "Mambo yalivyo Uchina," *Nchi Yetu Tanzania*, December, 1966, 22–23; URT, *The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance*, 1; Interview with Joseph W. Butiku, 9th July 2018, Posta-Dar es Salaam.

25 Havnevick, *et al*., *Tanzania: Country Study*, 168.

26 See, for instance, T. L. Maliyamkono and M. S. D. Bagachwa, *The Second Economy in Tanzania* (London: James Currey, 1990), 4; Deborah Fahy Bryceson, *Liberalizing Tanzania's Food Trade: Public and Private Faces of Urban Marketing Policy, 1939–1988* (Mkuki na Nyota Publishers, 1993), 8; Benno. J. Ndulu and Charles K. Mutalemwa, *Tanzania at the Turn of the Century: Background Papers and Statistics* (Washington DC: The World Bank, 2002), 12; Rwekaza Mkandala, "From Proud Defiance to Beggary: A Recipient's Tale," in *Agencies in Foreign Aid*: *Comparing China, Sweden and the United States in Tanzania,* ed. Goran Hyden & Rwekaza Mkandara (London: MacMillan, 1999), 5.

Table 1: Government health expenditure, 1970/71 to 1989/90.

Year	Health Expenditure Tshs. (Mill.)	Health Expenditure as % of Total Expenditure	Population (Mill.)
1970/71	152	6.2	13.171
1971/72	159	6.2	13.602
1972/73	207	6.5	14.047
1973/74	294	6.5	14.506
1974/75	426	6.9	14.980
1975/76	425	7.1	15.976
1976/77	561	7.1	15.976
1977/78	646	7.3	16.498
1978/79	688	5.3	17.036
1979/80	721	5.0	17.507
1980/81	815	5.5	18.080
1981/82	992	5.4	18.658
1982/83	983	5.1	19.255
1983/84	1171	5.4	19.871
1984/85	1329	4.8	20.506
1985/86	2446	6.2	21.162
1986/87	2213	4.2	21.874
1987/88	3074	4.0	22.611
1988/89	5509	5.0	23.1
1989/90	6532	4.6	272.2

Source: Modified from Lucian A. Msambichaka *et al*., *Economic Adjustment Policies and Health Care in Tanzania* (Dar es Salaam: Dar es Salaam University Press, 1994), 95.

Such a decline exacerbated maternal mortality rates and diminished the availability of drugs and medical equipment in government-owned hospitals.[27] The government's failure pulled the country towards traditional lending institutions such as the World Bank and International Monetary Fund (IMF), which, among other conditions, required the government to reduce spending in the social sector, including health. For instance, in 1987, the World Bank advocated greater reli-

27 Angwara D. Kiwara, "Health and Health Care in a Structurally Adjusting Tanzania," in *Development Challenges and Strategies for Tanzania: An Agenda for the 21st Century*, ed. Lucian A. Msambichaka, Humphrey P. B. Moshi and Fidelis P. Mtatifikolo (Dar es Salaam: Dar es Salaam University Press, 1994), 281–282.

ance on user charges, insurance mechanisms, the private sector and administrative decentralization policies to overcome the crisis.[28]

The increasing pressure from donor countries, the World Bank, and the IMF prompted the Tanzanian government to launch a cost-sharing policy, which began its trial in 1988, with every outpatient paying Tshs. 20 in a single attendance at any public health center. However, its implementation brought several challenges, such as mishandling the collected dues in hospitals since medical workers lacked practical knowledge of financial management. Furthermore, low-income communities complained that they could not afford the proposed fees. These and many other reasons prompted the government to drop the fee shortly afterwards, stating that further research and analysis were needed to implement the policy effectively.[29] However, joint research conducted by Tanzanian medical experts and the Britain Development Agency in 1990 affirmed that Tanzanians were ready for a cost-sharing program. The people's readiness was rooted in their determination to see improvements in the delivery of healthcare services, due to the government's inability to finance healthcare services following the 1980s economic shortfall.[30]

Implementation of the cost-sharing policy resumed in 1993 when the government reintroduced health service grades (I, II, III, IV), which redefined the quality of the services, costs, and kinds of prospective patients. Undoubtedly, the grades sustained the colonial and pre-socialist social disparities, whereby patients with high, middle, and low incomes received health services of varying quality. High-income patients afforded costs charged at grades I and II, which were relatively higher for more sophisticated health services. For instance, upon its commencement, patients attending grades I and II paid a consultation fee of Tshs. 500 at referral, 300 for regional and 150 for district hospitals. Furthermore, grade I patients paid a hospitalization fee of Tshs. 2,000 at referral, 1,500 at regional, and 1,000 at district hospitals per patient daily. While grade II patients paid Tshs. 1,000 for the referral, 750 for regional hospitals, and 500 for district hospitals. The government anticipated that patients who demanded grade I and II services

28 "Dr Y. Hemed, Source of Health Revenue from People who are Willing to Pay," MRC. Acc. No. 30, File No. M.10/5, Ulipiaji matibabu General, 1996–2006; Issa G. Shivji, "Liberalisation and the Crisis of Ideological Hegemony," in *Re-Thinking the Arusha Declaration*, ed. Jeannette Hartmann (Copenhagen: Axel Nielsen and Son A/S, 1991), 135.

29 JMT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Amrani H. Mayagila, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1993/94*, 53.

30 JMT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Amrani H. Mayagila, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1993/94*, 53; Phares G. M. Mujinja and Tausi M. Kida, *Implications of Health Sector Reforms in Tanzania: Policies, Indicators and Accessibility to Health Services* (Dar es Salaam: The Economic and Social Research Foundation (ESRF), 2014), 1.

would eagerly accept the cost-sharing policy; as a result, they were the first to be touched by the policy on July 1, 1993.[31]

In contrast, middle-income patients attended mainly grade III health services, where the quality of the services was moderate, consistent with their costs. Patients in this category paid consultation fees for Tshs. 300 for referrals, 200 for regional hospitals, and 100 for district hospitals. Unlike grades I and II, grade III patients paid once for the hospitalization regardless of the days. For instance, they paid Tshs. 500 in referrals, 300 for regional and 150 for district hospitals. The cost-sharing for this category was effective in the second phase, commencing on January 1, 1994. Admittedly, grades I, II, and III accommodated fewer Tanzanians, primarily businessmen, political elites and a few groups of formal and informal employees. Most Tanzanians with low incomes attended grade IV health services, which offered cheap but poor services. The services for this category were mostly executed through health centers and dispensaries. Unlike grades I, II, and III, the government gave grade IV beneficiaries and service providers time to prepare for the cost-sharing scheme.[32] It took until 1996 that the government, through the Community Health Fund (CHF), encouraged villagers and other non-civil servants to join the prepayment scheme voluntarily. The scheme aimed to reach about 85% of the population living in rural areas and others outside the formal employment sector. Under CHF, household members paid a fixed annual fee to access the primary level of health facilities.[33]

Moreover, in 1999, the Tanzanian government introduced the National Health Insurance Fund (NHIF) to provide its recipients with quality healthcare. The early beneficiaries of the scheme were civil servants and their dependents, but it has recently become open to private membership. Under the NHIF, employees in the public formal sector contributed 3% of their monthly salary, and their employers matched the same. NHIF covered health costs for the principal member, spouse, and legal dependents up to four under eighteen years old. The actual execution of the Insurance was released in 2001. The MoH assured NHIF members that they would receive sustainable healthcare in all public hospitals and some privately-

31 JMT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Amrani H. Mayagila, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1993/94*, 54–55.

32 JMT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Amrani H. Mayagila, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1993/94*, 54–55.

33 Peter Kamuzora and Lucy Gilson, "Factors Influencing Implementation of the Community Health Fund in Tanzania," *Health Policy and Planning* 22 (2007): 95; Gemini Mtei and Jo-Ann Mulligan, "Community Health Funds in Tanzania: A Literature Review," *Consortium for Research on Equitable Health Systems* (January 2007): 1.

run hospitals.[34] However, the membership turnout has been less promising. Up to September 2018, the NHIF had registered approximately 7%, while CHF covered about 25% of the Tanzanian population, accounting for 32% of the population covered by both NHIF and CHF. The government used two-thirds of the revenues to purchase medicines, medical equipment and other health-related expenditures. However, the funds collected could not cover the Ministry's health budget, forcing the government to keep financing the health sector from internal and external sources.[35]

Nevertheless, from the 1990s to the present, the government offered free health services to children of 0 to 5 years, pregnant women (clinic and delivery), elders of 60 years and above, and patients with contagious diseases such as HIV and AIDS, cancer, TB, leprosy and sickle-cell anemia, regardless of their ability to pay.[36] Notwithstanding a few categories of people, for whom the government waived their hospital fees, the introduction of cost-sharing buried equality in the delivery of health services since people with low income were unable to afford the prescribed costs. Many turned to traditional medicine and church hospitals, which charged lower fees.[37] Generally, cost-sharing transferred the responsibility of the socialist government to a third party, dismantling the socialist health system, which lasted over two decades in Tanzania.

2.4 Institutionalization of Traditional Tanzanian Medicine, 1968–1990

Before the coming of Europeans to Africa and Tanzania in particular, Africans depended entirely on local methods of diagnosis and treatment of diseases. Even after European missionaries and colonial governments came to the continent, most Africans continued to rely on traditional medicine because modern curative facilities were inadequate, and many Africans considered traditional therapy

34 JMT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Dk. Aaron D. Chiduo, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 2000/2001*, 7.

35 "Principal Secretary, Ministry of Health, Wananchi Kuchangia Huduma za Jamii, Afya, Muhtsari wa Mapendekezo ya Viwango na Maeneo ya Kuchangia, July 1, 1993," MRC. Acc. No. 30, File No. M.10/1/3, Medical Policy and Instructions General, 1990–2004; URT, *National Health Insurance Fund (NHIF), First Quarter Fact Sheet, September 2018*, 3–4; Selemani Mbuyita and Ahmed Makemba, "Equity in Health in Tanzania: Translating National Goals to District Realities," *EQUINET Discussion Paper*, no. 54 (Dec. 2007): 6.

36 MT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Dk. Aaron D. Chiduo, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1999/2000*, 19.

37 Maliyamkono and Mason, *The Promise*, 456.

methods more effective.[38] Biomedical practices did not fully dismantle traditional healing systems in Tanzania and Africa. Instead, local healers integrated several elements of biomedical practices, such as injections, which seemed helpful in curing ailments.[39] German and British colonialists recognized traditional health practitioners as health service providers. However, their services were strictly controlled and sometimes restricted over witchcraft accusations.[40] During the German colonial era, traditional medicine was open to practitioners with certificates indicating their locations of practice and the illnesses they treated. Through the British Medical Practitioners and Dentists Ordinance of 1929, the British colonial government permitted traditional health practitioners to practice in their communities, subject to permission from respective traditional authorities.[41] However, the government, through the 1928 Witchcraft Ordinance, prohibited healing systems which involved the so-called witchcraft practices, such as divination, considering them a threat to the colonial administration.[42] Nevertheless, they allowed the practices of healing systems that mainly utilized medicinal herbs, through which they assigned colonial botanists to examine the efficacies of

38 The WHO defines traditional medicine as the total of the knowledge, skill and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness. It uses mainly medicinal plants, mineral substances, and animal parts and relies exclusively on traditional healers to provide healthcare. While herbalism is the most common practice, it relies on divination and spiritualism. See, WHO, WHO Global Report on Traditional and Complementary Medicine, 2019, 8; M. Fawzi Mohomoodally, "Traditional Medicine in Africa: An Appraisal of Ten Potent African Medicinal Plants," Evidence-Based Complementary and Alternative Medicine, (December 2013): 1–3; "Letter from Chief Medical Officer, February 12, 1969 to all Regional Medical Officers, Research in Indigenous Systems of Therapeutic and Traditional Medicine," MRC. Acc. No. 13, File No. HE.11/86, Private Medical and Dental Practitioners, 1954–1972.

39 Megan Vaughan, *Curing their Ills: Colonial Power and African Illness* (Cambridge: Polity Press, 1991), 24.

40 Z. H. Mbwambo, R. L. A. Mahunnah and E. J. Kayombo, "Traditional Health Practitioner and the Scientist: Bridging the Gap in Contemporary Health Research in Tanzania," *Tanzania Health Research Bulletin* 9, no. 2 (May 2007): 117.

41 Torunn Stangeland, Shivcharn S. Dhillion and Haavard Reksten, "Recognition and Development of Traditional Medicine in Tanzania," *Journal of Ethnopharmacology* 117 (2008): 294; Rogasian L. A. Mahunnah, Febronia C. Uiso and Edmund J. Kayombo, *Documentary of Traditional Medicine in Tanzania: A Traditional Medicine Resource Book* (Dar es Salaam: Dar es Salaam University Press, 2012), 45.

42 Simeon Mesaki, "Witchcraft and the Law in Tanzania," *International Journal of Sociology and Anthropology* 1, no. 8 (December 2009): 134; Stacey A. Langwick, *Bodies, Politics, and African Healing: The Matter of Maladies in Tanzania* (Bloomington, IL: Indiana University Press, 2011), 45–46.

herbal medicine used by local practitioners and recommend them for use in European pharmacology.[43] On the one hand, the colonial government controlled the practices of local healing systems for their ends. Still, on the other hand, the permission granted to local herbalists played a role in developing traditional medical knowledge during colonization, thus laying the ground for its flourishing during the post-colonial period.

Notwithstanding the practicality and acceptability of traditional medicine in the pre-colonial and during the colonial periods, the independent Tanzanian government did not promptly promote the practice of traditional medicine. It neither coordinated nor linked the activities of traditional health practitioners with organized health services.[44] However, after the Arusha Declaration of 1967, the government began to promote the use of traditional medicine to maintain its endurance amid the spread of biomedicine. The government encouraged local healing practices to rescue a health sector nearly overwhelmed by the country's soaring population and disease burden amid its drive to extend healthcare to all. Moreover, under the self-reliance policy, the government anticipated promoting the practice of traditional medicine to reduce dependence on biomedicine. More importantly, severe reliance on imported biomedicine seemed to bolster the wealth of countries of the Global North. Thus, the country's weak economy made biomedicines too expensive to import.[45]

The 1968 symposium on African Medicinal Plants, held in Senegal, attended by Tanzanian officials, exemplified the need to promote traditional African medicine. The attempts, however, were inspired by the Chinese model, which, from the mid-1950s and through its 1958 Great Leap Forward and the 1966 Great Proletarian Cultural Revolution, compelled experts to integrate traditional medicine with biomedicine into the healthcare system and erase non-scientific (old-fashioned) traditional Chinese medicine practices, such as belief in voodoo and sorcery.[46] The Chinese government established schools and colleges that offered traditional medicine students' teachings and training. In 1955, it institutionalized

43 Langwick, *Bodies, Politics, and African Healing*, 53.

44 Richard M. Titmuss, Brian Abel-Smith, George Macdonald, Arthur W. Williams, and Christopher H. Wood, *The Health Services of Tanganyika: A Report to the Government* (London: Pitman Medical Publishing, 1964), 72.

45 Mahunnah, Uiso and Kayombo, *Documentary of Traditional Medicine in Tanzania*, 18; Langwick, *Bodies, Politics, and African Healing*, 9–10.

46 For further details, see Chapter 3 in Kim Taylor, *Chinese Medicine in Early Communist China, 1945–63: A Medicine of Revolution* (New York: RoutledgeCurzon, 2005) 30–62; Chien Hsin-chung, "Chinese Medicine: Progress and Achievements," *Peking Review*, February 28, 1964, 18; John Iliffe, *East African Doctors: A History of the Modern Profession* (Cambridge: Cambridge University Press, 1998); Iliffe, 211.

traditional medicine and established the Academy of Traditional Chinese Medicine, currently called the China Academy of Chinese Medical Sciences (CACMS). The CACMS played a vital role in adding scientific value to traditional Chinese medicine through medical research and training.[47] Formally trained traditional health practitioners covered the needed medical personnel gap, reducing mortality and morbidity, raising life expectancy, and successfully eradicating the most troubling diseases in China.[48]

The Tanzanian government admired China's achievements over a short period and took several initiatives to learn from them. The 1966 delegation of the MoH recommended, among others, the institutionalization and use of traditional medicine in hospitals parallel to Western biomedicine. Lucy Lameck, also a delegate, was impressed with the use of traditional Chinese medicine parallel to biomedicine. She said: "I visited one hospital and saw many boxes full of medicinal herbs. I was further surprised to see patients prescribed to take traditional medicine in government dispensaries and hospitals."[49] The Chinese government pledged to boost traditional medicine knowledge to practitioners and researchers in Tanzania to ease its integration with biomedicine.[50]

The Chinese model prompted Tanzania's MoH to institutionalize and integrate traditional medicine with biomedicine. In 1968, the government legally recognized and began to move towards integrating traditional and biomedicine. The Medical Practitioners and Dentist Ordinance of 1968 recognized the existence of traditional health practitioners and their right to practice traditional medicine.[51] Yet, not all healers were legally allowed to practice their services. Instead, the government sustained the 1928 Witchcraft Ordinance and prohibited healers whose medical practices invoked supernatural powers. In such contexts, the gov-

47 "Taarifa Fupi ya Safari ya Jamhuri ya Watu wa China, 16–23 Julai 2006," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 7; Ling Yang, "Training Medical Workers," *Peking Review*, November 13, 1964, 23.

48 "Report on Visit of Ministry of Health Delegation to the People's Republic of China, September 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

49 My translation from Kiswahili in "Mambo yalivyo Uchina," *Nchi Yetu Tanzania*, December 1966, 22–23.

50 "Mambo yalivyo Uchina," *Nchi Yetu Tanzania*, December, 1966, 22–23; also see China's commitment in "China's Obligation to Small Nations," *The Nationalist*, June 30, 1967, 8.

51 Traditional medicine practitioners in Tanzania comprise herbalists, ritualists, spiritualists, and midwives. See, for instance, Harald Kristian Heggenhougen, "Health Services: Official and Unofficial," in *Tanzania Crisis and Struggle for Survival*, ed. Jannik Boesen, Kjell J. Havnevik, Juhani Koponen, and Rie Odgaard (Uppsala: Scandinavian Institute of African Studies, 1986), 312; Vaughan, *Curing their Ills*, 60; URT, *Medical Practitioners and Dentists Ordinance (Amendment) Act, May 1968*.

ernment's legal system did not accept divination, perceiving it as chaotic and a threat to the nation's peace, security, and development.[52] These attempts imply that the Tanzanian government, like the British colonial government, endeavored to differentiate "witchcraft" practices from healing and magic.

The legal recognition of the local health system eased the establishment of the first National Union of Traditional Healers (UWATA) in 1971. The Union was a valuable forum for medical knowledge exchanges and cooperation among practitioners. Furthermore, through UWATA, the government monitored the activities of traditional health practitioners to enhance their effectiveness.[53] The government allowed practices of local healing systems prone to registering with the MoH at their respective district offices. Through their registration forms, healers recorded the places where they intended to work, the kinds of diseases they cured, and the commitment that their therapies did not involve so-called witchcraft.[54] The registration helped the government control their services and record its statistics.

Nevertheless, the recognition was negatively perceived by conventional doctors who mistrusted the ability and effectiveness of traditional health practitioners. Conventional doctors opposed the ministry's call for cooperation between traditional and conventional health practitioners.[55] The increasing mistrust between the two groups of health service providers was a challenge and an opportunity for the scientific development of traditional medicine. The ministry made several attempts to "modernize" the activities of traditional health practitioners through scientific research. In 1969, it launched research on traditional medicine that involved contacting famous local traditional African doctors and recording their methods of practice in accurate detail. The government research team also carried out a chemical analysis of herbs used in treatment by traditional health practitioners and conducted clinical trials for selected treatment methods.[56] The government's coordination of traditional medicine research was an emancipatory attempt, giving freedom to traditional health practitioners who had been offering

52 Mesaki, "Witchcraft and the Law in Tanzania," 132.

53 Mahunnah, Uiso and Kayombo, *Documentary of Traditional Medicine in Tanzania*, 7; Ann Beck, "The Traditional Healer in Tanzania," *A Journal of Opinion* 9, no. 3 (Autumn 1979): 4.

54 Langwick, *Bodies, Politics, and African Healing*, 39.

55 Mbwambo, Mahunnah and Kayombo, "Traditional Health Practitioner and the Scientist," 117; Elizabeth Karlin Feierman, "Alternative Medical Services in Rural Tanzania: A Physician's View," *Social Science Medicine* 15B (1981): 400.

56 "Letter from Chief Medical Officer, February 12, 1969, to all Regional Medical Officers, Research in Indigenous Systems of Therapeutic and Traditional Medicine," MRC. Acc. No. 13, File No. HE.11/86, Private Medical and Dental Practitioners, 1954–1972.

their services in the dark corners due to intimidation by religious leaders and government authorities.[57]

Initiatives in scientific research, institutionalization, and integration of traditional medicine with biomedicine made a breakthrough in 1974. During this period, the government launched a Traditional Medicine Research Unit (TMRU) at the University of Dar es Salaam's Faculty of Medicine of Muhimbili Medical College. The TMRU, which became an Institute of Traditional Medicine (ITM) in 1991, strived to put biomedically efficacious herbal medicines for use by conventional and traditional health practitioners.[58] It played a role in identifying useful health practices that could be adopted and *materia medica*, which could be modernized and developed into drugs for human use. Furthermore, the institute was determined to disentangle pre-colonial and colonial ways of communicating traditional medicinal knowledge, which mainly relied on informal training and inheritance, by establishing formal training for traditional medicine practitioners. Subsequently, it offered short and long training courses on traditional medicines to facilitate the improvement of knowledge, skills, and practice by various stakeholders in traditional medicine development and drug discovery.[59] These roles show that the institute internalized elements of biomedicine within its training, research and general practice, consistent with its endeavor of turning traditional medicine more scientific (Figure 1). Activities of the ITM and the whole institutionalization process leaned on herbal medicines compatible with scientific methods compared to other local healing systems that invoke supernatural powers.

From its inception, the institute conducted systematic studies and research on the plants suitable for making drugs for human use. The MoH anticipated that the research carried out by the institute would promote the development and use of traditional medicine as a substitute for imported drugs.[60] Besides medical research, the institute held scientific proof of medicines produced by traditional health practitioners to ensure their safety for human consumption and improve their practices, turning it into a credible scientific cure. The institute regularized

57 "Traditional Medicine: Will the Medicine Man Regain his Lost Honour?" *The Nationalist*, June 30, 1971, 4.

58 "Traditional Medicine Research Unit, Report from 1974–1982," TNA. Acc. 450, Ministry of Health, File. No. HEO.10/4A, Traditional Medicine Research Unit, 1979–83.

59 Interview with Rogasian L. A. Mahunnah, 21 July 2018, Tabata Kisiwani, Dar es Salaam; "Traditional Medicine Research Unit, Report from 1974–1982," TNA. Acc. 450, Ministry of Health, File. No. HEO.10/4A, Traditional Medicine Research Unit, 1979–83.

60 "Tenth Anniversary of Muhimbili Medical Centre," *Daily News*, August 3, 1987, 5; Interview with Professor Rogasian L. A. Mahunnah, July 21, 2018, Tabata Kisiwani, Dar es Salaam; Modest C. Kapingu, June 8, 2018, Institute of Traditional Medicine (ITM), Dar es Salaam.

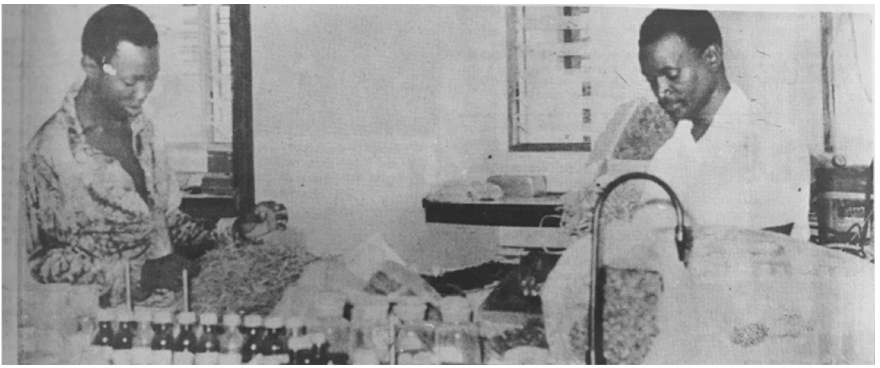

Figure 1: Phytopharmacological screening of various herbs at TMRU, 1985. Source: "Herbs Enter Conventional Medicine," *Sunday News*, July 28, 1985, 5 (printed with permission).

the activities of the practitioners without depriving them of their medical knowledge and social functions.[61]

The establishment of the TMRU eased the exchange of traditional medical knowledge between practitioners in China and Tanzania. On December 13, 1962, the two countries signed the Cultural Agreement, in which they agreed to exchange experiences in modern and traditional medicine.[62] However, it was not until the 1970s, after the Tanzanian government established TMRU, that the medical knowledge exchanges were realized. The exchange of practitioners and other medical stakeholders became a reality through the launch of the Sino-Tanzanian Joint Project on Traditional Medicine. Between 1974 and 1975, the joint research team collected samples of over 1,000 herbs used by traditional healers in Tanzania (Figure 2).[63] In 1977, traditional medicine researchers from ITM took over the research project and collected about 2,500 specimens of medicinal plants. Some specimens tested in the laboratory were efficacious, and researchers endorsed them for clinical trials.[64] In January 1983, the Faculty Board of Medicine and Senate of the University of Dar es Salaam approved further collaboration agreements

61 Morice Maunya, "Traditional Healers now in Mainstream Health Services," *Daily News*, February 28, 1991, 5; Beck, "The Traditional Healer in Tanzania," 4.

62 Read, for instance, Article 6 in URT, *Cultural Agreement Between the Government of the United Republic of Tanzania and the Government of the People's Republic of China, 1962*, 3.

63 Economic Commission for Africa, *Chemical Industry Development Programme: Report of the First ECA/UNIDO Chemical Industry Development Programme Mission, May-October 1978*, 113; Langwick, *Bodies, Politics, and African Healing*, 62.

64 "Amend your Laws on Medicine, Africa Told," *Daily News*, September 30, 1977, 3; also see "Tenth Anniversary of Muhimbili Medical Centre," *Daily News*, August 3, 1987, 5.

with training and research centers in China. These agreements, spanning six key areas, hold significant potential for the future of plant-derived pharmaceuticals in Tanzania. They included training and knowledge exchange on phytochemical and pharmacological screening of medicinal plants, production technology of plant-derived pharmaceuticals, and ethnobotanical and botanical garden preparations, deepening the Sino-Tanzanian traditional medicine knowledge exchange.[65]

In the 1980s, with the government's and donors' support, TMRU established botanical gardens in the Arusha, Tanga, Kilimanjaro, and Coastal regions. These gardens were among the initiatives and a strategic move to grow medicinal and aromatic plants to produce pharmaceuticals and cosmetics. The extensive cultivation of these plants was meticulously scheduled to ensure a steady supply of raw materials to the government-owned Keko Pharmaceutical Industries, which was expected to extract, distillate, and percolate the plants and finally produce medicines for human use.[66] However, the production of plant-derived pharmaceuticals ended in futility. TMRU failed to secure outlets for the products, presumably due to the non-existence of a clear-cut national policy on the production and utilization of plant-derived pharmaceuticals, collapsing the project in the 1990s.[67]

Besides the shortfalls, initiatives favoring the use of traditional medicine in parallel to Western biomedicine showed promising results. The ITM endorsed efficacious medicines for use in hospitals alongside modern medicine, and about seven types of herbal drugs were expected to be ready for use in hospitals by 1985.[68] Moreover, in 1990, the institute conducted research on traditional medicine capable of treating diabetes, malaria, asthma, ulcers, and HIV. Among the eight traditional medicines observed, one was found to control diabetes effec-

65 "Letter from the TMRU by E.N. Mshiu, Director of TMRU, to the Embassy of the United Republic of Tanzania in Beijing, China, dated 20 January 1983, titled Collaboration with Chinese Institution on Traditional Medicines Research," TNA. Acc. 450, Ministry of Health, File. No. HEO.10/4A, Traditional Medicine Research Unit, 1979–83.

66 "Ministry of Industries and Trade, Meeting on Plant Derived Pharmaceuticals Held at Keko Pharmaceutical Industries Limited 12th October 1984," TNA. Acc. 450, Ministry of Health, File. No. HEO.10/4A, Traditional Medicine Research Unit, 1979–83.

67 TNA. Acc. No. 638, Chemical Industries, File No. KPI/5, Keko Pharmaceutical Industries Ltd., 1991, Company Plan, 38.

68 The seven herbal drugs included *Azadirachta indica* – a popular herb locally known as *Mwarobaini* – used for treating malaria and fever, *calendula officinalis* with a potential for treating stomach pains, *cinchona succirubra* used for the preparation of quinine and chloroquine drugs for malaria cases, *cynara scolymas* for containing blood vein problems, *digitalis lanata* for heart ailments, *saponaria officinalis* and *tagets patula* for treating blindness, see "Herbs Enter Conventional Medicine," *Sunday News*, July 28, 1985, 5; "Local Herbs Usable in Hospitals," *Daily News*, March 21, 1987, 3; Langwick, *Bodies, Politics, and African Healing*, 62.

Figure 2: Ibrahim Mapembe (first left), a Tanzanian traditional healer, explains to Chinese doctors how he treats patients and the herbs he uses for treatment (1975). Source: "Traditional Healers and 'Health for All,'" *Sunday News*, February 19, 1984, 8 (printed with permission).

tively, while others were found to cure chronic malaria and ulcers.[69] Surely, achievements reached by the ITM brought hope and relief as the availability of more local medicine would ease the burden on the government, which spent a considerable amount of foreign currency to import drugs. Above all, the discovered local medicines were significant in curbing the dominance of biomedicine in healthcare and, therefore, a promising step toward self-reliance.

From 1974 to 1990, the MoH vigorously coordinated and gave prominence to the ITM's activities and services over traditional health practitioners' services. Such a context created the impression that the government had abandoned the practitioners and disvalued their services. It further generated numerous complaints from traditional health practitioners, who demanded more support and consideration from the MoH.[70] Fortunately, in February 1991, the MoH considered their demands and took several initiatives to coordinate their activities.

69 JMT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Prof. Philemon M. Sarungi, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1992/93*, 40; Interview with Febronia C. Uiso and Edmund J. Kayombo, June 8, 2018, Institute of Traditional Medicine (ITM), Dar es Salaam.
70 Interview with Edmund J. Kayombo, June 8, 2018, Institute of Traditional Medicine (ITM).

Among other things, it formally included traditional healers into its mainstream health services. The Minister for Health, Professor Philemon Sarungi, said: "I am here to announce to you [traditional medicine practitioners] that you are now a fully recognized sector, and my Ministry is now working to chart out guidelines and policies under which your activities would be coordinated nation-wide."[71] Before the official recognition, traditional practitioners worked individually, and the MoH did not effectively coordinate the services offered with the rigor needed to prevent and heal diseases. Since the 1990s, the government made more tangible attempts to promote the use of traditional medicine parallel to biomedicine. The ITM owed to the support it received from the Chinese government. In 1991, the Minister for Health acknowledged the support and affirmed that Tanzania was making headway on her research in traditional medicine because of the assistance it received from the Chinese government.[72]

The institutionalization of traditional medicine pleased many Tanzanians who trusted traditional medicine more than biomedicine. The available research illuminates that many patients went to hospitals or clinics as a last resort after traditional medicine had failed. Additionally, about 60% of the urban population and over 80% of the rural population in Tanzania rely on traditional medicine. Moreover, traditional health practitioners in Tanzania enjoyed a much more agreeable ratio of patients they attended to than biomedical doctors. The ratio of traditional health practitioners was 1:500 patients while that of biomedical doctors was 1:25,000 by 2012.[73] These glimpses imply that traditional medicine contributed significantly to the development of primary healthcare in Tanzania. They further demonstrate that the effective use of traditional medicine was vital for developing local medical knowledge, a key factor to attaining medical self-sufficiency.

2.5 Rural Healthcare, 1969–1980

At the time of its independence, rural healthcare services in Tanzania faced significant challenges. The 1964 Titmuss report showed that there were two to three trained doctors for every 100,000 people in rural areas by 1963. The report recommended that the post-colonial government prioritize staffing rural health centers to fight diseases effectively, curb rural-urban migration, and hasten agricultural

71 Maunya, "Traditional Healers now in Mainstream Health Services," 5.
72 "Sarungi Praises Chinese," *Daily News*, September 7, 1991, 3.
73 Mahunnah, Uiso and Kayombo, *Documentary of Traditional Medicine in Tanzania*, 8.

production, which was the backbone of the country's economy.[74] However, it was not until the Arusha Declaration of 1967 that the Tanzanian government took the rural healthcare agenda seriously, entrenching it in the concept of "socialism and rural development."[75] Its rural healthcare policy mirrored that of China, which took serious measures to improve rural healthcare services after the start of the Great Proletarian Cultural Revolution in 1966. Following the Revolution, crowds of urban medical and health workers nationwide were sent to rural areas to deliver medical care to peasants and workers. For instance, by 1973, the Chinese Ministry of Public Health reallocated more than 100,000 medical workers to rural areas.[76] Similarly, at independence, Tanzania had more than 90% of rural dwellers who depended on agricultural activities for survival. The government noticed that investing in rural healthcare was crucial for improving the lives of rural communities and the country. Consequently, Tanzania's economic destiny depended heavily on peasants, the primary food and cash crop producers. To promote peasants' production, the government, among others, extended health services to their vicinity.[77] Rural health services, therefore, constituted a crucial investment consistent with Nyerere's commitment to socialism and rural development and his bio-political endeavor. The state anticipated that people would produce more if they were energetic and healthier.

The Tanzanian government approached the rural healthcare program through a three-tier structure of personnel and facilities, consisting of village health posts, dispensaries, and health centers. It considered villages to be the basic unit of the healthcare system. Thus, it placed prime importance on village healthcare. Nevertheless, the delivery of healthcare in rural areas was challenging. The main hurdles were rooted in the structure of the villages themselves. Rural communities were scattered, and the voluntary concentration of scattered homesteads, administered in 1963 by the Rural Settlement Commission, was not progressing well. Up to 1965, only about 3,400 families resided in the newly established villages.[78] Despite such noticed failure, the government found it necessary for people to live in organized settlements to facilitate rural development. Nyerere argued: "We shall not be able to use

74 See, for instance, Chapter 5 in Titmuss, Abel-Smith, Macdonald, Williams, and Wood, *The Health Services of Tanganyika*, 106–107.

75 Resnick, *The Long Transition*, 192.

76 Zhou Xun, *The People's Health: Health Intervention and Delivery in Mao's China, 1949–1983* (Chicago: McGrill-Queen's University Press, 2020), 192–193; Xiaoping, *Barefoot Doctors*, 37; Wu, "For Workers, Peasants and Soldiers," 10.

77 Wilson Kaigarula, "Taking Health Services to the People," *Daily News*, March 6, 1979, 4.

78 Idriss S. Kikula, *Policy Implications on Environment: The Case of Villagization in Tanzania* (Dar es Salaam: Dar es Salaam University Press, 1997), 21.

tractors; we shall not be able to build hospitals or have clean drinking water; it will be quite impossible to start small village industries without a rural population living in villages."[79] The government perceived villagization as the only feasible means of reaching economic and social development.

Bringing together previously scattered communities heightened after the Arusha Declaration, where, through the Cooperative Societies Act of 1968, the government encouraged the registration of the newly established settlements as *Ujamaa* villages. Such attempts persuaded some communities to relocate to established villages, reaching approximately 300,000 people in about 650 villages by 1969. However, the pace was below the government's expectations. Thus, through the President Circular No. 1 of 1969 and the Presidential Decree of 1973, resettlement became compulsory, while the government applied both coercive and persuasive means to make sure that all families resided in *Ujamaa* villages by the end of 1976.[80] These attempts increased the pace of communities residing in the established *Ujamaa* villages. Up to 1983, about 35% of the rural population lived in established *Ujamaa* or developed villages where the government extended its health services.[81] Coercive measures led to a violent confrontation between villagers and the campaign teams in several places in the country. Such confrontation prompted numerous critics from human rights defenders and scholars who claimed that the campaign led to dehumanization and the declining rural economy throughout the 1970s.[82] Despite the odds, the villagization campaign was an essential means of putting communities together to facilitate the provision of social services. This view implies that the campaign brought hardships and opportunities to the rural communities.

The government development plans were structured according to the rural healthcare program. For example, the Second Five Year Development Plan stressed preventive health services through the agency of rural health centers. The government anticipated establishing health centers throughout the country. It aimed to attain the ratio of one health center to every 50,000 people. With this

79 Kikula, *Policy Implications on Environment*, 14.

80 Kikula, *Policy Implications on Environment*, 22; URT, *Second Five-Year Plan for Economic and Social Development July 1, 1969–June 30, 1974, Volume I: General Analysis, 1969*.

81 "World Drug Market Manual, November 19, 1982," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care.

82 Read, for instance, Maxmillian J. Chuhila, "Agrarian Change and Rural Transformation in Tanzania: Ismani, circa 1940–2010," *UTAFITI* 14, no. 1 (2019): 13; Andrew Coulson, *Tanzania a Political Economy* (New York: Oxford University Press, 1982), 168–176; also see James C. Scott, *Seeing Like a State* (London: Yale University Press, 1998), 223–261; Yusufu Q. Lawi, "Tanzania's Operation Vijiji and Local Ecological Consciousness: The Case of Eastern Iraqwland, 1974–1976," *The Journal of African History* 48, no. 1 (2007): 73.

target, the government needed to establish 240 health centers to meet the demands of the whole country. Besides supervising dispensaries in their respective areas, health centers organized preventive campaigns, such as nutrition education, environmental sanitation, maternal and child health services and immunization.[83] Under the Second Plan, the government further proposed establishing enough rural dispensaries as it endeavored to reach a ratio of a single dispensary to every 10,000 people. The government achieved its target by increasing development capital in the health sector from 2.2% allocated in the First Five Year Development Plan to 8% in the Second Five Year Development Plan.[84] The government plans were realistic since the budget for the Ministry of Health increased from Tshs. 8,538,000 in the 1971/72 financial year to Tshs. 14,198,000 in 1973/74. While in 1971, there were about 87 rural health centers, by the end of 1973, the number of centers increased to 135. Likewise, the number of dispensaries rose from 1,445 in 1971 to 1,594 in 1973.[85]

Furthermore, in the 1977/78 financial year, the government allocated Tshs. 15,800,000 to complete new rural health centers and dispensaries in different regions of Tanzania. The allocated funds were additional to Tshs. 18,590,000, spent in the 1976/77 financial year for the same purpose. The government's target was to establish at least 10 to 15 rural health centers and 40 to 50 dispensaries annually.[86] The 1970s and 80s were economically challenging periods for the Tanzanian government. The country experienced droughts, the oil crisis and a war fought with Uganda; thus, it spent much on purchasing imported foodstuffs, oil, and weapons. Despite the mentioned challenges, the government was devoted to improving health services, particularly in rural areas. Subsequently, it directed more funds to rural healthcare. Table 2 shows that between 1971 and 1980, the government's shares in rural health services rose from 20% to 42%. The government's commitment to allocating more funds for rural healthcare aimed to meet deliberations by its Second Five Year Development Plan, where it anticipated to establish about 80 rural health centers in various districts of Tanzania.[87] Despite

83 URT, *Second Five-Year Plan for Economic and Social Development, July 1, 1969–June 30, 1974, Volume II: The Programmes, 1969*, 101.

84 URT, *Second Five-Year Plan for Economic and Social Development, July 1, 1969–June 30, 1974, Volume I: General Analysis, 1969*, 162–164.

85 Julius Nyerere, *President's Report to the TANU Conference, September 1973*, 16.

86 "Big Cash Set Aside for Rural Health," *Daily News*, July 13, 1977, 1.

87 "Letter from the Office of Chief Medical Officer, Ministry of Health and Social Welfare, June 30, 1971, to all Regional Medical Officers, Rural Health Centres 1969/74," TNA. Acc. No. 450, Ministry of Health, File, No. HEH/41/4, Rural Health Centres, Ulanga District; Dominicus and Akamatsu, "Health Policy and Implementation in Tanzania," 199; Gerardus Maria van Etten, *Rural Health Development in Tanzania: A Case-Study of Medical Sociology in a Developing Country* (Assen: Van Gorcum, 1976), 43–44.

the evidence that the government allocated considerable funds for rural healthcare, the actual implementation of the program needed more funds, medicines, medical equipment, and personnel, which were not adequately available. Such inadequacies curtailed the sound achievements of the project.

Table 2: Budget allocation ratio between rural and urban healthcare.

Financial Year	Rural	Urban
1970/71	20%	80%
1974/75	37%	63%
1976/77	41%	59%
1979/80	42%	58%

Source: Created by the author based on data from Dominicus and Akamatsu, "Health Policy and Implementation in Tanzania," 199.

The establishment of the rural health posts and dispensaries went hand in hand with the staffing program. At independence, most rural health posts in Tanzania lacked trained medical personnel. Such a situation, too, existed in China. At liberation, China had only about 20,000 doctors trained in Western medical schools who mostly worked in urban areas. Its villagers depended mainly on traditional Chinese medicine practitioners.[88] After the Revolution, Chairman Mao strategized to improve health facilities throughout the country while prioritizing rural areas where most people lived. With the engagement of Mao's regime, it took about three years to implement a rural healthcare policy where staff and facilities in rural areas were improved, inspiring other countries of the Global South, such as Tanzania, to follow suit.[89]

Borrowing a leaf from China, the Tanzanian government established the Village Health Care Scheme in 1969. The scheme, famously known as the "First Aid-Kit Scheme," was run by Village Medical Helpers (VMHs) and aimed to provide healthcare to villages without health centers since the colonial era. Through village health posts, the scheme intended to obviate the need for people to travel more than 20 to 30 miles to seek health services. Moreover, village health posts anticipated a considerable reduction in the number of outpatients attending for

88 Chien, "Chinese Medicine: Progress and Achievements," 18.

89 "Report on a visit of Ministry of Health delegation to the People's Republic of China, September 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

comparatively trivial ailments at regional and district hospitals. It further aimed to get enough health practitioners to address village health challenges. Through the scheme, the government aimed to have at least two VMHs (one male and a female) in each village. Local administrations employed VMHs who worked for their respective ethnic groups or belonged to the same ethnic group as the area in which they were to be employed. By 1974, the government had trained 2,218 VMHs, who were working in villages throughout the country.[90] Generally, VMHs supplemented long-trained medical staff who were fewer in number to cater to the needs of the government.

The name "village medical helpers" was analogous to the British colonial "tribal dressers" of 1925 and the Chinese "barefoot doctors" (*chìjiǎo yīshēng*) of 1965 in structure and practice.[91] Findings from the present study show that the Tanzanian government utilized both experiences it learned from the British and the Chinese. The delegates from MoH sent to China for a study tour learned that the Chinese government improved its healthcare services by providing short-term training programs to lower medical cadres, enabling the country to record 4,000,000 barefoot doctors up to 1977.[92] Chinese achievements in staffing rural health centers were, therefore, admired and adopted by the Tanzanian government.

