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The Development and Expansion of Higher Education in China

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Abstract

This article describes the growth of higher education in China from 1990. The author chose this point in time, rather than providing a historical journey from the inception of higher education in China, which can be traced back many hundreds of years. It was during the 1990s that saw the acceleration and expansion of higher education with Project 21/1 and Project 98/5 implemented by the Chinese government in 1995 and 1998. This decade coincided with China's continued opening up, development and expansion of its economy, the rural to urban shift, the increased thirst and demand for higher education, and increasing numbers of Chinese students seeking to study abroad. The author outlines the responsibilities for higher education between the national and provincial governments, challenges, and what could be described as the consolidation of higher education in China as it becomes more targeted to meet national needs and goals. Countries can learn from China's experience and management in the exceptional expansion and development of its education system, and some of these key points are highlighted in the article.

Key Words: China, development, higher education, universities, expansion, education

Introduction

This paper presents a brief overview of the development and expansion of higher education in China. It includes the recent refocusing efforts of the higher education system in China. It examines who has the responsibility for higher education in China, managing the continued expansion of higher education in China, university closures in China, what can be learned from China's experiences, and recommendations for consideration. Additionally, this paper briefly describes the governance of higher education in China, expands on these control mechanisms, and looks at any university downsizing and prioritization initiatives.

Methodology

The methodology used in this paper is providing a summation of secondary research. That is, through information available through internet searches. The author of this document provides his thoughts and recommendations in the article; primarily in the latter sections of the document. The author's thoughts and recommendations provided are based on the author's experience and knowledge of the subject matter, general reading over a period of time, and conversations with people who have worked in the higher education sector.

Limitations

There are some limitations with this article, which the readers need to be aware of and could perhaps be addressed with further research and publications. Potential solutions are suggested to some of the limitations presented.

1. There was no primary data collected. This includes surveys, observations, meetings, and interviews to collect data that may not have been collected before and is directly related to the subject matter being investigated. Further articles could include such data.

2. Some websites were not accessible to the author. Additionally, some websites required registration and subscription payments. One specific website in this category is a site that provides statistics and tables. If readers require specific statistics and tables, these could be sought through the relevant bodies. Some additional information that may be of interest and benefit to readers is a breakdown of the cities in China that fall under a tier 1, 2, 3, or 4 (some classifications have a fifth tier) city, the number of universities, the year of establishment, growth in student numbers, funding allocation, university approvals and any closures, and locations. The last point is important as many university campuses have been built on the urban fringe of cities and this data could be used to examine the influence of university campus establishment on cities and their infrastructure development. However, the amount of data and its complexity would be huge because as at 2019 China had 613 cities (Wong, 2019), which is still current in 2023 (Brand Genetics, 2023). Wong's (2019) article provides information on the tiers.
3. Accuracy in terms of who funds universities and the number of universities receiving central government funding have been broadly reported. Specific amounts of funding and percentages could not be obtained through the secondary research.

Growth of higher education in China from 1990

This section of the article provides readers with the background, context, and some figures on the growth in higher education in China from 1990. This section adds to the informative nature of this document and its flow.

The 1990s saw the acceleration of (higher) education development with Project 21/1 and Project 98/5 implemented by the Chinese government in 1995 and 1998 (Wu & Zha, 2018) respectively, including the promotion of China's elite universities to reach world standard (Zha, 2011). Higher education in China has played a significant part in the nation's economic growth, scientific progress, and social development in the country by bringing up a large-scale of advanced talents and experts for the construction of socialist modernization.

Project 21/1 and Project 98/5 resulted in dramatic increases in the amount of students and institutions in China. "The higher education enrollment soared from 3.4 million in 1998 (the year immediately before the latest expansion that aimed to massify the system) to 22.3 million in 2010" (Zha & Hyhoe, 2014, p. 46). These student numbers reflect students enrolled in formal institutions and programs.

One of the challenges of this impressive growth rate resulted from Chinese universities borrowing from banks and becoming heavily indebted. The demand for places at universities far outweighed what universities could supply, so more campuses and facilities were built, financed through bank loans. Some heavily indebted universities were under pressure to pay back the loans they had taken out and the government had to step in to bail out troubled universities.

