

From Factories to Finance: Assessing How GVC Participation Shapes the Globalization of China's Financial Institutions

Dr. Palvinder Kaur Bakshi,

Associate Professor, PGDAV College evening, University of Delhi

Abstract: The ensuing econometric analysis investigates the impact of Global Value Chains (GVCs) on the Chinese financial institutions between the years 2000 and 2023. The study discusses the impact of integration of Chinese banks into Global Value Chains (GVCs) on their global reputation, financial performance and competitiveness. The paper examines how the trade flows in global value chains and the internationalization approach of banks that are part of the global value chains. It also analyzes the status of banks in the global market. The analysis will be based on financial indicators like Return on Equity (ROE) and Return on Assets (ROA) to conclude that the global performance of Chinese banks increases as the integration of venture capitalists that are under the government increases. This makes them more visible in the global markets and makes them more profitable. The panel information acquired through regression analysis of volumes of trade and FDI data reveals that this sort of integration is vital as far as international trade and world economy development are concerned.

Keywords: Global Value Chain, China, Chinese Banking Sector, International Trade

1. Overview

One of the aspects of concern in the economy is global value chains (GVCs). They also allowed countries to specialise in production within some countries and exploit their comparative advantage. Specialization can help the economy to be more productive, efficient and innovative. The countries will be able to produce more and facilitate the advancement of technology if they give more emphasis on their competitive advantages. It is also through GVCs that technology transfer and skill development is possible, which leads to the socio-economic progress and the newcomers in engines of sustainable growth and prosperity in the ever-evolving global environment (Teodoro, 2016).

The global trade and economic development have a major relationship with Global Value Chains (GVCs) and banking sector. Banks enable GVCs by providing financial services such as trade finance, working capital and foreign exchange transaction that enable businesses to manage costs and liquidities in the international trade. As GVCs are created, the specialization of the financial products is also becoming more significant and banks create certain products to cater to the cross-border trade that improves their efficiency and globalization. The banking strategies have also been affected by the interconnectedness, especially in such countries as China where the banks are

of paramount economic development as well as global trade. Banks achieve the resilience and sustainability of GVCs because of such adjustments, which encourages more economic goals and global cooperation. (Cao & Wang, 2023).

The participation in the Global Value Chains (GVCs) has increased the Chinese economic growth significantly since the late 1970s. The country has been getting a fair share of foreign direct investment (FDI) thereby turning it into a big player in the global manufacturing scene with specialization in electronics and the automotive sector. This FDI inflow and the advent of export-oriented manufacture have transformed the Chinese economy transforming it to an export-oriented one, which has increased the growth of the economy and led to employment. The transformation of China as an isolated economy into a manufacturing center of the world is one of the instances of the two-fold nature of the GVC participation that promotes exports as well as foreign direct investment and continues to bear an impact on the development of China in a world of connected economies. (China Evolving Role in Trade and Investment, 2022) (Tong et al., 2018).

The banking sector in China has not only begun to be an international presence as opposed to domestic focus, but also as a result of the integration of the country which is a part of Global Value Chains (GVCs). Chinese banks have increased services to enable international trade and investment that previously had been restricted by the government regulations. Since China is a major participant in the international business, these banks are establishing branches and subsidiaries abroad and they are aiding the intelligence of the country in making outward investments and gaining more financial power in the globe. The increase of Chinese banks aids the development of Chinese companies in the global value chains (GVCs) through the provision of the much needed financial services to facilitate the cross-border activities that include trade finance and risk management. With the expansion of Chinese companies in foreign nation, the cross-border capital flow through them is of concern and the banking services demanded by companies in managing the cross-border challenges in international finance has been in high demand. As a result, Chinese banks are becoming more competent and are becoming important stakeholders in the world economy as a wider trend of globalization and strengthening of the Chinese economic power. (Cerutti et al., 2020) (Xu & Tu, 2011)(11) (14)

The correlation between the involvement in the Global Value Chains (GVCs) and the performance of Chinese banks cannot be underestimated because GVCs have completely altered international trade and finance making the need of cross-border financial service more urgent. The Chinese banks play critical roles in trade finance, as they facilitate the export-import business and correspond with the outward investment policy of China. Nonetheless, the challenges facing international expansion include regulatory variations, geopolitical strains, competition by the already existing international banks, and risks, including currency variations and complicated regulations. The quantitative effects of GVCs on the banking industry in China are very important

to analyze the dynamics of the latter and assist banks in the competitive environment of global financial markets (Liu et al., 2023).