The VMHs scheme trained lower medical personnel. The training was elementary and chiefly confined to treating common local diseases. District medical officers (DMOs) were responsible for executing the training program.[93] The

90 "WHO, National Health Planning in Tanzania: Report on a Mission, August 1, 1973–April 28, 1974," WHOA, File No. TAN/SHS/002, 1972–1974-SHS/NHP, National Health Planning, 8; "Letter from the Principal Secretary, Ministry of Health, August 25, 1977, to all District Executive Directors of Tanzania, Mpango wa Huduma za Afya Vijijini," NRC. RAS-DOM 9/5/06, File Ref. No. M. 10/19 Medical Including Health Village Dispensaries, 1965–1982; Christopher Magola, "Accent on Rural Health," *Daily News*, December 4, 1982, 6; also see Kaigarula, "Taking Health Services to the People," 4.

91 The British tribal dressers scheme was initially introduced by the British Director of Medical and Sanitary Services, Dr J. O. Shircore, in 1925. The scheme trained mainly lower medical personnel assigned to address common local diseases in their respective villages. The term "barefoot doctors" came from Southern farmers who often worked barefoot in the rice paddy fields. The government recruited a lower medical cadre from a group of youths who received minimal training in treating minor illnesses, immunization, environmental sanitation, and other preventive services. See Xiaoping, *Barefoot Doctors,* 31.

92 "Mambo yalivyo Uchina," *Nchi Yetu Tanzania*, December 1966, 22–23; "Report on a visit of Ministry of Health delegation to the People's Republic of China, September 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

93 "Letter from the Principal Secretary, Ministry of Health, August 25, 1977, to all District Executive Directors of Tanzania, Mpango wa Huduma za Afya Vijijini," NRC. RAS-DOM 9/5/06, File Ref. No. M. 10/19 Medical Including Health Village Dispensaries, 1965–1982.

course lasted a minimum of three months. The training sessions were held in their respective districts and regional hospitals. Training for VMHs included lectures on basic anatomy and general medicine subjects, mother and child welfare, the village government's political structure, health posts management, environmental sanitation, food and nutrition, and knowledge of undesirable customs and beliefs that had a bearing on village health.[94] The government expected that trainees would be able to deal effectively with the average assortment of rural sick and would do a certain amount of treatment of minor ailments, render first aid, and act as collecting agents for the hospitals.[95] Furthermore, VMHs had to provide minimal preventive and curative services to the villages without a dispensary or health center and connect their respective villages to the official chain of referrals if more skilled services other than simple village-based ones were required. The government smoothed the effective delivery of health services to the trainees by equipping them with first-aid kits containing drugs for common health cases such as malaria, diarrhea, and other tropical diseases. They also received basic medical equipment, including a complete delivery kit, a scalpel with a blade, scissors, a dressing, forceps, a gallipot, and a kidney dish.[96]

Like the British tribal dressers and China's barefoot doctors, the selection of the VMHs involved local administration, which was their primary employer. However, the post-colonial Tanzanian government improved the selection process by training village leaders regarding rural healthcare and their roles as employers of the VMHs. The village leaders consulted villagers and recommended four names (two males and two females). Eligible persons were required to be permanent residents in the village, liked and respected by all, married or owned a durable house and farm in the village, married and living together with a spouse, aged between 25 and 45 years, and a diligent member of the Tanganyika African National Union (TANU).[97] Additionally, applicants were required to hold a minimum standard of primary education. Primary school graduates with suffi-

94 "Letter from District Medical Officer of Mbozi District to the Regional Medical Officer, January 2, 1971, Village Helper Course," MRC. Acc. No. 13, File No. HE.11/1, Rural Medical Aids General, 1971–1980; Christopher Magola, "Programme Brings Health Care to Rural Folk's Door," *Daily News*, March 5, 1987, 4; Magola, "Programme Brings Health Care to Rural Folk's Door," 4.

95 Magola, "Programme Brings Health Care to Rural Folk's Door," 4.

96 "Letter from the Office of the Principal Secretary, May 19, 1983, to the Programme Officer, UNICEF, First Aid Kits for Village Health Workers," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care.

97 "F. D. E. Mtango, Helena Restrepo, K. G. M. M. Alberti, O. Dale Williams, S. Dodu, Tanzanian Integrated Non-Communicable Diseases Prevention and Control Studies, Report of a Review of Activities, Geneva, Switzerland, August 17–19, 1983," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care.

cient knowledge and ability to read and write well in Kiswahili and a working knowledge of English were considered a priority. To commit VMHs to the service, the government demanded that they fill in agreement forms, committing them to serve the village for at least five years after completing their training.[98]

Most of the criteria used by the post-colonial Tanzanian government to admit eligible candidates for the VMHs program resembled those used by the British colonial government. Similarly, the criteria resembled and differed from those used to select barefoot doctors in China. For instance, the Chinese government considered trainees with secondary school certificates. Such a qualification allowed trainees to advance their medical education and get promoted to village medical doctors. In the 1980s, when the scheme collapsed, some barefoot doctors went for further training and became village medical doctors.[99] The selection of secondary school graduates would not work in colonial and post-colonial periods in Tanzania since there were few secondary school graduates.[100] As a result, the British recruitment system, which the post-colonial Tanzanian government embraced, limited further training to VMHs and left them jobless after the program's decline.

Like the British tribal dressers, the VMHs scheme acquainted trainees with notions of biomedicine. Such a training system contrasted with that in which the Chinese prepared trainees in both biomedicine and traditional Chinese medicine. The Chinese training system aligned with the Maoist policies, which stressed integrating biomedicine and traditional medicine in healthcare.[101] Archival records show that before the opening up of dressing stations in colonial Tanganyika, biomedicine was prevalent in only a few towns.[102] Therefore, dressing stations

98 Magola, "Programme Brings Health Care to Rural Folk's Door," 4; for the British Tribal Dressers, see "Letter by the Director of Medical Services to the Provincial Commissioner of the Southern Highlands Province, Mbeya, January 3, 1937," TNA. Acc. No. 450 Ministry of Health, File No. 209/1, Instructions for Tribal Dressers; "F. D. E. Mtango, Helena Restrepo, K. G. M. M. Alberti, O. Dale Williams, S. Dodu, Tanzanian Integrated Non-Communicable Diseases Prevention and Control Studies, Report of a Review of Activities, Geneva, Switzerland, August 17–19, 1983," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care.

99 Daqing Zhang and Paul Unschuld, "China's Barefoot Doctor: Past, Present, and Future," *The Lancet* 372, (November 29, 2008): 1866.

100 More details about Tanzania's education situation read Kahama, Maliyamkono and Wells, *The Challenge for Tanzania's Economy*, 23.

101 Xiaoping Fang, "Changing Narratives and Persisting Tensions: Conflicts Between Chinese and Western Medicine and Professional Profiles in Chinese Films and Literature, 1949–2009," *Medical History* 63, no. 4 (2019): 463.

102 "Organisation of Rural Medical Work in the Western Province," TNA. Acc. No. 450, Ministry of Health, File No. 209/7, Tribal Dressing Stations and Government Rural Dispensaries-Tabora District.

played a vital role in popularizing biomedicine in the interior of Tanganyika. Similarly, the negligence in training VMHs in traditional Tanzanian medicine played a role in popularizing biomedicine in rural areas.

The post-colonial Tanzanian government was dedicated to promoting preventive healthcare. Under its First Five-Year Development Plan of 1964 to 1969, the government prioritized preventive and curative measures. It realized that many health challenges were preventable, prompting its stress on vaccination and health education. Accordingly, the MoH circulated knowledge on the significance of wearing shoes, digging and using latrines, and paying proper attention to nutrition and cleanliness.[103] Thus, VMHs were effectively used to transmit preventive knowledge to villagers, consistent with the Chinese scheme, which also circulated preventive medical education through barefoot doctors.[104]

The British tribal dressers and the Chinese barefoot doctors worked in simple health units erected by villagers with minimal government assistance.[105] Likewise, through its district and village officers, the post-colonial Tanzanian government organized villagers to establish simple buildings and used them as village health posts. The Presidential Circular No. 2 of 1968 subjected all minor community development projects such as schools, dispensaries, community centers, teachers' houses and the like to a "self-help scheme." The government supported self-help projects with technical advice, roofing materials, pipes, and other forms of capital assistance.[106] At the same time, the village community furnished village health posts with simple facilities such as a table and chairs. Moreover, village governments covered travel costs for the helpers to enable them to travel to health centers and collect drugs and equipment. Additionally, the village governments exempted the helpers from other village development activities, such as

103 "Budget Speech by Minister for Health, June 1965," TNA. Acc. No. 589, Orodha ya Majalada ya Mtu Binafsi, Bhoke Munanka, File No. BMC. 10/03, Speeches of Ministers and Junior Ministers, 6.

104 Zhang and Unschuld, "China's Barefoot Doctor," 1866; "F. D. E. Mtango, Helena Restrepo, K. G. M. M. Alberti, O. Dale Williams, S. Dodu, Tanzanian Integrated Non-Communicable Diseases Prevention and Control Studies, Report of a Review of Activities, Geneva, Switzerland, 17–19 August 1983," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care.

105 "An Inspection Report by Sd. B. A. Coghlan, Medical Officer, Musoma to the Director of Medical Services, of February 21, 1935," TNA. Acc. No. 450 Ministry of Health, File No. 209/1, Instructions for Tribal Dressers, Revised Edition; "Report on a Visit of Ministry of Health delegation to the People's Republic of China, September 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

106 "The State House, Presidential Circular No. 2 of 1968, Self-Help Schemes, August 24, 1968," TNA. Acc. No. 593, Orodha ya Majalada Idara ya Habari, File No. IS/P/120/59, Distribution of Press Releases, 1963–1970.

road construction, cultivating *Ujamaa* farms and the like, to enable them to deliver medical services effectively.[107]

VMHs received monthly allowances from their respective village government councils, similar to the British tribal dressers and Chinese barefoot doctors. In China, for instance, barefoot doctors were paid by the people whom they served. In some places, barefoot doctors received a peasant's share, just like other peasants working on farms, while in other provinces, the residents of each commune paid one to two yuan per year as an allowance for the doctors. Thus, patients received clinical care free of charge. Under this system, China had two groups of medical workers: the ones who were paid by the government and those who were paid by communes, which reduced the central government's expenditure and enhanced people's access to healthcare.[108] Though details showing the monthly allowances received by VMHs are missing, village governments were obligated to enforce fee collection and indeed saw to it.[109]

Investments in rural healthcare required both political will and financial ability. Political elites in Tanzania were determined to see the rural healthcare scheme succeed. However, the country's ill economic situation was the main hindrance. The Tanzanian government requested and received support from different donors to address the financial deficit. Although China influenced the Tanzanian government to establish a village healthcare scheme, funding did not flow from China in significant amounts. Instead, the scheme was backed by the Basel Foundation for Aid to Developing Countries and other traditional donors of the Global North. The Basel Foundation provided 1,000,000 Swiss francs for the construction of buildings and the Rural Aid Centre (RAC) equipment at Ifakara in 1961. It also donated 200,000 francs annually to run the course and to develop and maintain the center.[110] The RAC trained low medical cadres, such as rural medical aids and assistant medical officers. However, following the government's needs for VMHs, it adjusted its training to meet the demand.[111] The United Nations

107 "Letter from the Head of the Department, Mvumi Hospital to Village Chairmen and Chair Health Committee, Mpango Kuhusu Wahudumiaji wa Afya Vijijini (Village Medical Helpers)," November 2, 1977," NRC. RAS-DOM 9/5/06, File Ref. No. M. 10/19 Medical Including Health Village Dispensaries, 1965–1982.

108 "Report on a visit of Ministry of Health delegation to the People's Republic of China, September 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

109 Magola, "Programme Brings Health Care to Rural Folk's Door," 4.

110 Rudolf Geigy, "Rural Medical Training at Ifakara: Swiss Help to Tanzania," *The Lancet* 285, Issue, 7400 (June 26, 1965): 1385–1386.

111 Lucas Meier, "Striving for Excellence at the Margins: Science, Decolonization, and the History of the Swiss Tropical and Public Health Institute (Swiss TPH) in (Post-) Colonial Africa, 1943–2000" (PhD diss., University of Basel, 2012), 171.

International Children's Emergency Fund (UNICEF) and the Swedish International Development Cooperation Agency (SIDA) also sponsored the program. The Swedish government, for instance, signed an agreement in May 1973, committing to donate 35 million Swedish kronor to Tanzania's disposal to support the development of rural health services during the fiscal years 1972/73 to 1976/77.[112] Furthermore, village medical helpers received bicycles, medicines and medical equipment from the central government, but provided by UNICEF as grants.[113] Bicycles helped them to reach many rural patients on time.

Despite the order from Health Minister Ally Hassan Mwinyi in 1972, directing medical graduates to work in rural dispensaries, unfavorable living and working conditions dissuaded many candidates.[114] Therefore, up to 1977, VMHs dominated healthcare delivery in rural health posts, while most medical graduates worked in towns and cities. This context created the impression that medical staff with short training were destined for rural areas, while qualified medical doctors were assigned to towns and cities.[115] In September 1977, the Minister for Health, Leader Stirling, issued another order to force medical graduates to work in rural areas for some years before they apply for re-allocation to towns and cities.[116] Subsequently, many doctors were relocated to rural areas in response to the Ministry's order (Table 3). The Ministry's decisions were consistent with the recommendations made by delegates from the MoH who went to China for a study tour. The delegates realized that by 1965, the Chinese government mobilized thousands of Chinese doctors from towns and cities and reallocated them to rural areas to prevent diseases, treat people, and transmit preventive health education to rural communities. These delegates recommended that the government improve living and working environments to convince medical graduates to work in rural health facilities.[117]

112 "Rural Health Programme, Terms of Reference for Review, 1976–77," NRC. RAS-DOM 9/5/06, File Ref. No. M. 10/19 Medical Including Health Village Dispensaries, 1965–1982.

113 "UNICEF, Plan of Operations for Development of Public Health Services (DPHS) in the United Republic of Tanzania, Interim Addendum for Development of Basic Health Services, July, 1991," WHOA, File No. TANZANIA/UNICEF-5, 1968–1972-SHS, Development of Public Health Services; "Letter from the Principal Secretary, Ministry of Health, August 26, 1976 to Development Directors, Mtawanyo wa Kwanza kwa Wahudumiaji wa Afya Vijijini," NRC. RAS-DOM 9/5/06, File Ref. No. M. 10/19 Medical Including Health Village Dispensaries, 1965–1982.

114 "Madaktari wafike pia Vijijini," *Uhuru*, July 15, 1972, 1; Heggenhougen, "Health Services: Official and Unofficial," 310.

115 Interview with Gallus Namangaya Abedi, June 6, 2018, Posta-Dar es Salaam.

116 "Doctors to Work in Rural Areas," *Daily News*, September 30, 1977, 5; also see Kaigarula, "Taking Health Services to the People," 4.

117 "Report on a visit of Ministry of Health delegation to the People's Republic of China, September 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

Table 3: Distribution of medical workers between urban and rural areas.

Year	1972	1976	1978	1980
Doctors				
Urban	418	487	513	598
Rural	216	399	479	547
Nurses				
Urban	2606	2760	2868	3570
Rural	1653	2060	3322	4705
Medical Auxiliaries (MAs* & RMAs*)				
Urban	208	456	624	910
Rural	605	1363	2166	2800

Source: Modified from Heggenhougen, "Health Services: Official and Unofficial," 310.

** MAs stands for Medical Assistants and RMAs for Rural Medical Aids.

The government's decision to force medical graduates to work in rural areas was intended to level the unequal distribution of medical workers in rural and urban areas, as shown in Table 3. From the colonial to the post-colonial periods, urban dwellers, who constituted less than 10% of the population, enjoyed a more sophisticated healthcare service. At the same time, the remaining majority endured inadequate health services with short-term trained medical personnel.[118] Before government efforts to prioritize rural healthcare, the national health system was structured like a pyramid, with well-equipped hospitals, research centers, specialist doctors, and auxiliary medical facilities in big cities. At the bottom, however, several districts, each with district hospitals and health centers, lacked basic facilities. Consequently, achieving equitable healthcare required the MoH's commitment to reconsidering how its limited resources could better serve rural areas.

Despite its merits, the VMH scheme faced several problems, such as inadequate funding from local authorities (employers), which threatened its survival. Some village governments did not provide monthly allowances and other incentives to VMHs. The lack of allowances and incentives influenced some VMHs to seek potential jobs in towns. The 1988 MoH evaluation report shows that about

118 Kaigarula, "Taking Health Services to the People," 4.

12% of VMHs left their jobs.[119] Moreover, village health posts lacked adequate medicines and medical equipment, especially from the end of the 1970s and 1980s when the economic crisis severely hit the country.[120] Additionally, some rural communities mistrust the health services offered by VMHs. Gallus Namangaya Abedi asserts that some villagers were worried when they were approached by a helper dressed in trousers and a shirt rather than the crisp white coats worn by doctors. Similarly, they were shunned and isolated from the learned medical staff, who perceived them as incompetent cadres, discouraging VMHs' healthcare delivery.[121] Consequently, from the 1980s and 90s, the VMHs scheme lost its relevance since it lacked effective management and community support. Like China's barefoot doctors, the cost-sharing policy, which emerged in the 1990s, buried the VMHs scheme in Tanzania. The free healthcare services provided by VMHs declined. Thus, a few remaining VMHs turned to other professions.[122]

The rural healthcare scheme became the cornerstone of the international Primary Health Care (PHC) conference held at Alma-Ata (Almaty), Kazakhstan, in September 1978. The conference made a declaration to meet the health needs of people worldwide. The declaration identified VMHs as one of the foundational cornerstones of having a comprehensive PHC, a program that would be a global strategy for achieving "Health For All" by 2000.[123] Tanzania was in an advantageous position since, even before the Alma-Ata conference, it had already in place a well-structured healthcare system from the grassroots level for more than a decade. With such initiatives, the WHO commended the country for having one of the most thoughtfully designed health systems based on human equality and the foundations of justice.[124] The "Health For All" agenda aligned with Tanzania's so-

119 "PHC Coordinating Section, Ministry of Health, A Briefing on PHC Programme for the Italian Delegation Visiting Tanzania, October 15, 1983," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care; JMT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Prof. Phillemon M. Sarungi, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1991/92*, 17.

120 Michele Barry and Frank Bia, "Socialist Health Care in Tanzania: A View from Kilimanjaro Christian Medical Centre," *Annals of International Medicine* 104, no. 3 (1986): 438; Heggenhougen, "Health Services: Official and Unofficial," 311.

121 Interview with Gallus Namangaya Abedi, June 6, 2018, Posta-Dar es Salaam; "E. J. I. Kato, Assessment of Village Health Workers' Diagnostic and Treatment Capabilities in Selected Villages in Maswa District, Tanzania, Faculty of Medicine, University of Dar es Salaam, February 28, 1983," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care, 3.

122 For barefoot doctors, read Zhang and Unschuld, "China's Barefoot Doctor," 1866; for cost-sharing policy in Tanzania, read JMT, Wizara ya Afya, *Hotuba ya Waziri wa Afya Mhe. Amrani H. Mayagila, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1993/94*, 54–55.

123 WHO, *Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata, USSR, September 6–12, 1978*, 61–62.

124 Rose Kalemera, "Well Done Tanzania, Says WHO Chief," *Daily News*, July 27, 1987, 1.

cialist policies adopted during the Arusha Declaration of 1967 and the ruling party's ideology of 1971. Socialist principles spearheaded the equality of all individuals and the preservation of life and health, which were also included in the Alma-Ata declaration. The PHC program, which the MoH implemented after the Alma-Ata conference, incorporated more than 2000 VMHs working throughout the country.[125] The preceding assertions imply that the Tanzanian government practiced the "Health For All" agenda before the 1978 conference. Nevertheless, after the Alma-Ata conference, it reviewed and updated its healthcare delivery system to conform to the PHC.

2.6 Banning Private Health Services Practice, 1977–1992

Although the Tanzanian government vowed to maintain equality among its citizens in accordance with socialist ideology, it retained the 1958 private practice policy endorsed by the British colonial government. The policy left room for the private domiciliary practice, consulting practice and special procedures.[126] Under private domiciliary practices, a patient could attend government-owned or private health centers. The policy allowed people and organizations to own and practice private hospitals. There were a few private health service centers during the British colonial period, but their number exploded after independence. For instance, by 1973, there were about 32 private health centers in Dar es Salaam alone, many owned by Tanzanians, Indians and the British. Private institutions were also established in the up-country areas and were mainly owned by Indians, Tanzanians, Italians, British, Kenyans, Australians, Pakistanis, and Swiss.[127] Thus, private health services functioned in parallel with government-owned hospitals. Above all, while the number of health facilities under private practitioners was lower than that of institutions provided by the government, their doctors accounted for almost half of the total number of doctors in the country (Table 4). For instance, in 1961, there were 419 registered doctors in the country, of whom

125 "J. A. S. Mahalu, Primary Health Implementation in Tanzania," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care: International Conference on Primary Health Care, Declaration of Alma-Ata, Alma-Ata, USSR, 6–12 September 1978; "Applied Village Health Worker Research and Evaluation Project in Tanzania, September 1983," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care.

126 "Medical Department, Private Practice secular of 1958," TNA. Acc. No. 450, Ministry of Health, File No. HEM/20/14, Private Practice Policy.

127 "List of Private Practitioners in Tanzania-Mainland," TNA. Acc. No. 450, Ministry of Health, File No. HEM/20/14, Private Practice Policy.

about 239 were in government service, while 180 were in private practice.[128] This context indicates that patients attending private health services would likely to receive more effective healthcare than those who attended government services.

Private practitioners spread primarily in towns and cities, widening the gap in medical services between urban and rural dwellers. People in urban areas enjoyed efficient health services from the government and private practitioners. Since profit maximization was the determining factor in establishing private practices, towns and cities were preferred over rural areas. Private practices paid high wages to their medical workers, attracting more medical graduates. In 1973, a medical officer started at TShs.1,840 a month and could not earn more than TShs.3,200, far below parastatal and private salaries or the incomes of less-qualified senior officers elsewhere in government. By 1973, nearly 50 Tanzanian Asian doctors had left government service and often the country, while several senior African doctors were moving to private practice.[129] Amon Nsekela and Aloysius Nhonoli write that out of 30 dentists, only ten worked in government or volunteer agencies.[130]

The survival of private practitioners under the socialist regime was uncertain. In the 1970s, the Tanzanian government realized private practitioners were inconsistent with its socialist ideology. Therefore, in 1977, the parliamentary procedures for banning the practice of private health services were tabled. Recommendations made by delegates of medical workers who went to China for a study tour backed the ban agenda. The delegates learned that under socialist policies, the Chinese government had prohibited private practitioners.[131] The recommendations were an eye-opener to political elites as they realized that ten years after Tanzania had opted for socialism, one professional field was yet to be effectively touched by the country's socialist endeavors to eradicate exploitation in its many and varied ramifications. Before the ban, private medical practitioners in Tanzania enjoyed a heaven of their own, notwithstanding complaints that they highly exploited low-income patients.[132]

128 Amon J. Nsekela and Aloysius M. Nhonoli, *The Development of Health Services and Society in Mainland Tanzania: A Historical Overview-Tumetoka Mbali* (Dar es Salaam: East African Literature Bureau, 1976), 79.

129 Iliffe, *East African Doctors,* 2004.

130 Nsekela and Nhonoli, *The Development of Health Services and Society in Mainland Tanzania*, 80.

131 "Report on a visit of Ministry of Health delegation to the People's Republic of China, September 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

132 R. Mwinyimbegu, "Private Hospitals Must Go Now," *Daily News*, January 19, 1977, 6.

Before the ban, politicians and ordinary citizens demanded the outlawing of private health services in Tanzania. Socialist allies wanted private health institutions to be closed to allow the government to practice fully socialist policies.[133] While supporters of socialism demanded the closure of private health practitioners, other citizens argued against it, maintaining that private health services were vital since they gave patients the freedom to choose where to get adequate health services. They further backed the fact that the services offered by private health practitioners were effective and quicker compared to public health services. The other point opposing the ban was that the government had inadequate health service centers; thus, banning private services would complicate healthcare delivery. In this view, the government had to promote the further establishment of private health services by local and foreign investors, instead of banning them.[134] Surely, the government health centers were overcrowded and provided inadequate services due to an acute shortage of medical personnel and limited resources. Yet, conflicting views from pro-socialism and anti-socialism groups were inevitable, given that the ban came at the height of Cold War politics.

Notwithstanding the contribution of private health services and the people's divergent opinions over their presence, the government considered it necessary to ban their practices to attain equality in service delivery and fulfil the "Health For All" agenda. Theoretically, the idea was revolutionary because it was premised on providing free medical services to all Tanzanians. Allies of socialism accused private hospitals of delivering health services to a particular class of people who could afford the expenses. They further alleged that the owners of private hospitals persuaded well-trained doctors working in public hospitals to retire prematurely and join their hospitals with the promise of higher salaries.[135] Furthermore, the government claimed that private medical practitioners were more concerned with making money than providing better services to patients. The Minister for Health cautioned: "It is not good that anybody should make [a] private profit out of human suffering."[136] The government suspected public medical staff members of stealing medicines and selling them to private hospitals and apothecaries.[137] The government anticipated that outlawing private hospitals would eventually address the shortcomings. President Nyerere endorsed the ban on private health practices, regularly maintaining that health was not an appro-

133 Mwinyimbegu, "Private Hospitals Must Go Now," 6.

134 K. K. Asher, "Unnecessary Hardship," *Daily News*, January 13, 1977, 7; also see Jeremiah Mwakasonda, "Are all Private Doctors Qualified?" *Daily News*, January 13, 1977, 7.

135 Johnhanes Ndossi, "Jumping Over a Stick, Landing on a Snake!" *Daily News*, January 13, 1977, 7.

136 Quoted in Iliffe, *East African Doctors*, 209.

137 Jeremiah Mwakasonda, "Are all Private Doctors Qualified?" *Daily News*, January 13, 1977, 7.

priate sector for profit-making and that private hospitals were inconsistent with his regime's socialist policies.[138] Thus, learning from the Chinese government and pressure from political elites and ordinary citizens influenced the ban on private health practices.

The long-standing outcry to end the practice of private health services was resolved in 1977 with the government signing the Private Hospital (Regulation) Act. Under the Act, the Tanzanian government made it illegal for any individual or organization to manage or cause to be managed by any private hospital except on behalf of an approved organization.[139] Up to 1977, more than 20% of doctors worked in the private health sector. Thus, restricting the operation of private health services was, from one perspective, the government's initiative to bring more doctors to the public health sector. After the closure of private health centers, the government convinced medical workers from the private sector to join the national health service and pledged to buy all medical equipment and related facilities used by the expelled hospitals.[140]

Nevertheless, the ban did not touch some private health centers owned by non-profit Non-Governmental Organizations (NGOs), mostly under religious institutions. Retaining them was not only the concern of political elites but also of the ordinary citizens. The government supported non-profit health practitioners since they charged relatively low fees and sometimes offered free healthcare to low-income families. Non-profit health practitioners charged low fees since they received most of their medicines and medical equipment as aid.[141] Yet, not all private practitioners under NGOs got approval certificates to operate. Under the 1977 Act, the MoH stipulated criteria for the approval of organizations to run private health services. According to the Act, religious and non-religious organizations were eligible for approval if they had as objects the advancement of religion, or they were established for the promotion of the welfare of workers and peasants, or they were engaged in the advancement of any other public purpose.[142]

The Minister for Health had the mandate to disapprove or cancel approval certificates of any organization which engaged or intended to engage in the man-

138 URT, *The Address Given to the National Conference of Chama cha Mapinduzi by the Chairman, Ndugu Julius. K. Nyerere, on 20th October, 1982 at Diamond Jubilee Hall, Dar es Salaam*, 27.

139 "URT, The Private Hospitals (Regulation) Act of 1977," MwRC, File No. M.10/1, Medical and Health, Medical Policy and Instructions, 1.

140 "World Drug Market Manual, November 19, 1982," TNA. Acc. No. 450, Ministry of Health, File No. HE/H/30/7A, Primary Health Care.

141 Mwinyimbegu, "Private Hospitals Must Go Now," 6.

142 "URT, The Private Hospitals (Regulation) Act of 1977," MwRC, File No. M.10/1, Medical and Health, Medical Policy and Instructions, 1.

agement of private health services to make a profit or promote the economic interests of the organization's members.[143] Generally, from 1977 to 1991, the government strictly prohibited the management of private health centers without a special approval certificate from the MoH. Any person who managed unregistered private health services was guilty of an offence and was liable on conviction to a fine not exceeding Tshs. 50,000 or to imprisonment for a term not exceeding three years, or to both fine and imprisonment.[144]

Despite the ban, several private health institutions remained, supplementing government health services. The 1992 World Bank statistics indicate that by 1988, NGOs owned approximately 96 hospitals, while government hospitals amounted to 74. However, the government outnumbered NGOs in health centers and dispensaries. Statistics show that it had 266 health centers and 2,205 dispensaries by 1988, while NGOs owned 11 health centers and about 730 dispensaries in the same period (Table 4).[145]

However, the ban on private health services did not survive liberalization. The 1986 structural adjustment programs (SAPs), which the Tanzanian government signed with the IMF, forced the government to allow private investment in economic and social sectors. From 1986 on, several internal and external campaigns demanded the resumption of private health services in Tanzania. For example, the Medical Association of Tanzania (MAT) tirelessly lobbied the government to allow the operation of private health practitioners.[146] Eventually, in 1991, the government resumed the operation of private health services following the passing of the Private Hospitals (Regulation) (Amendment) Act. Under this Act, the government allowed qualified medical practitioners and dentists to manage private health facilities with the approval of the MoH.[147] The lifting of the embargo led to a boom in private health services in Tanzania. For example, up to 1995, there were more than 300 private clinics and hospitals in Dar es Salaam. Above all, many private apothecaries extended to different parts of the country.[148]

143 "URT, The Private Hospitals (Regulation) Act of 1977," MwRC, File No. M.10/1, Medical and Health, Medical Policy and Instructions, 2.

144 "URT, The Private Hospitals (Regulation) Act of 1977," MwRC, File No. M.10/1, Medical and Health, Medical Policy and Instructions, 3.

145 World Bank Report, *Tanzania AIDS Assessment and Planning Study*, June 1992, 7.

146 Interview with Joseph W. Butiku, July 9, 2018, Posta-Dar es Salaam.

147 URT, *The Private Hospitals (Regulations) (Amendments) Act, 1991*, 1.

148 Iliffe, *East African Doctors*, 218.

Table 4: Total health facilities by region and management, 1988.

SN.	Region	Hospitals		Health Centres		Dispensaries	
		Govt	NGOs	Govt	NGOs	Govt	NGOs
1	Tanga	5	7	15	---	136	67
2	Coast	4	2	11	---	90	44
3	Morogoro	4	7	15	1	131	52
4	Lindi	4	3	12	---	88	12
5	Iringa	5	8	16	---	91	50
6	Ruvuma	2	5	13	---	93	36
7	Kilimanjaro	5	8	13	4	93	42
8	Arusha	6	6	11	---	115	65
9	Dodoma	5	1	16	1	148	24
10	Mara	3	4	11	---	92	31
11	Rukwa	2	1	11	1	73	15
12	Singida	2	4	12	---	75	46
13	Tabora	4	3	10	1	84	22
14	Kigoma	3	2	10	---	94	26
15	Mbeya	4	6	17	---	149	37
16	Mtwara	3	2	13	---	99	9
17	Mwanza	4	7	26	---	204	34
18	Kagera	1	10	12	---	132	15
19	Shinyanga	4	2	19	---	137	30
20	Dar es Salaam	4	8	3	3	81	73
Totals		**74**	**96**	**266**	**11**	**2205**	**730**

Source: World Bank Report, *Tanzania AIDS Assessment*, 1992, 7.

2.7 Conclusion

This chapter attempted to draw out some of the ways in which Chinese health policies inspired health policy developments in post-colonial Tanzania. The discussions showed that between 1966 and 1977, the MoH sent delegations of medical experts to study China's health system. Recommendations made by these envoys reinforced the government's decisions to practice a free healthcare policy, institutionalize traditional medicine, promote rural healthcare, and ban private health service practices. The government, however, did not copy the policies uncritically. Instead, the policies were learnt and applied based on the country's economic and social situation. To some extent, the post-colonial government molded some colonial health practices to conform to the socialist path. Inspired by China's parallel endeavor to pursue a distinct socialist path, Tanzanian authorities adopted socialist health policies and bolstered their relationship with China. As the exam-

ple of health policies shows, China's influence was not limited to direct transfers of resources and knowledge. Instead, the country also served as an inspiration "from the South" in less direct ways. This chapter has foregrounded the understanding of other means of China's medical assistance to Tanzania, which are the subject of the subsequent chapters.

Chapter Three
A History of Chinese Medical Teams in Tanzania, 1968–2010

3.1 Introduction

While the preceding chapter demonstrated indirect ways in which the Chinese government assisted the Tanzanian government through exposure to its health policies, this chapter examines China's direct assistance using the Chinese Medical Team (CMT) program as its focal point. The chapter discusses the history of CMTs in Tanzania from 1968 to 2010. It shows that Africa was the first frontier for the Chinese government to provide medical assistance, before its extension to other continents. The chapter discusses the implications of China's foreign aid policy in shaping the operation of the CMT program in Tanzania. It also analyzes several means of medical knowledge exchange and their roles in building the health sector's capacity in Tanzania. I argue that the CMT program was a humanitarian mission, but was simultaneously driven by political and economic calculations. The program served as a soft way of securing allies during the Cold War era and a vital tool in maintaining China's political and economic interests in Africa. At the same time, the ways in which the CMT program unfolded in Tanzania translated into modest increases in sustainability and self-dependency in the country's health sector.

3.2 Chinese Medical Teams in Africa

The Chinese medical team program was China's first medical assistance to Africa. CMTs started first in Algeria in 1963 due to their request to the Chinese government after experiencing rapidly deteriorating health services following the withdrawal of French medical staff soon after the liberation war in 1962. The dispatch of Chinese doctors to Algeria marked the beginning of the Chinese government's medical assistance to Africa, Latin America, Asia, Oceania and Southern Europe.[1] The CMT program was among several frontiers of China's medical assistance to

1 The Republic of Malta, a Southern European country, is the only European nation receiving CMTs. Malta, which signed diplomatic relations with China in 1972, has received medical teams from Jiangsu province for over 25 years. Unlike countries of the South, China's medical aid to Malta is neither relief nor charity since Malta's health system is quite strong. China's medical

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Africa. However, the lack of sufficient medical personnel in many African countries made the CMT category a more interventionist form of medical assistance than the rest, taking the largest share of China's health aid.[2] The Chinese government recruited medical workers from different provinces, where each province dispatched medical workers to one or more African countries (Table 5). Thus, the local government sent the teams abroad while the central government administered the program through its Ministry of Public Health. A single medical team comprised members from different medical departments: physicians, surgeons, gynecologists, ophthalmologists, acupuncturists, pharmacists, radiologists, laboratory technicians, anesthesiologists, and nurses. The team also included cooks and language translators. In total, a single team consisted of between 15 and 25 people, each working for a period of two years.[3] From 1963 to 1978, the Chinese government mostly covered the costs for maintaining medical teams, while recipient countries carried a fraction. The Chinese government covered the costs of language training, food, salaries, medicines, and transportation, while recipient countries provided the team with medical facilities, medical instruments, accommodation, and security.[4]

After the first CMT mission to Algeria, other African countries received CMTs for consecutive years. For instance, up to the end of the 1960s, about seven African countries received CMTs.[5] There was an increase in CMTs in Africa between 1970 and 1978, during which about 22 African countries received CMTs (Table 5).[6] The

assistance, therefore, aimed at bolstering diplomatic relations between the two countries and mainly boosting the practice of traditional Chinese medicine. By 2014, the Jiangsu province dispatched about 11 batches with 66 medical doctors. See Li Bo *et al*., "The Development of China's Medical Assistance Based on Jiangsu Province's Medical Aid to Malta and Zanzibar: Review and Suggestions," *Chinese Journal of Disaster Medicine* 6, no. 3 (March 2018): 122; "Diplomatic Relations Established Between China and Malta," *Peking Review*, March 3, 1972, 3; Li Anshan, "From "How Could" to "How Should": The Possibility of a Pilot U.S.-China Project in Africa," in *China's Emerging Global Health and Foreign Aid Engagement in Africa*, ed. Xiaoqing Lu Boyton (Washington DC: Centre for Strategic and International Studies, 2011): 41, also see Shuang Lin *et al*., "China's Health Assistance to Africa: Opportunism or Altruism?" *Globalization and Health*, (2016): 1. https://doi.org/10.1186/s12992-016-0217-1.

2 Peilong Liu, *et al*., "China's Distinctive Engagement in Global Health," *Lancet* 308 (August 2014): 795.

3 Interview with Ge Yonghe, March 1, 2016, Jinan. Ge is a Director of Medical Department, Health and Family Planning Commission of Shandong Province.

4 Global Health Strategies Initiatives (GHSi), *Shifting Paradigm: How the BRICS are Reshaping Global Health and Development,* (2012), 64.

5 Li, "From 'How Could' to 'How Should,'" 41.

6 Gail A. Eadie and Denise M. Grizzell, "China's Foreign Aid, 1975–78," *The China Quarterly*, no 77 (Mar. 1979): 228.

increase in the number occurred concurrently with the rise of African countries, which signed diplomatic relationships with the Beijing regime. China's medical assistance to African countries further increased in the 1970s following the support African countries provided to China in its admission to the UN Assembly in 1971.[7]

However, the dispatch of the CMTs underwent drastic changes in the 1970s following China's reform and opening-up policy. The changes did not last long. From 1981 to 1987, the Chinese government dispatched teams to about ten countries (Table 5). After a freeze of almost six years (1988–1994), medical teams began to flow from 1994, when Namibia, the Comoro Islands, and Lesotho received medical doctors for the first time. The medical teams, however, retreated from countries with political instabilities and those which signed diplomatic relations with the Republic of China (ROC)/Taiwan. For example, in 1991 and 97, the Chinese government withdrew teams from Somalia and Congo Kinshasa due to political instabilities and from Liberia in 1989, Burkina Faso in 1994, the Gambia in 1995, and Sao Tome and Principe in 1997 after they recognized Taiwan. The teams to Liberia resumed in 2005 after the country restored diplomatic relations with China. In the years after the 2000s, CMTs increasingly were sent to African countries (Table 5).[8] Generally, from its inception in 1963, the Chinese government sent many CMTs to Africa. By 2009, it dispatched about 21,000 medical workers to 69 countries of the Global South, about 17,000 of whom were in 48 African countries.[9] The table below shows the trend of Chinese medical workers in different African countries from 1963 to 2012. This chapter discusses specific case studies after this broad overview of the CMT program in Africa.

3.3 Origin, Roles, and Challenges of CMTs in Tanzania

The dispatch of medical teams to Tanzania resulted from a severe crisis in the health sector following the withdrawal of medical assistance from traditional donors of the Global North due to diplomatic rifts in the mid-1960s (Chapter 1). Following the crisis, Tanzania's Minister for Economic Affairs and Development Planning, Paul Bomani, made a special request for the CMTs to the Chinese government in 1966.[10] The official signing of the Memorandum of Understanding (MoU) for the CMT program between the two countries was, however, delayed since the Tanzanian Minister for Health,

7 Li Anshan, *Chinese Medical Cooperation in Africa: With Special Emphasis on the Medical Teams and Anti-Malaria Campaign* (Uppsala: Nordiska Afrikainstitutet, 2011), 9.

8 Li, *Chinese Medical Cooperation in Africa*, 12.

9 Xi Jinping, *The Governance of China*, (Beijing: Foreign Language Press, 2014), 334.

10 "A Special Report, Chinese Medical Assistance to Tanzania, May 12, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

Table 5: African countries and their respective serving provinces, 1963–2013.

Country	Dispatching Province	Year Started	Number CMTs up to 2013	Number of Aided Facilities	Changes
Algeria	Hubei	Apr. 1963	23	0	Withdrew in Feb. 1995 due to war, re-dispatched in 1997
Zanzibar	Jiangsu	Aug. 1964	26	1	
Somalia	Jilin + Shanghai	June 1965	13	2	Withdrew in 1991 due to civil war
Congo Brazzaville	Tianjin	Feb. 1967	22	4	Withdrew in 1997 due to civil war, and returned in Dec. 2000
Mali	Zhejiang	Feb. 1968	23	1	
Tanzania	Shandong	Mar.1968	22	2	
Mauritania	Heilongjiang	Apr. 1968	30	5	
Guinea	Beijing	June 1968	23	2	
Sudan	Shanxi	Apr. 1971	31	2	
Equatorial Guinea	Guangdong	Oct. 1971	26	1	
Sierra Leone	Hunan	Mar. 1973	16	1	Withdrew in 1993 due to war, re-dispatched in Dec. 2002
Tunisia	Jiangxi	June 1973	20	1	
DR Congo Kinshasa	Hebei	Sept. 1973	15	1	Withdrew in 1997 due to war, and returned in June 2006
Ethiopia	Henan	Nov. 1974	17	1	Interrupted in Sept. 1979, and returned in Dec. 1984
Togo	Shanghai +Shanxi	Nov. 1974	20	2	
Cameroon	Shanghai+ Shanxi	June 1975	16	6	Interrupted in Jan. 1979, and dispatched by Shanxi in 1985
Senegal	Fujian	July 1975	15	1	Withdrew in 1996, and re-dispatched in Sept. 2007
Madagascar	Gansu	Aug.1975	19	1	
Morocco	Shanghai + Jianxi	Sept. 1975	–	6	Jiangxi province joined in 2000

Table 5 (continued)

Country	Dispatching Province	Year Started	Number CMTs up to 2013	Number of Aided Facilities	Changes
Niger	Guangxi	Jan. 1976	17	1	Withdrew in July 1992 and re-dispatched in Dec. 1996
Mozambique	Sichuan	Apr. 1976	19	0	
Sao Tome and Principe	Heilongjiang + Sichuan	June 1976	11	0	Withdrew in 1997 after Sino-STP diplomatic relations ended
Burkina Faso (Upper Volta)	Beijing	June 1976	10	1	Withdrew in 1994 after Sino-BF diplomatic relationship suspended
Guinea-Bissau	Guizhou + Sichuan	July 1976	14	4	Withdrew in 1990 and re-dispatched by Sichuan in 2002
Gabon	Tianjin	May 1977	17	2	
Gambia	Tianjin +Guangdong	May 1977	9	5	Dispatched by Guangdong province instead in 1991, and withdrew in 1995
Benin	Ningxia	Jan. 1978	19	3	
Zambia	Henan	Jan. 1978	16	1	
Central African Republic	Zhejiang	July 1978	15	2	Withdrew in July 1991, re-dispatched in Aug. 1998
Chad	Jiangxi	Dec. 1978	10	1	Withdrew in 1979 and re-dispatched in 1989; withdrew in 1997 and re-dispatched in 2006; withdrew in Feb. 2008 due to war and re-dispatched in May 2008
Botswana	Fujian	Feb. 1981	13	1	
Djibouti	Shanxi	Feb. 1981	17	2	
Rwanda	Inner Mongolia	June 1982	16	3	
Uganda	Yunnan	Jan. 1983	16	1	

Table 5 (continued)

Country	Dispatching Province	Year Started	Number CMTs up to 2013	Number of Aided Facilities	Changes
Zimbabwe	Hunan	May 1985	13	3	
Libya	Jiangsu	Dec. 1983	5	0	Contract expired in 1994 and was not renewed
Cape Verde	Heilongjiang +Sichuan +Hunan	July 1984	15	2	Dispatching province changed to Sichuan in Feb. 1998, and late changed to Hunan
Liberia	Heilongjiang	July 1984	7	2	Withdrew in 1989 and returned in 2005
Burundi	Guangxi + Qinghai	Dec. 1986	15	1	The dispatching province was changed to Qinghai
Seychelles	Guangxi	May 1987	14	1	
Comoros	Guangxi	1994	9	1	
Namibia	Zhejiang	Apr. 1996	9	1	
Lesotho	Hubei	June 1997	9	0	
Eritrea	Henan	Sept.1997	8	1	
Angola	Sichuan	2007	3	2	Postponed, since the accommodation was not ready. The first batch finally arrived on June 23, 2009
Malawi	Shaanxi	June 2008	3	0	
Ghana	Guangdong	2008	3	3	The team set off on December 29, 2009
South Sudan	Anhui	2012	1	1	

Source: Modified from Liu et al., "China's Distinctive Engagement in Global Health," 796–797; Li Anshan, *Chinese Medical Cooperation in Africa*, 10–11.