The quality of education in the Chinese education system continued to improve between 2010 and 2020. Chinese school students from Beijing, Shanghai, Jiangsu, and Zhejiang achieved the highest scores in the 2018 PISA assessment and Chinese universities continued their rise in the world rankings (Textor, 2023a). However, educational excellence across all sectors of the education sector is skewed to the major cities. This includes universities where China has invested and focused on selected universities to develop them into world class institutions in a short period of time.

The growth in the number of public universities and colleges was not as pronounced as in the preceding decade. However, this is not reflected in the increase in student numbers. From 2012 to 2020 China added approximately 50 institutions per year (Statistica, 2024). Student growth numbers did not slow down in the decade proceeding 2010 reaching approximately 40 million students enrolled in higher education programs by the end of 2019.

The growth of universities and university students in China from 2010 to 2020 did not slow down the amount of Chinese students studying abroad. The number of outbound Chinese students grew by 9.5% per year in the decade reaching just over 700,000 students (Economist Intelligence, 2024). This figure does not include students on student exchange programs.

Upon the outbreak of Covid in 2020 the vast majority of the world closed their borders with many countries implementing extended periods of lockdowns. This included China, which adopted a Covid Zero approach and still had some cities or areas within cities locking down in 2022 (Ruwitch, 2023). Like the vast majority of countries students were forced to study online and many students in China were locked out of returning to their overseas study destinations. Perhaps the (after) effects has led to a reshaping of the education demands, and also the travel and tourism markets in China.

The enrolment rate in higher education reached 57.8% in 2021 (Clayburn, 2023). This is an increase from 30% in 2012 (Clayburn, 2023). The demand for higher education is a global trend. However, is there the supply of jobs for graduates, particularly in their chosen fields? In China, youth unemployment was over 20% in May 2023 (Hawkins, 2023). With China producing over 11 million graduates annually, will the youth unemployment continue to increase or will it develop more entrepreneurs? Even if the lack of employment opportunities for a large percentage of graduates produces more entrepreneurs, this is only going to be for a fraction of the millions graduates. It is likely to force more graduates into jobs that they are far more qualified for and are below expectations. This includes young people with postgraduate qualifications from highly ranked universities abroad (Hawkins, 2023). However, are graduate expectations sometimes too high?

While the above paragraphs present some challenges for China and its government planning bodies, the Chinese education sector has success stories to celebrate. The first is the continued rapid rise of in the rankings of Chinese universities. As of 2024 China has 15 universities in the top 100 of the Time Higher Education rankings (Times Higher Education, 2024). This is an increase from seven in 2020 (Jack, 2023). Additionally, China has a significant number of universities ranking on the top 3% of the world, which can be seen in the Shanghai Rankings (2024). However, with the oversupply of graduates, is this leading employers to filter graduates' employment applications based on the university they have studied at?

Another of the many success stories is China's increase in international student numbers. China hosts the third most international students in the world (Wen & Hu, 2023). China has averaged approximately 10% growth in international student numbers since 1998 and currently has approximately 500,000 international students at its universities. Impressively more than 85% of the international students studying in China are self-funded and less than 15% receive Chinese government scholarships (Yang & Wit, 2019). The key benefits for China are soft power for the country and diversification of the student base through international students at its universities. However, to put figures in perspective there are over 3,000 government colleges and universities, plus private providers in China.

The Chinese Ministry of Education announced that there are over 47 million students enrolled in higher education in 2024 (Mulder, 2024). This is an increase of over a million students from 2023. Additionally, China has over one million students studying abroad and a further 200,000 students on exchange programs (Education Fair, 2023). How long is this growth sustainable for with falling birth rates and a decreasing population (Master, 2024)?

The answer to the above question is that it is not sustainable in the long term with one of the reasons being the declining student age cohort (Sharma, 2023a) in the longer term. However, the thirst and demand for a university education by students and their parents is expected to grow for some years yet. This is evidenced by the largest number of students on record registered to take the Chinese university entrance exam in 2024 (Gan, 2024). There are also concerns about the debt of local authorities where perhaps in some provinces, university campuses were constructed that were not needed or may not reach their capacity.

The Chinese government will focus on quality in further expansion of the sector. This will promote the expansion of its top universities and optimizing facilities at existing campuses. Provinces may receive approvals for the construction of new universities if they are based on quality and need. The exception is the Greater Bay Area where there is a need for further university campuses to contribute to the fueling of technology driven growth in this region.

It is important to note that China has significantly expanded its vocational high school system. In 2023, there were 9,752 secondary vocational schools in the country, with over 17.8 million students (English News China, 2024). This represent a significant increase from 2022. Developing TVET in secondary schools, and the expansion TVET colleges and their course offerings are education and country development options nations should consider and action.

