

Economic Measures for Improvement of the International Competitiveness of Chinese Construction Machinery Industry

Xia Weifu, Dr. Aryaty Binti Alwie

Faculty Of Humanities, Management And, Science, Universiti Putra Malaysia

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v15-i5/25516> DOI:10.6007/IJARBSS/v15-i5/25516

Published Date: 19 May 2025

Abstract

This study aimed to explore economic strategies that the government and private sector in China can present to guarantee the China's Construction Machinery industry is competitive take the center stage in the global market. The purpose of the study was to investigate how the private companies and the government of China have taken the center stage in presenting economic measures that would assist in the competitiveness of china construction machinery industry in the global market. The study applied the methodology that consisted of the concentration on comprehensive access to relevant online databases and the academic sources that conform to the economic measures and china construction machinery industry. The results revealed that improved wages and remuneration process, tax incentives, exports and imports strategy and economic policies related to foreign direct investment were vital economic measures. While these economic measures are viable, there was an issue in the fast implementation contributing to the recommendation that every government and private company must be ready and work together to implement these measures. Prompting private companies and the Chinese government to implement the stated economic measures will lead to the global competitiveness of the china construction and machinery industry.

Keywords: Chinese Construction Industry's International Competitiveness, Economic Measures, Chinese Government, Private Companies Economic Measures for Improvement of Chinese Construction Machinery Industry

Introduction

The Chinese Construction Machinery Industry has made considerable improvement due to the unity and the joint dedication by the government and private companies. The continued concentration on the positive aspect has created a chance for the inclusion of economic strategies that can further improve it and ensure its competitiveness in the global market. There are several issues such as complex laws, the lack of proper concentration on research and design, difficult economic policies that ensures the address to global trade, and issues concerning wages and remuneration process are vital. There are various economic strategies

the government and private companies can apply to ensure this industry is competitive and thrives in the global market.

Improved wages and remuneration processes, tax incentives, and economic policies that permit foreign direct investments and exports and imports are relevant. According to the Statista, in 2021, there was a projection that the Chinese market for construction machinery will be estimated at over 40.8 billion dollars (Statista, 2022). Between 2022 and 2027, it will grow by 6.4% to about 62 billion US dollars in 2027. To ensure the expansion and the success in meeting the 2027 objective, both the government and the private sectors must present economic measures relevant to the course. Therefore, this research's objective is to examine economic strategies that the government and private sector in China can apply to guarantee the competitiveness of China's Construction Machinery industry and ascertain its global stability in the global market.

The current research on industry competitiveness is more at the theoretical level and less at the empirical level, more in general and less for a particular industry. It is in these two areas that this article aims to make a breakthrough using a combination of theoretical and empirical methods. The international competitive strategy of China's construction machinery industry must have a reliable theoretical basis for future sustainable development purposes.

Literature Review

Exports and Imports Strategy

The Chinese Construction Machinery industry is vital as far as China's economic growth is concerned. While many scholars have investigated the China construction machinery, scholars such as Xu (2023) believe that many private sectors are working towards the realization of the competitiveness of this industry in the global arena. The application of data from companies like Xuzhou Construction Machinery Group (XCMG) on their engagement has revealed that 90% of the total operation is based on exports. Xu (2023) therefore addressed the gap between exports and imports and realized that export is an economic measure that ensures the machines are used in the global sectors and appreciated by the international consumers. This company has declared that it is prepared to export a variety of goods, such as loaders, cranes, and excavators, to both domestic and foreign markets in order to facilitate major building projects. Xu (2023) concludes that the relocation is evidence of the business' continuous development and success as well as the rising demand for Chinese-made machinery both domestically and internationally. The notion has further been supported by Yujie et al. (2020) also provides an example of a private company that has engaged in the export of the machineries as the economic measures to ascertain the need for perfection and competitiveness of this industry. The use of data from Sany Heavy Industry Co. Ltd. That indicates that the revenue rose from 24.3% year-on-year over the first nine months of 2020 to 73.4 billion yuan (\$10.9 billion) is vital. Yujie et al. (2020) has been supported by Xu (2023) and has engaged in the export of the machineries creating a chance for the direct purchase by the global players. It means that continued concentration on the exports to other countries will create a chance for the complete trust in the machines in the construction industry. Yujie et al. (2020) concludes that this approach is ideal and create the needed exposure of the Chinese construction machinery industry to the foreign firms or nations that in turn increase the possibility of complete engagement to making a difference.