Derek Bryceson, who was British-born and educated at Cambridge, was highly skeptical of the quality of Chinese doctors. Only after Bryceson attended a conference held at the University of Dar es Salaam in 1967, where visiting Chinese Professor Wu Jieping presented the development of medical services in China, did the Minister for Health change his perception of what Chinese doctors could offer to Tanzania. Due to the Minister's original skepticism, the 1966 request for medical assistance had

been drafted and sent to China by the Minister for Economic Affairs and Development Planning rather than the Ministry of Health.[11]

In 1967, the Ministry of Health (MoH) submitted a detailed report to Chinese Premier Zhou Enlai, highlighting Tanzania's health challenges, including troubling diseases and a shortage of medical staff, medicines, and equipment, underscoring the country's pressing need for assistance.[12] A tour to China by medical delegates of Tanzania in November 1967 amplified the request for the CMTs. The delegates met Premier Zhou and signed a general agreement on the CMT program, upon which Zhou ordered Shandong province to send medical teams to Tanzania every two years. On May 6, 1968, the Ministries of Health of the two countries signed a contract for the CMT program (Figure 3). Thus, from 1968 to the present, the Shandong province has sent medical teams to Tanzania.[13]

The Chinese government dispatched the CMTs to Tanzania at the height of Cold War politics when China was not a member of the UN General Assembly. Furthermore, it was the period when China, alienated from the Soviet Union, was fighting against both so-called US "imperialism" and Soviet "revisionism." It was also during the time when China implemented its Great Proletarian Cultural Revolution (1966–1976). Chairman Mao vowed to eliminate old-fashioned capitalistic ideas through the Revolution, fight his political enemies who threatened his position within China's Communist Party (CCP), and promote Maoist ideology overseas. Thus, throughout the 1960s and 1970s, the Chinese experts deployed by the government to work abroad spearheaded the fight against "imperialism" and "revisionism," promoting Maoism while maintaining their country's influence and interests.[14] These contexts informed the recruitment, training, and activities of

11 Alicia N. Altorfer-Ong, "Old Comrades and New Brothers: A Historical Re-Examination of the Sino-Zanzibari and Sino-Tanzanian Bilateral Relationships in the 1960s," (PhD diss., Department of International History, London School of Economics and Political Science, 2014), 254.

12 "A Special Report, Chinese Medical Assistance to Tanzania, May 12, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; also see, Health Department of the Shandong Province, *The Chinese Medical-Aid Team in the United Republic of Tanzania, 1968–1998*, (Shandong, 1998), 11.

13 "Medical Aid to Tanzania, 1968," SPA. File No. A034-03-006, Shandong Province Health Bureau; "URT, Ministry of Health and Social Welfare, the 40th Anniversary on Chinese Medical Team Workers in Tanzania, 1968–2008," NRC. Ministry of Health and Social Welfare, 14/05/03, File Ref. No. HC. 74/311/02 Chinese Medical Team 2007–2010; Interview with Sun Yazhou, March 1, 2016, Jinan; "Madaktari Zaidi toka China Watakuja," *Uhuru*, May 7, 1968, 1; "China Yasaidia Tanzania Dawa na Madaktari," *Ngurumo*, May 7, 1968, 1.

14 Yanzhong Huang, "Pursuing Health as Foreign Policy: The Case of China," *Indiana Journal of Global Legal Studies* 17, no. 1 (Winter 2010): 111; Miriam Gross, "Between Party, People and Profession: The Many Faces of the 'Doctor' during the Cultural Revolution," *Medical History* 62, no. 3 (2018): 333.

Figure 3: Minister for Health A. K. Shaba (left) and the Chinese Ambassador to Tanzania, Chou Po-Ping (right), exchanging MoUs for the CMT program in Tanzania, May 6, 1968. Source: "Madaktari Zaidi toka China Watakuja," *Uhuru*, May 7, 1968, 1 (printed with permission).

the CMTs in Tanzania. For instance, medical doctors dispatched in the 1960s and 1970s were all faithful members of the CCP. Besides attending to patients, the doctors promoted Maoism, boosted Sino-Tanzanian friendship, and maintained China's influence in the region.[15] The partisanship criterion continued even after China halted political propaganda following its reform and opening-up policy in 1978. The Chinese government needed diligent medical doctors to defend China's political, social, and economic interests.[16]

The doctors recruited possessed specific professional and physical merits such as clinical training with tertiary qualifications, good professional recommendations, and at least five to ten years of working experience, as well as healthy physiques, with a maximum age of 55. Under such criteria, most doctors sent to Tanzania were older than 30, and many were married.[17] As shown in Table 6, the

15 "Medical Aid to Tanzania, 1968," SPA. File No. A034-03-006, Shandong Province Health Bureau.

16 "Job Description and Work Reports of the Medical Team in Tanzania, 1981," SPA. File No. A034-06-159, Shandong Province Health Bureau, Foreign Affairs Office.

17 "The Dispatch of Medical Aid Team to Tanzania, 1978," SPA. File No. A034-06-0358, Shandong Province Health Bureau; Interview with Deng Shucai, May 23, 2019, Jinan.

number of male doctors surpassed the number of females since Shandong province had fewer female doctors. Above all, most female doctors were unwilling to join the CMT program since they attended to social responsibilities at home than their male counterparts.[18] The province needed to recruit qualified doctors to meet regulations by the Registrar of the Medical Council of Tanganyika (MCT), who verified the merits of their professional qualifications. The council was mandated to issue medical doctors with professional working licenses or otherwise, based on the council's promulgated criteria.[19] In the 1960s and 1970s, Shandong, like many other Chinese provinces, encountered inadequacies of medical personnel. The province faced difficulties mobilizing qualified medical personnel to participate in the CMT program, especially in gynecology, anesthesia, surgery, and other more skilled personnel, since it did not have enough experts in those fields due to the growing population and disease burden.[20] Yet, despite the demands of medical doctors at home, the prevailing Cold War politics made the dispatch of CMTs overseas politically imperative for Beijing's health diplomacy and its evident illustration of international solidarity.

Chinese doctors deployed to Tanzania were experts with varying specializations depending on prevailing health challenges and special requests from Tanzania's MoH. The oral anecdotes I collected support the theory that negotiations took place between officials from the MoH and the Shandong Health Bureau regarding the types of experts required by the Tanzanian government.[21] Before the 1990s, following the country's shortage of medical personnel, the MoH requested and received experts of all levels of expertise (specialists and non-specialists). However, from the 1990s onwards, the number of local medical personnel increased. Yet, they were primarily physicians who needed further training and mentorship to address pressing health cases. Subsequently, the MoH requested and received specialist doctors to address more critical health cases of gynecology, obstetrics, and surgery to ease mentorships and address cases that could not be adequately cared for by local personnel.[22]

18 Interview with Qin Chengwei, July 22, 2018, Posta-Dar es Salaam.

19 "Letter from Registrar, September 5, 2009, to the Principal Secretary MoH, headed, Letter of Authorization," NRC. Ministry of Health and Social Welfare, 14/05/03, File Ref. No. HC. 74/311/02 Chinese Medical Team 2007–2010.

20 Interview with Ge Yonghe, March 1, 2016, Jinan.

21 Interview with Simon Ernest, May 7, 2018, MoH Headquarters, Dar es Salaam; Che Yansong, May 23, 2019, Jinan.

22 "List of Names of Doctors of the Chinese Medical Team, July 1, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5, Technical Assistance China; "Muhtasari wa Mkutano wa Ndugu L. D. Stirling Waziri wa Afya na Madaktari wa Kichina Uliofanyika Tarehe 25 Agosti, 1976 Saa 5:30–6:15 Adhuhuri Katika Ukumbi wa Chumba cha Mkutano Wizara ya Afya, Dar es Salaam, Tar-

Chinese doctors underwent language training before travelling overseas to interact easily with patients and local doctors. While Tanzania's lingua franca is Kiswahili, many Tanzanians speak and understand English with varying levels of fluency. The CMTs dispatched to Tanzania attended six months of training in English and Kiswahili in Jinan.[23] Under Mao's regime, language training stressed Kiswahili since the doctors spent half their time in rural areas where most people spoke Kiswahili and local languages. Moreover, under Mao, China sought to expand its influence and political propaganda. Thus, the CMTs had to interact effectively with political elites and other influential people through Kiswahili.[24]

However, language training courses did not effectively address the communication barrier, pushing the Chinese government to include two or more translators in each team to address the challenge. In the 1960s and 1970s, the Chinese government dispatched many doctors to work in several regions and districts of Tanzania. Such distributions demanded more translators, at least one in each region, which could not be sufficiently provided.[25] Worse still, the language barrier remained unsolved, not only because there were few translators but also because they were unfamiliar with some medical terms and did not always accompany medical doctors at their work sites.[26] Song Tao, an interpreter with over eight years of experience, admitted that he translated ordinary conversations, especially when the teams met government officers, and rarely to patients. However, Song underscored that the language handicap was always critical in the early months, but the teams addressed the challenge gradually as they interacted with patients and local doctors.[27]

The recruitment of translators was consistent with the needs of the Chinese government. As for the CMTs, translators were faithful members of the CCP. Their functions and competencies went far beyond translation. For instance, they worked as drivers for the CMTs and wrote reports and minutes after meetings with government officials. Translators also taught the English language to the doctors at night and assisted medical workers when needed. More importantly, they interacted with different groups of people and engaged in political discus-

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ehe September 7, 1976," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5, Technical Assistance China; Interview with Simon Ernest, May 7, 2018, MoH Headquarters, Dar es Salaam.

23 Interview with Sui Guangxin, March 1, 2016, Jinan; Chen Zhufeng, March 1, 2016, Jinan.

24 "Medical Aid to Tanzania, 1968," SPA. File No. A034-03-006, Shandong Province Health Bureau.

25 "List of Names of Doctors of the Chinese Medical Team, July 1, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

26 Interview with Rajabu Kisonga, April 24, 2018, Dodoma Regional Referral Hospital.

27 Interview with Song Tao, March 16, 2018, Posta-Dar es Salaam.

sions to discern people's perceptions of the Chinese presence in Tanzania in comparison to doctors from capitalist and socialist countries. Similarly, they read local newspapers and reported their discoveries to the Chinese government. They compiled and submitted reports detailing the political and economic situations of Tanzania and the activities of the CMTs every six months for a brief mid-year report and annually for an extensive report.[28]

In 1968, before dispatching the CMTs to Tanzania for the first time, the Shandong province sent a team of doctors to study the existing needs in healthcare, living conditions, work environment, climatic conditions, and political atmosphere in the country, in order to inform their preparations. There were two rounds of visits. The first, which preceded the arrival of the whole team, and the second, as a follow-up, took place before the teams started working.[29] The visiting teams not only studied Tanzania's health system and the challenges facing the health sector but also performed a diplomatic and political role. For instance, they explored the stability and influence of countries of the Global North in Tanzania and studied people's perceptions of China and Mao's philosophy. In their reports, they noted that imperialist countries still had a strong influence in Tanzania despite the country's taking the socialist path in 1967. The teams suggested curbing the hardships and improving the living and working conditions to ensure their effective performance and comfort.[30] Their reports marked a wake-up call and guided their preparations before travelling to Tanzania. Nevertheless, preliminary tours ended in the 1980s, since the activities of the CMTs were limited to four regions (see below), whose living and working conditions were already familiar.[31]

Activities of the CMTs in the 1960s and 70s involved political propaganda. For example, Chinese doctors distributed Mao Zedong's Little Red Book to political elites, college students, doctors, and patients and encouraged them to read. Doctors strongly promoted Mao's popularity in line with China's radical policies dur-

28 "Job Description and Work Reports of the Medical Team in Tanzania, 1981," SPA. File No. A034-06-159, Shandong Province Health Bureau, Foreign Affairs Office, also see "Work Report and Letters of the Medical Team in Tanzania, 1983," SPA. File No. A034-06-310, Shandong Province Health Bureau.

29 "Medical Aid to Tanzania, 1968," SPA. File No. A034-03-006, Shandong Province Health Bureau, also see "Chinese Medical Team in Mtwara," *The Nationalist*, February 1, 1968, 8; "Madaktari wa Kichina," *Ngurumo*, February 12, 1968, 1; "Chinese in Singida," *The Nationalist*, February 1968, 8.

30 "Medical Aid to Tanzania, 1968," SPA. File No. A034-03-006, Shandong Province Health Bureau.

31 From the 1980s onwards, CMT activities were limited to the Dodoma, Tabora, Mara, and Dar es Salaam regions. Interview with Simon Ernest, May 7, 2018, MoH Headquarters, Dar es Salaam.

ing the Great Proletarian Cultural Revolution. Chinese doctors attended to patients and presented them with Mao's Little Red Book, claiming they would cure their ills if carefully read, making patients believe that Mao was a god. The doctors' spread of political propaganda won them applause. Acknowledging their roles, the Radio Beijing Swahili services reported that Chinese doctors made great sacrifices to save the primitive Tanzanians to believe in one god, Chairman Mao.[32] Chinese doctors further criticized imperialism and neo-colonialism in their talks with different groups of Tanzanians. They carried and distributed printed portraits of Mao to regional, district, and village leaders. In the Dodoma Region, a Regional Commissioner received Mao's portrait and "kissed" it. While in Butiama, Nyerere's brother received the portrait and hung it on the wall of the house. Such deeds enhanced China's influence in the country and boosted Mao's popularity and his anti-imperialistic propaganda. Through the activities of the CMTs, many Tanzanians knew Mao. The Director of Muhimbili National Hospital first did not know Mao but came to know him through books and portraits he received from Chinese doctors as gifts.[33] After the reform and opening-up policy, the CMT discouraged the influence of pro-Maoists who were against the reform and opening-up policy. The doctors further commended the merits of the newly adopted policy for Sino-Tanzanian relations. Additionally, they spread Deng Xiaoping's speeches and publications to enhance his influence and strengthen and communicate the reform and opening-up policy in Tanzania.[34]

During the height of Cold War politics, the Chinese government anticipated that capitalist countries would spy on the Chinese government through Chinese workers overseas. Hence, at its inception, the CMTs working in Tanzania were forbidden from interfering in the internal affairs of the recipient country, talking to journalists, attending entertainment centers, and revealing the secrets of the Chinese government to foreigners. Moreover, the government prohibited them from engaging in conversations with foreigners and establishing private connections, including romantic relationships and marriages.[35] Generally, the CMTs had limited interactions with foreigners in Tanzania throughout Mao's reign. Nevertheless, after Deng Xiaoping's reform and opening-up policy, the CMTs began to

32 Alicia Altorfer-Ong, "They Came as Brothers, not Masters: Chinese Experts in Tanzania in the 1960s and 1970s," *Austrian Journal of Development Studies* xxvi, no. 3 (2010): 86.

33 "Job Description and Work Reports of the Medical Team in Tanzania, 1981," SPA. File No. A034-06-159, Shandong Province Health Bureau, Foreign Affairs Office.

34 "Work Reports of the Medical Aid Team in Tanzania, 1978," SPA. File No. A034-06-035, Shandong Province Health Bureau.

35 "Medical Aid to Tanzania, 1968," SPA. File No. A034-03-006, Shandong Province Health Bureau.

interact with foreigners strategically. The government enhanced doctors' training in English. Recruitment processes preferred doctors who mastered English to facilitate interactions with foreigners, deemed imperative to boost medical science and technology. The Chinese government, therefore, instructed the CMTs to work closely with foreign doctors, examine their technical expertise, and learn from them.[36]

CMT did not spread to all regions and districts of Tanzania because of the limited number of doctors. Their services reached regions and districts that reported many health cases and where outstanding politicians and leaders originated. For example, Chinese doctors worked in the Mara Region, the home province of President Nyerere. They further worked in Monduli District, the constituency of the Prime Minister, Edward Moringe Sokoine, and Mtwara, the home and constituency of the Minister for Health, Austin Shaba. The influence of political leaders likely prompted the distribution process. Furthermore, the Chinese government probably prioritized such regions to win the hearts and minds of political elites.[37] Generally, up to 2015, the CMTs provided medical services to 13 regions of Tanzania, including Dodoma, Tabora, Mara, Mtwara, Lindi, Kigoma, Shinyanga, Mbeya, Morogoro, Singida, Mwanza, Arusha, and Dar es Salaam (Figure 4).[38] However, from the 1990s onwards, the services by the CMTs concentrated on only four regions of Tanzania, namely Dar es Salaam, Dodoma, Tabora, and Mara.[39]

While working in Tanzania, the CMTs faced numerous challenges, in addition to the communication barrier, which I have discussed above. For instance, in the 1960s, the transport challenge was critical, especially in rural areas. Roads were hardly passable, especially during the rainy season, and public buses were limited to towns and cities. Although by the 1960s and 1970s, China's economic and social infrastructures were less advanced, they already had better roads and friendly public transportation in many places. Thus, the challenges they experienced were somewhat of a shock to the CMTs, and they took some time to adjust

36 "Job Description and Work Reports of the Medical Team in Tanzania, 1981," SPA. File No. A034-06-159, Shandong Province Health Bureau, Foreign Affairs Office.

37 "Bomani to Discuss Aid in Moscow," *Sunday News*, November 2, 1967, 1; "Cuba Sends More Doctors," *Daily News*, September 12, 1977, 3, and "Italian Doctors Arrive," *Daily News*, July 19, 1977, 1, for Italians.

38 "Work Reports of the Medical Aid Team in Tanzania, 1978," SPA. File No. A034-06-035, Shandong Province Health Bureau; "List of Names of Doctors of the Chinese Medical Team, July 1, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; also see Johanna Jansson, Christopher Burke and Tracy Hon, *Patterns of Chinese Investment Aid and Trade in Tanzania* (South Africa: Centre for Chinese Studies, University of Stellenbosch, 2009), 2.

39 Interview with Simon Ernest, May 7, 2018, MoH Headquarters, Dar es Salaam.

to the new lifestyle.[40] The MoH gave CMTs with vehicles, but the supply was insufficient for all, and some were old, which, in turn, led to frequent breakdowns. Ineffective transportation services forced Chinese doctors to travel on foot through forests and mountains, along with portable medical equipment and drugs, to reach *Ujamaa* villages (Figure 5). Yet, Chinese doctors did not hire porters to carry medical boxes and other equipment, showing a distinctive approach to responding to the transportation difficulties compared to colonialists, who used African porters to carry goods. Consequently, inconveniences in reliable transport systems complicated the transportation of food, medicines, and medical equipment, affecting effective clinical care.[41]

The inadequate supply of medicines, medical equipment, water, and electricity further hampered the activities of CMTs in Tanzania. The medical supplies that CMTs brought did not meet the demands. Furthermore, the effective use of some medical equipment was hampered because of the lack of an electricity supply in some hospitals. Besides, many health facilities lacked modern medical equipment.[42] The economic crisis which heavily affected the Tanzanian government in the 1980s caused severe cutbacks in government expenditure on health, falling from 7.1% in 1975/76 to 4.0% in 1987/88.[43] While the Tanzanian government attempted to address the challenges of providing essential medicines, health service, and equipment, its economic muscles to achieve this task remained limited. Thus, it touched on a few areas by providing generators and other social amenities, such as water and improved weather roads.[44]

Chinese medical doctors further encountered unaccustomed diseases and a threat of dangerous communicable and non-communicable diseases that were not common in China. There were diseases such as trachoma, which the doctors knew of theoretically but had never confronted throughout their professional lives in China. Such a disease and many others challenged their medical expertise, but allowed Chinese doctors to apply their medical expertise and gain new

40 Interview with Deng Shucai, May 23, 2019, Jinan, and Sui Guangxin, March 1, 2016, Jinan.

41 "Medical Aid Team in Tanzania, 1986," SPA, File No. A034-06-637, Shandong Province Health Bureau.

42 "Medical Aid Team in Tanzania, 1981," SPA. File No. A034-06-157, Shandong Province Health Bureau; Interview with Ding Zhaowei and Jin Xunbo, May 23, 2019, Jinan.

43 Lucian A. Msambichaka, *et al*., *Economic Adjustment Policies and Health Care in Tanzania* (Dar es Salaam: Economic Research Bureau, University of Dar es Salaam, 1997), 95.

44 "Letter from Daktari Mkuu wa Mkoa, Shinyanga, to Katibu wa TANU, Mkoa wa Shinyanga, 15th August, 1974, Madaktari wa Kichina," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

Figure 4: Map showing places where CMTs worked in Tanzania from 1968 to 2019. Source: Created by the Geographic Information System (GIS), Institute of Resource Assessment (IRA), University of Dar es Salaam, September 2019, based on data from "Work Reports of the Medical Aid Team in Tanzania, 1978," SPA. File No. A034-06-035, Shandong Province Health Bureau, and "List of Names of Doctors of the Chinese Medical Team, July 1, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

experiences.[45] Furthermore, dangerous diseases such as malaria, typhoid, cholera, and AIDS were a considerable challenge. Archival evidence shows that the Chinese government inoculated the CMTs to enhance their immunity to diseases

45 Interview with Rajabu Kisonga, April 24, 2018, Dodoma Regional Referral Hospital; Ding Zhaowei and Jin Xunbo, May 23, 2019, Jinan.

Figure 5: CMT members traveling to *Ujamaa* villages in Mtwara Region, 1971. Source: Health Department of the Shandong Province, Unforgettable Memory: The Chinese Medical Teams in the United Republic of Tanzania and Seychelles, 1968–2008 (Shandong, 2008), 25 (printed with permission).

such as cholera, tuberculosis, and smallpox.[46] However, many still contracted diseases. For instance, in 1986, six out of eight Chinese doctors working in Tabora contracted malaria.[47] The Chinese Embassy in Tanzania repatriated medical workers with complicated health problems. In 1986, a cook named Yu Shanjie and a doctor, Su Zhongyuan, left the country after facing severe health problems. On the one hand, such challenges threatened Chinese doctors, but on the other hand, they increased the attention of both the doctors and the hosting government.[48] Still, from the inception of the CMT program to the present, only two Chinese doctor have died while working in Tanzania.

Additionally, Chinese medical doctors working in Tanzania encountered challenges related to foodstuffs and their preparations, as they were often forced to compromise and make do with the available local foodstuffs to cope with the situ-

46 Interview with Zhang Jing, April 11, 2016, Hangzhou; "Chinese Medical Delegation Meets Principal Secretary AFYA," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; Interview with Che Yansong, May 23, 2019, Jinan.

47 "Medical Aid Team in Tanzania, 1986," SPA. File No. A034-06-637, Shandong Province Health Bureau.

48 "Medical Aid Team in Tanzania, 1986," SPA. File No. A034-06-637, Shandong Province Health Bureau.

ation. The Chinese government first addressed this hurdle by dispatching a cook with every medical team. However, they did not adequately address the challenge because, in Tanzania, Chinese doctors were divided into small groups comprising five to eight doctors or more and worked in different district hospitals. A cook had to accompany a single group. Therefore, other doctors had to cook for themselves, which, in turn, consumed part of their working hours.[49] Similarly, some food items desired by the Chinese were either missing or unavailable due to inadequate supplies. Generally, Chinese cuisine consists of two components: *fan*, which comprises grains and other starches, and *cai*, which includes vegetables and meat. These two divisions made a complete Chinese cuisine. Some essential foodstuffs, such as noodles, soybean products, vegetables, herbs-related foods, different sauces, and Asian spices, were not readily available in Tanzania. The Chinese government imported foodstuffs to address this, and the Tanzanian government waived their taxes at the Dar es Salaam port.[50] In some places of Tanzania, the CMTs planted several kinds of vegetables, and they kept chickens and ducks to produce their desired foodstuffs, which were either missing or not adequately available in the local market.[51] The Shandong province consistently dispatched many doctors to Tanzania despite the hurdles. Statistics show that up to 2017, Shandong province deployed 24 batches of CMTs, equivalent to about 1080 medical workers (Table 6).[52]

3.4 Changes in China's Foreign Aid Policy and the CMT Program

China's foreign aid policy has evolved over time, aligning with the changing political and economic interests of the Chinese government. For example, in the 1960s and early 1970s, foreign policy focused on enabling China to win diplomatic recognition

49 "Job Description and Work Reports of the Medical Team in Tanzania, 1981," SPA. File No. A034-06-159, Shandong Province Health Bureau, Foreign Affairs Office; Interview with Deng Shucai, May 23, 2019, Jinan.

50 "Protocol Between the Government of the United Republic of Tanzania and the Government of the People's Republic of China on Dispatching Medical Team from China to Serve in Tanzania from August 2007 to August 2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008.

51 "Medical Aid to Tanzania, Work Reports, Job Descriptions and Distribution Table, 1975," SPA, File No. A034-04-085, Shandong Province Health Bureau, Revolutionary Committee, Policy Office; Interview with Che Yansong, May 23, 2019, Jinan.

52 A speech by H. E. Wang Ke, Ambassador of China to Tanzania, at the Farewell Reception for the 24th Chinese Medical Team in Tanzania, Dar es Salaam, November 3, 2017.

Table 6: CMTs dispatched to Tanzania, 1968 to 2011.

Year	Team	Batch No.	Month	Male	Female	Total
1968–1970	1	1	May[53]	30	13	43
1968–1969	1	2	Aug.	1	–	1
1968–1970	1	2	Aug.	3	–	3
1968–1971	1	2	Aug.	23	5	28
1969–1971	1	2	Jan. & May	8	1	9
1969–1972	1	2	Oct.	1	–	1
1970–1972	1	2	Jan.	1	–	1
1970–1972	2	1	Aug.	36	10	46
1971–1973	2	2	April	29	9	38
1972–1974	3	1	Aug.	39	6	45
1973–1975	3	2	Aug.	27	10	37
1974–1976	4	1	Sept.	38	8	46
1975–1977	4	2	July	30	7	37
1976–1978	5	1	Aug.	37	8	45
1977–1979	5	2	Aug.	34	7	41
1978–1980	6	1	Aug.	31	11	42
1979–1981	6	2	Aug.	14	5	19
1980–1982	7	1	Aug.	28	14	42
1981–1983	7	2	Aug.	13	6	19
1982–1984	8	1	Sept.	15	3	18
1983–1985	8	2	Sept.	13	5	18
1984–1987	9	1	Aug.	12	5	17
1985–1987	9	2	Sept.	16	6	22
1987–1989	10	–	Sept. & Dec.	25	13	38
1989–1991	11	–	Aug., Sept. & Dec.	28	8	36
1991–1993	12	–	Aug.	31	9	40
1993–1995	13	–	Aug.	26	13	39
1995–1997	14	–	Aug.	19	9	28
1997–1999	15	–	Aug.	16	7	23
1999–2001	16	–	Aug.	18	6	24
2001–2003	17	–	Aug.	20	5	25

53 Information from the health department of the Shandong province such as *The Chinese Medical-Aid Team*, 117, shows that the first batch was dispatched to Tanzania in March 1968. In contrast, many sources I consulted mention that the first batch arrived in May 1968. For this research, I use May 1968, the month when the MoU was signed and recorded by many sources. See, for instance, "A Special Report, Chinese Medical Assistance to Tanzania, May 12, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; "Madaktari Zaidi toka China Watakuja," *Uhuru*, May 7, 1968, 1; "China Yasaidia Tanzania Dawa na Madaktari," *Ngurumo*, May 7, 1968, 1.

Table 6 (continued)

Year	Team	Batch No.	Month	Male	Female	Total
2003–2005	18	–	Aug.	21	4	25
2005–2007	19	–	Aug.	23	2	25
2007–2009	20	–	Aug.	18	6	24
2009–2011	21	–	Aug.	22	3	25
Total	**21**			**746**	**224**	**970**

Source: Modified from the Health Department of the Shandong Province. *The Chinese Medical-Aid Team in the United Republic of Tanzania, 1968–1998* (Shandong, 1998), 117–126; Health Department of the Shandong Province, *Unforgettable Memory: The Chinese Medical Teams in the United Republic of Tanzania and Seychelles, 1968–2008* (Shandong, 2008), 135–145; Health Department of the Shandong Province, *Do not Afraid the Hardship, be willing to Contribute, Heal the Wounded and Rescue the Dying, Great Love no Boundaries, 1968–2013* (Shandong, 2013), 118–129.

over Taiwan and be admitted into the UN General Assembly (UNGA). China vowed to maintain its relationships with countries of the Global South in exchange for their votes in the Assembly. During this era, it extended medical assistance to countries of the South, supporting the "One China policy." Countries that recognized Taiwan as a nation were disqualified from receiving China's medical assistance.[54]

The Chinese government dispatched many doctors to Africa to forge close relations and win allies, carrying most of the costs associated with hosting them. For instance, throughout the 1960s and 1970s, Shandong province dispatched medical workers to Tanzania in two batches per medical team, with each team arriving in the country at intervals of either several months or a year. This tendency enabled the country to receive medical doctors from China every year from 1968 to 1985 (Table 6). At the beginning of the CMT program, Tanzania received a more significant number of Chinese medical doctors than other African countries, which, in turn, enhanced Sino-Tanzanian relations. On the one hand, the dispatch of Chinese doctors to Tanzania was couched in humanitarian discourse. Still, it came at a significant cost to the Chinese government, given the country's shortage of trained medical personnel. On the other hand, China's devotion was driven by political calculations since the Tanzanian president, Julius Nyerere, had significant influence over China's admission to the UNGA campaign.[55]

54 Li, *Chinese Medical Cooperation in Africa,* 12; Huang, "Pursuing Health as Foreign Policy," 108.
55 Julius K. Nyerere's Speech at the United Nations General Assembly, in *Nyerere Freedom and Development/ Uhuru na Maendeleo: A Selection from Writings and Speeches, 1968–1973* (Dar es Salaam: Oxford University Press, 1973), 205.

Before China's foreign policy changes, the Chinese government mainly covered the costs of hosting CMTs in Tanzania. It met charges for domestic salary, international travel, and language training. Moreover, the government compensated hospitals from which members of the CMTs came during their training at home and service abroad.[56] The Chinese government also shipped the daily necessities for the CMT to the port of Dar es Salaam, including imported means of transportation, air conditioners, electrical household appliances, and food, and the Tanzanian government waived the tax on their shipments at the port.[57]

Furthermore, the Chinese government granted Tanzania medicines and medical equipment to address deficits throughout Mao's reign. Under the signed MoU, the Tanzanian government was to supply the CMTs with medical equipment and drugs for their work.[58] Nevertheless, many hospitals in post-colonial Tanzania lacked enough medical equipment and a sufficient supply of medicines. The Chinese government intervened by offering grants for medical supplies and equipment. For instance, the first team of doctors went to Tanzania with over 1,000 boxes containing drugs and medical equipment. Consistently, other CMTs carried along with medicines and medical equipment.[59] Indeed, grants for medicines and medical equipment were imperative for CMTs' work and for improving healthcare services in Tanzania.

Between 1968 and 1977, the Tanzanian government incurred a small cost for hosting the CMTs. The government met the costs for the return flights and upcountry trips. While in Tanzania, the teams travelled by train, MoH vehicles, and flights, depending on the distance from the capital city to the working stations. Moreover, the Tanzanian government provided lodging for the CMTs and covered

56 "Agreement for China's Medical Assistance by the PRC to Zanzibar, June 15, 1964," ZNA. Group Index. AJ. Medical Department, File No. AJ26/92, 1964 June, Chinese Agreement; also see, "Protocol Between the Government of the United Republic of Tanzania and the Government of the People's Republic of China on Dispatching Medical Team from China to Serve in Tanzania from August 2007 to August 2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 3.

57 "Agreement for China's Medical Assistance by the PRC to Zanzibar, June 15, 1964," ZNA. Group Index. AJ. Medical Department, File No. AJ26/92, 1964 June, Chinese Agreement; "The Agreement Protocol of 2007–2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 3.

58 "Letter from Consulate of the People's Republic of China in Zanzibar, August 17, 1978, to Honourable E. I. M. Mtei, Minister for Finance and Planning, the Government of the URT," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO5/25, 1976 March to May 1983, Mahusiano na Nchi za Nje-China.

59 "Madaktari Zaidi toka China Watakuja," *Uhuru*, May 7, 1968, 1; Interview with Che Yansong, March 1, 2016, Jinan.

costs related to house maintenance, water, electricity, and phone bills. Additionally, it provided security guards and cleaners for the residences and drivers for each Chinese doctor team and team leader, and met their necessary costs.[60] These assertions show that, compared to costs incurred by the Chinese government, Tanzania paid significantly less for hosting the CMTs in the country, which reflected the importance the Chinese government attributed to its partners in the Global South.

Yet, China's enthusiasm for hosting CMTs in Tanzania ended in 1978 after the launch of its new policy. A statement by the State Planning Commission avowed:

> We [Chinese] must expand our economic technical and cultural exchange with other countries on the principle of equality, mutual benefit and one supplying what the other needs [. . .]. We must learn hard from the good experience of other countries and combine this with our own originality. We learn from other countries and introduce their advanced technology to meet our needs, not to hinder but to promote our own creativeness, not to weaken but to increase our ability to develop our national economy and achieve modernization independently.[61]

China's open-door policy was inconsistent with Maoist policies, which limited interactions with foreign countries, especially from the Global North.[62] The government implemented the policy after Chairman Mao and Premier Zhou Enlai died. The repercussions of the policy change were evident in countries in the Global South. China's assistance to countries of the Global South declined as it shifted its interest to countries with advanced technology. The post-Mao leaders stressed economic gains for the Chinese government over ideological and political interests. Consequently, they discouraged aid with less or no economic interests.[63] These changes in foreign policy affected the dispatch of medical doctors to Tanzania, as the Chinese government

60 "A Memo, 6/6/1973," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; "Chinese Medical Delegation Meets Principal Secretary AFYA, September 12, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; "Protocol Between the Government of the United Republic of Tanzania and the Government of the People's Republic of China on Dispatching Medical Team from China to Serve in Tanzania from August 2007 to August 2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 4–5; also see, "Letter from Consulate of the People's Republic of China in Zanzibar, August 17, 1978 to Honourable E. I. M. Mtei, Minister for Finance and Planning, the Government of the URT," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO5/25, 1976 March to May 1983, Mahusiano na Nchi za Nje-China.

61 "China's Open-Door Policy," *Daily News*, September 13, 1977, 2.

62 Huang, "Pursuing Health as Foreign Policy," 111.

63 Yanzhong Huang, "Domestic Factors and China's Health Aid Programs in Africa," in *China's Emerging Global Health and Foreign Aid Engagement in Africa*, ed. Xiaoqing Lu Boyton (Washington: Center for Strategic and International Studies, CSIS, 2011): 20.

began to send medical doctors in a single batch only every two years. Even worse, from 1987 to 1993, the Tanzanian government received a team with fewer than 40 medical workers. The number of medical doctors further declined from 1995 to 2011, when the government received a team with fewer than 30 medical workers (Table 6). Undeniably, the decrease in the number of medical doctors sent to Tanzania affected healthcare delivery, especially in complex health cases and rural areas.[64]

Chinese doctors working in Tanzania supported the newly adopted reform policy. Their 1978 annual report advised the government to reduce the costs spent on the CMT program by reducing the number of medical workers sent to Tanzania. A team leader, Yu Changan, affirmed that the Shandong province lacked enough medical personnel and faced several health challenges. Thus, it was advantageous for the province to encourage doctors to work at home.[65] Their advice manifested the fact that the execution of the program did not satisfy some medical workers. In their view, sending medical doctors abroad was worthless and hurt healthcare delivery in their province. The 1986 annual report, besides discouraging the dispatch of CMTs, criticized the distribution of the CMTs to many districts of Tanzania. They argued that the distributions increased maintenance costs and hindered the effective delivery of health services since some medicines, equipment, foodstuffs, supporting staff, and medical experts had to serve multiple locations. In their view, the facilities and stuffs mentioned would have been satisfactorily used if they had been concentrated in a few hospitals. As a result, by the end of 1980, the activities of the CMTs had become dominant in four regional referral hospitals.[66]

The changes in China's foreign policy increased the burden of hosting CMTs on recipient countries. Since 1978, the Tanzanian government paid more to bring and host the CMTs. Under the 1978 MoU signed between the two countries, the government had to cover some expenses previously carried by the Chinese government. For instance, it began paying monthly allowances, including board expenses and pocket money for the CMTs, amounting to Tshs. 900 per month per head. Under the MoU, the government had to adjust the allowances if the commodity price fluctuation would exceed 10%. As a result, on October 25, 1979, the CMTs demanded an increase in allowances from Tshs. 900 of 1978 to Tshs. 1,400 per head per month due to soaring inflation. In the 1980s, when Tanzania's economy was in turmoil, its currency lost value. Thus, allowances shot from Tshs.

64 Interview with Gallus Namangaya Abedi, June 6, 2018, Dar es Salaam.

65 "Work Reports of the Medical Aid Team in Tanzania, 1978," SPA. File No. A034-06-035, Shandong Province Health Bureau.

66 "Medical Aid Team in Tanzania, 1986," SPA. File No. A034-06-637, Shandong Province Health Bureau.

1400 of 1979 to Tshs. 2,250 per head per month starting from October 1, 1981.[67] Information about the living allowances for the 1990s could not be found. However, data from the mid-to-late 2000s shows that the constant decline of the local currency influenced the execution of payments in the USD. Article VII of the 2007 MoU instructed the Tanzanian government to pay living allowances of about USD 170, equivalent to Tshs, per head per month. Subsequently, in February 2009, the MoH issued Tshs. 16,834,734, a three-month allowance for 25 Chinese doctors.[68] The initiation of allowances to the CMTs and their tremendous increase over time added a cost burden to Tanzania's economy while reflecting the priorities of the post-Mao regime, which discouraged free aid to overseas countries.

Furthermore, since the 1980s, the Tanzanian government has arranged and covered the costs for the CMTs' tours of several parts of the country, including the national parks, so that doctors could have a holiday. Thus, before the expiration of the contract, or after CMTs had worked in the country for about 12 months, the government set a 15-day holiday and a seven-day trip to Kilimanjaro, Ngorongoro, and Serengeti or any other places of interest proposed by the CMTs.[69] The cost burden for regional and district governments was considerable. For example, in 1981, Chinese doctors visited Bagamoyo, Mikumi, and Serengeti National Parks, where the regions hosting them covered all costs related to the tour, amounting to Tshs. 144,510 in total.[70] The costs for the tour rose with time. For example, in 1996, the

67 "Letter from Consulate of the People's Republic of China in Zanzibar, August 17, 1978, to Honourable E. I. M. Mtei, Minister for Finance and Planning, the Government of the URT," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO5/25, 1976 March to May 1983, Mahusiano na Nchi za Nje-China; "Letter from the Consulate of the People's Republic of China in Zanzibar, October 25, 1979, to the Principal Secretary to the Ministry of Finance and Planning of the United Republic of Tanzania," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO5/25, 1976 March to May 1983, Mahusiano na Nchi za Nje-China; "Letter from the Principal Secretary to the Treasury of the URT, February 25, 1982, to Mr Chung Chien Hua, Economic Representative of the PRC to the URT," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO5/25, 1976 March to May 1983, Mahusiano na Nchi za Nje-China.

68 "The Agreement Protocol of 2007–2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 4–5; "Minute, February 25, 2009," NRC. Ministry of Health and Social Welfare, 14/05/03, File Ref. No. HC. 74/311/02 Chinese Medical Team 2007–2010.

69 "Protocol Between the Government of the United Republic of Tanzania and the Government of the People's Republic of China on Dispatching Medical Team from China to Serve in Tanzania from August 2007 to August 2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 4–5.

70 The costs were determined by the number of doctors the region/district received. For instance, Dar es Salaam paid Tshs. 2,500, Mtwara 5,505, Monduli 15,000, Singida 30,000, Kigoma 21,000, Dodoma 11,000, Tabora 19,000, Shinyanga 20,000, and Musoma 15,000. See "Job Descrip-

Dodoma Regional government alone spent Tshs. 2.5 million for the tour by Chinese doctors working at the referral hospital. The regional government complained about the costs, arguing that they were higher and a burden to the government, given the country's economic plight.[71]

Furthermore, the Chinese government stopped supplying free medicines and equipment to Tanzania after the policy change. Instead, it agreed to continue providing grants of medicines and medical equipment while charging fees to patients, of which about 70% of the fees collected belonged to the CMTs, and 30% went to respective hospitals. According to the MoU, the charges were aimed at maintaining the sustainability and effectiveness of the CMT program since the money collected was sent to China's MoH to purchase drugs and medical equipment for use by the next batch of CMTs. Chinese doctors presented the costs and quantity of the donated medicines to the hospital management for further reference.[72] Thus, there were two pharmacies in the hospitals where the CMTs worked: one for Chinese medicines served by a CMT member and the other for general medicines served by local pharmacists. Oral and archival evidence show that Chinese medicines were sold at a lower price than in local pharmacies.[73] This strategy promoted the use, popularity, and market of Chinese drugs in Tanzania in line with the priorities formulated by China's senior officer from the MoH: "China's health aid should not only serve China's foreign policy but also act as a broker for economic development in China and recipient countries."[74] Surely, from 1978 onwards, the Chinese government used the CMT program to promote the market for Chinese medicines in Tanza-

tion and Work Reports of the Medical Team in Tanzania, 1981," SPA. File No. A034-06-159, Shandong Province Health Bureau, Foreign Affairs Office.

71 "Letter from Regional Medical Officer, July 26, 1996, to the Minister for Health, Ziara ya Madaktari wa Kichina Mbuga za Wanyama," Dodoma Regional Referral Hospital, File No. PA. 133/250/01 Chinese Medical Team, Health Services, Technical Assistant, 2016.

72 "The Agreement Protocol of 2007–2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 2–3.

73 Interview with Rajabu Kisonga, April 24, 2018, Dodoma Regional Referral Hospital; "Taratibu za Dawa kwa Wachina," Dodoma Regional Referral Hospital, File No. PA. 133/250/01 Chinese Medical Team, Health Services, Technical Assistant, 2016; "Letter from the CMTs, February 4, 2000, to Regional Medical Officer, Formal Statement about Medical Aid to Regional Medical Officer," Dodoma Regional Referral Hospital, File No. PA. 133/250/01 Chinese Medical Team, Health Services, Technical Assistant, 2016.