Responsibility for higher education in China

The Ministry of Education is responsible for basic education, vocational educational, and higher education. It is the main funder of higher education and accredits universities. The overarching responsibilities of the Chinese Ministry of Education (2018) can be seen @ this link. These include all areas of education including some specific to higher education and have been taken from the aforementioned reference and link.

- Strategies, plans, and polices.
- Direct the development and reform of higher education, and further deepen the reform of the administrative system of universities under the direct affiliation of the Ministry of Education.
- Formulate the curriculum catalogues and documents for the guidance of teaching.
- Examine and verify, in collaboration with relevant departments, the establishment, renaming, abolishment, and adjustment of higher education institutions.
- Direct and coordinate all forms of higher education and continuing education.
- Provide guidance for the improvement of the assessment of the higher education.
- Overall management of the educational funds under the jurisdiction of this Ministry.
- Manage the entrance examination for academic credentials for higher education.
- Make recruitment plans for higher education in collaboration with relevant departments.
- Take part in drawing up the employment policies for college and university graduates.
- Direct colleges and universities in their work to facilitate the graduates' job hunting and starting of their own businesses.
- Plan and guide the research by institutions of higher education in natural sciences, philosophy and social sciences.
- Coordinate and guide the institutions of higher education to take part in developing the national innovation system, and undertake the State's key projects and programs for the development of science and technology; to guide the construction and development of the scientific and technological innovation of institutions of higher education.
- Direct the informatization of education and promote the integration of production, teaching and research.
- Organize and guide international educational exchanges and cooperation.
- Formulate policies of programs for Chinese students studying abroad and foreign students studying in China, and joint educational programs by Chinese and foreign educational institutions.
- Take charge of the work of the conferring of academic degrees; to be responsible for the implementation of the conferral system for academic degrees.
- Responsible for the work towards international reciprocity in academic degrees and mutual recognition of academic degrees.

The Chinese Ministry of Education (2018) lists 75 subordinate universities on its website. While the author of this document would not usually site Wikipedia as a source, in this instance it was necessary when determining if more universities have been added since 2018 or if the 2018 date just has not been updated on the website. The author of this document assumes the latter as the webpage contains current reports. Wikipedia's (2024) Ministry of Education (China) webpage also reports 75 subordinate universities as at 2022.

Subordinate universities are those governed by the Ministry of Education (Nofri, 2015). These are the most prestigious and well-funded universities in China, and therefore the universities that appear on the higher echelons of university ranking lists. The competition to secure a place at one of these universities is intense because graduating from one of these universities unlocks career opportunities. The subordinate universities are at the top of the pyramid, with the remaining 3000 plus universities falling within the various layers of the pyramid. Additionally, Project 21/1 and Project 98/5 provided support for more than 100 universities (Nofri, 2015). A university's position within the layers is determined by a range of factors: administered by other ministries, administrated at a provincial or municipal level, location within China and province, age, size, partnerships, and possibly personnel.

The previous paragraph mentions the competition to enter a top university in China is intense. The Chinese university entrance test is called the Gaokao, which is a two-day, high-stakes exams with a high-score the way to secure a place at one of China's prestigious universities. China's "slowing economic growth and soaring youth unemployment has piled on the pressure to perform" (Gan, 2024) with diminishing opportunities for fresh graduates (Gan, 2024).

Funding

The opening paragraph of this section states that the central government is the main funder of higher education. However, the central government is not the only funder. This is evidenced by concerns about the debt of local authorities. That is, the provinces. The following bullet points on funding come from Liu, et al.'s (2020) article, Diversifying Funding Sources for Public Higher Education in China during Massification. Liu, et al.'s (2020) article highlights not only the challenges the higher education sector faces, but also the challenges the government – national and provincial – has encountered with the continued expansion of universities and their enrollment numbers in China.