Tax Incentives and Breaks

Xu et al., (2020) concentrate on the tax incentives and breaks as a measure issued to the construction companies to ensure their readiness in adapting to the challenges in the market and improve their involvement in making a differences in the market. Xu et al., (2020) has used literature review as a methodology by reviewing relevant sources. Sources such as (Jaillon & Poon, 2009, and Xu et al., 2015) reveal that the policies and specifications are the main focus of government practices. Xu et al., (2020) further believe that with the tax incentive offered by the government on the construction machinery, the companies in this sector will be ready to explore other markets in the global nations and act as a marketing tool for the Chinese construction machinery industry. Xu et al., (2020) conclude that this creates a chance for the direct concentration on making the best out of an entire market. Luo et al. (2021) further conforms to Xu et al., (2020) assertions that concentrates on the tax policies developed due to the need for proper improvement of the entire construction machinery industry. Luo et al. (2021) content analysis to analyze the previous research on China construction machinery industry. One of the sources Wang, C. et al. (2018) revealed that policies such as the 13th Five-Year Prefabricated

Building Action Plan, the Standard for Assessment of Prefabricated Building, and the Guidance on the Development of Prefabricated Buildings are just a few of the policies that the Chinese government has released to encourage prefabricated construction. The central government is a key player in all of these initiatives, and they cover a wide range. Luo et al. (2021) concludes the research by asserting that the more the concentration on developing these policies, the higher the chance for the improved concentration on the improvement in the construction machinery industry since the policies favor both the local and foreign investors.

Wages and Remuneration Structure

Zhao et al. (2019) concentrates on the labor production arising from the wages and remuneration in the Chinese Construction Machinery Industry. It is evident through the use of literature reviews and the surveys that this industry has seen the growth due to the emphasis on the capital structure and wages issued to the employees. The low wage complaints is a threat to the competitiveness of this industry creating a chance for perfection in the global market. Zhao et al. (2019) continue by highlighting that in labor studies, migrant workers' working conditions in the construction machinery sector have recently gained a lot of attention. Many topics are covered, including the subjectivity of employees and their ability to protest, wage arrears, the low rate of labor contracts, and labor control in the context of the subcontracting system. All these must be considered and the issues addressed to prevent a situation where there are loads of complaints in the process of handling remuneration of employees in this industry. Xia et al. (2020) support Zhao et al. (2019) focus on the wage structure and the remuneration procedures in the high-skilled industries in China such as construction machinery industry. Xia et al. (2020) use literature reviews to identify the results. From the sources, he realized that when China opened up to the outside world, foreign direct investment (FDI) started to rise. China began an economic development drive that included the creation of the world's low-cost export base and its own domestically focused manufacturing industry, in addition to a number of other policy initiatives. Xia et al. (2020) conclude that the more the approach to perfection, the higher the chance the situation has created as far as the stability in the Chinese construction industry is concerned.