74 Quoted in Huang, "Domestic Factors and China's Health Aid Programs in Africa," 20.

nia. These manipulations increased significantly in the 1990s, following the official approval of Chinese anti-malaria medicine (artemisinin), where the CMTs promoted its efficacy and use by prescribing the therapy to patients with malaria.[75]

From the mid-1990s, China's interests in Africa resumed, fueled by its economic, diplomatic, and political interests. Yanzhong Huang states that in the 2000s, China's medical assistance to Africa heightened and bolstered China's friendship with many African states, which, in turn, helped the Chinese government to tap into natural resources, win diplomatic recognition, dilute criticism from countries of the Global North over its violation of human and democratic rights at the UN, and win the competition to host the 2008 Olympic games.[76] From 1995 onwards, it bolstered diplomatic ties with African countries by waiving several costs for hosting CMTs, which was endorsed shortly after the policy change. It further dispatched a large number of medical doctors to several African countries.[77] In Tanzania, for instance, from August 2009, the Chinese government covered costs related to monthly allowances and return tickets for the CMTs. The Chinese government also took steps to permanently waive costs associated with logging. It has built a house in Dar es Salaam for use by members of the CMT and other technical teams sent to Tanzania.[78] These assertions imply that from the mid-1990s, China lessened the cost burden of some African countries while using the CMT program to bolster its relationship with African countries and portray itself as a more responsible and reliable partner than traditional donors of the Global North.

75 Deborah Brautigam, "U.S. and Chinese Efforts in Africa in Global Health and Foreign Aid: Objectives, Impact, and Potential Conflicts of Interest," in *China's Emerging Global Health and Foreign Aid Engagement in Africa,* ed. Xiaoqing Lu Boyton (Washington DC: Centre for Strategic and International Studies, 2011), 4.

76 Huang, "Pursuing Health as Foreign Policy," 128.

77 For Chinese government commitment to medical assistance in the 2000s read Part IV of "China's African Policy, January 2006," *Xinhua News Agency*, October 2006, 6–7.

78 "Talking Notes for the Permanent Secretary on the Occasion of Farewell and Welcome Ceremony to the Chinese Medical Team in Tanzania, August 14, 2009 at New Holiday Inn," NRC. Ministry of Health and Social Welfare, 14/05/03, File Ref. No. HC. 74/311/02 Chinese Medical Team 2007–2010; Interview with Edwin Mng'ong'o, May 7, 2018, MoH Headquarters, Dar es Salaam; Song Tao, May 6, 2018, Posta, Dar es Salaam.

3.5 The CMT Program and the Medical Knowledge Exchange

The CMT program was executed under the South-South Cooperation agenda, which promoted knowledge production and transmission among member countries to achieve self-dependency. From its inception, the architects of the CMT program vowed to use it as a vehicle for the easy exchange of medical knowledge among Chinese and Tanzanian medical personnel. Thus, among the responsibilities of the Chinese medical doctors in Tanzania was to communicate medical knowledge with local medical workers, a role initially performed mainly by personnel from countries of the Global North.[79] In line with Mao's philosophy, the Chinese doctors perceived recipients to have prior knowledge worth sharing while working together.[80] In 1965, Premier Zhou Enlai visited Zanzibar and underscored the role of Chinese doctors in building the capacity of the recipient country's health sector. He said:

> Now we have several dozens of CMTs abroad, yet it is not enough. CMTs should not only cure the disease, but help training work. They should bring medicine and facilities, train African doctors, who can be self-reliant and would work even if CMTs went away [. . .]. We would provide sincere help to any independent country. Our assistance is to make the country able to stand up. Just like building a bridge, so you can cross the river without a staff. That would be good.[81]

Zhou's commitment was highlighted by Mao when he met Nyerere in 1974. Mao reaffirmed that the role of CMTs in Tanzania would be "teaching" local medical doctors and "clinical care" to patients.[82]

The exchange of medical knowledge was executed through long-term and short-term training in numerous Chinese medical colleges and through the CMT program, where local medical workers learned while working alongside Chinese doctors. The Chinese government offered several scholarships to Tanzanians to pursue medical education in different Chinese medical colleges, mainly in the 1970s, at the height of the Sino-Tanzanian relationship. For instance, in November 1973, about five Tanzanians, all females, were sponsored by the Chinese government to pursue

79 Permanent Secretariat of the Afro-Asian Peoples' Solidarity Organisations, *Afro-Asian Peoples' Solidarity Movement* (Cairo), 12.

80 "Report of the Chinese medical doctors to the Minister for Health, January 27, 1967," ZNA. Group Index. AJ. Medical Department, File No. AJ29/322, 1964 September to 1966 December, Ripoti ya Madaktari wa Kichina.

81 Quoted in Li Anshan, *China and Africa in the Global Context: Encounter, Policy, Cooperation and Migration*, (Cape Town: Africa Century Editions (ACE) Press, 2020), 293.

82 "Medical Aid to Tanzania, Work Reports, Job Descriptions and Distribution Table, 1975," SPA, File No. A034-04-085, Shandong Province Health Bureau, Revolutionary Committee, Policy Office.

a medical education in Chinese universities.[83] The Chinese government offered more scholarships in 1976 when five local medical workers attended a three-month training in replantation and acupuncture, and one person went on for a long-term medical education. A few Tanzanians received provincial government scholarships, whereby, in 1984, the surgical department of the Shandong Medical Academy admitted two Tanzanians.[84]

Long- and short-term training exposed Tanzanians to Chinese medical knowledge and healthcare systems, maintaining trust in the expediency of Chinese medical education and bolstering the country's influence in Tanzania. In 1977, a delegation of medical workers led by the Principal Secretary of the MoH, G. J. Kileo, attended a short-term training in China. Upon returning to Tanzania, Kileo wrote an appreciation letter saying:

> All of us were very excited to see your Revolution in practice. We were particularly impressed by your health delivery system. I think the World has a great deal to learn from your experience, and in particular from the way you have been able to improve the health of the rural population in a very short time. Your willingness to share this experience with us is praiseworthy, and I would like to assure you that on our part, we shall always appreciate exchanging experiences with you.[85]

The above quotation suggests that medical training for Tanzanians in China persuaded the country to adopt some Chinese health policies, as I elaborated at length in Chapter 2. Moreover, the training influenced the shift from medical knowledge dependence upon countries of the Global North. Training opportunities offered by the Chinese government made the MoH realize that China was an adequate place for medical knowledge production and transmission.

Stereotypes over the quality of China's medical education system hijacked the expediency and sustainability of the Chinese government sponsorships to Tanzania's medical students. In the 1970s and 1980s, medical students who pursued

83 Names of Scholarship recipients were, Hawa Kawawa, Naomi Lunogelo, Victoria Dionice, Josephine Ndemaeli, and Sabina Mnaliwa. See "Waenda China," *Uhuru*, Novemba 27, 1973, 5.

84 "Letter from the office of the Embassy of the People's Republic of China in the United Republic of Tanzania, March 8, 1977, to the Principal Secretary of the MoH," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; "Letter from the Ministry of Education to the Principal Secretary Ministry of Health of June 14, 1976, Ndugu Lema Kupewa Scholarship ya China Kusomea Udaktari Huko China 1976/77," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; "Notifications and Letter for Medical Aid to Tanzania, 1984," SPA, File No. A034-06-363, Shandong Province Health Bureau, Foreign Affairs Office.

85 "Letter from the Principal Secretary, Ministry of Health, to the Vice Minister of Public Health, Ministry of Public Health, People's Republic of China, October 13, 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

medical studies in China were highly discriminated against by the "Makerere Group", a group composed of Tanzanians who had also pursued medical studies at Makerere Medical College in Uganda, Mhimbili Medical College in Tanzania, and medical schools in Europe and the US. Graduates from China were perceived as less skillful, and the Medical Council of Tanganyika (MCT) did not recognize their certificates.[86] The council regarded MD certificates offered by Chinese medical colleges as advanced diplomas and recognized the graduates only as assistant medical officers (AMOs). The issue became severe in the mid-1980s when the Tanzanian government denied employment to medical graduates from China.[87] The Makerere Group queried the relevance of the duration of studies in China, where MD students studied for less than seven years. After China's Great Proletarian Cultural Revolution of 1966 to 76, the training period for MD courses was reduced to five and three years, enabling the country to have 2,800,000 qualified but short-trained medical personnel and a comparatively favorable ratio of one doctor per 250 people by 1977.[88]

The duration of five and three years of training for the MD program was inconsistent with the globally accepted training system. However, Chairman Mao advocated the system politically, directing that:

> Medical education should be reformed. There's no need to read so many books. How many years did Hua T'o [Hua Tuo][89] spend at college? How many years [of] education did Li Shih-chen [Li Shizhen][90] of the Ming dynasty receive? In medical education, there is no need to accept only higher middle school graduates or lower middle school graduates. It will be enough to give three years to graduates from higher primary schools. They would then

86 The Medical Council of Tanganyika was established in 1959 to oversee medical and dental practice in Tanzania. The Council is mandated to register or deregister medical and dental practitioners based on qualifications.

87 Interview with Modest C. Kapingu, June 8, 2018, Dar es Salaam. Modest was awarded a Chinese government scholarship and studied at Nanjing University. He secured employment without hurdles, as he was employed when Cold War politics ended. Interview with Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam. Naomi pursued her medical education (MD) in China and was among the graduates affected by the challenges of Cold War politics. However, she survived and secured government employment as an assistant medical officer at Mhimbili National Hospital.

88 "Report on Visit of Ministry of Health Delegation to the People's Republic of China, September 1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; Parris H. Chang, "The Cultural Revolution and Chinese Higher Education: Change and Controversy," *The Journal of General Education* 74, no. 3 (1974): 188.

89 Hua Tuo was a Chinese physician who lived during the late Eastern Han dynasty. He was the first person in China to use anesthesia during surgery.

90 Li Shizhen was a Chinese acupuncturist, herbalist, naturalist, pharmacologist, physician and writer of the Ming dynasty. He is considered the most outstanding scientific naturalist in China.

> study and raise their standards mainly through practice. If this kind of doctor is sent down to the countryside, even if they haven't much talent, they would be better than quacks and witchdoctors, and the villages would be better able to afford to keep them. The more books one reads, the more stupid one gets.[91]

Mao stressed idealism and the "right" political allegiance – "a red heart" – over academic training. To him, what mattered most was not the number of years trainees accumulated but the trained personnel's practical knowledge, passion, and eagerness. During the Cultural Revolution, schooling duration was shortened at all levels, claiming that some courses were irrelevant or repetitive and that students would learn more knowledge while on the job. Emphasis was put on proletarian politics and practical training at the expense of bookish or theoretical knowledge.[92]

The Chinese government established a one-year upgrade course in Chinese medical colleges to enable the MCT to recognize Tanzanian graduates following the government's request. Accordingly, the MCT recognized medical graduates who were admitted to the upgrade course. By contrast, the MoH demoted graduates who did not join the upgrade course to the rank of AMOs, and others were recategorized to administrative posts.[93] This incident illuminates the incompatibilities of the Chinese and Tanzanian education systems. After independence, the Tanzanian government sustained the British education system, retaining the MCT established in the late 1950s to control the quality of MD graduates. As a result, it discouraged prospective medical students from accepting Chinese government scholarships since they perceived China as an undesirable place for medical education compared to European and American medical colleges.[94]

Moreover, medical knowledge was conveyed to local doctors through on-site training. A study by Paul Kadetz and Johanna Hood indicates that CMTs working in Madagascar mainly provided clinical care to patients and scarcely dedicated time to training local medical workers, failing to build capacity and improve the

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91 Mao Tse-tung, "Directive on Public Health, June 26, 1965," in *Selected Works of Mao Tse-tung Volume IX*, (India: Pragathi Book House, 1994), 216.

92 Ling Yang, "Training Medical Workers," *Peking Review*, November 13, 1964, 23; Chang, "The Cultural Revolution and Chinese Higher Education," 189.

93 Interview with Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam, also see Stacey A. Langwick, *Bodies, Politics, and African Healing: The Matter of Maladies in Tanzania*, (Bloomington, IL: Indiana University Press, 2011), 61.

94 Interview with Modest C. Kapingu, June 8, 2018, Dar es Salaam; Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

local health sector sustainably.[95] In contrast to the situation in Madagascar, findings from Tanzania show that Chinese doctors did share knowledge with local medical workers. However, the roles of knowledge sharing and mentorship were less stressful than those of clinical care. Archival evidence collected from Zanzibar shows that the doctors allocated at least one hour per week to train local doctors in basic physical diagnosis and practical pharmacology.[96] In mainland Tanzania, Chinese doctors were overwhelmed by the floods of patients who came to their clinics for treatment. Thus, they lacked time to offer formal training to local orderlies, but they disseminated knowledge during medical practice.[97]

Existing evidence shows that on-site training did not equip local medical workers with sufficient medical knowledge to work independently, especially for complicated health cases. This shortcoming defeated the goal of using the CMT program as a bridge to self-dependency. Accounts from local medical workers contend that many Chinese doctors could neither speak English nor Kiswahili fluently.[98] Such linguistic handicaps limited medical knowledge exchanges and implied that the six months of language training the CMTs received were insufficient. In the 1978 annual report, the CMTs affirmed that the language barrier was the main hindrance to passing medical knowledge on to local medical personnel. However, this study noted that practical medical works such as surgery gave local doctors more opportunities to learn by seeing and practicing under the guidance of Chinese doctors (Figure 6).[99]

Reciprocal learning between Chinese and local medical workers seemed even more problematic. This research has found that, in most cases, Chinese experts were disseminating medical knowledge to local personnel. Nevertheless, they learned medical practices from local experts through interactions and observa-

95 Paul Kadetz and Johanna Hood, "Outsourcing China's Welfare: Unpacking the Outcomes of Sustainable Self-Development in Sino-African Health Diplomacy," in *Handbook of Welfare in China (Handbooks of Research on Contemporary China Series*, ed. Beatriz Carrillo, Johanna Hood and Paul Kadetz, (Cheltenham: Edward Elgar Publishers, 2017), 339.

96 "Report of the Chinese medical doctors to the Minister for Health, January 27, 1967," ZNA. Group Index. AJ. Medical Department, File No. AJ29/322, 1964 September to 1966 December, Ripoti ya Madaktari wa Kichina.

97 Interview with Gallus Namangaya Abedi, June 6, 2018, Dar es Salaam; John G. Myonga, April 24, 2018, Dodoma Regional Referral Hospital.

98 Andrea Azizi Kifyasi, "On the Cover: Showcasing China's On-the-Job Training in Rural Africa." *Technology and Culture* 65, no. 1 (2024): 2; Interview with John G. Myonga, April 24, 2018, Dodoma Regional Referral Hospital, Amunga Meda, July 18, 2018, Dar es Salaam.

99 "Work Reports of the Medical Aid Team in Tanzania, 1978," SPA. File No. A034-06-035, Shandong Province Health Bureau; Interview with Elisiana Danford and Martha Manyirezi, April 24, 2018, Dodoma; Ding Zhaowei and Jin Xunbo, May 23, 2019, Jinan.

tions during medical practices, hence gaining experience in addressing several unaccustomed diseases.[100] Moreover, Chinese doctors conducted medical research while working in Tanzania, further enhancing their expertise. For instance, in 1978, the CMTs working in the Kigoma and Dar es Salaam regions conducted medical research on tropical diseases that were less prevalent in China, and they composed intensive reports about their discoveries.[101]

A few cases reflect the legacy of Chinese medical doctors in places where they worked. For instance, at Dodoma Regional Referral Hospital, Rajabu Kisonga testified that he learned from Chinese doctors and subsequently took over the ophthalmology department after the doctors left. Doctor Kisonga, not an ophthalmologist, worked closely with Chinese doctors, and after two years, he was able to address many eye cases, except for those requiring surgery.[102] Other evidence collected from Zanzibar reveals that trainees from the surgical department addressed several surgical cases by themselves after working with Chinese doctors for a year. Others from the ophthalmology department attended eye cases independently after being trained by Chinese doctors.[103] These assertions imply that the CMT program would have played a resounding role in boosting medical knowledge if the Chinese and Tanzanian governments had created a conducive environment and effective strategies for knowledge exchange. However, within the training modality, the framework of the signed agreements and language barriers were the main hindrances to on-site medical knowledge exchange.

3.6 Perceptions of the CMT Medical Services

Before 1968, Chinese doctors had neither worked in Tanzania nor had any experience with the country's health challenges. Unlike medical doctors from Britain, the expertise of Chinese doctors was little known to political elites and the Tanzanian community. This scenario and the prevailing Cold War politics and stereotypes prompted a negative perception of Chinese doctors.[104] Chinese doctors

100 Interview with Deng Shucai, May 23, 2019, Jinan; Ding Zhaowei and Jin Xunbo, May 23, 2019, Jinan.

101 "Work Reports of the Medical Aid Team in Tanzania, 1978," SPA. File No. A034-06-035, Shandong Province Health Bureau; Interview with Deng Shucai, May 23, 2019, Jinan.

102 Interview with Rajabu Kisonga, April 24, 2018, Dodoma.

103 "Report of the Chinese medical doctors to the Minister for Health, January 27, 1967," ZNA. Group Index. AJ. Medical Department, File No. AJ29/322, 1964 September to 1966 December, Ripoti ya Madaktari wa Kichina.

104 Interview with Gallus Namangaya Abedi, June 6, 2018, Dar es Salaam.

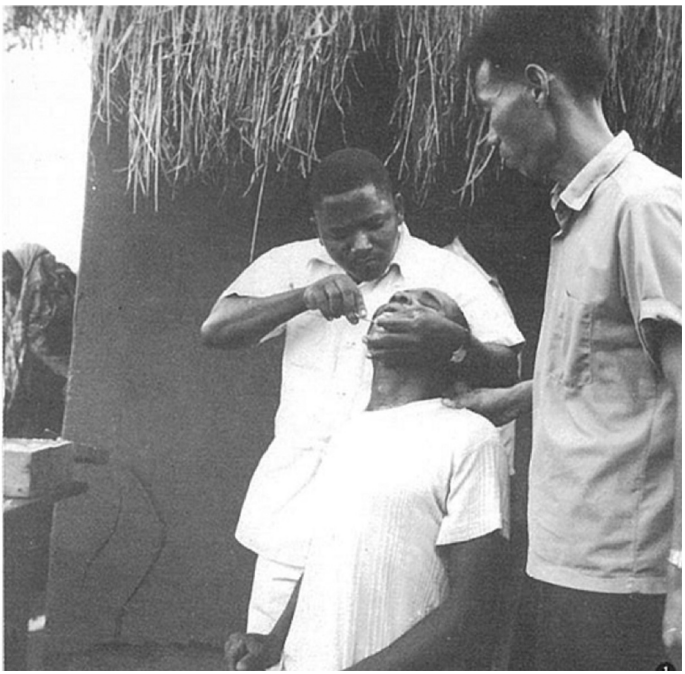

Figure 6: A Tanzanian dentist practicing dental surgery under the guidance of a Chinese doctor (undated, likely 1970s). Source: Health Department of the Shandong Province, *The Chinese Medical-Aid Team,* 76 (printed with permission).

themselves realized that patients, medical doctors of the Global North, and political elites had little faith in their expertise. In Tanzania, Chinese doctors worked hard and enthusiastically to win people's approval and eliminate doubts, attracting many patients (Figure 7). For instance, in the Mbeya region, patients from different nearby districts travelled to Mbeya Regional Hospital to get treatment from CMTs.[105]

Throughout the 1960s to the 1980s, hospitals and places with CMTs thrived (Figure 7), and some patients attempted to bypass the queue in several ways, including writing letters to seek special permits from the MoH. For instance, *Mzee* Mohamedi Swala tried unsuccessfully to receive treatment from Chinese doctors at Muhimbili Hospital. Fortunately, he got a chance through his letter to the MoH. The Ministry gave him an introductory letter, which helped him to be attended to

105 "Utekelezaji wa DK. 37 NA 38, Dr S. M. Kinunda, 12/9/1974," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

Figure 7: Chinese doctors providing clinical care to patients in a village, 1972. Source: Health Department of the Shandong Province, *The Chinese Medical-Aid Team,* 17 (Printed with Permission).

swiftly. Part of the introductory letter read: "[Mohamedi Swala] has been ill with left hemiparesis since 1968. He also gives [a] history of High Blood Pressure. He has been treated by a number of doctors with very little, if any, improvement. He has heard that Chinese doctors can help him. He has, therefore, asked us for assistance to see Chinese doctors."[106] This incident shows how difficult it was for patients to obtain hospital treatment and their tenacity to benefit from the CMTs.

Oral accounts confirm that patients flocked to places where CMTs operated after hearing the good news of their expertise and the provision of free services while enduring various health issues without effective clinical care for an extended period.[107] Generally, the hardworking spirit of the CMTs and their kindness towards patients earned them the trust of their patients. Their 1975 annual report noted that some patients believed the medicines offered by Chinese doc-

106 "Letter from the Office of the Principal Secretary, Ministry of Health, March 20, 1973, to the Team Leader, Chinese Medical Team, Bwana Mzee Mohamedi Swala," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

107 Interview with Cleopa David Msuya, July 6, 2018, Dar es Salaam; also see Philip Snow, *The Star Raft: China's Encounter with Africa* (New York: Cornell University Press, 1988), 159.

tors were more efficacious than those provided by local and foreign doctors from the Global North, despite their therapeutic values being the same.[108] Undoubtedly, the CMTs worked in places where neither European nor local doctors, apart from a few missionaries, were willing to venture. However, from the 1990s onwards, fewer patients sought healthcare services at hospitals staffed by CMTs. This decline is partly due to the increasing number of local medical personnel, whom many patients prefer over Chinese doctors.[109] Moreover, during this period, the Tanzanian government commenced the cost-sharing policy, which made patients pay to be attended to by either Chinese or local medical workers. Additionally, Chinese doctors began to charge fees to patients, limiting access for low-income patients.[110]

Oral testimonies further illustrated the nuanced perceptions of patients regarding the services offered by the CMTs in some places. The nuances were influenced by communication barriers, which created two groups of patients with contrasting satisfaction levels over the received clinical services. A group of middle-class patients who also spoke English were well informed about the CMTs and were attended by Chinese doctors whose English was at a good level of proficiency. Many patients from this group were satisfied with the clinical services they received from the doctors. The second group comprised ordinary patients who did not speak English and whose Kiswahili was not fluent, but instead a mixture of local dialects. The latter category preferred the services of local doctors who spoke Kiswahili and some local languages with them. They reported less favorably on the services they received, except those that involved surgery. Patients in this non-surgical group often consulted local doctors, asking them to confirm whether the prescriptions were consistent with their ailment cases.[111] Mistrust arose from the fact that these patients were less confident in their ability to express themselves to the Chinese doctors and could not be sure whether the doctors' prescriptions accurately reflected their expressed health concerns.

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108 "Medical Aid to Tanzania, Work Reports, Job Descriptions and Distribution Table, 1975," SPA, File No. A034-04-085, Shandong Province Health Bureau.

109 Interview with Simon Ernest, May 7, 2018, Dar es Salaam; Rajabu Kisonga, April 24, 2018, Dodoma.

110 "The Agreement Protocol of 2007–2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 4–5.

111 The nuanced perceptions between the middle class and ordinary patients were mainly relevant from the 1980s onwards, when the language training for Chinese doctors stressed English rather than Kiswahili. Dr Kisonga and Dr Myonga contended that many ordinary patients consulted them to verify their prescriptions after meeting Chinese doctors. In contrast, middle-class patients seemed satisfied with the services and did not seek further clarification. Interview with Rajabu Kisonga and John G. Myonga, April 24, 2018, at Dodoma.

Different groups of people testified to the abilities of Chinese doctors in delivering clinical care in Tanzania. For instance, in the late 1960s and early 1970s, several members of parliament (MPs) applauded the CMTs, testifying about their efficiency and capability. They further acknowledged the implications of their services to the general improvement of healthcare services, requesting that the MoH allow them to stay longer.[112] For instance, in April 1971, the MP of Tarime said: "Healthcare services offered by our brothers, Chinese doctors who volunteered to help us in hospitals and dispensaries in Mara Region are outstanding. Can the Ministry request them to live and work in villages for two consecutive years instead of just two weeks?"[113] MPs who could not receive the services from the CMTs requested that the MoH consider sending them next time.[114] Generally, the requests reflected the MP's acceptance of the CMTs' services and the demands for medical personnel in their constituencies. Furthermore, the ability of Chinese surgeons was appreciated by several patients. For instance, in April 1998, at Kitete Hospital, Tabora, Chinese surgeons performed about 100 eye surgeries successfully, after which 20 patients were doing fine, while ten regained their sight, and 70 gradually recovered, receiving warm appreciation from patients.[115] Such clinical achievements added value and acceptance of the Chinese doctors and, more importantly, justified their presence in Tanzania.

The activities of the Chinese doctors were also commended by officials of Tanzania's ruling party, Chama Cha Mapinduzi (CCM), also a partner of the Chinese Communist Party (CCP). On different occasions, CCM officials met the CMTs and praised their clinical care of patients. Bidding farewell to a CMT and welcoming another team in 1991, the Party Vice-Chairman, Rashidi Kawawa, paid tributes to the CMTs and the Chinese government, saying: "Your services are appreciated by Tanzanians because you are kind and caring, things that have moved a lot of people."[116] Meetings of CMTs with the ruling party leaders bolstered relationships between the CCM and the CCP political parties. The findings of this study show that Chinese doctors competed vigorously to meet and attend to government and party officials, who were attended to by doctors with higher levels of expertise, in order to earn positive appreciation (Figure 8). For instance, the CMTs working in

112 "Chinese Doctors Praised by Mara Region MP," NRC. PMO-RALG 8/2/3, File Ref. No. LGRD. N2/21, Tanzania News Bulletin, 1968–68.

113 My translation from Kiswahili text, "Maswali Bungeni, October 22, 1971, Parliamentary Hansard," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

114 "Maswali Bungeni, April 22, 1971, Parliamentary Hansard, Madaktari wa Kichina Masasi," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

115 Mujuni Anatory, "China yatoa Misaada kwa Hospitali," *Heko*, April 25, 1998.

116 Mussa Lupatu, "Kawawa Hails Chinese Doctors," *Daily News*, August 30, 1991, 5.

the Mara region cared for Nyerere's family. In August 1975, they camped at Nyerere's residence in Butiama to attend to Nyerere's mother, who was sick.[117] Such enthusiasm to provide care to political elites was not limited to Tanzania alone. Mu Tao and Yu Bin show that the CMTs working in Uganda offered special clinical care to President Yoweri K. Museveni and his government officers.[118] Such prioritizations allowed for easier acceptance and earned them the hearts and minds of political elites. Diplomatically, positive annotations from the party and government officials were of importance. Larry Hanauer and Lyle J. Morris maintain that some African political elites praised China's assistance to ensure continued support from the Chinese government.[119]

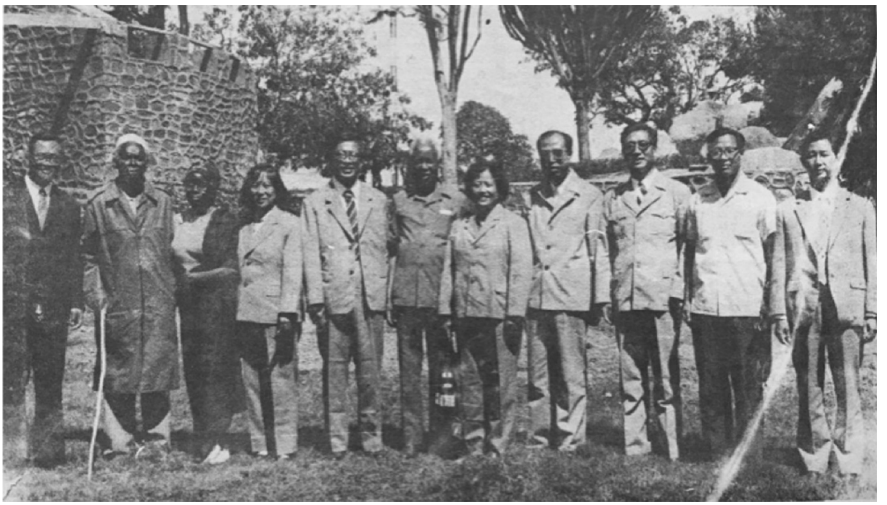

Figure 8: President Nyerere (sixth left) with Chinese doctors in Butiama, 1985. Source: "Matembezi ya Marafiki wa Mwalimu Butiama," *Uhuru*, October 31, 1985, 3 (printed with permission).

Nevertheless, perceptions of CMTs were negative among some medical doctors from other countries working in Tanzania. Information from the health department of Shandong province shows that the CMTs complained about the fierce

117 "Medical Aid to Tanzania, Work Reports, Job Descriptions and Distribution Table, 1975," SPA, File No. A034-04-085, Shandong Province Health Bureau.

118 Mu Tao and Yu Bin, *President Y. K. Museveni and Uganda: The Permanent Snow Mountain on the Equator and the Pearl of Africa, English Edition*, (Shanghai: Shanghai Lexicographic Publishing House, 2016), 266.

119 Larry Hanauer and Lyle J. Morris, *Chinese Engagement in Africa: Drivers, Reactions and Implications for U.S Policy*, (Washington DC.: RAND Corporation, 2014), 55.

competition between Chinese doctors and doctors from other countries. Huang Xichang, the leader of the fourteenth batch of the CMTs in Tanzania, said: "In Tanzania, there are doctors from more than ten countries, the competition is rather fierce, our advantage in addition to technical support, is a spirit, which is hardworking, fearing neither hardship nor tiredness, being on call, win the trust of the people with technology advantage."[120] This account confirms the oral testimonies I collected, in which respondents affirmed that, unlike medical doctors from the Global North, Chinese doctors worked harder to demonstrate their abilities in clinical care.[121] Apparently, medical doctors from other countries underrated their expertise. In their report to the provincial health department, the CMTs mention that doctors from countries of the Global North praised the health services that the former provided to patients, but not the skills they possessed. Still, a few doctors of the Global North collaborated with Chinese doctors to address severe health cases.[122]

Respondents' general overview suggests that the healthcare services provided by the CMTs in Tanzania from the 1960s to the 1980s met with overall positive responses. Some Tanzanians who experienced the services from this period gave credit to their expertise.[123] However, responses from Tanzanians who experienced the abilities and services of the CMTs from the end of the 1990s to the 2000s gave a different response. They claimed they did not see any extraordinary expertise from the CMTs, underscoring that their abilities were modest and similar to those of many Tanzanian medical workers – even though they ranked higher than the expertise of Cuban and medical doctors of the North.[124] Surely, Tanzania's healthcare situation largely influenced these contrasting perceptions. Therefore, Chinese doctors came to Tanzania when the country had a severe shortage of medical personnel. Furthermore, the CMTs were more qualified than local doctors, which also explains the positive perceptions of their services by patients, political elites, and local doctors. The increased number of trained local medical personnel might have influenced the perceptions of the 1990s and 2000s informants, who offered less enthusiastic evaluations of the CMTs.

120 Translated from Chinese text by Guo Suhang under my request, Health Department of the Shandong Province, *The Chinese Medical-Aid Team*, 32.

121 Interview with Rajabu Kisonga, April 24, 2018, Dodoma; Cleopa David Msuya, July 6, 2018, Dar es Salaam; Joseph W. Butiku, July 9, 2018, Dar es Salaam and Gallus Namangaya Abedi, June 6, 2018, Dar es Salaam.

122 Health Department of the Shandong Province, *The Chinese Medical-Aid Team*, 11.

123 Interview with Cleopa David Msuya, July 6, 2018, Dar es Salaam; Joseph W. Butiku, July 9, 2018, Dar es Salaam; Gallus Namangaya Abedi, June 6, 2018, Dar es Salaam.

124 Interview with Elisiana Danford, April 24, 2018, Dodoma; Martha Manyirezi, April, 2018, Dodoma; Simon Ernest, May 7, 2018, Dar es Salaam; Rajabu Kisonga, April 24, 2018, Dodoma.

3.7 The Distinctiveness of CMT Services

Before the onset of the CMT program in Tanzania, medical teams from countries of the Global North and South were working in the country. To distinguish the CMTs from previous approaches, avoid mistakes, and thus win popularity, prospective CMT members went on study tours before their dispatch. This confirmed a broader pattern since, as Deborah Brautigam has shown, the Chinese government had been keen to study traditional donors of the Global North and, on this basis, design aid strategically to bolster its interventions, acceptance, and popularity.[125] The CMT report of March 1, 1968, confirmed that donors of the Global North dominated the provision of clinical care, medicines, medical equipment, and scholarships to medical students in Tanzania. Accordingly, they advised their government to find its distinct approach towards medical assistance.[126] Indeed, before Tanzania's diplomatic clashes with the Federal Republic of Germany and Great Britain in the mid-1960s, the government had hired many medical doctors from Britain, Israel, Yugoslavia, Italy, Canada, and the USA.[127] Nevertheless, the government also received medical workers from different communist countries, such as the Soviet Union and Cuba.[128]

These medical teams triggered mixed responses. While talking to Consul Zhou Boping in 1967, Nyerere expressed concern that medical doctors from countries of the Global North were overly demanding and preferred a lavish lifestyle in a low-income country. He grumbled that they demanded pleasant, expensive houses with air conditioning, which cost the country dearly. Nyerere anticipated that doctors from China would be different simply because they came from a country of the Global South.[129] Coincidentally, the Chinese government had pledged in its Eight Principles of overseas aid that "[T]he experts dispatched by the Chinese Government to help in construction in the recipient countries will have the same standard of living as the experts of the recipient country. The Chi-

125 Deborah Brautigam, *The Dragon's Gift: The Real Story of China in Africa* (New York: Oxford University Press, 2009), 11.

126 "Medical Aid to Tanzania, 1968," SPA. File No. A034-03-006, Shandong Province Health Bureau.

127 "URT, President's Address to the National Assembly, Tuesday, June 8, 1965," TNA. Acc. No. 589 Orodha ya Majalada ya Mtu Binafsi, Bhoke Munanka, File No. BMC. 10/03, Speeches of Ministers and Junior Ministers, 23; "Italian Doctors Arrive," *Daily News*, July 19, 1977, 1.

128 "Bomani to Discuss Aid in Moscow," *Sunday News*, November 2, 1967, 1; "Cuba Sends More Doctors," *Daily News*, September 12, 1977, 3.

129 Altorfer-Ong, "Old Comrades and New Brothers," 261.

nese experts are not allowed to make any special demands or enjoy any special amenities."[130] Consequently, while other expatriates working in Tanzania enjoyed good salaries and comfortable living environments that were better than those of local medical workers with the same level of expertise, the Chinese experts put up with the local lifestyle and earnings.

Maoist philosophy manifested itself in Tanzania. For instance, in 1970, the Chinese government proposed to lower salaries to Tshs. 400 per month for the Chinese experts working in Zanzibar to adjust to local wages. Part of the letter by Chen Ching, the Chinese Consul in Zanzibar, to the First Vice-President, Sheikh Abeid Amani Karume, read:

> On behalf of the Government of the People's Republic of China, I have the honour to confirm hereby that following the teaching of the great leader of the Chinese people, Chairman Mao, to preserve the style of plain living and hard struggle with a view to reducing Zanzibar's burden in its national economy through self-reliance, the Chinese Government proposes hereby to lower the standard of living expenses of Chinese experts in Zanzibar.[131]

The argument for "plain living" advocated by Chinese experts was based on the view that countries of the Global South, including China, were equal since, at different historical periods, they experienced similar social, economic, and political predicaments instigated by the impacts of imperialism, colonialism, and neocolonialism.[132] This context enhanced the CMTs' acceptance in Tanzania as the government expected them to evade an imperialistic lifestyle. Similarly, Nyerere anticipated that doctors from socialist countries would transmit socialist lifestyles to local doctors through their positive examples.[133]

In 1968, the Second Vice President of Tanzania, Rashidi M. Kawawa, maintained that Chinese doctors distinguished themselves from medical doctors of the Global North by being obliging and capable of living and working in any environment.[134] While the sources used for this study confirm that the CMTs endured

130 "Eight Principles for Economic and Technical Aid Contended by Premier Zhou Enlai when Answering Questions from Reporters of the Ghana News Agency on January 15, 1964, in Ghana," quoted in *Afro-Asian Solidarity Against Imperialism: A Collection of Documents, Speeches and Press Interviews from the Visits of Chinese Leaders to Thirteen African and Asian Countries* (Peking: Foreign Languages Press, 1964), 150.

131 Quoted in "Chinese in Zanzibar to Earn Less," *The Nationalist*, November 20, 1970, 1.

132 Read, for instance, "A Speech by Chiao Kuan-Hua, Chairman of the Chinese Delegation and Minister of Foreign Affairs at the 31st Session of the United Nations General Assembly, October 6, 1976," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

133 Julius K. Nyerere, *Ujamaa: Essays on Socialism* (Dar es Salaam: Oxford University Press, 1968), 148.

134 "Misaada ya China Haina Mirija," *Ngurumo*, February 12, 1968, 1.

modest living and working conditions in Tanzania, CMT members did submit a few complaints to the MoH. For example, they were unhappy with old furniture, and they demanded repair and purchase of some items such as curtains, air conditioners, cooking utensils, gas cookers, and others, which Nyerere initially perceived as luxurious amenities. They also complained about the old vehicles the ministry gave them for an upcountry medical tour. Moreover, in some regions, apartments rented for the CMTs were not of low quality. In 2008, for instance, the Tanzanian government paid up to USD 1,500 a month per apartment.[135] This study has found that the CMTs' living and working environments varied from time to time and from one region to another. The MoH addressed several challenges at national and regional administrative levels to enable the CMTs to live and work comfortably.

Working in *Ujamaa* villages was among the distinctive features of the CMTs. Such attempts aligned with the country's socialist health policies, prioritizing rural healthcare, similar to the Chinese healthcare policy adopted following the Great Proletarian Cultural Revolution.[136] To become consistent with the government's health policy, the CMTs spent at least half their time attending to patients in villages under their mobile health services, enduring challenges such as unreliable water and electricity supply and public transport.[137] For example, in 1970, the doctors attended to 16,500 patients residing in rural areas of the Shinyanga and Maswa Districts. In a single *Ujamaa* village, the Chinese doctors stayed for more than ten days to participate in village life and work, winning the hearts and minds of political elites and the general rural communities.[138] In 1975, the Principal Secretary of the MoH applauded the CMTs by saying:

> Chinese doctors work in rural areas where the health care services are indigent, and patients are most in need of assistance. Doctors from other countries cannot adapt to such an environment, while Chinese doctors in those places can work with enthusiasm. Secondly, they [Chinese doctors] know Tanzania very well and understand the problems of the people.

135 "A Memo, 9/4/1974," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; "Meeting Minutes: 29th February 2008," NRC. Ministry of Health and Social Welfare, 14/05/03, File Ref. No. HC. 74/311/02 Chinese Medical Team 2007–2010.

136 "Madaktari Zaidi toka China Watakuja," *Uhuru*, May 7, 1968, 1; "'Rash' of Clinics but no Staff, Self-Help Hitch," *Tanganyika Standard*, Wednesday, July 18, 1962, 3.

137 "Letter from Daktari Mkuu wa Mkoa, Shinyanga, to Katibu wa TANU, Mkoa wa Shinyanga, August 15, 1974, Madaktari wa Kichina," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

138 "A Special Report, Chinese Medical Assistance to Tanzania, May 12, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

> Working with the people of Tanzania and helping them is both a challenge and a pleasure for Chinese doctors.[139]

Such assertions illuminate that working in rural areas by the CMTs pleased officials in the MoH, as it differentiated them from other teams whose doctors were scared of working in villages. More importantly, it pleased grateful villagers who, in different places, presented gifts to the CMTs to express their gratitude (Figure 9). Mothers in villages whose infants' lives were saved or whose fertility cases were addressed by Chinese gynecologists gave their children Chinese names or surnames of the doctors.[140] Generally, throughout the 1960s and 1970s, the CMTs prioritized rural healthcare. Nevertheless, since the end of the 1980s, their services have been primarily based in national and referral hospitals, preferably in Dar es Salaam, Dodoma, Tabora, and Musoma.[141] During this period, the roles of the CMTs were less stressed in spreading communist propaganda. Instead, they focused on bolstering the market for Chinese medicines and painting the Sino-Tanzanian relationship. Such new roles did not primarily require CMTs to work in rural areas.

Structural differences existed between the CMTs and medical teams from other countries working in Tanzania. While medical doctors from China, from its inception, remained public and decentralized at the provincial level, medical teams from other donor countries were primarily provided by public, private, and multilateral foundations. The Chinese central government and African countries negotiated for medical assistance, but the provinces deployed medical doctors to the continent.[142] This structure gave Chinese provinces arguably greater control over the CMT program than the central government. As a result, it maintained relationships between recipient countries and their respective provinces, helping Chinese provinces swiftly access markets and investment opportunities in recipient countries. In Tanzania, for instance, traditional Chinese medicine practitioners from Shandong province mainly invested in traditional Chinese medicine clinics.[143] It is, therefore, fair to contend that the CMT program played a soft power role in easing the penetration of provincial hard power through trade and direct investment in Tanzania.

Maintenance cost was among the aspects that distinguished the CMTs from medical doctors from other countries working in Tanzania. Since 1978, following

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139 Translated from Chinese text by Guo Suhang under my request, Health Department of Shandong Province, *The Chinese Medical-Aid Team,* 32.

140 Health Department of Shandong Province, *The Chinese Medical-Aid Team,* 60.

141 Interview with Edith Bakari, May 8, 2018, Dar es Salaam; Rajabu Kisonga, April 24, 2018, Dodoma.

142 Paul Kadetz, "Unpacking Sino-African Health Diplomacy: Problematizing a Hegemonic Construction," *St Antony's International Review* 8, no. 2 (2013): 156.

143 Interview with Sui Guangxin and Chen Zhufeng, March 1, 2016, Jinan.

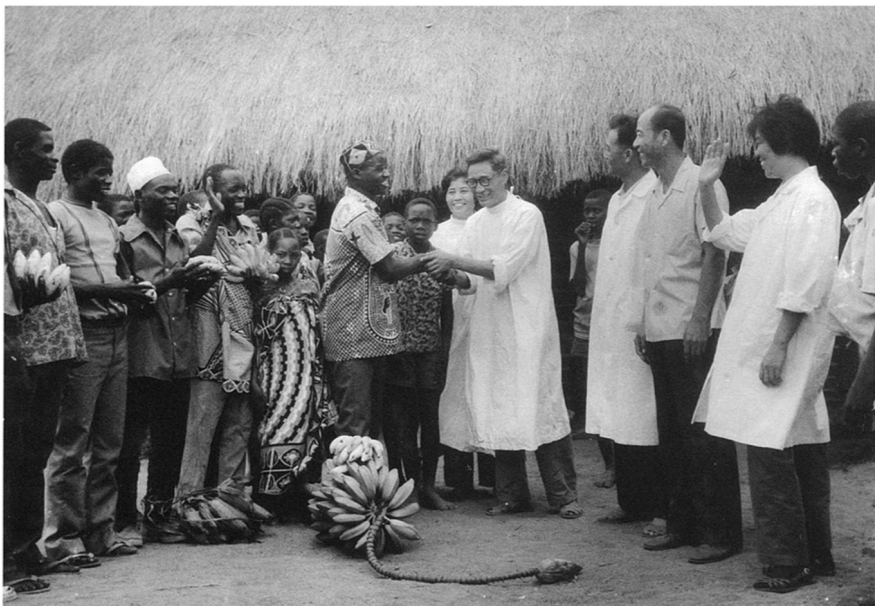

Figure 9: A gift of bananas to the CMT (undated, likely 1970s). Source: Health Department of the Shandong Province, *Unforgettable Memory,* 71 (printed with permission).