- The national and provincial budgets for sustaining the expansion of higher education systems is limited. They cannot keep up with student demand and funds required by universities to operate and digitize.
- The government is the dominant funder of higher education. This includes providing appropriations and grants, and awarding contracts.
- A competitive model, where universities compete with each other for limited amounts of government funding. Perhaps a different funding model would be more efficient.
- Tuition fees have been the second largest source of university revenue since 1997. Government benchmarking analysis resulted in the government determining that it would not cover more than 25% of the education cost for each student. It is noted the government funding amounts have varied over the years.
- The Student Loan Schemes emerged as part of the introduction of tuition fees in all public universities in 1997. These have not been without their challenges, particularly ensuring that low-income students can benefit and access the loans. This includes the amount students are eligible to loan between the provinces.
- Universities have been encouraged to engage in entrepreneurial activities from the end of the 20th century. Only the top universities have been reasonably or possibly somewhat successful in generating revenue from these activities.
- Universities actively seek donations from philanthropists, foundations, businesses, alumni, and community groups. At the present funding received from these activities is low.
- The two tiered funding model between the central government and local governments determines who funds an institution. The total expenditure on higher education by local governments has grown faster than the expenditure by the central government. This is mainly because local higher education institutions have grown much faster than central ones in size and number.

Efforts have been and are continuing to be made to diversify funding in the public higher education sector. However, the government continues to be the main funder. Even though the government's percentage of funding decreased between 1998 and 2005 with the student funding contribution through increased tuition rising during this period, from 2006 this has been reversed. These two sources of funding dominate the revenue that most public universities receive. The prestigious universities receive far more funding than others (see Figure 1). Unfortunately, the author of this article was not able a find a breakdown of the funding sources.