Economic Policies that Allows Foreign Players through Foreign Direct Investment

Johnstone (2023) concentrates on the economic policies that allows foreign players through foreign direct investment. Johnstone (2023) uses Hunan model that involves the comparison of two variables. From the model, it is evident that the need for the better policies that can allow foreigners to directly invest in this industry is the leeway towards the growth of this industry. It creates a chance for continued improvement since foreign companies will be ready and willing to invest in China. Johnstone (2023) continues by analyzing the model based on the China's perspective on market growth. The result shows that the National Development and Reform Commission, China's most influential policy-making body, published a report in July 2022 outlining how Chinese construction machinery industry could and ought to encourage investment and trade. Johnstone (2023) concludes that through continued foreign direct investment terms and policies, there is a proper possibility for the stability of China construction machinery industry. Barber (2022) also supports Johnstone (2023) findings on foreign direct investment. Barber (2022) uses surveys by foreign chambers of commerce in China. The result indicate that China has surpassed the United States of America as an economic hub. Barber (2022) concludes that the continued stability and competitiveness, the foreign direct investment policies must be taken into consideration for ease in attracting the expertise, skills and the finance from the foreign investors intending to invest in China construction machinery industry.

Methodology

A research on the online database, and the academic publications was carried out. Chinese Construction industry, Economic measures, Chinese government, private companies were some of the key words applied to ensure the relevance of the sources regarding the research topic. Academic sources published within the last five years were the ones included in the search to ensure relevance and credibility. The criteria applied in the selection of relevant was screening where the keywords, the timeframe and the concentration on China led to the realization of relevant and approved sources. After identification of relevant sources, the consideration of authors, publication years, aims, methodologies, and results and the procedures applied by the authors to ensure available information were considered. The data was then analyzed based on the themes and keywords presented to ensure that the relevant information that assisted in the completion of the report was viable. Improved wages and remuneration process, tax incentives, exports and imports strategy and economic policies related to foreign direct investment were vital economic measures were some of the primary themes applied and analyzed. Also, the challenges, gaps and the drawbacks in this study were analyzed and the recommendations for their address given to ensure a complete search.

Discussion and Results*Tax Incentives*

The sources reviewed showed that the moment the government offer tax incentives or break in the construction machinery industry, the cost of manufacture and operation cost will reduce. This will create a chance for the local and the foreign investors in this industry due to continued investing through employment of the job seekers, training them to ensure high-level expertise and exposing them to other experts for ease in learning and improved skills.

The sources also contained the information that the government has a chance to ensure the solution has been realized and the private companies must also engage to apply the opportunity ideally to expose this industry to the better. The concentration on tax incentives and breaks is vital for the Chinese construction machinery industry.

According to Tian et al. (2020), tax incentives fuels an industries research and design measures creating a chance for the understanding of the entire market and the needed strategies to apply to create a chance for positive change. Since the Chinese construction machinery is growing and becoming better, the concentration on research and design aspects creates a chance for the private and the public companies to understand the need for the concentration on recent market trends through research (Li & Du, 2019). The situation has given a chance for the direct approach to technological innovation in a case where the design and research conducted reveals the need for adaptation to the changes in the technology. The fact that 93% of Chinese businesses have adjustment costs below the tax crucial threshold indicates that China's policy of R&D tax incentives is generally successful (Li & Du, 2019). Additionally, non-state-owned firms are more significantly affected by the tax policy's incentive effect on R&D investment than are state-owned firms. This creates a chance for liaising together to effect the changes needed and the direct concentration on improving the operations in the Chinese construction machinery industry. The fact every Chinese firm regardless of it being private or state-owned has liaised and benefited from the tax incentives or breaks creates the notion that this economic measure is vital and will create an exposure in this industry. For an industry to be competitive, there must be understanding of the recent market trends, technological innovations and the unique selling points. Through tax incentives, china construction machinery industry will be viable to compete in the global market due to the continued appreciation of the services it will offer and the lucrative approach and aspects it will derive. The situation also creates a chance for the improved or increased investment by foreign investors that in turn improves the image of this industry and allows more funds that are vital for the improved growth.