China's open-door policy, recipient countries paid more to host CMTs. However, compared to medical teams from other countries, the CMTs were cheaper. For example, while the CMTs working in Tanzania received USD 170 a month by the 2000s, the Cuban doctors received a living allowance of up to USD 300 per month per person in the same period.[144] In other countries, such as South Africa, the Cuban government demanded full salaries for its medical doctors, and it collected 57% of income tax from doctors' working salaries.[145] Distinctively, throughout the CMT program in Tanzania, the Chinese government paid salaries to its medical workers working in the country. The cheapness of the CMTs was further realized in the aspect of flight costs, where the Tanzanian government paid only for the return tickets to the CMTs, but it paid for the round-trip tickets to Cuban doctors.[146]

144 "Minute, August 31, 2005," NRC. Ministry of Health and Social Welfare, 14/3/04, File Ref. No. BC. 103/544/01 Republic of Cuba Technical Assistance, 2005–2010.

145 Daniel Hammett, "Cuban Intervention in South African Health Care Service Provision," *Journal of Southern African Studies*, 33, no. 1 (March 2007): 76–77.

146 "Minute, August 31, 2005," NRC. Ministry of Health and Social Welfare, 14/3/04, File Ref. No. BC. 103/544/01 Republic of Cuba Technical Assistance, 2005–2010.

Therefore, despite the changes in China's foreign policy, Chinese doctors were far cheaper than medical teams from other countries. Nevertheless, the cheapness of the services provided by the CMTs does not mean that the Chinese government gained nothing from its medical missions. Instead, the CMT program promoted market access for Chinese medicines and bolstered diplomatic relations between the two countries.

3.8 Conclusion

This chapter has unpacked the history of the CMT program in Tanzania. Discussions in the chapter have contended that the CMTs had a long history in the country. The chapter discussed how the CMT program distinguished itself from medical assistance provided by other nations, making the Chinese government appear a more responsible and reliable partner than traditional donors of the Global North. The analyses in this chapter add weight to the argument by Jeremy Youde, Olivia Killeen, and colleagues, who hold that China's medical diplomacy extended hard and soft powers.[147] The chapter has shown that the CMT program went hand in hand with donating Chinese-made drugs, which partly assisted Tanzanians in getting access to basic medicines while promoting market access and acceptance of Chinese medicines in Tanzania. The chapter maintained that the CMT program modestly promoted self-dependence in Tanzania's health sector. Even worse, the Tanzanian actors failed to negotiate, shape, or drive Chinese actors to turn the CMT program into a bridge for the self-sufficiency agenda. To this end, the CMT program, which has been in place for more than half a century, has not lived up to its claims of capacity building, which would have been a vital step in promoting a sustainable healthcare system. Dispatching CMTs to Tanzania, overwhelmed training programs, and joint medical research activities. This situation exacerbated Tanzania's dependence on Chinese doctors up to the present day, as, following Drew Thompson, the Tanzanian health sector is under serious threat by the fact that China's population increase and disease burden will cause some provinces to withdraw their dispatch of medical specialists to Africa.[148]

147 Olivia J. Killeen, *et al*., "Chinese Global Health Diplomacy in Africa: Opportunities and Challenges," *Global Health Governance* 12, no. 2 (Fall 2018): 19; Jeremy Youde, "China's Diplomacy in Africa," *China an International Journal* (March 2010): 151.

148 Drew Thompson, "China's Soft Power in Africa: From the "Beijing Consensus" to Health Diplomacy," *China Brief* 5, no. 21 (October 13, 2005): 4.

Chapter Four
A History of Traditional Chinese Medicine in Tanzania

4.1 Introduction

This chapter examines the introduction, perception, and practice of Traditional Chinese Medicine (TCM) in Tanzania. It reveals that TCM was first introduced in the coastal region of the country by Chinese navigators in the fifteenth century. However, it was not until the late 1960s that the therapy gained widespread popularity and became widely practiced following the dispatch of Chinese Medical Teams (CMTs). The TCM experts who accompanied CMTs practiced and disseminated TCM knowledge to local medical workers. The commencement of HIV and AIDS TCM research and treatment in 1987 at Muhimbili National Hospital (MNH) and the establishment of private TCM clinics in the 1990s further enhanced its acceptance and practice in the country. This chapter argues that the practice, spread, and acceptance of TCM knowledge in Tanzania were crucial for promoting medical knowledge from the Global South. In the spirit of Southern solidarity, countries of the Global South viewed South-South knowledge exchange as an emancipatory initiative against dependence on the medical knowledge of the Global North.[1] Nevertheless, the chapter illustrates that the execution of TCM services in Tanzania was not only envisioned as an alternative to medical knowledge from the Global North but also promoted the use of Chinese medicine alongside biomedicine. Unfortunately, such promotions did not translate into great success in mainstream Tanzanian public health.

4.2 Traditional Chinese Medicine's Global Outreach

Traditional Chinese medicine relies primarily on herbal medications to prevent and help the human body fight ailments, relieve pain and restore health. In addition to medication, TCM adopts non-pharmacological therapies such as acupunc-

1 Permanent Secretariat of the Afro-Asian Peoples' Solidarity Organisations, *Afro-Asian Peoples' Solidarity Movement*, (Cairo), 12.

https://doi.org/10.1515/9783112206881-004

ture and moxibustion, massage, cupping, and spooning.[2] Acupuncture and moxibustion are the key components of TCM and began in China around 100 BCE. The therapies spread outside China, recording positive receptions in Korea and Japan in the sixth century CE, Vietnam in the eighth and tenth centuries CE and France in the seventeenth century before it spread to Germany, Holland, and England by 1700.[3] By the 1900s, TCM had spread to North America, Asia and several European countries. Portuguese Jesuit missionaries working in Japan and Asian immigrants, especially the Chinese and Vietnamese, were the principal agents for the practice and its spread outside Asia.[4]

The advent of biomedicine in the 1900s negatively impacted the popularity and endurance of TCM not only in Europe but also in China. During this era, acupuncture and moxibustion therapies were perceived as unscientific.[5] However, after the founding of New China in 1949, the government attached great importance to the development of TCM by laying down policies, principles, and strategies to promote its acceptance and practices worldwide.[6] The promotion of TCM aimed at backing up Western-based medical care in China. In the 1950s, China had more than half a billion people attended to by fewer than 40,000 biomedical doctors. Consequently, the promotion of TCM partly aimed to enable the Chinese government to utilize about 500,000 TCM practitioners who were previously disorganized, discouraged, and disengaged from healthcare provision.[7]

The promotion of TCM went hand in hand with scientizing its knowledge. The Vice-Minister for Public Health, Chien Hsin-chung, confessed that most TCM therapies were unscientific, calling for scientific research to prove their effectiveness.[8] The minister's call aligned with Chairman Mao Zedong's ambitions, who,

2 The State Council Information Office of the People's Republic of China (PRC), *A White Paper on the Development of Traditional Chinese Medicine (TCM) in China, 6th December 2016*, 4; Interview with Jiang Xuan, January 4, 2016, Hangzhou; Andrea Azizi Kifyasi, "How Effective Was the Global South Knowledge Exchange? The Chinese-Funded Medical Projects in Tanzania, 1968–1990s." *Technology and Culture* 65, no. 1 (Jan. 2024): 45.

3 A. White and E. Ernst, "A Brief History of Acupuncture," *British Society for Rheumatology* 43, no. 5 (May, 2004): 662.

4 Stephen J. Birch and Robert L. Felt, "The Acculturation and Re-Acculturation of Acupuncture," in *Understanding Acupuncture,* ed. Stephen J. Birch and Robert L. Felt (London: Churchill Livingstone, 1999), 45.

5 Ernst, "A Brief History of Acupuncture," 663; Paul U. Unschuld, *Traditional Chinese Medicine: Heritage and Adaptation*, trans. Bridie J. Andrews (New York: Columbia University Press, 2018), 1.

6 Chien Hsin-chung, "Chinese Medicine: Progress and Achievements," *Peking Review*, February 28, 1964, 18.

7 Birch and Felt, "The Acculturation and Re-Acculturation of Acupuncture," 51.

8 Chien, "Chinese Medicine," 18.

besides promoting the use and spread of TCM in and outside China, did not believe in it. Mao told his physician, Dr Li Zhisui, "Even though I believe we should promote Chinese Medicine, I personally do not believe in it. I don't take Chinese medicine. Don't you think that is strange?"[9] Mao desired to see TCM practitioners formally trained and its therapies scientifically trustworthy and integrated with biomedicine to earn local and global acceptability. He avowed,

> What I believe is that Chinese and Western medicine should be integrated. Well-trained doctors of Western medicine should learn Chinese medicine; senior doctors of Chinese medicine should study anatomy, physiology, bacteriology, pathology, and so on. They should learn how to use modern science to explain the principles of Chinese medicine. They should translate some classical Chinese medicine books into modern language, with proper annotations and explanations. Then, a new medical science based on the integration of Chinese and Western medicine can emerge. That would be a great contribution to the world.[10]

Accordingly, since the mid-1950s, the Chinese government established TCM schools with a standardized curriculum, where TCM students and practitioners studied basic biomedical sciences, traditional pharmacotherapy, and acupuncture. In 1956, China made TCM a compulsory course for students trained in biomedicine to enhance their basic knowledge of TCM and promote the use of both medical systems. To legally protect the integration process, China's constitution stipulated that modern medicine and TCM should be developed.[11] The establishment of formal training, which began in the mid-1950s and heightened after the 1966 Great Proletarian Cultural Revolution, not only legitimized TCM as a trustworthy practice grounded in science but also helped the government unify and regulate the practices of traditional health practitioners. Throughout the 1950s and 1960s, the government stressed training and undertaking research. Thus, it established TCM colleges in Beijing, Shanghai, Chengdu, Guangzhou, and Nanjing in the 1950s, spreading to all provinces from the 1960s onwards. While believing in biomedicine, Mao saw the economic and political potential of TCM vying to promote its knowledge globally, bolstering its parallel use with biomedicine, fighting diseases, and winning market and national pride.[12]

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9 Li Zhisui, *The Private Life of Chairman Mao: The Memoirs of Mao's Personal Physician Dr Li Zhisui*, trans. Tai Hung-Chao (New York: Random House, 1994), 84.

10 Li, *The Private Life of Chairman Mao*, 84.

11 Birch and Felt, "The Acculturation and Re-Acculturation of Acupuncture," 52; WHO, "Study Tour in China," *World Health*, November 1977, 23; WHO, *The Role of Traditional Medicine in Primary Health Care in China, 1985*, 1.

12 Chien, "Chinese Medicine," 18; Ling Yang, "Training Medical Workers," *Peking Review*, November 13, 1964, 23.

While TCM's emergence and spread in Europe, America, and other Asian countries are well documented, similar narratives are missing in Africa. Anecdotal information shows that TCM was introduced to the East African coast in the fifteenth century through expeditions led by the Ming dynasty diplomat Zheng He. Zheng's expeditions to the East African coast comprised 180 Chinese doctors and orderlies. The medical doctors cared for the delegates and sought new medical knowledge and *materia medica* from the coast.[13] In such ways, medical knowledge from the coast flowed to China through direct contact between Chinese and local medical practitioners.[14] Yet, reliable evidence indicating that Chinese medical doctors extended medical services to the coastal people is missing. Furthermore, there is no plausible information suggesting that coastal medical practitioners adopted any medical knowledge from Chinese medical practitioners. Nevertheless, Li Xinfeng shows that Chinese descendants left by Zheng in Mombasa after a shipwreck practiced TCM therapies such as massage and cupping and passed on medical knowledge from one generation to another.[15] Li's assertions, however, fall short in terms of methodology as he lacked complementary information from archival and archaeological sources. It is, therefore, not known whether the Chinese left were TCM practitioners or ordinary Chinese with varying levels of TCM knowledge. Yet, Li's study brings to light the practice of some TCM therapies on the East African coast before the 1960s. However, their use and spread to other parts of Africa were curtailed by the limited nature of precolonial and colonial Sino-African relationships. In the colonial period, for instance, so-called Chinese "coolies" worked in different colonial economic investments in Tanganyika, South Africa, and West Africa.[16] However, there is no evidence that these indentured Chinese practiced TCM in those colonies. TCM was spread intensely in Africa by the CMT from the 1960s onwards, with acupuncture therapy being the first to be introduced due to its efficacious aptitude in relieving pain and treating various health cases.[17]

TCM hinges on the philosophy that conceives the human body as maintained by "primordial life energy" called *qi*. This theory explains the physiology and pa-

13 Abdul Sheriff, *Dhow Cultures of the Indian Ocean: Cosmopolitanism, Commerce and Islam* (New York: Columbia University Press, 2010), 296.

14 Sheriff, *Dhow Cultures*, 298.

15 Li Xinfeng, *China in Africa in Zheng He's Footsteps*, trans. Shelly Bryant (Cape Town: Best Red HSRS 2017), 29–30.

16 Read, for instance, Juhani Koponen, *Development for Exploitation: German Colonial Policies in Mainland Tanzania, 1884–1914* (Münster: LIT Verlag, 1994), 336.

17 "United Nations Development Programme (UNDP), Project of the Governments of Training Course on Acupuncture Treatment, 17/11/1977," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China; WHO, "Study Tour in China," 23.

thology of the human body and underpins the etiology, prevention, and cure of diseases. TCM practitioners uphold that the *qi* energy flows throughout the human body along several channels called "meridians." Thus, the effective flow of *qi* energy is vital for maintaining a balance between two crucial natural forces, *yin* and *yang*, which, in turn, is required to maintain the stability of the human body.[18] In this regard, the occurrence of diseases was attributed to the dominance of either of the forces over the other, caused by an imbalanced flow of *qi* along the meridians.[19] The balanced state of *yin* and *yang* is manifested in three dimensions: the harmonization of physical form and vitality, man and nature, and man and society. The outlined dimensions made the TCM theory compatible with the WHO's concept of "health," which defined it as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."[20]

According to TCM theory, the imbalanced flow of the *qi* energy leading to the occurrence of diseases was caused by exogenous factors, epidemic pathogenic factors, parasites, emotional changes, improper diet, maladjustment between work, exercise, and rest, trauma, and fluid retention, as well as blood stasis. Yet, TCM practitioners did not just rely on symptoms and signs to diagnose diseases. Instead, they employed further diagnostic skills such as observation, listening, smelling, inquiring, and palpation.[21] Modes of causation and the types of diseases informed the healing systems. Some patients received herbal doses, while others underwent acupuncture therapy. In the case of acupuncture, acupuncturists insert acupuncture needle(s) into the skin at specific points of the body along the meridian. The inserted needle(s) stimulated sensory nerves under the skin and muscles of the patient's body to restore the usual balance of *yin* and *yang* for the

18 Douglas Allchin, "Points East and West: Acupuncture and Comparative Philosophy of Science," *Philosophy of Science* 63 (Sep. 1996): S109; Jie Wang, Lin-guo Zhang and Wei Jia, "The Rationale of Combination Drug Formulas in Traditional Chinese Medicine," in *Chinese Medicine Modern Practice: Annals of Traditional Chinese Medicine Vol. I*, ed. Ping-chung Leung and Charlie Chang-li Xue (Singapore: World Scientific Publishing, 2005), 44.

19 Stefan Jaeger, "A Geomedical Approach to Chinese Medicine: The Origin of the Yin-Yang Symbol," in *Recent Advances in Theories and Practice of Chinese Medicine*, ed. Haixue Kuang (2012), 30; Unschuld, *Traditional Chinese Medicine,* 25.

20 WHO, *Constitution of the World Health Organization, 1946*, 1; Li Zhao, Kelvin Chan, Kwok-fai Leung, Feng-bin Liu and Ji-qian Fang, "The Conceptual Framework of the Chinese Quality of Life (ChQoL) Instrument," in *Chinese Medicine Modern Practice: Annals of Traditional Chinese Medicine Vol. I*, ed. Ping.chung Leung and Charlie Chang-li Xue (Singapore: World Scientific Publishing Co. Pte. Ltd, 2005), 189–191. 44.

21 Wen Xuan, "Traditional Chinese Medicine: An Overview," in *Traditional Chinese Medicine*, ed. Chun-su Yuan, Erick J. Bieber and Brent A. Bauer (Washington: CRC Press, 2011), 97–107.

normal flow of *qi* energy and, hence, restored health.[22] Although TCM theory and practices spread worldwide, Western scientists dismissed its conception of disease and healing, claiming that it was unscientific. The placement of needles, for instance, contrasted with the Western scientific conception of cells, nerve pathways, and energy in biological systems. Under such a perception, they categorized TCM therapies as a pseudoscience.[23] Nevertheless, the *qi* theory remained fundamental for the practices of TCM in different parts of the world.

Moving away from Eastern and Western societies to Africa, the Chinese conception of health and disease also varied from that of African societies. From the pre-colonial period to the present, African societies have had a different conception of illness and its etiology. For instance, in the pre-colonial era, various health practices and epistemologies emphasized that the neglect of ancestral spirits caused illness and other afflictions to individuals, families, and the general community. Furthermore, they supposed that a particular disease was caused by a sorcerer when a person died suddenly or had a chronic illness that was unexplainable and progressed rapidly. Communities further believed that disrespect of community taboos was capable of causing diseases as a punishment by spirits. Moreover, some societies believed other diseases existed naturally, without any spiritual or social cause.[24]

African healing systems varied considerably depending on their etiology, and comprised three levels: divination, spiritualism, and herbalism. Medicinal herbs and minerals were used to cure some diseases, while others were treated through propitiations or sacrifices to ancestral spirits.[25] The healing practices adopted

22 Lynnae Schwartz, "Evidence-based Medicine and Traditional Chinese Medicine: Not Mutually Exclusive," *Medical Acupuncture* 12, no. 1 (Spring 2000), 2; Yong G. Wang, "Acupuncture," in *Traditional Chinese Medicine*, ed. Chun-su Yuan, Erick J. Bieber and Brent A. Bauer (Washington: CRC Press, 2011), 124; Allchin, "Points East and West," S110.

23 Margaret Lock and Vinh-Kim Nguyen, *An Anthropology of Biomedicine* (Oxford: Wiley-Blackwell, 2010), 40; Allchin, "Points East and West," S110.

24 Gloria Waite, "Public Health in Pre-colonial East-central Africa," in *The Social Basis of Health and Healing in Africa,* ed. Steven Feierman and John M. Janzen (Los Angeles: University of California Press, 1992), 213–218; Steven Feierman, "Explanation and Uncertainty in the Medical World of Ghaambo," *Bulletin of the History of Medicine* 74, no. 2 (2000): 320; Yusufu Q. Lawi, "Changes and Continuities in Local Articulations of Life, Illness and Healing in Rural Africa: A case of the Iraqw of North-Central Tanzania," *Tanzanian* Journal *of Population Studies and Development* 15, no. 1 and 2 (2000): 68; Karen. E. Flint. *Healing Traditions: African Medicine, Cultural Exchange and Competition in South Africa, 1820–1948* (Athens: Ohio University Press, 2008), 56.

25 Harald Kristian Heggenhougen, "Health Services: Official and Unofficial," in *Tanzania Crisis and Struggle for Survival*, ed. Jannik Boesen, Kjell J. Havnevik, Juhani Koponen, and Rie Odgaard (Uppsala: Scandinavian Institute of African Studies, 1986), 312; Megan Vaughan, *Curing their Ills: Colonial Power and African Illness* (Cambridge: Polity Press, 1991), 60; Waite, "Public Health in Pre-colonial East-central Africa," 214–215.

other traditions, including biomedicine, from the late nineteenth century to the present. Following Stacey A. Langwick, Tanzanian patients and practitioners have regarded biomedical approaches as only part of "a broader therapeutic ecology" up to the present.[26] Therefore, although biomedicine became entrenched in the colonial period, Tanzanian communities relied on both biomedical and traditional logic of causality and treatment. Although the colonial administration promoted the use of biomedicine, communities in Tanzania perceived it as insufficient in addressing all health problems. Thus, medical pluralism remained the main feature of the Tanzanian healthcare system in both colonial and postcolonial periods. Thus, when TCM was introduced and practiced in Tanzania, it met communities that were accustomed to pluralistic health systems capable of absorbing new medical culture.[27] Michael Jennings illustrates how patients in Tanzania were less interested in knowing the philosophical underpinnings of TCM. Instead, they mainly considered the efficacy of their clinical care.[28]

In such pluralistic contexts, acupuncture spread swiftly and was practiced in some African hospitals. Countries such as Algeria, the Republic of the Congo, Ethiopia, Mauritania, Somalia, Togo, Tanzania, and Niger have used acupuncture therapies in some government hospitals since the 1960s. Moreover, Chinese acupuncturists offered free lessons to local medical workers and established acupuncture departments in government hospitals in some African countries.[29] In the 1990s and 2000s, the Chinese introduced an acupuncture course in some African universities, such as Conakry University in Guinea, Universidade Eduardo Mondlane in Mozambique, and the Madagascar State Public Health School.[30] A milestone for training TCM courses for African doctors was reached in 2000 following the inauguration of the Forum for China-Africa Cooperation (FOCAC). During the first FOCAC Ministerial meeting, held in Beijing in 2000, participants issued a declaration that, among other things, suggested the convocation of the China-Africa Forum on Traditional Medicine and the adoption of an Action Plan

26 Stacey A. Langwick, "Articulate(d) Bodies: Traditional Medicine in Tanzanian Hospital," *American Ethnologist* 35, no. 3 (2008): 428.

27 Murray Last, "The Importance of Knowing About Not Knowing," *Social Science Medicine* 15B (1981): 390.

28 Michael Jennings, "Chinese Medicine and Medical Pluralism in Dar es Salaam: Globalization or Glocalisation? *International Relations* 19, no. 4 (2005): 467.

29 Li Anshan, "From 'How Could' to 'How Should': The Possibility of a Pilot U.S.-China Project in Africa," in *China's Emerging Global Health and Foreign Aid Engagement in Africa*, ed. Xiaoqing Lu Boyton (Washington DC: Centre for Strategic and International Studies, 2011), 42.

30 Li, "From 'How Could' to 'How Should,'" 42.

for cooperation in traditional medicine between China and African countries.[31] The convocation was partly used as a bridge to pass TCM knowledge on to African countries through the provision of scholarships for TCM courses in China and the promotion of TCM clinics in Africa. The available evidence generally shows that from the 1960s to 2010, Chinese TCM colleges admitted more than 1,000 African students.[32]

4.3 Emergence, Spread, and Practices of Traditional Chinese Medicine

From the 1960s onwards, most African countries that received CMTs witnessed the emergence, spread, and practice of TCM. China's 2016 White Paper on the Development of Traditional Chinese Medicine indicates that 10% of the CMTs sent to over 70 countries in Asia, Africa, and Latin America comprised TCM professionals.[33] Tanzania, like many beneficiaries of the CMT program, received TCM doctors who practiced and popularized acupuncture therapy since 1968, alleviating various ailments, including lumbago, arthritis, and rheumatism. For example, the first batch of the CMT included three acupuncturists who worked in health facilities in Tarime, Mtwara, and Mpwapwa.[34] Approximately every batch of CMT included three or more acupuncturists. In the 1970s, the number of acupuncturists dispatched to Tanzania rose from three between 1968 and 1970 to six from 1971 to 1973. From 1973 onwards, the number of acupuncturists sent to Tanzania remained steady, at around six, until 1978.[35] The increase in the number of acu-

31 Goldon C. Shen and Victoria Y. Fan, "China's Provincial Diplomacy to Africa: Applications to Health Cooperation," *Contemporary Politics* 20, no. 182, (2014): 202, https://dx.doi.org/10.1080/13569775.2014.907993.

32 Mu Xueguan, "China's Medical Team in Morocco Runs Free Clinic for Local Chinese," *Xinhua News*, June 18, 2015.

33 The State Council Information Office of the PRC, *A White Paper*, 12; also see Philip Snow, *The Star Raft: China's Encounter with Africa* (New York: Cornell University Press, 1988), 159.

34 "Medical Aid to Tanzania, 1968," SPA. File No. A034-03-006, Shandong Province Health Bureau.

35 "List of Names of Doctors of the Chinese Medical Team, July 1, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5; "Technical Assistance China, Medical Aid to Tanzania, Statistics from 1968–1985," SPA. File No. A034-05-366, Shandong Province Health Bureau, Foreign Affairs Office; "Muhtasari wa Mkutano wa Ndugu L. D. Stirling Waziri wa Afya na Madaktari wa Kichina Uliofanyika Tarehe 25 Agosti 1976 Saa 5:30–6:15 Adhuhuri Katika Ukumbi wa Chumba cha Mkutano Wizara ya Afya, Dar es Salaam, Tarehe 7 September, 1976," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5, Technical Assistance China; "Madaktari toka China watambulishwa kwa Waziri wa Afya," *Uhuru*, August 26, 1976, 5.

puncturists paralleled the spread of their services in different places in Tanzania (Table 7). The reasons for this increase were attributed to positive perceptions among Tanzanian patients and the Chinese government's endeavor to extend TCM knowledge to countries of the Global South.[36] However, from 1979 onwards, following the reform and opening-up policy, the number of CMTs dispatched to Tanzania declined to two. The new regime's focus was on projects with higher economic returns. Foreign assistance programs with little or no economic gains were shelved.[37]

The Chinese doctors did not swiftly introduce acupuncture therapy in Tanzania. Despite being used to medical pluralism, local medical workers, political elites, and patients initially doubted its efficacy. However, under the close persuasion of the Chinese government and the determination of acupuncturists, the therapy began as a trial for a few patients in 1968 and 1969. Its positive reception convinced the Chinese government to deploy more acupuncturists to Tanzania beginning in 1971.[38] Available workload statistics show that from June 1973 to September 1975, acupuncturists attended to about 36,125 patients. The number of patients decreased in 1976 when 10,510 were attended. Nevertheless, the number soared in the following years, with 36,290 patients attending in 1977, and about 14,760 patients received acupuncture therapy in 1978. The decline in the number of acupuncturists sent to Tanzania from 1979 resulted in a fall in the number of patients who attended. Statistics show that about 2,336 and 1,334 patients were attended to in 1982 and 1983, respectively.[39] These high volumes of workload statistics show that patients perceived acupuncture therapy positively. Some patients wrote letters to the Chinese Embassy and Tanzania's Ministry of Health appreciating the therapy's efficacy and requesting further dispatch of acupuncturists.[40]

The effectiveness of Acupuncture therapy was highly appreciated by patients from Kasulu, Western Tanzania, especially in curing polio through its simple but effective surgical treatment. According to archival information, Kasulu reported many polio cases throughout the 1970s that influenced Chinese acupuncturists to

36 Interview with Paolo Peter Mhame, May 9, 2018, Dar es Salaam.

37 Yanzhong Huang, "Pursuing Health as Foreign Policy: The Case of China," *Indiana Journal of Global Legal Studies* 17, no. 1 (Winter 2010): 111.

38 "Medical Aid to Tanzania, Work Reports, Job Descriptions and Distribution Table, 1975," SPA, File No. A034-04-085, Shandong Province Health Bureau, Revolutionary Committee, Policy Office.

39 "Medical Aid to Tanzania, Statistics from 1968–1985," SPA. File No. A034-05-366, Shandong Province Health Bureau, Foreign Affairs Office.

40 "Letter from Mr Raza A. Fazal to the Chinese Embassy in Dar es Salaam, January 2, 1974," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China.

establish a special acupuncture center to fight the disease. Information shows that many patients overcame polio after receiving acupuncture therapies. For instance, a four-year-old child who became paralyzed when he was two years old was cured by acupuncturists within three months of the treatment. Similarly, in 1983, a three-year-old child with congenital paralysis was cured after three weeks of attendance at the acupuncture clinic at Muhimbili National Hospital.[41]

Table 7: Distribution of acupuncturists across different working stations, 1968–1985.

Years	Number of Acupuncturists	Working Stations
1968–1970	3	Tarime, Mtwara, Mpwawa
1971–1973	6	Morogoro, Kondoa, Tabora, Bukoba, Mtwara, Nachingwea
1974–1975	6	Dodoma, Tabora, Kasulu, Maswa, Morogoro, Mtwara
1976–1978	6	Dodoma, Maswa, Tabora, Kasulu, Morogoro, Mtwara
1979–1982	2	Muhimbili, Dodoma

Source: Created by the author based on data from SPA. File No. A034-05-366, Shandong Province Health Bureau, Foreign Affairs Office.

Affirmative acceptance of acupuncture treatment influenced local government authorities' requests for acupuncturists in their district hospitals. For instance, the development director of Western Lake Province wrote a letter to the regional medical officer, requesting that the officer send a special request to the Ministry of Health (MoH) to dispatch acupuncturists to Bukoba.[42] The aforementioned popularity of acupuncture was not limited to Tanzania. Elsewhere in Africa, acupuncture was credited and endorsed as an alternative medicine. In Algeria, for instance, patients perceived acupuncture as an alternative to musculoskeletal health cases, which were not efficiently addressed by biomedicine.[43] This indicates that many patients did not perceive biomedical knowledge as entirely capa-

41 "Medical Aid to Tanzania, 1975 Work Reports, Job Descriptions and Distribution Table," SPA. File No. A034-04-085, Shandong Province Health Bureau, Revolutionary Committee, Policy Office; "Work Report of 1983," SPA. File No. A034-06-309, Shandong Province Health Bureau, Foreign Affairs Office.

42 "Letter from Mkurugenzi wa Maendeleo, Ziwa Magharibi, to Bwana Mganga, Bukoba, January 18, 1974, Utabibu wa 'Acupuncture'", TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China.

43 Li Anshan, *Chinese Medical Cooperation in Africa: With Special Emphasis on the Medical Teams and Anti-Malaria Campaign* (Uppsala: Nordiska Afrikainstitutet, 2011), 18.

ble of diagnosing and addressing all kinds of health issues, since some ailments were successfully diagnosed and treated by traditional or alternative medicines.[44]

The practice of acupuncture in Tanzania continued throughout the 1960s until the 1980s, but the therapy was only practiced in government-owned health facilities. Its practice and popularity became more robust in the 1990s, following the establishment of private TCM clinics, many of which were owned and operated by Chinese citizens in major towns and cities of Tanzania. Under the newly implemented cost-sharing policy, government-owned health facilities charged patients more than Chinese TCM clinics. For instance, while TCM practitioners charged Tshs. 2500 for a malaria dose, the licensed pharmacy sold a similar dose for Tshs. 6,000. Additionally, while TCM clinics waived registration fees, government hospitals charged Tshs 1,000 for referrals, Tshs 500 for regional, and Tshs 300 for district hospitals.[45] These significant differences boosted patient attendance at TCM clinics. Edmund Kayombo, also the chairperson of the Traditional and Alternative Health Practice Council, argued that TCM clinics offered cheap health services because they were not charged any costs related to their investment by the government. This context illuminates why the clinics vanished after the Tanzanian government passed the Traditional and Alternative Medicine Act in 2002, which obliged registration of the services and annual fees.[46]

Despite the limited number, Chinese acupuncturists offered clinical care and spread TCM knowledge to local medical workers through on-site training. Since the 1970s, at least every week, they allocated time to offer free acupuncture training to local medical workers.[47] Furthermore, a three- to four-month acupuncture training course was provided in Kasulu, where acupuncturists established a training center in cooperation with the MoH (Figure 10). In 1975, about 33 local medical doctors received acupuncture training in Kasulu.[48] Training local medical workers enabled them to address ailments through acupuncture therapy and spread Chinese medical culture in the country.

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44 Lock and Nguyen, *An Anthropology of Biomedicine*, 53–54.

45 Interview with Liggyle Vumilia, May 7, 2018, Dar es Salaam; Hsu, "The Medicine from China has Rapid Effects," 299; Hsu, "Medicine as Business," 223; Jennings, "Chinese Medicine and Medical Pluralism," 463; "Principal Secretary, Ministry of Health, Wananchi Kuchangia Huduma za Jamii, Afya, Muhtsari wa Mapendekezo ya Viwango na Maeneo ya Kuchangia, July 1, 1993," MRC. Acc. No. 30, File No. M.10/1/3, Medical Policy and Instructions General, 1990–2004.

46 Interview with Edmund J. Kayombo, June 8, 2018, Institute of Traditional Medicine (ITM).

47 Interview with Sui Guangxin, March 1, 2016, Jinan; Chen Zhufeng, March 1, 2016, Jinan.

48 "Medical Aid to Tanzania, 1975 Work Reports, Job Descriptions and Distribution Table," SPA. File No. A034-04-085, Shandong Province Health Bureau, Revolutionary Committee, Policy Office.

Figure 10: Training local doctors in acupuncture, Kasulu District, 1975. Source: Health Department of the Shandong Province, *The Chinese Medical-Aid Team in the United Republic of Tanzania, 1968–1998* (Shandong, 1998), 74 (printed with permission).

The commitment to communicate TCM knowledge stemmed from the fact that the therapy drew its background from Chinese medical philosophy, which Chairman Mao vowed to cherish and spread to the rest of the world. Li Anshan states that the advantage that the Chinese government expected from the CMT program was to introduce and spread TCM to recipient countries. The devotion of Chinese acupuncturists to training local doctors in Tanzania was commendable. Li adds that in the 1970s, Tanzanian trainees were allowed to practice on bodies of Chinese acupuncturists and patients under the supervision of their trainers (Figure 11).[49]

In addition to on-site training, Tanzanians received Chinese government sponsorships for long – and short-term studies at different TCM colleges in China. For instance, from October 1975 to January 1976, two Tanzanian medical workers (Hatibu Lweno and Fabian Hoti) secured three months of training sponsorships in acupuncture therapy in China.[50] The course aimed at enabling trainees to ac-

49 Li, *Chinese Medical Cooperation in Africa*, 18–20.

50 "Letter from the office of the Embassy of the People's Republic of China in the United Republic of Tanzania, March 8, 1977, to the Principal Secretary of the MoH," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China; "A Report About a Study Tour Prepared by Dr P. M. Sarungi, Dr Moses Ndosi, and Dr William Ng'ombe, Our Study Tour on Replantation

quire new medical knowledge and practice in Tanzania. While the Chinese government's sponsorship may sound altruistic, it gave China an inexpensive opportunity to spread TCM knowledge in the country and establish a market for TCM clinics set up in later years.[51] Similarly, the spread of acupuncture treatment in Tanzania allowed China to enhance the TCM equipment and drug market. For instance, in 1976, following the completion of training in acupuncture by Tanzanian medical staff, the Chinese government gave the MoH two sets of microsurgical instruments and acupuncture therapy apparatuses.[52] The donated equipment was necessary for the practice by the medical staff who completed their training. However, more medical equipment was needed, so the Chinese government recommended that the MoH purchase equipment worth £2,200 to enable local acupuncturists to have complete equipment for their practice. The ministry, however, was skeptical of implementing the suggestion, doubting the ability of trainees to use the equipment correctly.[53]

It is, however, crucial to note here that campaigns advocating the use of TCM were not restricted to Tanzania, but rather covered many countries of the Global South. The comprehensive promotion of traditional medicine to countries of the Global South in the 1970s gave TCM a chance to penetrate further into Southern countries. In September 1972, the United Nations Development Programme (UNDP) signed the "Basic Agreement" with China, in which it committed to funding projects related to health personnel development, medical information, traditional medicine, pharmaceutical standards, and primary health care (PHC). The agreement necessitated sponsorship of medical workers from countries of the Global South to undertake TCM training in Beijing. Given their simplicity and efficacy, the UNDP endorsed acupuncture and moxibustion therapies as essential medical knowledge to be communicated to medical doctors of the Global South.[54]

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of Severed Limbs in the People's Republic of China, October 1975–January, 1976, of January 1976," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China.

51 Interview with Liggyle Vumilia, May 7, 2018, Dar es Salaam.

52 "Letter from the office of the Embassy of the People's Republic of China in the United Republic of Tanzania, March 8, 1977, to the Principal Secretary of the MoH," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China.

53 "Letter from the Embassy of the United Republic of Tanzania, Peking China to the Minister of Health, March 16, 1976"; also "Letter from the office of the Principal Secretary, Ministry of Health, April 9, 1976, to Dr P. M. Sarungi, Senior Lecturer and Consultant Orthopaedic Surgeon, Mhimbili Hospital, Vyombo vya Kupasulia kutoka Uchina," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China.

54 Yanzhong Huang, "Pursuing Health as Foreign Policy: The Case of China," *Indiana Journal of Global Legal Studies* 17, no. 1 (Winter, 2010): 110; WHO, *Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September 1978*, 63; "Letter from the UNDP Office, 14 April 1977 to the Principal Secretary Ministry of Health, Multi-Regional

It is unclear why the WHO promoted the training of the therapies, especially in Global South countries. However, significant reasons might include the disease burden among countries of the Global South, and acupuncture and moxibustion therapies would efficiently address many of such diseases. The backing of TCM training by international agencies signaled its global acceptance, legalized its practice, and spread it to countries of the Global South.

Figure 11: A trainee practicing acupuncture in the Kasulu District, 1975. Source: Health Department, *The Chinese Medical-Aid Team*, 74 (printed with permission).

Generally, from 1968 through the 1990s and onwards, the main sponsors of TCM training for Tanzanians were the Chinese government and the UNDP. Local initiatives to spread TCM knowledge started in the 2000s. The Department of Traditional and Alternative Medicine (DTAM) and local TCM practitioners proposed to establish a school for alternative healing mechanisms with acupuncture and mox-

Study Tours and Courses in China, 1977–78," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China; WHO, *The Promotion and Development of Traditional Medicine: World Health Organization Technical Report Series 622* (Geneva, 1978), 30; David Wondering, "Acupuncture in Mainstream Health Care," *British Medical Journal* 333, no. 7569 (23 September 2006): 611.

ibustion among the prioritized courses.[55] DTAM and local acupuncturists endeavored to transmit acupuncture knowledge to a more significant number of Tanzanians who missed sponsorship opportunities from the Chinese government. Unfortunately, the aspirations of establishing colleges for traditional medicine did not materialize for unknown reasons.

In the 2000s, non-governmental organizations (NGOs) engaged in spreading TCM knowledge, especially in the field of acupuncture therapy. Furaha, an osteopathy non-profit organization, invited two Italian acupuncturists to train local medical doctors in Ilula, Iringa, Tanzania. Italian acupuncturists belonged to the group *Agopuntura Senza Frontiere* (ASF) (Acupuncture Without Borders). The ASF team trained twelve local medical doctors within nine days, and they were awarded certificates.[56] This shows that although traditional treatment methods were specific to particular communities, a therapy like acupuncture was used globally, and its core was understandable to anyone. Its medical knowledge was not spread solely by Chinese acupuncturists, but by other nationals, such as the Italians. The Italian acupuncturists had attended formal training for more than five years, yet surprisingly, they confidently believed that Tanzanian trainees would acquire sufficient acupuncture knowledge within nine days.

The findings of this study illuminate that the training arrangements provided by Chinese acupuncturists, the UNDP, and other stakeholders did not help trainees to acquire sufficient knowledge to practice effectively and sustainably. A Chinese acupuncturist's oral testimony revealed that acupuncture knowledge was complex and required a trainee to fully acquire physical and sensory skills, which could not be studied adequately within a short training period.[57] Training to become a fully qualified TCM expert takes up to five years in China. Yet, the Chinese government summarized the training to three months or less, which did not work for Tanzania's medical workers. Even worse, stereotypes undermined the effective practice of acupuncture therapy by the trainees. Information from the MoH insinuates that local doctors favored biomedicine over TCM. For instance, the two Tanzanian doctors, Hatibu Lweno and Fabian Hoti, who attended

55 "URT, MoH, The Proposal of Establishing a School for Alternative Healing Mechanisms in Tanzania, February 10, 2000," NRC. Ministry of Health and Social Welfare, 14/6/03, File Ref. No. HF. 458/615/01 Traditional Medicine Research 2004–2009; "Letter from Dr Mbilo of November 22, 2004, to Permanent Secretary MoH, Maombi ya Kufungua Chuo cha Mafunzo ya Uganga wa Tiba Asilia," NRC. Ministry of Health and Social Welfare, 14/5/02, File Ref. No. HF. 207/615/01 "A", Traditional Medicine 2005–2008.

56 Elisa Rossi, "Chinese Medicine in Ilula Tanzania: An Experience in Learning," *The European Journal of Oriental Medicine*, (January 2012): 27.

57 Interview with Jiang Xuan, January 4, 2016, Hangzhou.

an acupuncture training course in 1976, did not practice or develop further interests in it. Instead, a few months after the completion of the acupuncture course in Beijing, they joined Muhimbili Medical College for further studies in biomedicine.[58]

This study further showed that Tanzania's MoH lacked an aid-use strategy. The ministry sent medical doctors for overseas training without creating favorable plans or conducive environments for trainees to apply the learned medical knowledge after completing their courses. As shown above, the Chinese government was determined to see the trainees' actual practice of acupuncture therapy. It granted Tanzania's MoH two sets of microsurgical instruments and acupuncture therapy apparatuses for use by trained medical personnel.[59] However, Tanzania's MoH did not purchase further equipment as suggested by the Chinese government to enable trainees to practice despite the reminders by Tanzania's Ambassador to China and the trainees.[60] This circumstance shows that the MoH hesitated to allow its medical staff to practice acupuncture therapy in its government-owned health facilities. Gallus Namangaya Abedi, a retired Principal Assistant Secretary of the MoH, claims that some officers in the ministry perceived medical knowledge of Chinese origin as inferior compared to biomedicine. Additionally, Abedi opined that such a stereotype, among other reasons, impeded the practice of acupuncture by trained medical workers.[61]

The failed practice of acupuncture by local medical doctors in Tanzania was noted with frustration by the Chinese government. In her visit to China on October 17, 2004, the Minister for Health, Anna M. Abdallah, had to make a commitment that her ministry would promote the practice of acupuncture in regions and hospitals where Chinese acupuncturists worked. However, its implementation was less promising as local medical workers lacked the expertise and interest to apply acupuncture knowledge in health facilities. For example, the regional medical officer in Tabora re-

58 Kifyasi, "How Effective Was the Global South Knowledge Exchange," 54; "Letter from the Office of the Principal Secretary, Ministry of Health, April 9, 1976, to Dr P. M. Sarungi, Senior Lecturer and Consultant Orthopaedic Surgeon, Mhimbili Hospital, Vyombo vya Kupasulia kutoka Uchina." TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China.

59 "Letter from the office of the Embassy of the People's Republic of China in the United Republic of Tanzania, March 8, 1977, to the Principal Secretary of the MoH," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China.

60 "Letter from the Embassy of the United Republic of Tanzania, Peking China to the Minister for Health, March 16, 1976," also see "Letter from the office of the Principal Secretary, Ministry of Health, April 9, 1976, to Dr P. M. Sarungi, Senior Lecturer and Consultant Orthopaedic Surgeon, Mhimbili Hospital, Vyombo vya Kupasulia kutoka Uchina," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5: Technical Assistance China.