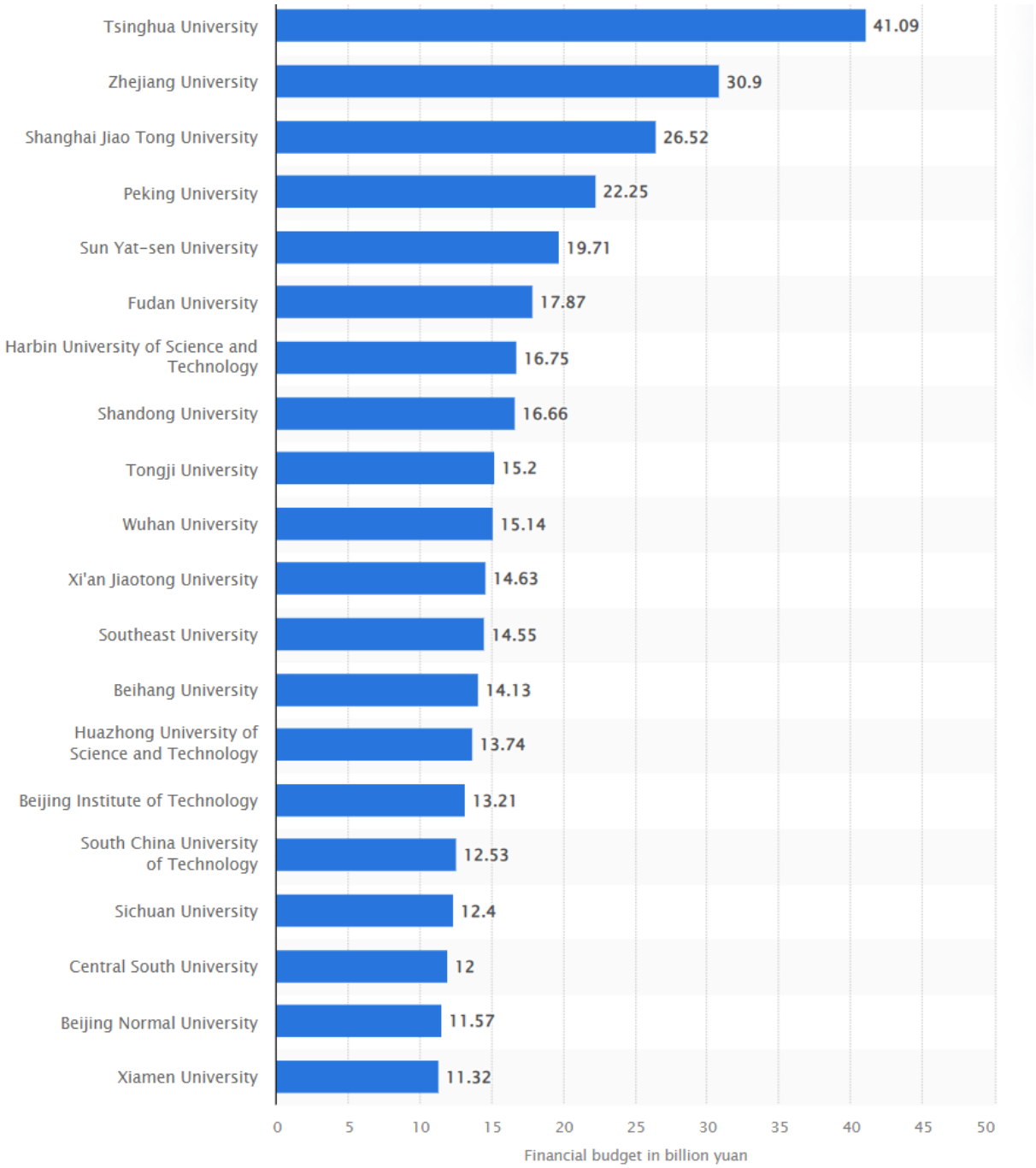

Figure 1: Planned financial budget of leading universities in China for 2023 (Textor, 2023b).

The focus and content of this article is on the public sector. However, it needs to recognize the large private higher education sector in China. It is this sector that has contributed greatly to the massification of higher education in China through market demand for higher education throughout the nation. For the purposes of clarity and context, private sector involvement in all sectors of the education market has been growing for a number of decades as parents have sought the best educational outcomes for their child.

Funding comes from student tuition fees and through government support for non-profit and for-profit colleges and universities. The 2016, the Law of the People's Republic of China on the Promotion of Private Education document provides the guidelines for the government to support and regulate private colleges and universities. The funding policy is based on rewarding excellence and universal welfare.

In addition to funding support, private operators receive tax incentives, credit incentives, land concessions, and other measures of support (Hu, et al., 2023). Wen & Marginson (2023) seem to imply there is some funding for the private sector from the state. The funding and other measures of support are the responsibility of provincial governments. It must be noted some or perhaps many public universities have private arms to gain financial returns from these public universities owned private colleges (Liu, et al., 2022).

Governance

The Ministry of Education is responsible for higher education in China. University presidents are appointed by the government and university management follows decrees issued by the Ministry of Education. Administrative authority far outweighs academic authority, and while there are boards and committees within universities, they do not have a governance role (Wang, 2022). This dual governance arrangement has long been practiced in Chinese higher education, and it was formally regulated by the Chinese Higher Education Law. According to the law, 'in higher education institutions run by the State, the system shall be applied under which the presidents take overall responsibility under the leadership of the Primary Committees of the Communist Party of China (PCCPC) in HEIs' (Article 39) (Ruan, et al., 2023).

Since 2014 "governmental administrative powers that have been delegated to universities include teaching plans, curriculum development, infrastructure construction, and the purchase of equipment" (Li & Yang, 2014). There seems to be some conjecture about what body or bodies determine research priorities.

The government controls the budgets and therefore the running of universities. This model has not stemmed high-quality scientific research outputs at Chinese universities (Tong, 2023). Wen and Marginson (2023) note that the current system fosters academic research with Party secretaries working alongside academic leaders at each level. Additionally, returnees from universities abroad have contributed to the development of changes in operation structures and decision making.

Wen and Marginson (2023) describe the models of governance as top-down power and bottom-up agency. Top-down control ensures the countries objectives and messages are being followed, and contributing to China's trajectory. Bottom-up agency contributes to China's trajectory through academic freedom to produce scientific research. This is important for the development of a country.

While the Ministry of Education is responsible for higher education, only a number of universities are under its direct control. The provinces are responsible for the rest of the universities, which comprise of well over 90% of the countries universities (Wen & Marginson, 2023). One of the measurable evaluation tasks the central government assigns to the provinces is the operation of higher education.

This section has acknowledged the governance role of the state in higher education with universities having Party branches and committees. From 2024, the state's role in and at universities will increase with the merger of university president's offices with Party committees (ChinaFile, 2024). The author of this article notes that this supposed change has not been widely reported on. What the implications are, are yet to be seen. However, the author of this document notes that some university presidents are already Party secretaries. It could actually be beneficial: more accountability, aligning courses with country needs and jobs, efficiency, continued rise in the rankings, funding expansion and increases, and more scientific research opportunities for academics.

Managing the continued expansion of higher education in China

This section of the article highlights some of the challenges China has faced and continues to face with higher education. Additionally, it presents some of the measures the Chinese government is taking to address these challenges. These include increasing the approval requirements for new universities and campuses, focusing on the nations priority areas of the development of science and technology, and the development of the Great Bay Area. China's Ministry of Education released a policy document titled Opinion on the Establishment of Higher Education institutions during 14th Five Year period (2021-2025). As the name suggests, the document sets out rules and priorities regarding setting up new higher education institutions, addressing number, education level, type and location (British Council, 2021).