Economic Policies Related to Foreign Direct Investment

Also, from other sources studied, it was evident that economic policies that allow foreign investment in the Chinese construction machinery industry is an economic measure that must be taken into consideration to ensure the value and perfection. Other authors from the sources were convinced of this measure drawing their ideas from the Chinese market where an open market policy has affected some industries such as technology, automotive and food positively. Relating this result to the success in this industry created a chance for the required perfection and direct involvement in making the ideas work and ensuring the competitive advantage of this industry. The information was further based on the increase number of foreign firms intending to invest in the Chinese market. The ideal foreign direct investment policy will be ideal since there will be a total need and inclusive approach in making the best out of an entire global market.

Economic Policies Related to Foreign Direct Investment in the china construction machinery industry is vital. According to Zeng & Zhou (2021), China's foreign direct investment (FDI) has stretched to 941.52 billion yuan in recent years. This means that China has allowed its companies to invest in others and also other foreign companies to access its market (Zeng & Zhou, 2021). Through this approach, it is evident to note that China has tried

as much as possible to create a balance in the investments policies. For instance, Law of People's Republic of China upon Wholly – Owned Enterprise, Law of People's Republic of China upon Sino-Foreign Ventures, Law of People's Republic of China upon Sino-Foreign Cooperative Enterprise and Guiding Inventory on Industries Open to Investment. These policies therefore issue investors with a chance to understand the investment patterns in the China Construction Machinery industry creating the need for the concentration on the foreign policies guiding every country (Zeng & Zhou (2021)). The moment an individual has a chance to invest in the direct market after understanding the guidance and laws, he or she will not hesitate. The situation further explains the increase in foreign direct investment by the Chinese firms in the construction machinery industry and the continued focus on making the best out of opportunities presented. Decision-makers can only successfully modify the FDI introduction structure to achieve the goals of upholding environmental protection standards, avoiding an extensive development mode, raising the bar for technological innovation, and ultimately fostering the robust growth of the domestic economy, once they have a firm grasp of all the different impacts brought about by FDI inflows. This creates a chance for the application of this economic strategy since it only require an adherence to the policies to access the market. China has emphatically concentrated on this policy creating a chance for its industries to receive the global exposure and engage in the supply of quality machines due to the high demands by the firms that believe in quality and durability.

Improved Wages and Remuneration Procedure

The secondary sources appraised further revealed that improved wages and remuneration process in the China construction machinery industry will be ideal in the realization of its competitiveness. The sources were mainly from 2018 leading to the understanding that they focused on the recent market trends and the needed interventions that were still applied and will be applicable ideally in the future. Some of the sources concentrated on the 2024 trends in the market. Employees can be productive and engage their skills and expertise willingly provided there is a better wage and the remuneration structure is vital. Changes in labor markets have been the subject of some studies. For instance, Tsinghua University researchers have surveyed the new generation of migrant workers about their short-term employment preferences. The labor market and other social factors are disregarded in favor of the production process and the relationships within the businesses as the primary subjects of these studies.

Improved wages and remuneration process is another economic measure realized from the research conducted. According to Adams (2019), the remuneration and wage structure applied can either lead to the productivity of employees or create an aspect of reluctance due to the lack of motivation (Adams, 2019). In the industries where the welfare of the employees regarding the amount paid and the structure of compensation are taken care of, the employees will be in the best position to achieve the required objectives. According to Statista, China's manufacturing wages rose from 92459 CNY/year in 2021 to 97528 CNY/year in 2022. China's manufacturing wages reached an all-time high of 97528.00 CNY/year in 2022 and a record low of 597.00 CNY/year in 1978. From 1978 to 2022, the industry averaged 22876.69 CNY/year.