Comparative analysis shows that Chinese banks have significant advantages as they are large, have government support, and have access to an increasing domestic market, which increases their impact on the world. They however have disadvantages such as poorer operations, governance as well as less developed risk management than their foreign counterparts. They must deal with these inefficiencies of operations and governance to be more competitive and sustainable. (Nayak & Gao, 2018) (Yin et al., 2015). GVCs that involve integration of Chinese banks have to be planned and regulated properly to gain stability. It is necessary for those who formulate policy to be able to deal with the threats that are currently there and be aware of the problems that are looming over the global economy. Competition requires creative thinking, research and collaboration. Banking patterns will be determined by geopolitics, technology and the digital revolution. This is why and digital banking will expand global banking. The largest problem is trade and regulatory compliance disputes. According to Zhang et al. (2024), Chinese banks need to adapt to these conditions to take advantage of growth and strengthen their banking image in the world.

2. Objective

The paper will focus on the way the entry of China into Global Value Chains (GVCs) has enhanced the global performance and competitiveness of China banking industry. The report reveals the opportunity and issues with the Chinese financial institutions in international participation through GVCs. Moreover, the paper will aim at trying to describe how the integration of GVCs can improve the competitiveness and the operational efficiency of Chinese banks in the overseas market.

1. To evaluate how the involvement in Global Value Chain (GVC) affects the international development of Chinese banking institutions.
2. To investigate the correlation between trade flows relating to GVC and financial performance of different entities.
3. To make comparative studies of the Chinese and international banking institutions.
4. To determine the major drivers and challenges experienced in this framework besides offering evidence based policy recommendations based on the research findings.
5. To foresee the new trends in the field.

Research Methodology: The analysis explores the integration of China's banking sector within Global Value Chains from 2000 to 2023, utilizing a dataset that includes various economic, financial, and trade indicators. Key data sources comprise the World Bank for trade volumes and GVC participation, UN Comtrade for export-import activities, and annual reports from major



Chinese banks such as ICBC, CCB, ABC, and BOC. Additional information is sourced from the Bank for International Settlements, Bloomberg, and Thomson Reuters, along with macroeconomic indicators from the IMF and China's National Bureau of Statistics. Insights into regulatory frameworks and sector reforms are provided by the China Banking and Insurance Regulatory Commission, along with academic literature and industry analyses.

Analysis: The econometric models enable the analysis of static and dynamic variables across financial institutions over time. This framework compares performance indicators of Chinese financial institutions with global counterparts, using similar independent and control variables. The analysis is conducted using R software, which is effective for panel data regression and statistical testing. The study begins with a thorough examination of the descriptive statistics of the key variables involved.

Table:1 Descriptive Statistics of Variables

Variable	Mean	Median	Std Dev.	Min	Max
Global Presence (Branches)	150	120	80	10	400
Global Presence (Assets)	300B	250B	100B	50B	700B
ROA(%)	1.5	1.4	0.5	0.5	3
ROE(%)	15	14.5	4	8	25
NPL Ratio (%)	1.8	1.7	0.6	0.5	3.5
GVC Integration Index	0.65	0.70	0.10	0.40	0.80
Trade Volumes (USD in Trillion)	1T	0.9T	0.3T	0.5T	1.5T
FDI Inflows (USD in Billions)	100B	95B	30B	50B	150B
GDP Growth (%)	7.5	7	2	4	12
Exchange Rate (CNY/USD)	6.5	6.4	0.3	6	7
Interest Rate (%)	3	3	0.5	2	4

Results:

Model 1: Impact of GVC Integration on Global Expansion

$$\text{Global Presence}_{it} = \alpha + \beta_1 \text{GVCIntegration}_{it} + \beta_2 \text{TradeVolume}_{it} + \beta_3 \text{FDI}_{it} + \gamma X_{it} + \epsilon_{it}$$



Table 2: Impact of GVC Integration on Global Expansion

Variables	Coefficient	Std. Error	t-Stat	P-Value
GVC Integration	120.5	40.2	3	0.003
Trade Volumes	50.3	20.1	2.5	0.013
FDI Inflows	30.7	15.5	1.98	0.48
GDP Growth rate	10	5	2	0.046
Exchange Rate	-5	3	-1.67	0.098
Interest Rate	7.5	4	1.88	0.06
Constant	300	50	6	0.000

The correlation analysis indicates that there is a high positive relationship (coefficient of 120.5, $p < 0.01$) between enhanced involvement in Global Value Chains (GVCs) and international expansion of Chinese banks, which confirms the argument that GVC integration contributes to their international expansion. It further concludes that increase in trade volumes and foreign direct investment (FDI) relates positively to the international presence of the banks and the growth in the GDP fuels their international growth. Conversely, the role of exchange rates and interest rates is less significant, which underscores the significance of GVCs involvement and trade operations to the global reach of the banks.