Sharma (2023b) discusses some of the recent measures China is taking, or perhaps plans China has, is a more appropriate description. These include: developing courses focusing on new technology and priority with an estimated 10,000 programs to be added to contribute to the countries goal of becoming a technology and science power; force unwanted programs to close, which could as high as 20% of programs in a short period of time; adding medicine and health programs, including creating faculties and schools at current universities; focusing on subject areas with international influence, and adding centers and programs in these areas; and building 30 new technology colleges, and 300 outstanding engineering colleges and modern industrial colleges, while expanding programs with distinctive industrial characteristics in universities. It is expected these plans will result in the repurposing of provincial higher education providers to achieve the goals of by 2035. That is, the structure of higher education disciplines and majors will be more coordinated, to achieve high-quality education, and employment outcomes. Youth unemployment in China is a huge challenge of the nation. China's youth unemployment rate in May 2023 was 20.8% (Tindall, 2023). 42% of unemployed urban youth in China at least had a bachelor's degree and a large percentage have higher qualifications (Kang & Yuxuan, 2023).

The increase in medicine and health programs are to serve national development. These programs are in a plan released by the Ministry of Education and four other departments: National Development and Reform Commission, Ministry of Industry and Information Technology, Ministry of Finance, and Ministry of Human Resources and Social Security (Sharma, 2023b).

The Ministry of Education has closed many local – foreign university joint programs over the last seven years. The major reasons for the closures have been poor quality and not being aligned to the country's needs. The Ministry of Education created new approval guidelines for joint programs, which focus on ensuring quality and being aligned with the country's needs (Sharma, 2024). Shanghai Jiao Tong University (2021), and China Higher Ed and the Embassy of Finland Beijing provide the requirements and steps required to now establish joint programs. Links can be found in the reference list of this article. Other countries could consider adapting some of the content in these links.

Dongmei's (n.d.) article highlights the problems some of the university cities have faced. The concept is to build a large university campus or in some cities multiple universities and build infrastructure around them, which is turn will create business. However, this has not always eventuated. There have been problems with farmers feeling undercompensated, poor construction quality, graft and possible corruption, fees charged to students, and more. This is a concern that China has faced and as many of these universities are residential with students living on campus, the country can overcome them for now with the continued demand for higher education.

There are other areas the higher education sector in China is struggling with, but is seeking to address. These include funding inequalities. This is not just between universities under the Ministry of Education and those under provincial governments, but differences between provinces. Additionally, there are differences in education quality and outcomes between institutions and locations.

University closures in China

The Ministry of Education is responsible for, in collaboration with relevant departments for the establishment, renaming, abolishment, and adjustment of higher education institutions (Ministry of Education, China, 2018). Unfortunately, the author of this article could not identify the relevant departments. It would be very beneficial if a procedural document could be procured. Such as document outlining the mechanisms would be very beneficial.

Feng's (2018) article reported that the Ministry of Education closed over a fifth of partnerships between local and foreign universities in the past year. These included five jointly managed institutions and over 200 joint programs. The reasons for the closure were poor quality, low enrollments, and financial mismanagement. There was no discrimination with some of the foreign university partners being very highly ranked, and the Chinese institutions included two of the most prestigious universities in China. However, approvals for high-quality joint programs continue to be granted by the Ministry of Education (Sharma, 2024a).

Sharma's (2023b) article provides some information on how courses are deleted with approximately 20% of programs not contributing to socio-economic development, of low quality, and/or having low employment outcomes for graduates will have to cease enrolment. These programs will be culled based on the inspection results of the provincial education authorities.

The provincial education authorities need to publish lists of low and high priority programs to determine whether degrees align with regional development goals. The only indicator stated in Sharma's (2023b) article is that under long-standing rules, programs are eliminated if less than 60% of the graduating students in two successive years fail to find work. There is no elaboration provided in terms of full time work, employment related to what the students studied, etc.

What other countries can learn from China's experiences?

China has the largest education system in the world and it will continue to grow for some years yet. However, as this document has shown, the growth is being refocused to meet the nation's needs and improve quality. There is a distinct focus on science and technology subjects, while eliminating many degrees, which do not provide outcomes for students or the country. Countries can potentially learn from the approach being taken in and by China.