This means that the industry is trying as much as possible to increase wages (Statista, 2023). This will create a chance for the motivated employees to showcase their expertise. The result

will be proper quality machinery, best services offered that in turn will lead to an appreciation by the consumers. Also, in a situation where the wages and the payment structure conforms to the government's requirements, both state owned and private companies in the construction machinery industry will be ready to explore other avenues such as training and development of the employees arising from the need to create a specialized employee body with the latest and updated skills required in the construction machinery market. The situation has further led to the increase in foreign direct investment due to the quality products offered by motivated and skilled employees. The increase in foreign direct investment (FDI) began when China opened up to the outside world (Adams, 2019). China started an economic development drive that included a number of other policy initiatives as well as the establishment of the world's low-cost export base and its own domestically focused manufacturing industry. All of these focused on the wage structure in an attempt to achieve the optimal compensation. It is therefore evident that the concentration on the wages and the remuneration contributes to the competitive advantage since the employees will willingly offer their best skills due to the appreciation they are receiving from the industry.

Exportation and Importation Strategies

The sources studied additionally revealed that exportation and importation is an economic measure relevant in this case. It creates a chance for the ideal choice of exportation method and the benefits. The major factor that created similarity is that private companies have been engaging in the exportation of the machines and the Chinese government has supported the importation. This exchange is the leeway towards the ideal concentration on the realization of the cooperation in this industry. The assistance from the government and the private companies creates the stability due to sharing of ideas. The results from the sources reviewed under exportation and importation were similar therefore created ease in the identification of the required information for discussion.

The concentration on the exports and imports has further created a chance or the competitive advantage in the global market. Many private construction industries such as, Xuzhou Construction Machinery Group (XCMG) export machines from its stores to the global companies and nations. This will create a chance for the direct approach to accepting the machines manufactured in China and their use in the global nations. The fact that this private company can export loaders, cranes, and excavators contributes to the rising demand of Chinese made construction machines in the global nation. The increased demand of the products contributes to more exports leading to positive growth (Edeh et al., 2020). The move is proof of the company's ongoing growth and success as well as the growing demand in the domestic and international markets for machinery manufactured in China. Also, Sany Heavy Industry Co. Ltd. has exported machinery, opening the possibility of direct purchase by international players. It implies that a targeted focus on exports to other nations will provide the opportunity for total confidence in machinery in the building sector. It is evident to note that through such exports and imports, the demand and supply increase that in turn leads to more revenues to the companies involved. The entire situation creates a chance for the companies to engage in the continued quality service delivery that concentrates on the unique selling points. Since the government has further supported the import and export of the construction machines, the approach is the leeway towards the competitive advantage in this industry. Consumers' perception about a product creates a chance for the clarity in making the direct access and access to more markets in the foreign nations (Edeh et al., 2020).

It is evident to note that the concentration on economic measures such as exports and imports and the support and strategies by the private and state owned companies and the government in general is ideal and creates the path towards the competitive advantage. It is further evident to note that china has been growing mainly through the exports of the machines and the support in the economy.

Conclusion

Therefore, China's machine construction industry is growing and has a competitive advantage, but there are still obstacles in the way of it becoming a dominant force in the international market. Factors such as inadequate focus on economic research and design, intricate economic policies that facilitate global trade, and grievances pertaining to wages and compensation processes are pertinent. Meanwhile, the government and the private sectors can engage in different economic strategies such as improved wages and remuneration process, tax incentives and economic policies that allows foreign players to trade to ensure the construction machinery industry is competitive, economic policies that allows foreign players and exportation and importation not only in the local market but globally. The research has therefore investigated economic strategies that the government and private sector in China can present to ensure the China's Construction Machinery industry is competitive and become one of the top global players in the global market. The results witnessed and the discussion of such results have concluded that Chinese government and private companies must liaise to ensure the economic measures are fully applied in the construction machinery industry to ensure the stability and the global dominance as far as this industry and other sectors are concerned. The Chinese government and the private companies must therefore be alert to the economic measures relevant to this industry.

Recommendations

Concerning the results, it is suggested that the Chinese government and the private companies must work together to ensure the competitiveness of china construction machinery industry in the global market. To address the situation, it is vital to have a close communication, make decisions favoring the two players and the industry and ensure the strategies are relevant. The focus on the solution will lead to the success of goals and objectives set in the chins construction and machinery industry regarding global competitiveness.