61 Interview with Gallus Namangaya Abedi, June 6, 2018, Posta-Dar es Salaam.

quested further training for his medical workers to implement directives from the ministry.[62] Thus, despite the affirmative acceptance by patients and Chinese acupuncturists' commitments to spread their knowledge to local medical workers, the practice of acupuncture therapy in government health facilities by local medical doctors remained minimal. Since the 1990s, Tanzanians and Chinese doctors have mainly practiced traditional Chinese herbal medicine and acupuncture in private clinics.

4.4 TCM Research and Treatment for HIV and AIDS, 1987–2014

The HIV and AIDS pandemic poses one of the major challenges to global health, drawing the world's attention through its rapid spread. Recognizing the disease as a serious threat to global health in the 1980s, the WHO prioritized efforts to combat it. Due to the increasing integration of the world's population, HIV spread across the globe at an alarming pace. Yet, AIDS had spread silently from the mid-1970s until 1981, when the first cases were diagnosed in the US. From then on, reports of AIDS patients increased rapidly from different corners of the world.[63] The 2023 UNAIDS global statistics report shows that about 39.9 million people globally were living with HIV by 2023, with more than 1.3 million new infections. The epidemic has claimed the lives of more than 42.3 million people from its start to 2023, recording 630,000 deaths in 2023 alone globally. Sub-Saharan Africa was the world's most severely affected region. The region reported more than 26.9 million (5.1 million from Western and Central African countries and 20.8 million from Eastern and Southern African states) people living with HIV in 2023. Furthermore, the region has recorded more than 390,000 AIDS-related deaths from the start of the epidemic to 2023, remaining a severe threat to people's health.[64] Before the turn of the millennium, though, in 1983, a surgeon in the Kagera Region of Northwestern Tanzania had recorded Tanzania's first AIDS case. The region was more severely affected than other regions of Tanzania. In the 1990s, the region reported

62 "Letter from Regional Medical Officer, Tabora, September 9, 2005 to the Principal Secretary MoH, Maeneo Mhimu ya Makubaliano Yaliyofanyika wakati wa Ziara ya Waziri wa Afya, Mhe. Anna M. Abdallah Nchini China Tarehe 17/10/2004 Hadi 27/10/2004," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008.

63 "Health Workers Training Modules on HIV/AIDS, Zanzibar AIDS Control Programme, Ministry of Health, Zanzibar, 1990," WHOA, File No. A20-370-32TAN-JKT1, GPA-Programme on Information, Education and Communication-Tanzania, 1995, 5; Packard, *A History of Global Health*, 273; Patterson, *Africa and Global Health Governance*, 32.

64 UNAIDS, *Global HIV Statistics Fact Sheet*, 2024.

about 16% of all deaths, while other regions reported less than 3% (Table 8).[65] From Kagera, the disease spread to different regions of Tanzania. According to the 2022–2023 Tanzania HIV Impact Survey (THIS), the prevalence of HIV among adults (aged 15 years and older) in Tanzania was 4.4%, corresponding to approximately 1,548,000 adults living with HIV. HIV prevalence varies geographically across the Mainland Tanzanian regions. The Kagera region, which reported the first AIDS cases, managed to contain further spread, recording 5.7% of the HIV prevalence in 2023. Kigoma region reported the lowest HIV prevalence of 1.7%, but the prevalence was above 9.0% in three regions: Mbeya (9.6%), Iringa (11.1%), and Njombe (12.7%).[66] Up to the present, the disease has rapidly spread throughout the country, affecting all categories of people in society.

Regrettably, the pandemic plagued the African continent amid economic breakdown. Thus, many states were financially handicapped and could not afford to fight against the disease. On the other hand, international health agencies focused on primary health care (PHC), endorsed by the 1978 Alma-Ata conference. AIDS was missing from the PHC priorities, and global health agencies perceived AIDS as less dangerous compared to malaria, which was the primary cause of death throughout the 1980s, accounting for about 10,000 deaths annually in Tanzania alone.[67] It took until January 1986 for the WHO to recognize AIDS as a major public health concern. In May 1986, the World Health Assembly launched a special program on AIDS that would later be named the Global Programme on AIDS (GPA). This program was reconstituted in December 1995 as a new joint United Nations Programme on AIDS (UNAIDS).[68] Under the GPA, AIDS was conceived as a behavioral problem caused by having sex with multiple partners and

65 World Bank Report, *Tanzania AIDS Assessment and Planning Study, June 1992*, iii; Maryinez Lyons, "Mobile Populations and HIV/AIDS in East Africa," in *HIV and AIDS in Africa* Ezekiel Kalipeni, *et al.* (Hoboken, NJ: Blackwell Publishers, 2005), 178; Andrea Azizi Kifyasi, "China's Role in Global Health: HIV/AIDS Traditional Chinese Medicine Research and Treatment in Tanzania from 1987 to 2014," *China Quarterly of International Strategic Studies* 7, no. 3, (2021): 248; JMT, *Wizara ya Afya, Hotuba ya Waziri wa Afya Mhe. Prof. Philemon M. Sarungi, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1991/92*, 12.

66 Tanzania HIV Impact Survey (THIS), *A Population Based HIV Impact Assessment, 2022–2023 Summary Sheet,* 2023.

67 John Iliffe, *The African AIDS Epidemic: A History* (Athens: Ohio University Press, 2006), 68; Randall M. Packard, *A History of Global Health: Interventions into the Lives of Other Peoples* (Baltimore, MD: Johns Hopkins University Press, 2016), 279; and in "WHO yataka Watu Waelimishwe Kuhusu AIDS," *Uhuru,* Novemba 6, 1985, 5; World Bank Report, *Tanzania AIDS*, 4.

68 WHO, *Global Strategy for the Prevention and Control of AIDS: Report by the Director General, 1988*, 6; Packard, *A History of Global Health*, 282.

tied to cultural practices such as polygamy. Thus, the GPA promptly transmitted behavioral and sex education and distributed condoms to raise global awareness and reduce the pace at which the disease spread.[69]

Table 8: List of AIDS cases and deaths in Tanzania, 1983–1986.

Year	Total Cases	Deaths in Hospitals	Cases in Kagera Reg.	% of Total Cases in Kagera
1983	3	3	3	100
1984	16	16	16	100
1985	266	141	145	54.5
1986	654	170	509	78.0
Total	**939**	**330**	**673**	**72.0**

Source: "URT, MoH, AIDS Control Programme, Draft Proposal for a 5-Year Plan, 13 March 1987," WHOA, File No. A20-181-18-JKT1, TSA with the Ministry of Health and Social Welfare, National AIDS Task Force, Dar es Salaam, Tanzania, in Respect of Strengthening the National AIDS Prevention and Control Programme, 1989, 39.

Like many other African countries, Tanzania tried several ways to eliminate the disease. This included using local medical experts, who extensively researched both traditional and biomedicines to find suitable drugs to cure the disease.[70] In May 1985, it formed a National AIDS Task Force (NATF) – later renamed the National AIDS Technical Advisory Committee (TAC) – to advise the government on control measures. In March 1987, the committee received financial and technical assistance from the WHO and other donor agencies, enabling the formulation of a medium-term plan (MTP) for dealing with the disease. The MTP aimed to monitor the progression of the disease, decrease the transmission by blood transfusion, reduce mother-to-child transmission, improve diagnostic capabilities, and decrease transmission through education.[71] These activities were primarily undertaken by the National AIDS Control Program (NACP), which was officiated in 1988.

69 "MoH, Brief on the NACP," WHOA, File No. A20-370-1TAN-JKT4, GPA-Basic Operations-Tanzania, 1991,11; "WHO yataka Watu Waelimishwe Kuhusu AIDS," *Uhuru*, Novemba 6, 1985, 5; J. Shao, S. Y. Maselle and R. O. Swai, "AIDS," in *Health and Disease in Tanzania*, ed. G. M. P. Mwaluko, W. L. Kilama, M. P. Mandara, M. Murru, and C. N. L. Macpherson (London: Harper Collins Academic, 1991), 14; WHO, *Global Strategy for the Prevention and Control of AIDS*, 5.
70 Shao, Maselle and Swai, "AIDS," 8.
71 "URT, National AIDS Prevention and Control Programme, Medium-Term Plan, 15 Dec. 1987–14 Dec. 1988," WHOA, File No. A20-370-1TAN-JKT1, GPA-Basic Operations-Tanzania, 1989, 3.

Under its four technical units, the NACP dealt with prevention, diagnosis, and research.[72] The government endeavored to succeed in the fight against the disease. However, up to the moment when it requested assistance from the Chinese government, the fight against HIV had not generated promising results. With the support from the WHO and other traditional donor countries of the Global North, medical experts in Tanzania were only able to identify patients who contracted the disease, recognize the AIDS virus, and decrease the pace of transmission. Yet, they were only able to treat opportunistic diseases such as tuberculosis, prolonged diarrhea, and sexually transmitted diseases (STDs) using both traditional and biomedicine.[73] To this end, the Tanzanian government needed support from countries with more advanced medical knowledge to eliminate the disease.

The Tanzanian government requested China's assistance to fight the AIDS pandemic in March 1987, following Julius K. Nyerere's trip to China. The positive reputation of Chinese doctors, who had been working in the country since 1968, combined with inadequate measures taken by the WHO and other traditional global health partners against the disease, prompted the government to turn to Chinese aid.[74] Subsequently, the Chinese President, Deng Xiaoping, accepted the request of the government presented by Nyerere and promptly ordered the Ministry of Health to dispatch medical experts to the country and carry out an anti-HIV research and treatment project using TCM. In the absence of therapeutics or a vaccine, Deng hoped traditional herbal medicines would provide an alternative solution to the virus.[75] The use of TCM in fighting HIV aligned with the 1970s Alma-Ata's call for employing traditional medicine in the fight against pandemics. More importantly, China's readiness to fight AIDS realized the contribution of Global South countries to global health, implying that the fight against pandemics was not limited to traditional donors of the Global North. Indeed, the acceptance of the request rekindled hope that it would be possible to fight AIDS since, to combat the disease, Tanzania needed both financial assistance and medical knowledge. Moreover, to many traditional medicine researchers and practitioners in

72 World Bank Report, *Tanzania AIDS*, 136–137.

73 "URT, MoH, National AIDS Control Programme and Budget for 1.9.1989 – 31.12.1991," WHOA, File No. A20-370-1TAN-JKT2, GPA-Basic Operations-Tanzania, 1990, 24; Godfrey Mhando, "Historia ya Ugonjwa wa AIDS," *Uhuru*, Oktoba 4, 1985, 4; Shao, Maselle and Swai, "AIDS," 8.

74 Interview with Gallus Namangaya Abedi, June 6, 2018, Posta-Dar es Salaam; Joseph W. Butiku, July 9, 2018, Posta-Dar es Salaam.

75 "URT, Ministry of Health and Social Welfare, the 40th Anniversary on Chinese Medical Team Workers in Tanzania, 1968–2008," NRC. Ministry of Health and Social Welfare, 14/05/03, File Ref. No. HC. 74/311/02 Chinese Medical Team 2007–2010, also see China Academy of Chinese Medical Sciences, *The 30th Anniversary of China-Tanzania Cooperation on TCM Treatment of HIV/AIDS*, 3.

the country, the TCM research and treatment project was a promising attempt at effective knowledge exchange.

China's assistance for HIV and AIDS research in Tanzania came when its interest in Africa had lessened following its reform and opening-up policy of 1978. During this period, the policies and practices of assistance shifted, and the new relationship was one of investment and profit – the era of Mao and Zhou Enlai was over, even though the theme of "friendship" and the era of cooperation before 1980 were recalled strategically in diplomatic speeches.[76] Yet, it still became possible for the Chinese government to devote resources to research and treatment of the disease since eradicating AIDS, which even powerful countries of the Global North had yet to find a cure for, was a pride worth trying for. Fighting a global health challenge using TCM would bring Chinese experts' global scientific prestige. Thus, if it succeeded, the project held promise for the Chinese government in terms of scientific, economic, and political potential. Moreover, the long-term friendship between Nyerere and Deng influenced the Chinese government to accept Nyerere's request.[77] Consequently, in May 1987, Tanzanian and Chinese health authorities signed a cooperation agreement on researching and treating HIV. The Chinese government committed to dispatching teams of TCM experts to Tanzania to cooperate with local doctors of Muhimbili National Hospital (MNH) on research and treatment. MoUs were signed every three years, based on negotiations that either added or deleted some items according to changing demands.[78]

The HIV and AIDS TCM project officially launched its activities in Dar es Salaam in September 1987. The China Academy of Chinese Medical Sciences (CACMS, formerly the Academy of Traditional Chinese Medicine) dispatched experts to run the project with local doctors from the MNH of Tanzania.[79] TCM experts were recruited from different hospitals and institutes under CACMS, such as Guang'anmen and Xiyuan hospitals, as well as the Institute of Basic Theory for Chinese Medicine (Table 9). The CACMS was established in 1955 and was reputed for hosting

76 Huang, "Pursuing Health as Foreign Policy," 111.

77 Interview with Joseph W. Butiku, July 9, 2018, Posta-Dar es Salaam.

78 Interview with Liggyle Vumilia, May 7, 2018, Dar es Salaam; "Summarised Minute of Meeting between Ministry of Health and Social Welfare of the United Republic of Tanzania and State Administration of Traditional Chinese Medicine of the People's Republic of China on Continuing Cooperation of Treatment of HIV/AIDS, Beijing, July 17, 2006," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008.

79 China Academy of Chinese Medical Sciences, *The 30th Anniversary*, 3; also see "Traditional Chinese Medicine has Great Prospects in Dealing with HIV/AIDS," *Xinhua News Agency*, September 25, 2003, accessed May 2, 2016, http://www.chinadaily.com.cn/en/doc/2003-09/25/content_267510.htm.

prominent TCM specialists. It conducted extensive TCM research for several diseases and earned WHO recognition.[80] Despite its long history and reputation, before 1987, its experts had engaged in neither HIV nor AIDS research nor treatment. By that time, no AIDS cases had been officially announced in China; the first cases would only be in 2001.[81] Tanzania, therefore, marked the first place for CACMS to research and treat HIV and AIDS.

The CACMS team sent to Tanzania comprised six experts per batch, including TCM pharmacists and physicians. Chinese experts worked with a local pharmacist in charge of monitoring the safety of the drugs and a local physician in charge of managing and handling patients. A few local nurse assistants were also engaged in the research, assisting the Chinese and local researchers. The tenure of TCM experts was unsystematic; some stayed for one year, while others stayed for two. Over the 31 years, up to 2018, the CACMS dispatched 16 batches to Tanzania with 66 experts (Table 9). Together, they conducted research and attended to more than 10,000 HIV patients in Tanzania.[82]

The Chinese Ministry of Finance primarily sponsored the HIV and AIDS research and treatment project. It carried expenses related to the domestic salaries of the experts, travelling expenses from China to Tanzania, language training, medical equipment, and medicines.[83] The Tanzanian government met costs related to travelling expenses from Tanzania to China, lodging, house maintenance, water and electricity bills, and phone expenses. Furthermore, it hired security guards and cleaners for doctors' residences, drivers, and 50 liters of fuel every week for vehicles used for work. The Tanzanian government also paid TCM experts allowances equivalent to USD 170 per head per month.[84] Compared to China, the Tanzanian government bore light costs in maintaining TCM experts.

80 "Taarifa Fupi ya Safari ya Jamhuri ya Watu wa China 16–23 Julai 2006," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 7.

81 L. H. Chan, P. K. Lee and G. Chan, "China Engages Global Health Governance: Processes and Dilemmas," *Global Public Health* 4, no. 1 (January 2009), 7.

82 Charles W. Freeman and Xiaoqing Lu Boynton, "A Bare (but Powerfully Soft) Footprint: China's Global Health Diplomacy," in *Key Players in Global Health: How Brazil, Russia, India, China and South Africa Are Influencing the Game*, ed. Katherine Elaine (Washington DC: Centre for Strategic and International Studies, Global Health Policy Centre, 2010), 17.

83 "The Agreement Protocol of 2007–2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 3.

84 "The Memorandum of Continuing Cooperation on the 7th Period of HIV/AIDS Treatment with TCM between The China Academy of Chinese Medical Sciences, The People's Republic of China and The Muhimbili National Hospital, The United Republic of Tanzania, Beijing, July 18, 2006," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid

Table 9: List of TCM experts dispatched to Tanzania by the China Academy of Chinese Medical Sciences, 1987–2018.

Batch	Year	Number of Experts	Undertaking Unit(s)
I	1987–1988	5	Guang'anmen Hospital & Institute of Basic Theory for Chinese Medicine
II	1988–1991	5	Institute of Basic Theory for Chinese Medicine, Guang'anmen Hospital & Xiyuan Hospital
III	1991–1992	6	Institute of Basic Theory for Chinese Medicine, Guang'anmen Hospital & Institute of Information on TCM
IV	1992–1993	6	Guang'anmen Hospital, Institute of Basic Theory for Chinese Medicine, AIDS Centre & Institute of China Medical History Literature
V	1993–1995	5	Institute of Basic Theory for Chinese Medicine
VI	1995–1997	5	Institute of Basic Theory for Chinese Medicine
VII	1998–1999	5	Institute of Basic Theory for Chinese Medicine, Guang'anmen Hospital & AIDS Centre
VIII	1999–2001	6	Guang'anmen Hospital
IX	2001–2003	3	Guang'anmen Hospital
X	2003–2005	3	Guang'anmen Hospital
XI	2005–2006	3	Guang'anmen Hospital
XII	2006–2008	3	China Academy of Chinese Medical Sciences, Xiyuan Hospital & Wangjing Hospital
XIII	2008–2010	3	Guang'anmen Hospital & Xiyuan Hospital
XIV	2011–2012	3	China Academy of Chinese Medical Sciences
XV	2012–2013	2	Guang'anmen Hospital
XVI	2017–2018	3	Institute of Chinese Materia Medica & Guang'anmen Hospital

Source: Modified from China Academy of Chinese Medical Sciences, *The 30th Anniversary*, 22.

China 2005–2008, 3; "The Agreement Protocol of 2007–2009," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 4–5.

The HIV and AIDS outpatient clinic was established shortly after the agreement between the CACMS and the MNH was signed.[85] Although TCM experts lacked experience in both therapy and research, they promptly started giving clinical care to patients. They imported bulk herbal medicines synthesized into powder and liquid forms to ease patient consumption. An article published on October 15, 2006, in *Xinhua News Agency* reported that Chinese TCM experts perceived HIV to have been "jointly caused by the invasion of wrong and bad *qi* from outside the human body and unintended discharge of right and good *qi* from within the body."[86] Thus, they believed patients would recover if several formulae of tested herbs addressed the two problems mentioned. TCM experts did not begin with an extensive study of the virus and other related scientific procedures. Instead, they directly engaged in trial-and-error practices on patients, something critics claimed turned patients into guinea pigs. They started providing TCM drugs capable of reducing the viral load and maintaining patients' body immunity while exploring efficacious medicinal herbs for curing the disease.[87]

In the beginning, patients doubted the ability of the Chinese experts to address the disease using TCM. This was because patients had never heard about the engagement of TCM practitioners in any research, nor had Chinese practitioners had previous experience in fighting AIDS.[88] Furthermore, the clinic was established when suspected patients faced fierce stigma. The community perceived AIDS as a disease of shame and sin.[89] This negatively impacted patients' attendance at the clinic. Some patients feared that their communities would shun them if they had contact with other patients. This prevented some patients from

85 Information Centre, China Academy of Traditional Medicine (CATM), *Signing Ceremony of Memorandum of Cooperation between China Academy of Chinese Medical Sciences and Tanzania's Mhimbili Hospital Held in Beijing on March 2, 2011*.

86 "Traditional Chinese Medicine in Tanzania," *Xinhua News Agency*, October 15, 2006; Wei-bo Lu, "Approaches in Treating AIDS with Chinese Medicine," in *Chinese Medicine Modern Practice: Annals of Traditional Chinese Medicine Vol. I*, ed. Ping-chung Leung and Charlie Chang-li Xue (Singapore: World Scientific Publishing, 2005), 54–56.

87 Interview with Bai Wenshan, May 28, 2019, Beijing, China; Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam; Modest C. Kapingu, June 8, 2018, Dar es Salaam; Rogasian L. A. Mahunnah, July 21, 2018, Dar es Salaam.

88 Interview with Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

89 See, for instance, how patients were perceived by their relatives and community at large in Deborah Pellow, "Sex, Disease, and Culture Change in Ghana," in *Histories of Sexually Transmitted Diseases and HIV/AIDS in Sub-Saharan Africa,* ed. Philip W. Setel, Milton Lewis and Marynez (New York: Greenwood Press, 1999), 28; also see Frederick Kaijage, "Disease and Social Exclusion: The African Crisis of Social Safety Nets in the Era of HIV and AIDS," In *History of Disease and Healing in Africa,* ed. Y. Q Lawi and B. B Mapunda (University of Dar es Salaam, GeGCA-NUFU Publications, 2004), 117.

attending clinical care, while others requested that they attend the clinic secretly. Yet, others preferred visiting private traditional medicine clinics where confidentiality was better guaranteed.[90]

Clear statistics showing the patients' turnout are missing. However, oral testimonies show that many patients attended the clinic over time. Chinese medicines were offered for free; thus, many ordinary and low-income patients who could not afford private clinics became the main clients of the clinic.[91] Most AIDS clinic patients were women and children. A patient and a doctor I interviewed argued that many Tanzanian women were more courageous and caring than men regarding their health and that of their children. Therefore, the turnout of male patients was less promising, and most of them could not endure regular attendance at the clinic.[92] Doctor Naomi Mpemba adds that this was a challenge to boosting patients' immunity because patients who did not accompany their spouses to the clinic continued to have sexual relationships with their husbands or wives, whose viruses were more active.[93]

When the clinic was founded, its attending patients were from MNH, mostly Dar es Salaam City residents, and a few from other regions of Tanzania. Over time, patients from the nearby areas, including Coast, Tanga, and Morogoro, started attending the clinic. Plans to extend the service to many regions of Tanzania were underway, pending the final results of this research. However, throughout its existence, the clinic did not extend its services to other areas of Tanzania. These remained solely based at the MNH for further research and clinical trials.[94]

Besides its record of attending to many patients, the HIV and AIDS TCM project's contribution to boosting the capacity of Tanzania's health sector was marginal. Medical knowledge exchange between TCM experts and local traditional medicine practitioners was not exercised, compromising the South-South knowledge exchange agenda that conceived the assistance. The agreements between the Tanzanian MoH and the CACMS denied local medical doctors the opportunity to gain and share their knowledge and experiences with TCM doctors. The Tanzanian actors failed to negotiate the terms of assistance with Chinese actors to advance the project's sustainable benefits. As a result, the CACMS partnered with the MNH instead of the Institute of Traditional Medicine (ITM), which had several

90 Interview with Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

91 Interview with Bai Wenshan, May 28, 2019, Beijing, China; Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

92 Interview with AIDS patient "A" (pseudonym), April 9, 2019, Dar es Salaam; Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

93 Interview with Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

94 Interview with Amunga Meda, July 18, 2018, Dar es Salaam.

senior traditional medicine researchers, including chemists, pharmacologists, botanists, and medical anthropologists. While CACMS dispatched TCM experts for the research, MNH deployed biomedical staff with limited interest in traditional medicine to work on the project.[95] Such poor project conceptions allowed TCM experts to dominate the research project. TCM experts coordinated all activities related to the extraction of chemicals, laboratory experiments, and medicine production. The local biomedical staff assisted TCM experts in organizing patients, taking serology tests, diagnosing patients, making clinical observations, and conducting routine laboratory blood tests.[96] The project's *modus operandi* allowed a less tangible scientific investment in the laboratory and other medical and research equipment at MNH than in clinical care. TCM herbal formulations were prepared in China and imported into Tanzania for clinical trials.[97] This study upholds that the ill-thought-out *modus operandi* of the project, which excluded ITM experts and other traditional medicine stakeholders from the Tanzanian side, defeated the South-South medical knowledge exchange agenda and affected the project's effectiveness and sustainability.

Notwithstanding its weakness in capacity building, the HIV and AIDS research and treatment project managed to test more than six formulae of herbs up to 2006. The medical analysis showed that many of the formulae were 40 to 50% effective in fighting HIV. Available sources illuminate that the general health statuses of AIDS patients were improved.[98] The tested formulations reduced viral loads, improving patients' body immunity and quality of life by alleviating com-

95 Rogasian L. A. Mahunnah, Febronia C. Uiso and Edmund J. Kayombo, *Documentary of Traditional Medicine in Tanzania: A Traditional Medicine Resource Book* (Dar es Salaam: Dar es Salaam University Press, 2012), 7; Interview with Modest C. Kapingu, June 8, 2018, Dar es Salaam; Rogasian L. A. Mahunnah, July 21, 2018, Dar es Salaam.

96 "The Memorandum of Continuing Cooperation on the 7th Period of HIV/AIDS Treatment with TCM between The China Academy of Chinese Medical Sciences, The People's Republic of China and The Muhimbili National Hospital, The United Republic of Tanzania, Beijing, July 18, 2006," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 2.

97 Interview with Rogasian L. A. Mahunnah, July 21, 2018, Dar es Salaam; Modest C. Kapingu, June 8, 2018, Dar es Salaam.

98 Rodney Thadeus, "China to Help Dar Fight AIDS," *The African*, February 17, 2003, 3; "Traditional Chinese Medicine in Tanzania," *Xinhua News Agency*, October 15, 2006; Interview with Prof. Bai Wenshan, May 28, 2019, Beijing China; "TCM Explores Treatment Opportunities in Tanzania," *Xinhua News Agency*, July 15, 2009; Interview with Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

mon diseases such as fever, fatigue, abdominal pains, cough, asthenia, and severe diarrhea.[99] The preceding assertions suggest that TCM therapies elongated patients' lives similarly to Western antiretroviral therapies (ARTs). However, Wang Jian and Bai Wenshan, who also worked at the HIV and AIDS clinic in Tanzania, claim that the two therapies had two different focuses. While the ARTs focused on getting rid of the virus, TCM stressed increasing the defensive capabilities of patients' immune systems, which were more susceptible to HIV. In this vein, AIDS patients whose body immunities were severely affected did not withstand measures employed by TCM.[100] One patient reported that her husband, who suffered from deficient body immunity, died four years after starting to use TCM. At the same time, she survived since she started using TCM when her body's immunity was still high.[101]

The advent of ARTs in 2004 negatively impacted the reception and survival of the TCM clinic in Tanzania. Many patients left the clinic and opted for ARTs. Other patients went back and forth between ARTs and receiving TCM clinical treatments.[102] Generally, patients were looking for a cure, irrespective of whether it would be ARTs or TCM. Some patients who had attended the TCM clinic since the 1980s and the 1990s and had experienced fewer health improvements were tired of TCM and wanted to try a new medication. Therefore, from 2004 onwards, the number of patients attending the TCM clinic decreased. This defeated the acceptance and popularity of TCM considerably and contributed mainly to the MoH calling off the research project in 2006.[103] At the moment when the research was closed, Chinese TCM experts had tested more than six formulae, four of which yielded promising results. They, thus, endorsed one of the four efficacious formulae, *Eling*, for patient use. Since the medicines were produced in China, they were regularly imported according to patients' demands. However, since patients turned to using ARTs, the endorsed Chinese therapy, *Eling*, was less used and marginally spread outside Dar es Salaam.[104]

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99 Interview with Amunga Meda, July 18, 2018, Dar es Salaam; Interview with Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam; Interview with HIV/AIDS patient "A", April 9, 2019, Dar es Salaam; "Traditional Chinese Medicine in Tanzania," *Xinhua News Agency*, October 15, 2006.

100 Interview with Bai Wenshan, May 28, 2019, Beijing, China; Wei-bo, "Approaches in Treating AIDS with Chinese Medicine," 57.

101 Interview with HIV/AIDS patient "A," April 9, 2019, Mlimani City, Dar es Salaam.

102 Interview with Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

103 Interview with Bai Wenshan, May 28, 2019, Beijing, China; Naomi Vuhahula Mpemba, August 1, 2018, Dar es Salaam.

104 "Taarifa Fupi ya Safari ya Jamhuri ya Watu wa China, 16–23 Julai 2006," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 7; "Letter from Permanent Secretary, MoH to Katibu Mkuu Kiongozi, July 25, 2006, Taarifa ya Safari

The discontinuation of the research in 2006 gave birth to the Sino-Tanzanian TCM Centre. The center, which was again housed at MNH, expanded its research on TCM beyond HIV and AIDS. In addition to attending to AIDS patients, it conducted research and attended to diseases treatable by TCM, such as asthma, diabetes, high blood pressure, and pneumonia.[105] However, the center only survived short and was closed eight years later in 2014. The closure of the center limited access to data, making it difficult to find information about the reasons for its decline. Yet, in 2016, the MNH and CACMS agreed to promote institutional relationships by exchanging medical experts to ease the sharing of medical knowledge. The CACMS agreed to send TCM experts to Tanzania to train local traditional medicine researchers and practitioners, but this plan did not come to fruition as the two sides voiced disagreements over the terms of its execution in 2018.[106]

4.5 Conclusion

This chapter's discussions unveiled that TCM knowledge was spread and practiced in Tanzania, despite its entanglements. Its practice and acceptance added value to the strength of medical knowledge from the Global South. It further implied that there was potential for South-South medical knowledge production and circulation as an alternative to the North-South model. The current trend further suggests the possibility of a South-North medical knowledge exchange. Global health players relied on biomedicine in the fight against pandemics while excluding traditional medicines. TCM intervention in HIV and AIDS was an attempt to promote innovation in and practice of medical knowledge from the Global South. Findings from the present study suggest that the Chinese-Tanzanian HIV and AIDS research was not particularly successful in eradicating the disease and only marginally contributed to boosting the medical knowledge of local researchers and practitioners. Nevertheless, TCM became widely practiced and accepted in Tanzania. However, this did not come without self-interest, as Chinese engagement in African countries yielded tangible benefits in terms of market access and scientific achievements.

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ya China 16–22, 2006," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 2.

105 "Letter from Permanent Secretary, MoH to Katibu Mkuu Kiongozi, July 25, 2006, Taarifa ya Safari ya China, July 16–22, 2006," NRC. Ministry of Health and Social Welfare, 14/7/01, File Ref. No. BC. 74/544/01, Technical Aid China 2005–2008, 2.

106 Interview with Bai Wenshan, May 28, 2019, Beijing, China.

Chapter Five
A History of Chinese-Funded Pharmaceutical Factories in Tanzania

5.1 Introduction

Tanzania's healthcare situation at independence was terrifying, prompting President Julius Nyerere to christen diseases among the three main "enemies" of the country's development, next to ignorance and poverty.[1] Despite the government's commitments to fight diseases, it lacked essential "weapons." Successful preventive and curative measures required the sufficient spread of health education to the population, vaccination against troublesome diseases, and an adequate supply of medicines and medical equipment. Yet, the government depended on acquiring all its curative and preventive therapies overseas, which were costly and could not be afforded by a low-income country. Such challenges burdened healthcare systems and limited effective healthcare delivery in the country. Local production of pharmaceuticals, by contrast, would maintain the country's self-sufficiency, reduce medical imports, and prevent the loss of foreign currency. This chapter surveys the emergence and development of Chinese-funded pharmaceutical industries in post-colonial Tanzania, tracing their history and implications for Tanzania's health sector. It also provides an overview of pharmaceutical industrial development before the onset of Chinese-funded factories, tracing the evolution of pharmaceutical industries in the country chronologically. It further examines the extent to which Chinese-sponsored pharmaceutical factories promoted self-sufficiency and how it implicated the Sino-Tanzanian pharmaceutical knowledge exchange under the spirit of Southern solidarity. While local production of pharmaceuticals held great potential in view of Tanzania's self-reliance agenda, I argue that the Chinese-sponsored factories instead created new forms of dependency, especially on imported raw materials and technical experts.

1 Julius K. Nyerere, Foreword to *History of the Medical Services of Tanganyika* by David F. Clyde (Dar es Salaam: Government Press, 1962), I.

https://doi.org/10.1515/9783112206881-005

5.2 Prelude to Chinese-Funded Pharmaceutical Factories, 1900s–1968

Industrialization in the colonial territories was less encouraged in Africa since the colonies produced agricultural raw materials such as sisal, cotton, tea, and the like for the metropolitan industries. At the same time, colonialists turned the colonies into a market for the consumer and producer goods of the colonial powers.[2] The colonial economy was geared towards serving the interests of the colonial states and the metropolitan nations. Nevertheless, pharmaceutical manufacturing companies set up production facilities and started manufacturing medicines in Africa during the colonial period. Serious investment in medicines production became visible in the 1930s, concentrating in Tanganyika, Kenya, South Africa, Zimbabwe, and Nigeria. Throughout the colonial period, investment in pharmaceutical industries was closely tied to multinational European companies that set up subsidiaries in their colonies. For instance, in 1930, Glaxo Company set up its base in Kenya. Likewise, in 1935, the Abbott companies established a pharmaceutical industrial base in South Africa, while in Nigeria, May and Baker companies established their firms in 1944.[3] Yet in some colonies, such as Tanganyika, simple pharmaceutical factories were established and run by the colonial authorities. The establishment of pharmaceutical industries in some African countries went hand in hand with colonial economic investments. The colonial governments encouraged the establishment of pharmaceutical industries in settler colonies to meet the demands of pharmaceuticals for settlers and laborers. Moreover, import challenges necessitated the colonial authorities to build pharmaceutical industries during the world wars to meet the local supply of medicines to military personnel and African troops.[4] However, throughout most of the colonial period, there were fewer initiatives to promote the local production of medicines in Africa. The administrations mainly sourced medicines from abroad, preferably from the colonial authorities' metropoles.

2 URT, *Report on the Fifty Years of Independence of Tanzania Mainland, 1961–2011*, 104; also read Chapter 5 in John Iliffe, *A Modern History of Tanganyika* (Cambridge: Cambridge University Press, 1979).

3 Geoffrey Banda, Samuel Wangwe and Maureen Mackintosh, "Making Medicines: An Historical Political Economy Overview," in *Making Medicines in Africa: The Political Economy of Industrializing Local Health*, ed. Maureen Mackintosh, Geoffrey Banda, Paula Tibandebage and Watu Wamae (London: Palgrave Macmillan, 2016), 8.

4 Amon J. Nsekela and Aloysius M. Nhonoli, *The Development of Health Services and Society in Mainland Tanzania: A Historical Overview-Tumetoka Mbali* (Dar es Salaam: East African Literature Bureau, 1976), 8; Banda, Wangwe and Mackintosh, "Making Medicines," 10.

The history of pharmaceutical industries in Tanzania dates back to the German and British colonial eras. The two colonialists established small-scale factories producing preventive and curative medicines. Germans, for instance, produced the smallpox lymph vaccine in Dar es Salaam until they fled the territory during WW I. In 1928, the British colonial government took over the production of a vaccine for smallpox at the Vaccine Lymph Institute in Mpwapwa, Dodoma. The Institute was the only institution in East Africa specially designed to produce and research the smallpox vaccine. Before its establishment, vaccine lymph was sourced from outside the country, while a few were prepared in the medical laboratory in Dar es Salaam. With an area of ten acres, the institute was completed and commenced production in July 1928 at a total cost of less than £4000, including buildings, equipment, and residences, producing one million doses annually. The production goals were to manufacture enough vaccines sufficient for the territory and surplus to supply to other colonies, help generate revenues, and serve the cost incurred from the imported vaccines. However, the Institute was closed in 1944, prompting the territory's purchase of lymph from Kenya, where, through the 1947 Directors of Medical Services Conference, the Kenyan government was permitted to manufacture Biological Products on behalf of other Territorial Governments.[5]

The Amani Tropical Agricultural Research and Biological Institute and a cinchona tree plantation at Bomole, Tanga, gave a chance to the emergence of a simple pharmaceutical factory in 1914.[6] The Germans' initial goal of planting cinchona trees was not meant for raw materials to be locally used for the production of quinine. Instead, it was grown to satisfy German needs for industrial raw materials and research by the Amani Institute. However, the advent of the First World War (1914–1918) forced the Germans to establish a simple pharmaceutical industry in the territory. During the war, local supplies of quinine ran short because of the insecurity that prevented the Germans from importing more quinine from abroad. Thus, the Germans opened quinine factories in Kilosa and the Veterinary Laboratory at Mpapua, Tanga. The factories exploited cinchona barks

5 "Centralization of the Production of Vaccine Lymph for East Africa at Mpwapwa, Tanganyika Territory," TNA. Acc. No. 450, Ministry of Health, File No. 204, Vaccine Lymph-Local Manufacturer and Distribution of, 1935–1946; "Letter from Director of Medical Services, 3 November 1948, Lymph Institute Mpwapwa, to the Chief Secretary, Dar es Salaam," TNA. Acc. No. 450, Ministry of Health, File No. 204/4, Manufacture of Vaccine Lymph – Buildings, 1948–1949; Nsekela and Nhonoli, *The Development of Health Services*, 9.

6 Nsekela and Nhonoli, *The Development of Health Services,* 14; Stefanie Gänger, "World Trade in Medicinal Plants from Spanish America, 1717–1815," *Medical History* 59, no. 1 (January 2015): 47, https://doi.org/10.1017/mdh.2014.70.

grown in Kilosa and Amani Institute, respectively. Production trials commenced on a small scale in January 1914, when about 10 kilos were produced a month by the officer in charge. The factories at Kilosa and Tanga continued to operate throughout the War, producing quinine and other medicines.[7]

After the British takeover of the colony in 1918, the new colonial administration inherited the remains of the German cinchona trees. Tanganyika, a "conquered" territory, the League of Nations mandate was less valued for industrial investment by the British colonial government. In East Africa, British colonial policy preferred establishing industries in Kenya, a settler colony.[8] However, in 1942, the British government established a totaquina factory in Dar es Salaam using barks exploited from the old half-forgotten plantation and the cinchona just reaching maturity, which had been planted in different parts of the territory.[9] The British needed to establish the factory during the Second World War because Java, which was the leading supplier of quinine to the British colonies, had been occupied by the Japanese in February 1942. This deprived the British and their allies of the primary source of global quinine supply.[10] To alleviate the situation, the British government encouraged the production of drugs locally in the colonies. Hence, Tanganyika's existing cinchona plantations gained favor with the British. However, notwithstanding the quality of totaquina produced in Dar es Salaam, the British colonial government ceased its production in October 1947, followed by two years of decline after the end of WW II. The cessation implies that the factory operation was a wartime expedience – a short-term factory consistent with imperial policy, propelling the post-colonial government's dependence on imported medicines.[11]

At independence, the Tanzanian government attempted various ways to provide policy guidelines by which it would disengage itself from neo-colonial economic entanglement and thereby hasten its progress to achieve self-reliance. It was realized that importing medicines from abroad was the leading cause of the

7 "Letter from the Acting Chief Secretary, September 20, 1922, to the Principal Medical Officer, Tanganyika Territory," TNA. Acc. No. 450, Ministry of Health, File No. 174, Cinchona, 1920–1935.

8 Rune Skarstein, "Growth and Crisis in the Manufacturing Sector," in *Tanzania Crisis and Struggle for Survival*, ed. Jannik Boesen, Kjell J. Havnevik, Juhani Koponen, and Rie Odgaard (Uppsala: Scandinavian Institute of African Studies, 1986), 79.

9 "A Memorandum on Cinchona Development and Research on Totaquina, 1944," TNA. Acc. No. 450, Ministry of Health, File No. 174, Cinchona Products, Maintenance and Supplies, 1943–1945.

10 "A Memorandum from the Colonial Office of April 1, 1942," TNA. Acc. No. 450, Ministry of Health, File No. 174, Cinchona Products, Maintenance and Supplies, 1941–1942.

11 "Letter from the Member for Finance, Trade and Economics, December 18, 1948 to the Director of Medical Services," TNA. Acc. No. 450, Ministry of Health, File No. 1063, Cinchona, 1944–1949.

scarcity of foreign currency.[12] Thus, in its First Five Year Development Plan (FYDP) covering the period 1964 to 1969, the Ministry of Commerce and Industries pledged to convert Tanzania from an agrarian and weak country, dependent upon the caprices of other countries, into an industrial and powerful country, fully self-reliant, and independent of exploiting countries.[13] To achieve this objective, the ministry, in its development plans, laid a firm industrial base.

Consequently, the establishment of pharmaceutical industries was a part of the government's long-term plans, premised on the FYDP. These industries were founded when the government prioritized expanding healthcare to serve basic needs, raise life expectancy, and foster healthy communities. On the other hand, the government's stress on pharmaceutical industries aimed at remedying the country's dependency on imported drugs, which became expensive and unsustainable for a growing economy.[14] Indeed, the establishment of pharmaceutical factories presented an opportunity to save lives while creating jobs and improving the local economy. The industries anticipated prompting local production of packing materials, containers, boxes, printing work, medical literature, and other products demanded by the factories. Above all, these production jobs would also increase the country's export volume, creating industries that would ensure constant production to meet domestic needs and a surplus for exports, which would boost the country's economy.[15] This indicates that pharmaceutical industries were vital for the nation's development and for improving the standard of people's health, which assured a vigorous labor force to develop a sound economy.

Concrete steps to implement the government's plans to set up pharmaceutical industries were envisaged in the Second Five Year Development Plan (SFYDP) projected for 1969 to 1974. The government envisioned establishing three government-owned pharmaceutical factories.[16] Such commitment was bound by the government statement, which outlined its intent to practice the national politics of

12 URT, *Second Five-Year Plan, 1969–1974, Programme for Industrial Development, Part I, July 1969*, 9; Interview with Cleopa David Msuya, July 6, 2018, Upanga, Dar es Salaam.

13 "Ministry of Industries, Mineral Resources and Power, Budget Speech. The Fundamental Task of the Five-Year Plan and the Path of its Fulfilment," TNA. Acc. No. 469, Ministry of Commerce and Industries, File No. CIC 70/12 Speeches-Material, 1962–64, 1.

14 "Proposal for the Setting up of a Factory to produce Pharmaceutical Products in Tanzania, 1964," TNA. Acc. No, 596, National Development Corporation, File No. D/3522/2, Pharmaceutical Project, 1966–1966.

15 Interview with Cleopa David Msuya, Upanga, Dar es Salaam; "Memorandum, Tegry-Assia Pharmaceutical Ltd, April 20, 1966," TNA. Acc. No, 596, National Development Corporation, File No. D/3522/2, Pharmaceutical Project, 1966–1966.

16 URT, *Second Five-Year Plan, 1969–1974, Programme for Industrial Development, Part I, July 1969*, 38.

self-reliance through the local production of pharmaceuticals.[17] Therefore, Mabibo Vaccine Institute and Keko Pharmaceutical Industries (discussed below) were established under the country's scheduled development agenda. These two factories supplemented the existing privately owned Mansoor Daya Industries, founded in 1962 (see below).