China is rapidly developing and expanding its vocational education sector to meet the needs of the country, while providing employment and career opportunities for its young people. In December 2022 the central government issued guidelines to deepen the reform of the county's vocational education system. In 2024 more initiatives were announced, including opening more vocational schools with strong operational capabilities, integration between education and industry, and strengthening city-level industry-education alliances, and fostering industry integration communities (Ministry of Education, China, 2024). The next section of this document provides some recommendations.

Recommendations for consideration

The author has provided some suggestions below, based on what has been presented in this article and some of the author's experience informed ideas.

- Countries have university regulations documents. Are the governance and operational policy documents connected or contained in these documents? If not, perhaps they need to be completed and enacted, starting with priority documents, which could include processes and approvals for: eliminating subjects and courses, closing universities and/or campuses, minimum requirements for universities and campuses, establishing universities and/or campuses, and so on.
- Use the above documents to close micro and satellite campuses, which a number of universities seem to have. The author assumes these are expensive to establish, maintain, and operate. Technology provides multiple delivery options for those in remote areas, with some onsite delivery provided within the course or subjects. The author endorses the deleting of degrees where there is significant overlap with another degree (title) or when there is ambiguity between degrees. However, the author contends that it is better for universities to delete subjects rather than degrees. There are two reasons for this. First, the more degrees listed under a school, faculty, and university makes them looks big. It is attractive for a university. Second, subjects should be deleted where there is overlap and repetition of subjects in degrees across schools and faculties. For example, many degrees have management subjects. Universities should delete all of them apart from those offered through the schools or faculties of business or management. The schools or faculties of business or management would be responsible for delivery of these subjects across the university. This approach realizes economies of scale, provides a far broader learning experience for the students, and allows other schools and faculties to focus on and develop their core offerings. With this model, assessments are differentiated.
- Are there quality assurance and auditing processes and functions for universities? Such functions assist with accountability, planning, quality, effectiveness, a proactive approach, managing key performance indicator achievement, etc. These tools ensure the consistency of high-quality learning and teaching, and courses and subjects, regardless of the provider and location.
- Focus on the quality of course offerings, which align with the technology countries seek to develop, and the needs of the labor market. Scholarships should be aligned with these objectives. For students receiving thesis and research based scholarships, plans and thesis investigations should at minimum be established before a person receives or embarks on their research study and development journey.
- Universities need to establish more links, collaboration, and partnerships with industry and the private sector.
- Diversification of income streams for higher education providers. This point should be mandated for the vocational sector too.

- Implement more stringent processes to register degree courses, subjects, etc. Coupled with this, needs to be standardized quality assurance mechanisms for courses, and their implementation; and student assessment tasks and requirements.
- Encourage universities to enter into agreements with foreign universities to deliver university degrees in-country. For this approach to be beneficial to a country the government needs to specify what courses will be approved and the location. It should not be a 'one-stop-shop' fits all approach. Alternatively, or in conjunction with this approach, universities in partnership with district/provincial/state offices need to submit a business case for such partnerships clearly stating the degrees to be implemented and the outcomes. This approach has multiple benefits: reasonably cost effective, provides local universities with a fee-sharing revenue stream, upskills local academics, research outputs (put in the agreements) and training, course development, and marketability and soft power development leverage options.
- A K-12 model of 13 years of schooling needs to be benchmarked and recognized globally. The aim should be to eliminate university foundation programs and the need for local students to complete a foundation program before entering a bachelor's degree locally or abroad. Additionally, countries that have 4-year bachelor's degrees should consider implementing general education subjects in the first two years of bachelor's degrees to eliminate some of the current subjects and subject matter content, which should have been completed in high/secondary school.
- Strengthen and develop the technical and vocational education and training system. Along with higher education, focus on areas of need for a country and outcomes for students. Develop partnerships with industry, universities, pathways, K-12 providers, etc.

Conclusion

The higher education system in China is huge and complex. This includes some of the funding and governance mechanisms. While information was reported on in these sections of the document, the actual ministerial frameworks were not uncovered by the author. It would be beneficial to obtain more inform on these sections. However, the information presented in this report enabled the author to present suggestions.

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Ethical statement

This study does not contain any studies with human or animal subjects performed by the author.

Conflicts of interest

The author declare that they have no conflicts of interest to this work.

Data availability statement

Not applicable for this article.

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