References

- Barber, V. (2022). Transition and opportunity: Investing in and benefiting from China's new development paradigm. *China and Globalization*, 111-124. https://doi.org/10.1007/978-981-16-8603-0_11
- Beijing Review. (2023). Chinese machinery giant gears up for sales surge amid upbeat industry prospects-- Beijing review. https://www.bjreview.com/Business/202302/t20230201_800319681.html
- China Briefing. (2023, October 17). China's machine tool industry: Market trends and opportunities. *China Briefing News*. <https://www.china-briefing.com/news/chinas-machine-tool-industry-market-trends-and-opportunities/>
- Edeh, J. N., Obodoechi, D. N., & Ramos-Hidalgo, E. (2020). Effects of innovation strategies on export performance: New empirical evidence from developing market firms.

- Technological Forecasting and Social Change, 158, 120167.
<https://doi.org/10.1016/j.techfore.2020.120167>
- Johnston, L. (2023). The Hunan Model: China's Zone for the China–Africa Future. South African Institute of International Affairs. <http://www.jstor.org/stable/resrep53509>
- Li, W., & Du, J. (2019). Tax incentives, adjustment costs, and R&D investment in China. *China Journal of Accounting Studies*, 4(4), 433-455.
<https://doi.org/10.1080/21697213.2019.1252088>
- Luo, T., Xue, X., Wang, Y., Xue, W., & Tan, Y. (2021). A systematic overview of prefabricated construction policies in China. *Journal of Cleaner Production*, 280, 124371.
<https://doi.org/10.1016/j.jclepro.2020.124371>
- Rozelle, S., Xia, Y., Friesen, D., Vanderjack, B., & Cohen, N. (2020). Correction to: Moving beyond Lewis: Employment and wage trends in China's high- and low-skilled industries and the emergence of an era of polarization. *Comparative Economic Studies*, 62(4), 774-775. <https://doi.org/10.1057/s41294-020-00141-0>
- Statista. (2022, March 31). China: Construction machinery market. <https://www.statista.com/statistics/1350087/china-construction-machinery-market-size>
- Statista. (2023, August 6). China: Average yearly wages in manufacturing 2020. [https://www.statista.com/statistics/743509/china-average-yearly wages-in-manufacturing/](https://www.statista.com/statistics/743509/china-average-yearly-wages-in-manufacturing/)
- Tian, B., Yu, B., Chen, S., & Ye, J. (2020). Tax incentive, R&D investment and firm innovation: Evidence from China. *Journal of Asian Economics*, 71, 101245.
<https://doi.org/10.1016/j.asieco.2020.101245>
- Xu, Z., Wang, X., & Wu, G. (2022). Exploring the coupling relationship of industrial agglomeration and low-carbon economy considering spatiotemporal differentiation: An empirical study in China's construction machinery industry. *Frontiers of Engineering Management*, 10(2), 285-299. <https://doi.org/10.1007/s42524-022-0197-1>
- Xu, Z., Zayed, T., & Niu, Y. (2020). Comparative analysis of modular construction practices in Mainland China, Hong Kong and Singapore. *Journal of Cleaner Production*, 245, 118861.
<https://doi.org/10.1016/j.jclepro.2019.118861>
- Yujie, B., Guoping, L., & Yutong, L. (2020). Construction-machinery makers ' sales soar on China's economic recovery. *Caixin Global - Latest Business and Financial News on China, U.S. Trade War and Negotiations, Breaking News, Headlines and Developments*. <https://www.caixinglobal.com/2020-11-02/construction-machinery-makers-sales-soar-on-chinas-economic-recovery-101622073.html>
- Zhao, W. (2018). Market control: Understanding the China's construction industry. *Asian Journal of German and European Studies*, 3(1). <https://doi.org/10.1186/s40856-018-0037-6>