Before the assistance from the Chinese government, the Tanzanian government encouraged locals and foreigners to invest in pharmaceutical industries. Through its Three-Year Development Plan (TYDP) of 1961 to 1964, the government created favorable conditions for foreign capital by offering tariff protection and tax incentives. For instance, the Foreign Investment Act of 1963, among other commitments, gave immunity to foreign capital from nationalization without compensation. Furthermore, in January 1965, the government established the National Development Corporation (NDC), an industrial development and promotion organization which promoted private and public investments in the industrial sector.[18] Tanzanians and foreigners showed interest in investing in pharmaceutical industries. For instance, Mansoor Daya, a pharmacist in a retail pharmacy in Dar es Salaam since 1959, collaborated with the Tayford Laboratories of England to establish Mansoor Daya Chemicals Limited in 1962. The industry, the first to be established in post-colonial Tanzania, started its production in May 1965 with production facilities for tablets, granules, ointments, liniments, suspensions, and syrup.[19] Though it was a small-scale unit with an establishment cost of £12,000, its inauguration marked an important milestone in the fight against diseases and for the local production of pharmaceuticals. The unit manufactured drugs for preventive and curative measures targeting the demands consistent with the existing

17 JMT, *Mpango wa Maendeleo wa Shughuli za Afya na Ustawi wa Jamii kwa Kipindi cha Miaka Mitano Kuanzia Julai 1, 1969 Mpaka Juni 30, 1974*, 18.

18 URT, *Ministry of Industries, Mineral Resources and Power, Budget Speech. The Fundamental Task of the Five-Year Plan and the Path of Its Fulfilment*, 3; Rune Skarstein and Samuel M. Wangwe, *Industrial Development in Tanzania: Some Critical Issues* (Uppsala: Scandinavian Institute of African Studies, 1986), 4; Idrian N. Resnick, *The Long Transition: Building Socialism in Tanzania* (London: Monthly Review Press, 1981), 27; Jeannette Hartmann, "The Two Arusha Declarations," in *Re-Thinking the Arusha Declaration*, ed. Jeannette Hartmann (Copenhagen: Axel Nielsen and Son A/S, 1991), 113.

19 Sudip Chaudhuri, Maureen Mackintosh and Phares Mujinja, "Indian Generics Producers, Access to Essential Medicines and Local Production in Africa: An Argument with Reference to Tanzania," *European Journal of Development Research* 22, no. 4 (2010): 8; also see Banda, Wangwe and Mackintosh, "Making Medicines," 19.

health challenges.[20] Nevertheless, production at Mansoor Daya Chemicals Limited was insufficient to satisfy the country's needs, prompting further investment calls.

Chinese-funded pharmaceutical industries in Tanzania were established shortly after the government endorsed the Arusha Declaration in 1967, which defined a socialist development course. Under the declaration, the state controlled the economy to overcome dependence on private parastatals. Thus, it nationalized privately owned industries to enable the government to own the primary means of production. Such policies discouraged local and foreign investment in pharmaceutical industries.[21] Yet, pharmaceutical industries funded by the Chinese government were compatible with the government's endeavor to have state-owned enterprises. In Africa, Tanzania was the first to get assistance from the Chinese government, and two industries, Mabibo Vaccine Institute (MVI) and Keko Pharmaceutical Industries (KPI), were built in 1968 (discussed below). Algeria followed Tanzania in line to receive Chinese assistance, and on December 22, 1976, consented with China to construct a factory for surgical instruments in Médéa.[22]

In the mid-1960s, when China committed to providing technical and economic assistance to Tanzania, it had already attained healthy economic and technological development domestically. After its 1949 liberation movement, China invested vigorously in industries for hospital equipment. The industries gave the government enough Chinese-made equipment to diagnose and treat diseases and facilitate surgical operations. Such investments transformed China's dependency on imported hospital equipment. By the 1970s, it imported only 1,500 kinds of medical equipment with 5,000 specifications to meet domestic needs. The Chinese government further established research institutes for medical equipment and built large factories in Beijing, Tianjin, and Shanghai, as well as in the provinces of Shaanxi and Sichuan, to produce enough medical equipment to cater to the needs

20 Lawrence Mabele, "Kiwanda cha Madawa," *Tanzania Nchi Yetu*, November 1977, 12–13; "Industrial Studies and Development Centre, Some Facts about the Market for Medicinal and Pharmaceutical Products in Tanzania, 1965," TNA. Acc. No. 596, National Development Corporation, File No. D/3522/2, Pharmaceutical Project, 1966–1968.

21 Kjell J. Havnevik, "A Resource Overlooked-Crafts and Small-Scale Industries," in *Tanzania Crisis and Struggle for Survival*, ed. Jannik Boesen, Kjell J. Havnevik, Juhani Koponen, and Rie Odgaard (Uppsala: Scandinavian Institute of African Studies, 1986), 269.

22 "WHO, National Health Planning in Tanzania: Report on a Mission, August 1, 1973–April 28, 1974," WHOA, File No. TAN/SHS/002, 1972–1974-SHS/NHP, National Health Planning, 7; Gail A. Eadie and Denise M. Grizzell, "China's Foreign Aid, 1975–78," *The China Quarterly*, no 77 (Mar. 1979): 228; Dongxin Zuo, "Economizing Socialist Aid: China's Failed Surgical Plant in Algeria, 1973–80," *Technology and Culture* 63, no. 3 (July 2022): 724.

of the whole of China.[23] These examples imply that when China pledged to assist Tanzania with equipment and experts for the pharmaceutical industries, it had already made a step in producing them at home.

5.3 Mabibo Vaccine Institute (MVI), 1968–1984

> The most effective way to prevent many infectious diseases is through vaccination, but for now, all vaccines are imported from abroad. With the help of a friendly country [China], [Tanzania] seeks to establish a vaccine factory to manufacture locally two kinds of vaccines before the end of 1969.[24]

The preceding quotation underscores the government's commitment to establishing a vaccine plant to conform with its self-reliance agenda and the preventive healthcare campaign endorsed in the TYDP for 1961 to 1964 and the FYDP for 1964 to 1969, stressing the dual approaches of hygiene and vaccination.[25] Yet, since WW II, the country sourced all vaccines from abroad, causing an unavoidable delay and or spoiling the vaccines while on the way to Tanganyika, compromising the preventive health campaign.[26] Furthermore, before the local production of vaccines, the government relied on vaccines imported to the country by international organizations as grants. For example, from 1968 to 71, the United Nations International Children's Emergency Fund (UNICEF) and the WHO provided vaccines, transport facilities, vaccine kits, and medical equipment to support smallpox and tuberculosis eradication campaigns.[27] Yet, the granted vaccines did not cover the country's needs, costing the government more than Tshs. 2,000,000 for

23 Hua Hsin, "Chinese Factory's Long March from Dustpans to Hospital Equipment," *Daily News*, October 19, 1977, 4.

24 My translation from Kiswahili in JMT, *Mpango wa Maendeleo wa Shughuli za Afya na Ustawi wa Jamii kwa Kipindi cha Miaka Mitano Kuanzia Julai 1, 1969 Mpaka Juni 30*, 1974; also see URT, *Second Five-Year Plan for Economic and Social Development July 1, 1969–June 30, 1974, Volume I: General Analysis, 1969*, 173.

25 URT, *Tanganyika, Development Plan for Tanganyika, 1961/62–1963/64, Dar es Salaam, 1962*, 18; URT, *Tanganyika, Five-Year Plan for Economic and Social Development, July 1, 1964–June 30, 1969, Volume II: The Programmes, 1964*, 118.

26 "Letter from Senior Medical Officer, Western and Central Province, Tabora, December 24, 1949, to the Director of Medical Services, Small Vaccine Lymph," TNA. Acc. No. 450, Ministry of Health, File No. 204, Vaccine Lymph- Local Manufacture and Distribution of, 1946–1952.

27 "Addendum to the Plan of Operation for the Development of Public Health Services in the United Republic of Tanzania (Tanganyika): BCG Vaccination, 1970," WHOA, File No. TANZANIA/UNICEF-5, 1968–1972-SHS, Development of Public Health Services; URT, *Ministry of Health and Social Welfare, Annual Report of the Health Division, 1967 Volume I*, 6.

purchasing vaccines from abroad yearly throughout the 1960s.[28] Consequently, China's assistance in the establishment of the vaccine factory was an imperative attempt to challenge the colonial policies, which gave less prominence to preventive healthcare and emancipation from dependence on imported vaccines from countries of the Global North. More importantly, the production rekindled hope that it would be possible for the government to combat TB and smallpox successfully, promote the country's self-reliance agenda, and preserve foreign currency.

The Mabibo plant was co-financed by the Tanzanian and Chinese governments. Tanzania received China's support in the form of "Technical Assistance," whereby the Chinese government covered expenses related to experts for technical work and all equipment needed for production and construction work. In return, the Tanzanian government provided funds to erect the plant buildings worth Tshs. 1,000,000.[29] The plant was located at Mabibo, a few miles outside the city center of Dar es Salaam in the Kigogo area. President Julius K. Nyerere officially inaugurated the plant on April 23, 1971.[30] About 70 Tanzanians manned the factory under the supervision of Chinese experts who taught them the art of vaccine manufacturing (Figure 12). Production commenced in January 1971, and the first production was issued to Kisarawe District in March 1971 for TB prevention. Up to 1972, about 500 people were vaccinated in Kisarawe District.[31] Regrettably, some industrial equipment sourced from China was found unsuitable in hot climate regions such as Dar es Salaam. The hot weather lowered the quality of the vaccine produced in liquid. As a result, in 1974, the plant changed its products from a liquid form into tablets and procured new equipment for drying the liquid-made vaccines into tablet form (Figure 12). The MVI produced enough vaccines to satisfy the country's needs and a surplus, which was sold to nearby countries. Its production capacity was 1.5 million doses of freeze-dried vaccine for smallpox and 250,000 doses of Bacillus Calmette-Guérin (BCG) vaccine for TB per year.[32]

28 Marcelino Komba, "Tanzania takes a Step Towards Self-Reliance in Drugs," *The Nationalist*, May 4, 1971, 3.

29 "A Special Report, Chinese Medical Assistance to Tanzania, May 12, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; "Dar to Have a Vaccine Plant, Government Moves to Combat Smallpox, Tuberculosis," *The Nationalist*, August 22, 1970, 8.

30 Komba, "Tanzania takes a Step Towards Self-Reliance in Drugs," 3.

31 "A Special Report, Chinese Medical Assistance to Tanzania, May 12, 1972," TNA. Acc. No, 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China.

32 "A Special Report, Chinese Medical Assistance to Tanzania, May 12, 1972," TNA. Acc. No. 450, Ministry of Health, File No. HEA/90/5 Technical Assistance China; Ellen Rhobi Binagi, "Madawa ya Kinga Yatengenezwa Mabibo," *Tanzania Nchi Yetu*, Novemba 1977, 13.

Figure 12: Local and Chinese workers standing beside a vaccine dryer, 1977. Source: Ellen Rhobi Binagi, "Madawa ya Kinga Yatengenezwa Mabibo," *Tanzania Nchi Yetu*, Novemba 1977, 13 (printed with permission).

The MVI began with the production of BCG for TB, followed by the freeze-dried vaccine for smallpox. The government dearly needed these two vaccines to curb smallpox and TB, which were spreading alarmingly. The incidences of smallpox and TB were a threat not only to the Tanzanian population but to many countries of the Global South. For instance, in 1958, the World Health Assembly endorsed the Smallpox Eradication Programme (SEP) to fight the epidemic. With its frightening spread rate, the WHO paid much attention to SEP from 1966 onwards.[33] The production of vaccines at MVI responded to the global health challenges. In Tanzania, incidences rose during WW II and accelerated further after independence. The WW II military requirements caused a considerable dislocation of the rural epidemiological services, allowing smallpox cases to increase markedly in many parts of the country, predominantly south and east of Lake Victoria (Table 10). Yet, it took until 1968 for the Tanzanian government to launch a robust campaign against smallpox and ensure that all newborns were inoculated.[34] The government's regulation was obligatory given the mounting incidences of smallpox. The

33 Randall M. Packard, *A History of Global Health: Interventions into the Lives of Other Peoples* (Baltimore, MD: Johns Hopkins University Press, 2016), 129–145.

34 URT, *Ministry of Health, Annual Report of the Health Division 1965 Volume I,* 6; W. l. Kilama, A. M. Nhonoli and W. J. Makene, "Health Care in Tanzania," in *Towards Ujamaa: Twenty Years of TANU Leadership*, ed. Gabriel Ruhumbika (Dar es Salaam: East African Literature Bureau, 1974), 212.

1965 annual report of the Health Division shows the incidences of smallpox more than doubled from 1,461 cases in 1964 to 3,017 cases in 1966 (Table 10). Such a rise occurred despite the vaccination campaign, which was underway. In 1964, for instance, the government inoculated about 1,500,000 people. The number of inoculated Tanzanians rose to 3,131,555 out of more than 11,000,000 people by 1965.

Table 10: Annual returns of smallpox cases and deaths in mainland Tanzania, 1937–1967.

Year	Notified Cases	Deaths	Cases/Mortality Per cent
1937	1,478	31	2.1
1938	1,095	27	2.4
1939	579	27	4.7
1940	156	5	3.2
1941	92	6	6.5
1942	90	4	4.4
1943	201	2	1.0
1944	5,755	38	0.6
1945	12,285	1,815	14.7
1946	12,671	1,935	15.2
1947	2,960	616	20.8
1948	1,206	209	17.3
1949	10,45	169	16.1
1950	6,390	345	21.0
1951	855	139	16.2
1952	370	34	9.2
1953	1,200	54	4.5
1954	928	28	3.0
1955	542	15	2.8
1956	605	21	3.5
1957	856	38	4.4
1958	1,176	94	7.9
1959	1,442	158	10.9
1960	1,584	83	5.2
1961	914	45	4.9
1962	1,048	53	5.0
1963	867	49	5.6
1964	1,461	102	7.0
1965	2,759	213	7.7
1966	3,017	171	5.7
1967	1,629	150	9.2

Source: URT, *Ministry of Health*, *Annual Report of the Health Division*, *1965*, Volume I, 7; "WHO, Smallpox Eradication: Assignment Report, 1972," WHOA, File No. TANZANIA-1801, 1970–1974-CDS2, Smallpox Eradication, 21.

Yet, the 1965 report shows that smallpox epidemics affected several regions, such as Mwanza, which reported 490 cases, Mbeya 475, Kigoma 407, Shinyanga 354, and Iringa, which recorded 309 cases. Other regions, such as Tabora, Singida, and Mtwara, reported not more than 100 cases, while the incidences in other areas were less sporadic.[35] This increasingly smallpox epidemic in the mid-1960s incited the importation of vaccines and made the need for the local production of vaccines appealing.

Furthermore, TB was also a severe threat to the Tanzanian government. The 1967 annual report of the Health Division shows that TB incidences were rampant in all regions of Tanzania. Numerous TB cases among both outpatients and inpatients were reported in Mwanza, Tanga, Kilimanjaro, and Arusha Regions (Table 11).[36]

Table 11: Tuberculosis incidences by 1967.

Region	Population	Total No. T.B. Beds	Total No. B.C.G. Vaccinations	Outpatients	Inpatients	Total
Arusha	601,515	84	198,822	672	1,054	1,726
Kilimanjaro	650,533	246	37,670	629	1,329	1,958
Coast	781,267	230	24,475	647	678	1,958
Dodoma	708,422	84	856	178	182	360
Iringa	683,555	102	1,565	299	468	767
Kigoma	470,773	–	40	132	130	262
Mara	535,882	60	2,503	559	242	801
Mbeya	955,891	120	65,114	42	218	260
Morogoro	683,061	100	–	97	487	584
Mtwara	1,032,896	226	–	432	1,442	1,874
Mwanza	1,057,965	170	112,439	452	2,569	3,021
Ruvuma	392,812	100	8,540	733	587	1,320
Shinyanga	888,209	95	–	297	113	410
Singida	454,749	–	–	582	320	902
Tabora	552,339	73	–	149	36	185
Tanga	769,304	196	3,955	960	1,084	2,044
West Lake	658,079	120	314	183	1,429	1,612
Totals	11,876,982	2,016	456,343	7,043	12,368	19,411

Source: URT, Ministry of Health and Social Welfare, Annual Report of the Health Division, 1967 Volume I, 10.

35 "WHO, Smallpox Eradication: Assignment Report, 1972," WHOA, File No. TANZANIA-1801, 1970–1974-CDS2, Smallpox Eradication, 22; URT, *Ministry of Health, Annual Report of the Health Division 1965 Volume I,* 2.

36 URT, *Ministry of Health and Social Welfare, Annual Report of the Health Division, 1967 Volume I,* 10.

Undoubtedly, the production of vaccines at the MVI was a notable achievement. Nevertheless, in 1979, the WHO declared the eradication of smallpox, and subsequently, the MVI condensed the production of the freeze-dried vaccine. At the same time, 50 employees out of 70 left the plant. The production of the BCG vaccine continued, but after the Chinese experts left, the quality of the vaccines produced by local workers with limited experience and expertise no longer met the WHO requirements. In such a context, the production of the BCG vaccine halted in 1982, and a few remaining personnel, left unoccupied, abandoned the factory.[37] In 1980, Mabibo was handed over to the National Chemical Industries (NCI) through the Ministry of Industries with a view to rehabilitation. In 1984, it was considered the most suitable site for housing the Extended Program of Immunisation (EPI) in Tanzania. As a result, all but three of the buildings were handed over to the Ministry of Health for EPI. In July 1986, the remaining three buildings were handed over to EPI by NCI for their use. Thus, Mabibo has not been available for vaccine production ever since.[38]

5.4 Keko Pharmaceutical Industries (KPI) and Production for Self-Sufficiency, 1968–1997

The Keko plant was established with assistance from the Chinese government in 1968 as a unit under Tanzania's Ministry of Health and Social Welfare. It was a medium-scale unit with facilities that produced tablets, capsules, and infusions for therapeutic purposes. Its foundation stone was laid in 1973 by the first Vice President, Aboud Jumbe. The construction of KPI was divided into two phases. Phase one was completed in 1972, while the second phase was done in July 1975. Trial production started in 1975 after completing civil works and machinery installation.[39] The Chinese government assisted in founding KPI following the request by Tanzania's Ministry of Health in 1967. The plant was built at the cost of Tshs. 9.9 million, the government of Tanzania contributing a sum of Tshs.

37 United Nations Industrial Development Organization (UNIDO), *Programme for Production of Vaccines in Africa, Technical Report: Programme for Production of Vaccines in Tanzania, Prepared for the Government of the United Republic of Tanzania, on January 6, 1986*, 5.

38 UNIDO, *Establishment of a Formulation-Filling Plant for Bacterial Vaccines for Veterinary Application Technical Report, Findings and Recommendations, Prepared for the Government of the United Republic of Tanzania, on November 13, 1991*, 9.

39 "A Special Report, Chinese Medical Assistance to Tanzania, May 12, 1972," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko); "Kiwanda cha Dar Kutoa Madawa Mwaka Ujao," *Uhuru*, Novemba 3,1973, 1.

5.1 million for civil works and the remaining Tshs. The Chinese government provided 4.8 million in machinery, raw materials, and technology. KPI was a production wing of the Ministry of Health before its transfer to the Ministry of Industries under the National Chemical Industries (NCI) in May 1980, beginning to produce commercially.[40]

The factory had five main sections: Quality Control, Tabletting, Injection, Administration, and Accounts. These sections were manned by 100 employees, including three registered pharmacists, two chemical laboratory technicians, two medical laboratory technicians, production assistants and auxiliaries, laborers, cleaners, and watchmen. Its production capacity was 105 million tablets, twelve categories of injections contained in 10 million ampules, and five categories of intravenous infusions contained in 40,000 vials per year. The plant was committed to producing highly needed drugs consistent with health challenges. Its trial production list included about 35 varieties of medicines.[41] However, in 1977, production was reduced to 25 products. The management realized there was little demand for some products while others were uneconomical. For instance, eye drops were in less demand due to fewer eye cases. The production of some drugs was phased out as they were perceived to be unpopular with many users. Among the 25 listed products, not all were routinely produced. Some drugs were made only on special requests.[42] There was an increase in the production of the seriously needed medicines at the plant. The available figures show that aspirin and dextrose were in high demand, raising their production tremendously. For instance, the production of aspirin rose from 20 million tablets in 1975 to 35 million in 1977. Similarly, the production of dextrose rose from 2,000 tablets in 1975 to 15,000 in 1977.[43] These few glimpses reveal that the production focus responded to the economic demands following the most common diseases.

The plant's management and production shook, recording several malfunctions and losses immediately after the Chinese pharmaceutical technicians handed over management and production to Tanzanians in June 1976. For in-

40 "National Chemical Industries, Brief Notes on Keko Pharmaceutical Industries Limited, 1981," TNA. Acc. No. 638, Chemical Industries, File No. GM/6/F/80, Keko Pharmaceutical Industries Ltd, 1985, Special Surveys and Reports.

41 "Letter from the Office of Planning and Development Department of the Tanzania Investment Bank to the Director, Keko Pharmaceutical Plant, March 18, 1978, Production of Keko Factory," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko); "Kiwanda cha Madawa Kitajengwa Mjini Dar," *Uhuru*, Septemba 21, 1972, 5.

42 "Pharmaceutical Plant, Keko, Production List," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

43 "Pharmaceutical Plant, Keko, Production List," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

stance, in 1977, the plant recorded a loss of Tshs. 90,673.83. Inadequate supply of raw materials, poor management, and insufficient skilled personnel were the primary causes of malfunctions and production losses.[44] Yet, the shortfalls reveal that the conditions for a successful handover were unsatisfied. The production trends show that the target was not realized throughout the 1970s and early 1980s (Table 12). It was not until 1981 that tablet production reached 130 million, and in 1983, the production of infusion turned to 125,000 liters. The production target at KPI was realized and exceeded its initial capacity in the 1980s when the government received loans and grants from Nordic and other countries of the Global North. The loans and grants enabled the government to purchase raw materials and modern equipment, which replaced Chinese production technology.[45] With modern machines, for instance, KPI successfully switched the production of infusion from glass bottles to polypropylene bags in 1982, increasing production to 2,000 bags from 500 bottles daily.[46] This increase in production implies that the availability of raw materials and modern machines was imperative for pharmaceutical industries' efficiency and sustainable development.

Nevertheless, from the late 1980s to the early 1990s, traditional donors of the global North reduced their loans and grants to the Tanzanian government, negatively impacting pharmaceutical production at the plant.[47] Reductions in loans and grants were prompted by liberal politics, which promoted a free-market economy and privatization of government enterprises. Such policies favored privatization and private corporations, discouraging financial and material support of government-owned factories. As a result, under a free market economy, the government-owned pharmaceutical industries failed to keep pace with the privately owned and imported pharmaceuticals, which were cheaply sold and collapsed.[48] Production records show a tremendous drop in the KPI in 1988, which became worse throughout the 1990s. These drops imply that the assistance the Tanzanian government received from the Nordic and other traditional donors of the Global North in the 1980s did not sustainably enhance the operational capacities of pharmaceutical industries. The only advantage of the time was that while

44 "Pharmaceutical Plant, Keko, Production Report Year July 1977–June 1978," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

45 "Letter from the Secretary, Central Tender Board, February 5, 1979 to the Director, Keko, Pharmaceutical Plant, request for Purchase of Oil-Fired Steam Boiler and Pressure Vessel," TNA. Acc. No. 450, Ministry of Health, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

46 "Infusion Administration set, October 2, 1982," TNA. Acc. No. 450, Ministry of Health, File No. HEI.10/15, Pharmaceutical Plant (KEKO), 1980–1982.

47 JMT, *Hotuba ya Mheshimiwa C. D. Msuya (MB.), Waziri wa Viwanda na Biashara, Akiwasilisha Bungeni Makadirio ya Matumizi kwa Mwaka 1994/95*, 15.

48 Interview with Cleopa David Msuya, July 6, 2018, Upanga, Dar es Salaam.

government-owned pharmaceutical industries registered little success, privately owned industries supplied the market requirements considerably more. For instance, the Mansoor Daya and Shellys Ltd. pharmaceutical industries increased their production of tablets from 35,535 million tablets in 1989 to about 47,596.7 million tablets in 1990.[49] The promising performance of the privately-owned pharmaceutical industries justified the need to privatize government-owned pharmaceutical industries. As a result, in 1997, the government sold Keko to a private investor who owned 60% of the shares, with the remaining 40% retained by the government.[50]

Table 12: Production trends at KPI, 1976–1990.

SN.	Year	Tablets (Millions)	Infusions Litres (Thousands)
1	1976	83.13	25.69
2	1977	85.36	27.75
3	1978	66.37	24.93
4	1979	100.00	24.93
5	1980	103.45	25.00
6	1981	130.00	37.15
7	1982	200.00	26.78
8	1983	180.00	125.00
9	1984	335.31	185.57
10	1985	44.23	202.77
11	1986	276.98	494.43
12	1987	371.77	398.92
13	1988	201.62	630.79
14	1989	362.73	376.89
15	1990	305.89	500.78

Sources: Created by the author based on data from TNA. Acc. No. 638, Chemical Industries, File No. KPI/8, Keko Pharmaceutical Industries Ltd, Company Plan, 1985, 38; File No. KPI/6, Keko Pharmaceutical Industries Ltd, 1988, Company Plan, 1, and File No. KPI/5, Keko Pharmaceutical Industries Ltd, 1991, Company Plan, 44.

The failure of KPI and other domestic pharmaceutical industries to meet national demands made the government spend most of its foreign currency on purchasing drugs and other medical equipment abroad. Available financial information dis-

49 JMT, *Hotuba ya Mheshimiwa C. D. Msuya, (MB.), Waziri wa Viwanda na Biashara, Akiwasilisha Bungeni Makadirio ya Matumizi kwa Mwaka 1991/92*, 13–14.

50 Robert M. Mhamba and Shukrani Mbirigenda, "The Drugs Industry and Access to Essential Medicines in Tanzania," *EQUINET Discussion Paper Series,* 83 (July 2010): 14.

closes that the total costs of imported medicinal and pharmaceutical products rose with time. For instance, the expenses surged from Tshs. 34 million in 1971 to Tshs. 120 million in 1977.[51] Inevitably, the mounting costs of drugs and equipment overwhelmed the Tanzanian government's budget. For example, in the 1990/1991 financial year, the funds required to purchase medicines amounted to Tshs. 6.2 billion. Yet, the government afforded only 35% of it, relying on the rest on loans and grants from multilateral lenders and donor countries.[52] In 1990, the government predicted that the costs of purchasing medicines and medical equipment would shoot to at least Tshs. 8 billion by 2000. However, the actual cost turned out to be Tshs. 10 billion, Tshs. 2 billion higher than the government's forecasts. Worse still, the costs further increased to Tshs. 30 billion in 2004/2005 and to Tshs. 53 billion in 2008/2009, respectively, realizing that the government's endeavor to save foreign currency through the local production of pharmaceuticals was marginally attained.[53]

5.5 Raw Materials for Pharmaceutical Industries

A constant supply of raw materials is imperative for the pharmaceutical industry. Yet, many African countries did not take investment in raw materials seriously after political independence. As a result, the production of pharmaceuticals on the continent leaned towards the secondary and tertiary levels, meaning that the industries produced finished dosage forms from imported raw materials and excipients, as well as packaging and labelling finished products.[54] With limited ex-

51 "The Pharmaceutical Industry, 1970," TNA. Acc. No. 596, National Development Corporation, File No. D/1000/4, Vol. 1 Projects General, 1969–1974; "JMT, *Mpango wa Pili wa Maendeleo wa Shughuli za Afya na Ustawi wa Jamii kwa Kipindi cha Miaka Mitano Kuanzia Julai 1, 1969 Mpaka Juni 30, 1974*," TNA. Acc. No. 589, Orodha ya Majalada ya Mtu Binafsi, Bhoke Munanka, File No. BMC. 10/03, Speeches of Ministers and Junior Ministers, 18; "Kiwanda cha Madawa Kitajengwa Mjini Dar," *Uhuru*, Septemba 21, 1972, 5; "Arusha Drug Plant to Save 48m/-" *Daily News*, November 9, 1977, 3.

52 JMT, *Wizara ya Afya, Hotuba ya Waziri wa Afya Mhe. Prof. Phillemon M. Sarungi, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1992/93*, 30.

53 JMT, *Wizara ya Afya, Hotuba ya Waziri wa Afya Mhe. Anna Margareth Abdallah, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 2005/2006*, 8; JMT, *Wizara ya Afya, Hotuba ya Waziri wa Afya Mhe. Prof. David Homeli Mwakyusa, (MB.), Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 2008/2009*, 68.

54 African Union (AU), *Pharmaceutical Manufacturing Plan for Africa, Third Session of the African Union Conference of the Ministers of Health: Strengthening of Health Systems for Equity and Development in Africa, April 9–13, 2007* (Johannesburg: African Union 2007), 7; East African Community, *East African Community Regional Pharmaceutical Manufacturing Plan of Action (2012–2016)*, 17.

ceptions for South Africa, Egypt, and Ghana, production at the primary level, which involved manufacturing active pharmaceutical ingredients (APIs) and intermediates from basic chemical and biological substances, did not exist. Up to 2012, 95% of APIs were imported to Africa.[55] Thus, many post-colonial African industries produced generic medicines, which means copies of original branded medicines. The enterprises purchased chemicals in bulk and turned them into a form suitable for patient administration. The medicines produced contained the same dosage form, therapeutic effect, delivery route, known risks, and side effects as the originator drug.[56] This situation limited the development of pharmaceutical knowledge and innovations in many African countries. It further aggravated the dependency on foreign brands and prompted the repatriation of the economy by purchasing APIs overseas.

While Mansoor Daya Chemicals Ltd. utilized raw materials from overseas, primarily from England, the Chinese-funded Mabibo Vaccine plant relied on China for its raw materials.[57] At that time, the Chinese did not supply all the vaccine-related raw materials. Instead, some were sourced from the Netherlands and exported to Tanzania according to the factory's demand. The imported raw materials for the vaccine factory were explicitly intended for manufacturing TB vaccines, whereas the production of smallpox vaccines made use of locally produced raw materials.[58] In the case of the Keko plant, it commenced production using a stock of raw materials provided by the Chinese government as a grant.[59] While this grant facilitated the production launch, it also constituted a market entry strategy for Chinese pharmaceutical raw materials in Tanzania. KPI utilized raw materials it received from China for a while and promptly began purchasing such raw materials, mainly in China (Table 13).[60]

The table appended below shows that KPI imported more than 60% of its raw materials from China and purchased a few in India, the Netherlands, the United

55 UNIDO, *Pharmaceutical Manufacturing Plan for Africa: Business Plan* (Addis Ababa: UNIDO, 2012), 54.

56 Banda, Wangwe and Mackintosh, "Making Medicines," 11; also see J. V. S. Jones, *Resources and Industry in Tanzania: Use, Misuse and Abuse* (Dar es Salaam: Tanzania Publishing House, 1983), 95; Mhamba and Mbirigenda, "The Drugs Industry," 9.

57 Mabele, "Kiwanda cha Madawa," 12–13.

58 Binagi, "Madawa ya Kinga Yatengenezwa Mabibo," 11.

59 "Ripoti ya Quality Control, 1976/77," TNA. Acc. No. 450, Ministry of Health, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

60 "Ripoti ya Quality Control, 1976/77," TNA. Acc. No. 450, Ministry of Health, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

Table 13: Varieties of raw materials imported for KPI and the importing countries, 1977.

SN.	Name of Raw Material	Importing Country
1	Thiamine Hydrochloride	China
2	Chloramphenicol	China
3	Neomycin Sulphate	China
4	Procaine HCL	China
5	Phenobarbitone	China
6	Sulphacetamide Sodium	China
7	Ascorbic Acid	China
8	Ephedrine HCL	China
9	Glucose Oral	China
10	Mannitol	China
11	Magnesium Stearate	China
12	Aspirin	China
13	Vitamin C	China
14	Dextrose Monohydrate	India
15	Dextrin	India
16	Aminophylline	India
17	Ferrous Sulphate	India
18	Starch	Netherlands
19	Talcum Powder	Netherlands
20	Indigo Carmine	Netherlands
21	Lemon Yellow	London-UK
22	Cochineal	London-UK
23	Tetracycline HCL	Geneva-Switzerland

Source: "Ripoti ya Quality Control, 1976/77," TNA. Acc. No. 450, Ministry of Health, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

Kingdom, and Switzerland. By the 1970s, Chinese enterprises were unable to produce all the raw materials necessary for pharmaceutical production.[61] Anecdotal evidence shows that aid-recipient countries gave the Chinese government the privilege to import manufactured goods and industrial raw materials in appreciation of the support and cooperation they received. For instance, in Zanzibar, a government official assured the Deputy Ambassador of China to Tanzania: "Often

61 "Ripoti ya Quality Control, 1976/77," TNA. Acc. No. 450, Ministry of Health, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

when we want to order [products], we first ask China, and if they do not have, we inquire to other countries."[62] The dominance of Chinese-made pharmaceutical raw materials throughout the 1970s implies that the procurement processes favored Chinese companies.

The findings of this study show that the necessary purchase of raw materials for pharmaceutical industries caused the government to spend considerable sums of foreign currency that were not allocated to its budget. Raw materials were costly, with soaring prices each financial year (Table 14). Investment in pharmaceutical industries marginally reduced the government's spending on imported medicines from abroad, but increased demand for foreign currency to purchase pharmaceutical raw materials. The available financial reports show that from 1981 to 1985, the funds spent on purchasing pharmaceutical raw materials rose tremendously. For instance, the costs for pharmaceutical raw materials at KPI alone rose from Tshs. 19 million in 1981 to Tshs. 24.7 million in 1982. The cost further increased from Tshs. 30.13 million in 1983 to Tshs. 37.66 million in 1984. The grant for raw materials that the KPI received from Nordic countries in 1984 lowered the costs of importing raw materials from Tshs. 37.66 million in 1984 to Tshs. 20.05 million in 1985.[63] This implies that the local production of raw materials for pharmaceutical industries was essential in saving foreign currency.

Dependence on imported raw materials for pharmaceutical industries was challenging. In addition to the costs incurred, as raw materials were transported by ship, it took at least three months to receive the goods in the Dar es Salaam port. Procurement processes were usually bureaucratic, which further discouraged purchases and delayed importation.[64] Moreover, imported raw materials raised production costs, which led to higher prices for Tanzanian-made drugs. Yet, fewer initiatives were made by the Tanzanian government to counter import dependence on its local industries. In his address to the national conference of the ruling political party *Chama Cha Mapinduzi* (CCM), Chairman Julius. K. Nyerere

62 My translation from Kiswahili in "Mazungumzo na Balozi wa China, August 7, 1970," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO10/4, 1969 April to 1970 August, Maelezo ya Mkutano na Balozi wa Uchina; also see Andrea Azizi Kifyasi, "The Goals of China-Africa Medical Cooperation: A Case Study of Tanzania, 1960s-2010" (Master's diss., Zhejiang University, July 2016), 19.

63 "Brief Notes on Keko Pharmaceutical Industries Limited, 1981," TNA. Acc. No. 638, Chemical Industries, File No. GM/6/F/80, Keko Pharmaceutical Industries Ltd, 1985, Special Surveys and Reports; also see TNA. Acc. No. 638, Chemical Industries, File No. KPI/8, Keko Pharmaceutical Industries Ltd, Company Plan, 1985, 8.

64 "Letter from the Director, Pharmaceutical Plant, Keko, July 24, 1978, to the Manager of Import Licencing Department, July to December Foreign Exchange Allocation of Industrial Raw Materials," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

Table 14: Prices of Pharmaceutical raw materials, 1976–1979.

Sn.	Raw Material	Price in Kg. for 1976/1977	Price in Kg. for 1977/1978	Price in Kg. for 1978/79
1	Chloroquine Phosphate	205/00	292/00	342/00
2	Talc – Powder	5/00	11/25	13/00
3	Starch White (corn)	12/50	14/00	16/00
4	Aminophylline	86/50	93/60	104/00
5	Aspirin (granulated)	20/50	28/00	35/85
6	Tartaric Acid	20/50	26/50	42/00
7	Ethanol	5/00	10/00	10/50
8	Tetracycline Hydrochloride	192/50	266/50	–
9	Chloramphenicol Levo	203/50	299/60	454/50
10	Phenobarbitone Sodium	–	79/20	151/90
11	Aluminium Hydroxide	–	169/75	213/75
12	Ephedrine Hydrochloride	216/00	234/00	257/65
13	Dextrose Anhydrous B.P	13/80	13/80	13/80
14	Mannitol	29/50	39/00	39/00
15	Ferrous Sulphate	11/75	12/15	12/50
16	Riboflavin	26/50	26/50	26/50
17	Nikethamide	118/30	225/00	225/00
18	Chloramphenicol Succinate	–	–	1,062/00
19	Sodium Chloride 0.9%	475/00	475/00	475/00
20	Vitamin B	207/00	250/00	250/00

Prepared by the author using data from "Wizara ya Afya, Kiwanda cha Madawa Keko, March 26, 1980," TNA. Acc. No. 450, Ministry of Health, File No. HEI.10/15, Pharmaceutical Plant (KEKO), 1980–1982.

confessed: "We have paid little attention to the possibility of the local development of these minor but essential inputs [industrial raw materials] [. . .]. The problem of the import-dependence of our industries has never been given sufficient weight in our decisions [. . .]."[65]

The disappointments of *Mwalimu* Nyerere prompted the Ministry of Industries and Commerce to develop a plan to tackle the question of obtaining raw materials. Subsequently, in its Third Five-Year Development Plan, the ministry proposed to increase the production of pharmaceutical industries to reach at least 40% of the actual needs of medicines in the country using locally produced raw materials and vowed to reduce the importation of pharmaceutical raw materials and promote local production. Yet, the ministry planned to consent to import a few varieties of raw materials that could not possibly be produced in Tanzania.

65 URT, *The Address Given to the National Conference of Chama cha Mapinduzi by the Chairman, Ndugu Julius. K. Nyerere, on October 20, 1982, at Diamond Jubilee Hall, Dar es Salaam*, 44.

With such projections, the government anticipated producing more than 80% of the demand for medicines locally by 1986.[66] Unfortunately, such dreams did not materialize. The importation status after 1986 remained similar to that of previous years, with the government importing more than 90% of medicines and all of its raw materials for chemical industries.

Undeniably, the question of raw materials posed a significant challenge to the development of pharmaceutical industries. Some scholars argue that the production of pharmaceutical raw materials in Africa – and Tanzania, in particular – was impossible. For instance, J. V. S. Jones maintains that the production of commonly used drugs in Tanzania, such as aspirin and chloroquine, demanded a large bank of intermediate chemicals, such as sulphuric acid, caustic soda, and chlorine. It also needed reagents such as acetic acid, acetic anhydride, benzene, ethylene, alcohol, and others, the production costs of which a non-industrialized and low-income country like Tanzania could not afford. He added that the country further lacked a strong quality control team to guarantee a high standard of purity for the chemicals.[67] Despite the merits of Jones' observations, I argue that Tanzania had the potential to produce some pharmaceuticals using locally produced raw materials while importing a few that could not be produced in the country. For instance, the production of quinine sulfate could have been eased by the presence of cinchona plantations established during the German and British colonial periods. Suleiman Mbonea Mlungwana, a long-time employee at KPI, admitted that local production of some raw materials was possible, but the goodwill of political elites and donors was missing.[68]

The possibilities of producing raw materials locally would have been learnt from the Democratic Republic of Congo, where a Belgian-established pharmaceutical factory, Pharmakina, produced quinine sulfate using cinchona bark yielded in the Kivu and Ituri provinces. The factory began manufacturing quinine using locally grown cinchona barks in 1944 and currently produces 80% of the world's quinine.[69] *Mzee* Mlungwana contended that the Pharmakina fed KPI with quinine salts from the 1990s to the present.[70] Information from the MoH shows that up to 1985, cinchona was grown in the Tanga Region, the north-eastern part of Tanza-

66 URT, *Hotuba ya Ndugu Basil P. Mramba, (MB.), Waziri wa Viwanda na Biashara, Akiwasilisha Bungeni Makadirio ya Matumizi kwa Mwaka 1981/82*, 19.

67 Jones, *Resources and Industry in Tanzania,* 97.

68 Interview with Suleiman Mbonea Mlungwana, June 6, 2018, KPI Headquarters.

69 "Letter from the Director of Regie Congokina, June 30, 1945, to Medical Department of Tanganyika Territory," TNA, Tanganyika Secretariat, File No. 32780, Manufacture of Quinine in Tanganyika Territory, 1944–1945.

70 Interview with Suleiman Mbonea Mlungwana, June 6, 2018, KPI Headquarters.

nia, especially at Amani in Lushoto and Handeni Districts. For instance, by 1985, there was a large-scale production of cinchona in Dindira, which had 940 acres and produced 36 tons yearly. Similarly, the Balangai cinchona farm, which had 700 acres, produced 62 tons yearly. At the same time, Moga, where 24 acres of cinchona were planted, produced at least 756 kilograms of cinchona bark annually.[71] Nevertheless, the cinchona bark produced in the post-colonial period was not locally utilized. Instead, the bark was exported overseas. In February 1985, the Principal Secretary of the Ministry of Health, Julius Sepeku, complained to medical researchers about the repatriation tendencies and vowed to encourage the use of cinchona bark for the local production of quinine.[72] Yet, records documenting the local use of cinchona following the Ministry's commitments could not be found.

5.6 Economic Crisis, China's Reform and Opening-up Policy, and the Fate of Pharmaceutical Industries, 1978–1990s

The period from the late 1970s to the 1980s was a memorable time in Tanzania's history. The country's economy suffered under several predicaments, including the Uganda-Tanzania War of 1978 to 1979, which, in turn, affected the survival of several local industries.[73] The government faced a severe foreign currency deficit during and especially after the war, severely affecting the pharmaceutical industries. For instance, production at KPI dropped from 335.31 million tablets in 1984 to 44.23 million in 1985.[74] It was ill-fated that the crisis occurred when China's assistance to Tanzania was less forthcoming. At the end of the 1970s, China lost interest in Africa following its reform and opening-up policy adopted in 1978. Projects funded by the Chinese government in Africa were abandoned, with China providing neither guidance nor financial assistance. Under the new policy, the Chinese authorities had set aside ideological and political interests in favor of economic gains. From 1978 onwards, the Chinese government did not pledge to spon-

71 "Mimea ya Quinine ipo Mingi," *Uhuru*, February 28, 1985, 3; Maximillian Julius Chuhila and Andrea Azizi Kifyasi, "Green Imperialism: Cinchona and the Biomedical Campaigns in Colonial Tanganyika, ca.1900s," *International Journal of African Historical Studies* 57, no. 2 (September 2024): 207.

72 "Wizara yataka Quinine Itengenezwe," *Uhuru*, February 27, 1985, 3.

73 T. L. Maliyamkono and M. S. D. Bagachwa, *The Second Economy in Tanzania* (London: James Currey, 1990), 4.

74 TNA. Acc. No. 638, Chemical Industries, File No. KPI/6, Keko Pharmaceutical Industries Ltd, 1988, Company Plan, 1.

sor massive projects as it used to in the previous decades. Instead, it preferred joint ventures for selected industrial projects with which it had developed a close friendship, including Tanzania.[75]

Under the joint venture policy, the Chinese government was devoted to taking control of projects established under its sponsorship. Accordingly, it assisted Chinese enterprises in penetrating the African market, investing, and running enterprises under the government's sponsorship.[76] Some Chinese-funded projects in Tanzania, including the Friendship Textile Factory, were taken over by Chinese enterprises in the 1990s, as the Tanzanian government possessed less than 50% of the shares, which enabled Chinese enterprises to exercise the management of the industries entirely.[77] I could not find the reasons that prevented Chinese enterprises from taking control of pharmaceutical industries. However, profit return was the determining factor for China's commitment to a joint venture, and it seems the Chinese government did not see any potential from the pharmaceutical industries, abandoning them entirely.[78]

China's reduction of assistance to Africa and Tanzania, in particular, weakened the economic and political strength of Nyerere's government. Moreover, *Mwalimu* Nyerere, a close friend of Mao Zedong, perceived the open-door policy as an open betrayal of Maoism.[79] Before officially endorsing the policy, Nyerere sent to China a delegation led by Prime Minister Edward Moringe Sokoine in September 1978 to negotiate the new forms of Sino-Tanzanian diplomatic relationship. Chinese officials informed Sokoine that their economy was affected by several predicaments, such as earthquakes and declining coal and iron production. Thus, while the Chinese government focused on reviving the declining economy, it allocated limited resources to foreign assistance. In 1978, the government

75 Yanzhong Huang, "Pursuing Health as Foreign Policy: The Case of China," *Indiana Journal of Global Legal Studies* 17, no. 1 (Winter, 2010): 111; Li Anshan, "China's New Policy toward Africa," in *China into Africa, Trade, Aid, and Influence,* ed. Robert I. Rotberg (Washington DC: Brookings Institution Press, 2008), 7; "Letter from Principal Secretary, Ministry of Foreign Affairs, November 30, 1982, to the Assistant Minister, Ministry of State (Planning) of Zanzibar, Joint Venture with China," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO5/25, 1976 March to May 1983, Mahusiano na Nchi za Nje-China.

76 See, Menghua Zeng, "An Interactive Perspective of Chinese Aid Policy: A Case Study of Chinese Aid to Tanzania," (PhD diss., University of Florida, 1999), 198.

77 Menghua, "An Interactive Perspective," 198.

78 Some scholars claim that the Chinese government never abandoned projects it funded in the country, see Rwekaza Mukandala, "From Proud Defiance to Beggary: A Recipient's Tale," in *Agencies in Foreign Aid: Comparing China, Sweden and the United States in Tanzania*, ed. Goran Hyden and Rwekaza Mukandala (New York: St. Martin's Press, 1999), 55.

79 Interview with Joseph W. Butiku, July 9, 2018, Dar es Salaam.

also projected that it would reach the highest level of development, comparable to that of superpower nations, by 2000. Hence, the government of China utilized most of its resources internally to promote economic growth.[80] To this end, it is apparent that the reform and opening-up policy targeted China's development into an economic superpower, shelving Mao's political interests.

The hardships outlined above no doubt weakened China's economy. Nevertheless, as this study has shown, international aid had also been motivated by the struggle for diplomatic recognition between Mainland China and Taiwan, which, following China's admission, had reached a satisfactory end. Thus, diplomatic support from African countries was not a primary motivation to provide aid. Instead, Chinese authorities desired sophisticated industrial technology, which African countries could not provide. The Chinese authorities found it imperative to reconcile with the United States and attract foreign direct investment (FDIs) to obtain advanced technologies and capital for its diffusion to domestic firms. Only industrialized countries in the Global North could provide that. It was not until the mid-1990s that China acquired technology and advanced industries that seemed to promise their elevation to "superpower" that Africa again became of great importance – but this time, only because it had abundant raw materials needed for Chinese industrial development, market for Chinese goods, investment potentials for Chinese firms and vying for political recognition in multilateral institutions.[81]

China's abandonment of pharmaceutical industries prompted the Tanzanian government to turn to donors of the Global North. From the 1980s, countries like the United Kingdom, Denmark, Sweden, Finland, Norway, and the Netherlands emerged as significant donors and technical advisors to the industrial sector.[82] Their interventions decreased China's influence on pharmaceutical industries. For instance, they advised on and formatted KPI with new European-made machines and technologies. The machines installed by Chinese technical experts were perceived to be small-scale, crude, outdated, and unable to keep pace with the growing technology and production demands. Thus, in 1980, Chinese produc-

80 "Ziara ya Waziri Mkuu ndugu E. M. Sokoine, Mb. Katika Jamhuri ya Watu wa China kati ya Tarehe 12/9/1978 hadi 15/9/1978," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO5/25, 1976 March to May 1983, Mahusiano na Nchi za Nje-China.

81 Peter J. Buckley, Jeremy Clegg and Hi Tan, "Knowledge Transfer to China: Policy Lessons from Foreign Affiliates," *Transnational Corporations* 13, no. 1 (April 2004): 31; Huang, "Pursuing Health as Foreign Policy," 111; Deborah Brautigam and Xiaoyang Tang, "Going Global in Groups": Structural Transformation and China's Special Economic Zones Overseas," *World Development* 63 (2014): 80–81.

82 Alf Morten Jerve, "The Tanzanian-Nordic Relationship at a Turning Point," in *Re-Thinking the Arusha Declaration*, ed. Jeannette Hartmann (Copenhagen: Axel Nielsen and Son A/S, 1991), 171.

tion technology at KPI was phased out and replaced by European technology.[83] The phasing out of Chinese technology was a big blow to the South-South knowledge production and exchange agenda. Yet, China's abandonment of Africa from 1978 to 1995 influenced some countries, including Tanzania, to reorient their economic destiny toward the Global North.

During these diplomatic shifts, Tanzania's industries came to rely increasingly on raw materials from Northern countries, while imports from China decreased. For example, in 1984 and 1990, the governments of Norway and Sweden donated to KPI raw materials.[84] Some traditional donors of the Global North attempted to rescue Tanzania's pharmaceutical industries through loans. For instance, the World Bank gave Tanzania a loan of USD 10 million in 1990 and USD 26.5 million in 1993 to purchase essential medicines, medical equipment, and raw materials for pharmaceutical industries.[85] The donation of raw materials and drugs to Tanzania was beneficial since it invigorated the production activities of the government pharmaceutical factories. However, it covertly paved the way for the prompt penetration of such goods into the Tanzanian market.

The preceding exposition illustrates attempts by countries of the Global North to revitalize local pharmaceutical industries through loans and grants. However, such assistance did not sustainably maintain the efficiency of the government-owned pharmaceutical industries. The question of pharmaceutical raw materials was answered by loans and grants of raw materials purchased from abroad, preferably from donor companies.[86] Additionally, the insufficient production of medicines by local pharmaceutical factories was addressed through loans to purchase medicines abroad and by donations of some essential medicines.[87] These kinds of assistance did not provide a lasting solution to the existing drug shortages, and the production of pharmaceutical industries collapsed. Instead, they exacerbated the government's debt burden. Loans received by the government from the World Bank and other traditional multilateral lenders were meant

83 Interview with Suleiman Mbonea Mlungwana, June 6, 2018, KPI Headquarters, Silver Sendeu, June 12, 2018, Kimara Bonyokwa.

84 TNA. Acc. No. 638, Chemical Industries, File No. KPI/8, Keko Pharmaceutical Industries Ltd, Company Plan, 1985, 39; TNA. Acc. No. 638, Chemical Industries, File No. KPI/6, Keko Pharmaceutical Industries Ltd, 1988, Company Plan, 6; TNA. Acc. No. 638, Chemical Industries, File No. KPI/5, Keko Pharmaceutical Industries Ltd, 1991, Company Plan, 6.

85 JMT, *Wizara ya Afya, Hotuba ya Waziri wa Afya Mhe. C. S. Kabeho, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1990/91*, 21–22.

86 TNA. Acc. No. 638, Chemical Industries, File No. KPI/6, Keko Pharmaceutical Industries Ltd, 1988, Company Plan, 6.

87 JMT, *Wizara ya Afya, Hotuba ya Waziri wa Afya Mhe. C. S. Kabeho, MB. Kuhusu Makadirio ya Matumizi ya Fedha kwa Mwaka 1990/91*, 21–22.

for consumption and not production. Purchased medicines and equipment were consumed or used, and once finished, the government applied for the next supply. Donors' assistance was less extended to projects capable of building and maintaining the ability of the Tanzanian government to produce pharmaceutical raw materials and enough medicines through its local industries. The subsequent section illuminates how the Sino-Tanzanian technical cooperation formed since 1964 implicated the pharmaceutical knowledge exchange between technicians from the two countries.

5.7 Pharmaceutical Industries and Knowledge Exchange

On June 16, 1964, the Chinese and Tanzanian governments signed agreements on economic and technical cooperation, in which the government pledged to offer economic aid and transmit its production technology to Tanzania through equipment, goods, and technical experts.[88] The modes of the knowledge exchange were through long- and short-term training of Tanzanian technicians in China, as well as short-term training via special classes in Tanzania and through on-the-job training.[89] Accordingly, the Tanzanian government anticipated that the signed cooperation agreements would address the shortfalls of skilled personnel.

At its establishment, MVI and KPI recruited Tanzanians to work with Chinese technical experts to share knowledge. Many recruits graduated from the University of Dar es Salaam, majoring in chemistry, engineering, and biology.[90] Recruits for the MVI worked with Chinese technical experts from 1971 to 1979. In the case of KPI, the recruits joined 13 Chinese technical experts in 1975 and worked together until 1976. Archival and oral testimonies show that neither the training of technical students in China nor training in the formal classes at the factory premises was provided. Instead, on-the-job training was privileged. The Chinese government assumed local workers would swiftly learn pharmaceutical knowledge

88 "Protocol to the Agreement on Economic and Technical Co-operation Between the Government of the People's Republic of China and the Government of the United Republic of Tanzania," TNA. Acc. No. 596, National Development Corporation, File No. D/3822(A), Agricultural Tools and Implements Factory, Chinese.

89 Li Anshan, "Technology Transfer in China-Africa Relation: Myth or Reality," *Transnational Corporations Review* 8, no. 3 (2016): 186, http://dx.doi.org/10.1080/19186444.2016.1233718.

90 Interview with Suleiman Mbonea Mlungwana, June 6, 2018, KPI Headquarters; Silver Sendeu, June 12, 2018, Kimara Bonyokwa.

and skills while on the job.[91] Effective on-the-job training involves theory and practice, integrating trainers and trainees. Consequently, language as a medium of communication was a valuable training tool. Yet, Chinese technical personnel could neither speak English nor Kiswahili fluently. Thus, they mostly passed pharmaceutical knowledge to the locals through gestures.[92] This technique was used by Chinese technicians working on other Chinese-funded projects. Philip Snow writes that in the Tanzania-Zambia Railway (TAZARA) project, "a [Chinese] technician would assemble and dismantle a piece of machinery and encourage his African apprentices to follow suit until they got the procedure right."[93] This informal way of transmitting knowledge to Tanzanian staff lasted until June 1976 for the KPI and until 1979 for MVI. On September 8, 1976, and in 1979, Chinese technical personnel completed their assignment and left the country. Since then, the management and production activities at KPI and MVI were left to Tanzanian personnel.[94]

Scholarships, which had allowed Tanzanian students to train at Chinese universities for certain periods, were not a solution. Following the Great Proletarian Cultural Revolution, the Chinese government closed all higher learning institutions from 1966 to 1970.[95] Therefore, it was not until 1972 when about 200 Tanzanian and Zambian students received Chinese government scholarships to pursue their studies in transportation, locomotive speciality, and railway engineering.[96] Scholarships for other specializations and to other countries resumed in 1974, three years after the handover of the MVI and two years before the handover of the KPI to Tanzanians. Furthermore, in 1978, two years after the handover of KPI, China adopted the open-door policy, which diminished its interest in Africa. The new policy affected the Chinese government's scholarship program for African students. For instance, scholarship opportunities dropped from 121 in 1978 to 30 in 1979.[97] Thus, opportunities for pharmaceutical technicians from Tanzania to

91 "Ripoti ya Quality Control, 1976/77," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko), Interview with Suleiman Mbonea Mlungwana, June 6, 2018, KPI Headquarters; Silver Sendeu, June 12, 2018, Kimara Bonyokwa.

92 Interview with Suleiman Mbonea Mlungwana, June 6, 2018, KPI Headquarters.

93 Philip Snow, *The Star Raft: China's Encounter with Africa* (New York: Cornell University Press, 1988), 163.

94 "Ripoti ya Quality Control, 1976/77," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

95 Parris H. Chang, "The Cultural Revolution and Chinese Higher Education: Change and Controversy," *The Journal of General Education* 74, no. 3 (1974): 187.

96 Li, "Technology Transfer in China-Africa Relation," 186.

97 Li Anshan, "African Students in China: Research, Reality and Reflection," *African Studies Quarterly* 17, Issue 4 (Feb. 2018): 11.

get trained in Chinese pharmaceutical colleges were minimal. In contrast, the Chinese government channeled its scholarships to students studying for the TAZARA project since, compared to other projects, the prosperity of TAZARA had a higher geopolitical value in the eyes of the Chinese government, in line with Mao's directives that "education must save politics."[98] While previous scholarship has used the TAZARA case to justify that Chinese-sponsored projects in Africa went hand in hand with adequate knowledge transmission to the personnel of the recipient country, the MVI and KPI cases show that there were no effective means of knowledge exchange to the local personnel. The sophisticated art of making medicines needed more systematic knowledge exchange than simplified on-the-job training.[99]

The management and production at KPI and MVI, led by Tanzanian staff, were crucial assignments to test the efficiency of the on-the-job training. Unfortunately, from the beginning, the factories faced technical and managerial hurdles, signaling that local personnel could not run the factories effectively. The two factories faced a severe shortage of experts and updated knowledge on the part of the existing personnel. For instance, soon after the Chinese left, the production of vaccines at MVI was found to be below WHO standards. This situation discouraged the government, and the factory was closed shortly after.[100]

Passing on pharmaceutical knowledge through on-the-job training was insufficient. Such challenges resulted from feebleness in structural and systematic processes in the establishment and operation of the factory. Pharmaceutical industries utilized equipment and machines that demanded more expertise to operate effectively. They, therefore, required highly trained and experienced personnel. Nevertheless, the government established the industries without industrial (technical) pharmacists and experienced managerial personnel. Graduates who took over the industries from the Chinese experts lacked effective production and managerial skills. This was because the relevance of the science and engineering knowledge produced at local universities was limited to grounding scientific theories, which were vital for founding pharmaceutical industries. Yet, the knowledge produced lacked application skills. Thus, college graduates who took over produc-

98 Chang, "The Cultural Revolution and Chinese Higher Education," 187.

99 Li "Technology Transfer in China-Africa Relation"; also see Liu Haifang and Jamie Monson, "Railway Time: Technology Transfer and the Role of Chinese Experts in the History of TAZARA," in *African Engagements: Africa Negotiating an Emerging Multipolar World,* ed. Ton Dietz, *et al.* (USA: Brill, 2011).

100 UNIDO, *Programme for Production of Vaccines in Africa, Technical Report: Programme for Production of Vaccines in Tanzania, Prepared for the Government of the United Republic of Tanzania, on January 6, 1986*, 5.

tion and managerial activities needed specific industrial training to gain production skills through short formal training and further studies.[101]

Pharmaceutical manufacturing was a complicated process involving many stakeholders whose investments needed financial and technical preparations before starting production and commercialization. An effective manufacturing system requires specialized skills in several disciplines, such as pharmacy, chemistry (analytical, organic, synthetic and medicinal), biological sciences (biochemistry, microbiology and molecular biology), life sciences (medicine, pharmacology and toxicology), management (strategy, financial and management accounting, operations, logistics and commercial laws), and information and communication technology (ICT).[102] These specializations were dearly missing in post-colonial Tanzania. Moreover, successful pharmaceutical services included clinical (hospital, retail pharmacies) and industrial (technical) pharmacies. Regrettably, during the German and British colonial eras, Tanganyika developed these services in one-way traffic, specifically in the field of clinical pharmacy. Throughout the colonial period, medical training focused on a few cadres, dispensing auxiliaries, and rural medical aids. It was not until 1940 that the British colonial government introduced courses in chemical analysis and pharmacy assistantship. Moreover, such attempts were interrupted by WW II and thus were, in the end, in vain. Therefore, the colonial medical schools only trained pharmaceutical cadres for hospital and retail pharmacies.[103] In the post-colonial period, the Tanzanian government did not shift the paradigm. Instead, it proceeded from where the colonialists left off by establishing training schools for the same medical cadres. The post-colonial government failed to realize the need for industrial (technical) pharmacists, who were the pillars of the development of pharmaceutical industries. Pharmaceutical technicians were responsible for drug discovery, manufacturing, quality control, and utilization.[104]

Until 1972, Tanzania had only five African pharmacists who had trained abroad and were hired by the Mansoor Daya and Mabibo Vaccine plants. It was

101 UNIDO, *Programme for Production of Vaccines in Africa, Technical Report: Programme for Production of Vaccines in Tanzania, Prepared for the Government of the United Republic of Tanzania, on January 6, 1986*, 41.

102 UNIDO, *Programme for Production of Vaccines in Africa, Technical Report: Programme for Production of Vaccines in Tanzania, Prepared for the Government of the United Republic of Tanzania, on January 6, 1986*, 41.

103 "Letter from the Director of Medical Services, June 5, 1946, to the Chief Secretary, Dar es Salaam," TNA. Acc. No. 450, Ministry of Health File No. 675 Medical Training Centres; also see Nsekela and Nhonoli, *The Development of Health Services*, 40.

104 "Pharmaceutical Production Technician Training, June 15, 1978," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

not until 1974 that the Muhimbili University of Health and Allied Sciences (MUHAS) launched the School of Pharmacy. The school began as a department in the Faculty of Medicine of the Medical College. Subsequently, in July 1974, the school commenced a three-year course on pharmaceuticals with an annual intake of 16 students. It was established with the assistance of the British Council, the United Nations Development Programme (UNDP), and the WHO. They assisted in the form of experts, equipment, and fellowships.[105] Consequently, the school was established three years after MVI was handed over to the Tanzanian government and two years before the handover of KPI. Not surprisingly, the industries faced technical challenges caused by the lack of skilled local personnel shortly after the handover. Archival sources show that many job applicants lacked the required qualifications. For instance, KPI advertised a vacancy for production auxiliaries in June 1976, but up to June 1978, there were no qualified applicants.[106]

Given that the Chinese experts had spent more than five years studying to qualify, it is not surprising that a few months of training and on-the-job coaching proved insufficient. The 2012 United Nations Industrial Development Organization (UNIDO) report affirms that pharmaceutical knowledge is complicated, and it would take at least three years or more to train a college graduate with an essential qualification in relevant disciplines and convert the trainee into a skilled pharmaceutical operator.[107] Information available illuminates that local experts could not efficiently use and repair some machines, including the pharmaceutical freeze-dry, ovens, and autoclaves installed by the Chinese, because they were all instructed in Chinese, and the short training could not equip them with helpful operation and maintenance knowledge. Worse still, Chinese experts did not leave any maintenance manuals for local technicians to use. Thus, only Chinese experts could effectively use and repair the machines, prompting regular requests and hir-

105 "WHO, Assignment Report: Medical School, Dar es Salaam, July 1968–August 1974," WHOA, File No. TAN-HMD-001, 1974–1979-HMD 5, Training of Health Personnel, 5; "WHO, National Health Planning in Tanzania: Report on a Mission, 1st August 1973–28th April 1974," WHOA, File No. TAN/SHS/002, 1972–1974-SHS/NHP, National Health Planning, 16; Charles A. Mkonyi, "Emergence of a University of Health Sciences: Health Professions Education in Tanzania," *Journal of Public Health Policy* 33, no. 1 (2012): S54; Interview with Rogasian L. A. Mahunnah, July 21, 2018, Dar es Salaam.

106 "Pharmaceutical Plant, Keko, Production Report Year July 1977–June 1978," TNA. Acc. No. 450, File No. HE/I/10/15, Pharmaceutical Plant (Keko).

107 UNIDO, *Programme for Production of Vaccines in Africa, Technical Report: Programme for Production of Vaccines in Tanzania, Prepared for the Government of the United Republic of Tanzania, on January 6, 1986*, 42.

ing Chinese experts for help.[108] Generally, ineffective production and managerial knowledge exchange prompted the country's dependence on foreign technicians, which was inconsistent with socialist policies, which upheld self-dependency. Thus, the Chinese pledge to teach Tanzanians to "fish" and not give them "fish" did not yield sustainable results.

5.8 Conclusion

This chapter has shown how China, an emerging donor of the Global South, pledged to assist Southern countries in the spirit of the South-South solidarity agenda. Its assistance was expected to promote self-dependency in African countries and cherish the South-South cooperation, which perceived economic and technological self-sufficiency as the primary weapon in the fight against imperialism, colonialism, and neo-colonialism. Nevertheless, this chapter has shown that China's assistance in the establishment of pharmaceutical industries in Tanzania instead sustained the country's dependency on pharmaceutical raw materials and technicians from China. Such dependencies were caused, for instance, by the ill-conceived mechanisms of knowledge exchange, which failed to pass on sufficient technical knowledge and managerial skills to local personnel. Moreover, capacity building for the local production of pharmaceutical raw materials remained marginal while the country relied heavily on periodic imports. The chapter has maintained that aid provided only short-term relief to technological, economic, political, and social challenges facing recipient countries. Thus, the collapse of Chinese-funded pharmaceutical factories was partly caused by problems with imported technology and the dependency created by it. In the absence of loans, grants, and technical experts from the donor countries, production and management of the government-owned pharmaceutical industries declined, essentially underscoring the problematic nature of reliance on grants and the goodwill of other countries.

108 "A Letter from Karakana ya Dawa, KPI to Katibu Mkuu Wizara ya Biashara of 14 Mei, 1980 titled Uagizaji wa Vipuri Kutoka China. TNA. Acc. No. 450, Ministry of Health, File No. HEI.10/15, Pharmaceutical Plant (KEKO), 1980–1982.

Chapter Six
Conclusion: The Interface Between China's Medical Assistance and Tanzania's Self-Reliance Agenda

The Bandung Conference of 1955 and other related conferences, including the Afro-Asian Solidarity conferences held in Cairo in 1957, Conakry in 1960, and Moshi in 1963, emphasized self-reliance to countries of the Global South. They further denounced assistance with strings attached, which would perpetuate dependencies.[1] Consistently, in 1964, the Chinese government formulated principles governing its economic and technical aid to foreign countries, which resonated with the priorities advocated by African and Asian countries.[2] In the same vein, following the Arusha Declaration of 1967, the Tanzanian government set itself an agenda of socialism and self-reliance. With these two principles, it anticipated eliminating exploitation, enhancing the government's control of the major means of production, and its effective use of local resources as primary development agents. The government welcomed assistance, which promised to help the country's transition towards self-reliance.[3] Against such a backdrop, this study has examined the implications of China's medical assistance for the development of Tanzania's health sector under the discourse of the Southern solidarity agenda. It specifically aimed at assessing the extent to which China's medical assistance reflected the Southern agenda of promoting self-reliance and lessening the dominance of countries of the Global North in medical aid and knowledge in the Global South. After exploring the social, economic, and political contexts that gave birth to China's medical assistance in Tanzania, this study discussed several major Chinese-funded health projects in independent Tanzania, assessing them in

1 The Ministry of Foreign Affairs, Republic of Indonesia, *Final Communique of the Asian-African Conference of Bandung, April 24, 1955*; Executive Committee of the Afro-Asian Peoples' Solidarity Organisations, *Afro-Asian Peoples' Solidarity Movement* (Cairo), 8.

2 "Eight Principles for Economic and Technical Aid Contended by Premier Zhou Enlai when Answering Questions from Reporters of the Ghana News Agency on January 15, 1964, in Ghana," in *Afro-Asian Solidarity Against Imperialism: A Collection of Documents, Speeches and Press Interviews from the Visits of Chinese Leaders to Thirteen African and Asian Countries* (Peking: Foreign Languages Press, 1964), 149.

3 URT, *The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance* (Dar es Salaam: Publicity Section, 1967); Julius K. Nyerere, *The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance, February 5, 1967*, 7.

https://doi.org/10.1515/9783112206881-006

light of Tanzania's nation-building agenda and its role in promoting new medical knowledge and self-reliance within Tanzania's health sector.

This research contributes to the existing literature on Sino-African relationships, specifically China's medical assistance to countries of the Global South. Some studies have examined the activities of Chinese medical doctors in Africa without fully establishing the contexts that gave rise to such programs. Additionally, some medical aid projects funded by the Chinese government in Africa, such as pharmaceutical industries and AIDS research and treatment, have received little or no scholarly attention. Most publications about China's medical assistance to the Global South are not historical studies, but instead come from political science and anthropology, focusing on China's recent medical diplomacy, the practice of traditional Chinese medicine in private clinics, and other contemporary issues. Such works do not show the subtle changes in the projects over time, nor their implications in promoting self-reliance and South-South medical knowledge exchange. Yet, available primary sources allow for more nuanced historical research.

Despite the existence of Sino-African relations before and during colonization, the relationships became direct and more robust during the 1950s, prompted by Cold War politics, which called for the Bandung Conference in 1955.[4] The conference gave rise to the Afro-Asian Peoples' Solidarity Organisation (AAPSO) in 1957, which spearheaded Southern solidarity, thereby underscoring the need for African and Asian countries to assist one another economically, politically, socially and technologically. As shown in Chapter 1, China's medical assistance to Tanzania was partly influenced by the ideal of Southern solidarity and the "Eight Principles" governing economic and technical assistance to the South, articulated by Premier Zhou Enlai in 1964, which became a blueprint for bilateral medical aid. However, I argue that China's assistance was motivated by its aspirations to attain political and economic power in a global context. Indeed, China's dominance in the AAPSO won it influence and recognition from many African and Asian countries, enabling China to maintain its political and economic interests.

China's medical assistance to Tanzania was a reciprocal process. The assistance was executed when both governments needed assistance from each other. As discussed in Chapter 1, at independence, the Tanzanian government lacked skilled medical personnel and imported all pharmaceuticals from abroad. Only

4 For more on the pre-colonial China-Africa relations, see Abdul Sheriff, *Dhow Cultures of the Indian Ocean: Cosmopolitanism, Commerce and Islam* (New York: Columbia University Press, 2010); For more on China-Africa relations during the colonial period, see Juhani Koponen, *Development for Exploitation*: *German Colonial Policies in Mainland Tanzania 1884–1914,* (Hamburg: LIT Verlag, 1994), 348.

twelve registered Tanzanian medical doctors were on record, and the disease burden outweighed their capacity. Furthermore, in the mid-1960s, the country encountered diplomatic rifts with West Germany, Britain, and the USA, which limited assistance from countries of the Global North. Such conditions underpinned the Tanzanian government's reliance on Chinese assistance. While external medical assistance was necessary for the Tanzanian government, the Chinese prioritized gaining recognition in the United Nations General Assembly (UNGA). Upon learning about the influence of Tanzanian President Julius K. Nyerere in Africa, Chinese diplomats lobbied so that Nyerere and his delegate would contribute votes that would grant China recognition in the UNGA. Eventually, while the Tanzanian government needed China's medical assistance to enhance the capacity of its health sector, the Chinese government sought Tanzania's support in the UNGA.

Yet, diplomacy and politics were not the only binding factors that aligned Tanzania's interests with those of the Chinese. Instead, the socialist health policies adopted by the Tanzanian government after the Arusha Declaration of 1967 echoed many ideas of the Chinese health system. As elaborated in Chapter 2, Tanzania's Ministry of Health (MoH) sent medical delegates to China to study the practicality of China's socialist health system following its Great Proletarian Cultural Revolution. The delegates recommended that the MoH adopt free healthcare, institutionalize traditional medicine, ban private health services, and promote rural healthcare. The Tanzanian government espoused and practiced the recommended policies in the 1960s and 1970s. I maintain that the adopted policies responded to the needs of the Tanzanian government for healthy people and, thus, human resources. For instance, the extension of rural healthcare was imperative for improving peasants' welfare, which in turn facilitated the effective production of food and cash crops. Additionally, the provision of free healthcare was conducive to sexual reproduction and reduced mortality and morbidity rates, which, in turn, would boost the nation's economy. The adoption of Chinese health policies contested the conceptions about the production and transmission of knowledge and experiences from the Northern "core" to the Southern "periphery". Furthermore, it bespoke the Tanzanian government's endeavor to foster a Southern solidarity agenda by learning from the so-called peripheral countries. I argue that China's economic, political, and social influences on Southern countries should be perceived as a "paradigm shift" since it challenged the core countries and reduced their ability to remain the key donors.

Questions about the effectiveness of the South-South medical knowledge exchange have been discussed in Chapters 3, 4, and 5 of this study. Knowledge exchange was the main agenda of the African and Asian countries since it was the central means of attaining self-reliance. Moreover, it was the seventh of the "Eight Principles" of China's foreign aid proclaimed by Premier Zhou Enlai in

1964.[5] China's aid vision won the trust of the Tanzanian government, which perceived its assistance as a bridge to self-reliance.[6] The Chinese government employed different means to foster exchanges of medical knowledge with local medical doctors and technical pharmacists. They included both long- and short-term training for Tanzanians in China, as well as on-the-job training. Overall, however, the education and training of local experts did not rank high among the Chinese government's priorities. Following China's Great Proletarian Cultural Revolution, which shut down all higher learning institutions from 1966 to 1970, only a few Tanzanians got Chinese government scholarships to pursue medical education in China. Moreover, the general stereotype about the quality of medical education in China defeated long-term training. Medical graduates from China were deemed incompetent by their colleagues who had been schooled at the University of Dar es Salaam, Makerere University, and other universities in the Global North. Such unevenness and tensions discouraged Tanzanians from accepting Chinese government scholarships for medical training in China, hindering the production of medical knowledge and exchange.

Furthermore, the *modus operandi* of knowledge exchange was unsustainable. The Chinese government mostly preferred on-the-job training, expecting local workers in hospitals and pharmaceutical industries to acquire adequate medical knowledge while collaborating with Chinese experts. Moreover, language barriers impeded training and exchange, as many Chinese experts neither spoke fluent English nor Kiswahili. Instead, as shown in Chapter 3, Chinese medical doctors spent most of their time providing clinical care instead of training local medical doctors. Contrary to most scholarly accounts, which maintain that Chinese experts working in Africa effectively transmitted their knowledge to local workers, my findings suggest that on-the-job training failed in this regard.[7] As discussed in Chapter 5, the production of vaccines at the Mabibo factory stopped immediately after Chinese technicians had left, since the vaccines produced fell below WHO standards. Similarly, Keko Pharmaceutical Industries collapsed because of unskilled personnel and poor management.

5 See *Afro-Asian Solidarity against Imperialism*, 149.

6 Julius K. Nyerere, "TAZARA- from a Caricature of a "Chinese" Railway to "Our" Railway," A Speech at the Handing-over of the Tanzania-Zambia Railway (TAZARA) to Tanzania and Zambia Kapiri Mposhi, Zambia: July 14, 1976, in *Freedom and Liberation: A Selection from Speeches 1974–1999*, ed. The Mwalimu Nyerere Foundation (Dar es Salaam: Oxford University Press (T), 2011), 95.

7 Li Anshan, "Technology Transfer in China-Africa Relation: Myth or Reality," *Transnational Corporations Review* 8, no. 3 (2016): 186.

Since the country was rich in flora, medicinal herbs were highly used in Tanzania, and its citizens used herbal medicines long before colonial rule. Up to 2012, the country had about 12,667 plant species, of which 1,267 were utilized in traditional medicine practices.[8] The South-South Commission further recommended using traditional medicine as the best way of restoring self-reliance to countries of the Global South.[9] Therefore, traditional medicine is key in addressing global health challenges. Nevertheless, despite the richness of the flora, traditional medicine practitioners utilized only 10% of medicinal plants. I argue that the effective use of herbal medicine in parallel with biomedicine was imperative in addressing global health challenges and maintaining self-support in Southern countries. Regrettably, as Chapter 2 reveals, several political and technical bureaucratic impediments hampered attempts to use local medicinal plants to produce medicines at Keko Pharmaceutical Industries. By contrast, medicinal herbs from Tanzania were exported overseas, and the government normalized the importation of pharmaceutical raw materials for its industries.

Furthermore, the emergence and practices of traditional Chinese medicine (TCM) had a vital impact on promoting medical knowledge in the Global South. As described in Chapter 4, TCM gained influence during the 1960s and was positively received by different groups of Tanzanians. Moreover, China's engagement in the research and treatment of HIV using TCM was an essential contribution to global health. The Tanzanian government hoped that TCM practitioners could boost medical knowledge exchange with local traditional medicine researchers and practitioners while reducing the country's dependency on medicine and medical knowledge from countries of the Global North. However, traditional medicine researchers from Tanzania were less involved in TCM research and treatment projects because the Chinese disease interventions were often perceived as being empowered by faith and as having superior knowledge and technology. In this vein, they devalued the knowledge and abilities of traditional medicine researchers and practitioners from Tanzania. Such circumstances existed because the achievements of the research and treatment projects would have triggered scientific, economic, and political consequences of significance to the Chinese government.

Dependency theory has maintained that economic and political relationships between the "rich" countries of the Global North and the "poor" countries of the Global South were unbalanced and caused underdevelopment in the Southern

8 Rogasian L. A. Mahunnah, Febronia C. Uiso and Edmund J. Kayombo, *Documentary of Traditional Medicine in Tanzania: A Traditional Medicine Resource Book* (Dar es Salaam: Dar es Salaam University Press, 2012), 8.

9 The South Commission, *The Challenge to the South* (New York, NY: Oxford University Press, 1990), 102.

world. They further maintain that countries of the Global North exploited resources and maintained their national interests in the Global South through different means, including foreign assistance.[10] However, I argue that a "national interest" agenda attached to foreign assistance can be exercised by any donor country, regardless of its economic, political, technological, or social achievements, with assistance directly or indirectly projecting the interests of donor countries onto recipient countries.

The major findings of this study departed from those of the research literature, which maintains that Southern countries assisted one another altruistically.[11] Discussions in Chapters 3, 4, and 5 showed that the Chinese-funded health projects intertwined political and economic interests. For instance, from the inception of the medical cooperation in 1968 to 1977, the Chinese government pursued more political and less economic interests through its assistance extended to Tanzania. The battle over the political recognition of Taiwan in the UNGA influenced political interests. It was further complicated by Mao Zedong's political propaganda against US imperialism and Soviet revisionist policies in the Global South. Therefore, China's assistance throughout the 1960s to 1970s was primarily aimed at winning votes for recognition and admission to the UNGA. However, after the 1978 reform and opening-up policy, its assistance to Africa took a new direction. During this period, the Chinese government reduced foreign assistance in favor of economic relationships with countries of the Global North. For example, it was no longer ready to supply free raw materials to the pharmaceutical factories it funded in Tanzania. Moreover, the activities of the Chinese doctors in Tanzania were restructured to promote and popularize medicines manufactured in China. Under the new policies, economic interests overwhelmed geopolitical interests since the Chinese government intended to become an economically powerful nation by the year 2000.[12] Therefore, while the Tanzanian government per-

10 Dambisa Moyo, *Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa* (New York, NY: Farrar, Straus and Giroux, 2009); Sebastian Edwards, *Toxic Aid: Economic Collapse and Recovery in Tanzania* (Oxford: Oxford University Press, 2014).

11 Li Anshan, "*China-Africa Medical Cooperation: Another form of Humanitarian Aid*," accessed May 1, 2016, http://www.doctorswithoutborders.org/china-africa-medical-cooperation-another-form-humanitarian-aid; Ding Ying, "Healing Angels from China: Medical Teams from China Fight Death and Disease in the Harshest Environments in Africa," *Beijing Review*, September 22, 2011.

12 "Ziara ya Waziri Mkuu ndugu E. M. Sokoine, Mb. Katika Jamhuri ya Watu wa China kati ya Tarehe 12/9/1978 hadi 15/9/1978," ZNA. Group Index. DO. Ministry of Trade and Industry, File No. DO5/25, 1976 March to May 1983, Mahusiano na Nchi za Nje-China.

ceived medical assistance from China as a stepping-stone towards self-reliance, the Chinese government used foreign aid to pursue both political and economic interests at different historical periods.

The aspiration to make Tanzania self-sufficient had its roots in the mid-1960s, following its diplomatic rifts with traditional donors in the Global North. Like other newly founded African states, Tanzania perceived industrialization as a bridge to self-reliance and a symbol of economic progress. Subsequently, the government established several industries and sought technical and financial support from other countries to achieve its industrialization agenda. I argue that Tanzania's industrialization spirit was an ideological fallout of imperialism since it was equated with development, particularly the development bridging the gap between the already industrialized countries of the Global North and the semi-industrialized countries of the South. Under this strategy, the Tanzanian government aimed to block the massive importation of medicines by establishing pharmaceutical industries that could produce them locally. Such import substitution programs gained support from structuralist and dependency theorists, who have explained poverty in Southern countries as the result of the relationship between European and North American nations with so-called underdeveloped countries. These theorists, however, have overlooked the role played by less industrialized but powerful countries such as Cuba, India and China in retarding development in Southern countries.[13] From this misconception, political elites in Africa perceived donors from the South as "Angels" and those from the North as "demons."[14] Yet, such conceptions maintained the trust of political elites in Tanzania in Asian and Latin American governments. Similarly, government authorities in Tanzania perceived China's sponsorships for the establishment of pharmaceutical industries as emancipatory.

Undeniably, with its socialist ideology, the Chinese government attained a considerably higher level of self-dependency soon after founding the People's Republic of China in 1949. It was, therefore, regarded as a development model in several Global South countries, including Tanzania. In December 1967, a delegation led by Pius Msekwa (then Tanganyika African National Union (TANU) Executive Secretary) visited China and admired China's development and Maoism. Msekwa said: "You are able to make great political, military, and economic achievements because you have the correct thought guiding you, that is, the

13 Randall M. Packard, *A History of Global Health: Interventions into the Lives of Other Peoples* (Baltimore, MD: Johns Hopkins University Press, 2016), 239; also see Edwards, *Toxic Aid*, 24–25; Walter Rodney, *How Europe Underdeveloped Africa* (Washington DC: Howard University Press, 1982).

14 Paul Tiyambe Zeleza, "Dancing with Dragon: Africa's Courtship with China," *The Global South* 2, no. 2 (Fall 2008): 174.

thought of Mao-Tse-tung. China has set an excellent example for us in taking the road to self-reliance. Tanzania must take this road, too. It's the only road to make our country strong and prosperous."[15] From this perception, China's pledge to support the establishment of pharmaceutical industries was positively hailed, as it was believed to reduce the country's dependence on imported pharmaceuticals. However, as presented in Chapter 5, the pharmaceutical industries of Keko and Mabibo failed to promote the country's self-reliance agenda since they faced managerial and technical challenges, which led to their decline in the 1980s and 1990s, respectively. The main reasons behind their collapse included poor management, poor feasibility studies, a lack of qualified local personnel, and insufficient funds to purchase raw materials for pharmaceutical industries. I maintain that the Chinese-funded industrial projects were conceived under ineffective structural settings with a short-trained managerial team, inadequate locally trained personnel, and unsustainable sources of industrial raw materials. All these challenges hampered the local production of pharmaceuticals, curtailing Tanzania's aspirations for self-reliance.

In closing, this research has shown that China's medical assistance to post-colonial Tanzania hardly functioned as a solution to the Tanzanian government's health challenges. Its modes of execution were inconsistent with Tanzania's self-reliance agenda. The Tanzanian government failed to negotiate with the Chinese actors and shape relations in ways that advance the sustainable development of the health sector. As a result, China's assistance created unforeseen dependencies on Chinese medical doctors, pharmaceutical raw materials, traditional Chinese medicine, and pharmaceutical technicians from China. The findings of this study have shown that whenever Chinese assistance was withdrawn, most medical projects declined. Such circumstances warrant the conclusion that Chinese aid only offered short-term relief to several challenges facing the health sector in Tanzania. For instance, under the Chinese medical team program, Chinese doctors saved the lives of many patients and donated drugs, which, in turn, assisted Tanzanians in getting access to essential medicines. However, after the Chinese doctors left and the donated medicinal supplies were depleted, the inadequacies of skilled medical personnel and the lack of essential medicines persisted. Similarly, Chinese sponsorship of pharmaceutical industries helped the Tanzanian government kick-start the production of several kinds of medicines. Nevertheless, shortages of pharmaceutical technicians and raw materials resulted in Tanzania's dependency on China. Generally, medical assistance was provided in return for international recognition, political leverage, and economic gains, which served China's national interests in different historical periods.

15 "TANU Team Flies to S. China," *The Nationalist*, December 22, 1967, 1.

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Interviews

No.	Name	Date	Place
1	Jiang Xuan	January 4, 2016	Hangzhou
2	Ge Yonghe	March 1, 2016	Jinan
3	Che Yansong	March 1, 2016 & May 23, 2019	Jinan
4	Qin Shanbo	March 1, 2016	Jinan
5	Chen Zhufeng	March 1, 2016	Jinan
6	Sui Guangxin	March 1, 2016	Jinan
7	Sun Yazhou	March 1, 2016	Jinan
8	Zhang Jing	April 11, 2016	Hangzhou
9	Song Tao	March 16, 2018	Posta, Dar es Salaam
10	Rajabu Kisonga	April 24, 2018	Dodoma Regional Referral Hospital
11	John G. Myonga	April 24, 2018	Dodoma Regional Referral Hospital
12	Elisiana Danford	April 24, 2018	Dodoma Regional Referral Hospital
13	Martha Manyirezi	April 24, 2018	Dodoma Regional Referral Hospital
14	Liggyle Vumilia	May 7, 2018	Posta, Dar es Salaam
15	Simon Ernest	May 7, 2018	Posta, Dar es Salaam
16	Edwin Mng'ong'o	May 7, 2018	Posta, Dar es Salaam
17	Edith Bakari	May 8, 2018	Posta, Dar es Salaam
18	Paolo Peter Mhame	May 9, 2018	Posta, Dar es Salaam
19	Gallus Namangaya Abedi	June 6, 2018	Posta, Dar es Salaam
20	Suleiman Mbonea Mlungwana	June 6, 2018	Keko, Dar es Salaam
21	Eedmund J. Kayombo	June 8, 2018	Muhimbili University, Dar es Salaam
22	Modest C. Kapingu	June 8, 2018	Muhimbili University, Dar es Salaam
23	Febronia C. Uiso	June 8, 2018	Muhimbili University, Dar es Salaam
24	Silver Sendeu	June 12, 2018	Kimara Bonyokwa, Dar es Salaam
25	Cleopa David Msuya	July 6, 2018	Upanga, Dar es Salaam
26	Joseph W. Butiku	July 9, 2018	Posta, Dar es Salaam
27	Amunga Meda	July 18, 2018	Muhimbili National Hospital, Dar es Salaam
39	Rogasian L. A. Mahunnah	July 21, 2018	Tabata Kisiwani, Dar es Salaam
30	Qin Chengwei	July 22, 2018	Posta, Dar es Salaam
32	Naomi Vuhahula Mpemba	August 1, 2018 & April 9, 2019	Goigi Mbezi Beach, Dar es Salaam
33	HIV/AIDS Patient, A	April 9, 2019	Mlimani City, Dar es Salaam
34	Deng Shucai	May 23, 2019	Jinan
35	Ding Zhaowei	May 23, 2019	Jinan
36	Jin Xunbo	May 23, 2019	Jinan
37	Bai Wenshan	May 28, 2019	Guang'anmen Hospital, Beijing

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