Model 2: Relationship Between GVC-Related Trade Flows and Financial Performance

$$\text{Financial Performance}_{it} = \alpha + \beta_1 \text{Trade Volumes}_{it} + \beta_2 \text{FDI}_{it} + \beta_3 \text{GVCIntegration}_{it} + \gamma X_{it} + \epsilon_{it}$$

Table 3: Relationship Between GVC-Related Trade Flows and Financial Performance

Variables	Coefficient	Std. Error	t-Stat	P-Value
GVC Integration	0.2	0.1	2	0.046
Trade Volumes	0.15	0.05	3	0.003
FDI Inflows	0.5	0.2	2.5	0.013
GDP Growth rate	0.1	0.05	2	0.046
Exchange Rate	-0.05	0.03	-1.67	0.098
Interest Rate	0.1	0.05	2.0	0.046
Constant	5	1	5	0.000

The ROA and ROE of Chinese banks increase with inflation of trade and Foreign Direct Investment (FDI), which makes them more profitable and efficient. Global Value Chains promote financial performance and banking well-being. The positive impact of favourable interest rates and



economic growth (GDP) also influences the bank performance in a positive manner, whereas the exchange rates influence in a negative manner, yet the impact is not so strong and is not presented as a serious threat to the stability of the entire picture.

Model 3: Comparative Analysis of Chinese Banks with Global Counterparts

$$\text{Comparative Performance}_{it} = \alpha + \beta_1 \text{GVCIntegration}_{it} + \beta_2 \text{TradeVolume}_{it} + \beta_3 \text{FDI}_{it} + \gamma X_{it} + \epsilon_{it}$$

Table 4: Comparative Analysis of Chinese Banks with Global Counterparts

Variables	Coefficient	Std. Error	t-Stat	P-Value
GVC Integration	0.75	0.3	2.5	0.013
Trade Volumes	0.4	0.2	2	0.046
FDI Inflows	0.3	0.1	3.0	0.003
GDP Growth rate	0.2	0.1	2	0.046
Exchange Rate	-0.1	0.05	-2.0	0.046
Interest Rate	0.5	0.07	2.14	0.034
Constant	7.0	2.0	3.5	0.001

The Chinese banks concerned in Global Value Chains (GVCs) present better performance in terms of optimized operation and better services. Foreign Direct Investment (FDI) is also beneficial in that it brings in capital and technology transfer thus making the world more competitive. Also, their performance is influenced by macroeconomic factors like GDP growth and interests where high GDP growth and good interest rates enhance the operations of the banks and their profitability, which eventually makes them more competitive in the international financial arena.

5.3 Robustness Checks

The Variance Inflation Factor (VIF) analysis revealed that the values were always less than 5, which meant that there was no problem of multicollinearity in the dataset. It is that the independent variables in the regression model are not too closely correlated to the extent that they keep their respective predictive strength untainted in the estimation of the coefficients and inflated standard errors.

Breusch-Pagan/Cook Weisberg test shows that the residues of the regression model do not exhibit heteroscedasticity, and therefore homoscedasticity is observed with a constant variance of the error terms at all levels of the independent variables.

Durbin-Watson test value shows that the values are close to 2 which implies that there is no strong autocorrelation in the regression model residues. This lack of dependence of the residuals improves the validity of the model results and avoids the threat of biased results and false statistical answers.

Hausman test statistics support the fixed effects against the random effects model which implies that the fixed effects are much closer to the actual data by solving the unobserved heterogeneity using the variation within the groups. This implies that it is significant to control individual traits of entities under study. Also, entry of China into the Global Value Chains (GVCs) has had far reaching implications on the banking sector in China in terms of its international presence and financial performance making the banks more competitive and able to negotiate with more ease in the international market.

Policy Implications

To bring in Chinese financial institutions into the Global Value Chains, there must be strong regulatory systems that will support their internationalization and financial performance. The lawmakers ought to concentrate on streamlining regulatory procedures to establish Chinese banking branches in the foreign destination countries to meet the global standards as a way of reducing compliance costs, and operational difficulties. Also, formulation of superior risk management systems that are specific to GVCs, and best practices in governance, transparency and accountability should be considered to reduce risks in international operations.

In order to make Chinese banks more competitive in the global arena, there is a strong necessity to promote digital transformation, fintech innovations, and invest in cybersecurity to conduct transactions across the borders. Global Value Chains (GVCs) will also satisfy the diverse interests of enterprises through diverse financial products, and sustainable banking will support global sustainability objectives. The enhancement of the partnership with international financial institutions and regulators will help in the exchange of knowledge and the best practice and building of partnerships between the state and the companies will help in innovation and solve other challenges in international banking.

The study indicates the beneficial spillover impacts of engaging in Global Value Chains (GVCs) on the banking industry, indicating that the policymakers ought to develop policies to boost trade and investment, reinforce GVC connection, and minimize trade and barriers and enhance trade facilitation. The recommendations are to invest in infrastructure in logistics and supply chain management, modernize with digital infrastructure in banking and trade finance and facilitate educational and training efforts to produce a competent workforce in international finance, risk management, and digital banking. The promotion of sustainable activities in the global value chains, and resolving economic policies and trade policies in accordance with the international

standards of sustainability will help to increase the global status of Chinese banks and make them more competitive.

Limitations: The study also emphasizes the role of Global Value Chains on the Chinese banking industry but has major limitations on data especially in emerging markets where access and quality is not the same. Certain sources of data might not capture the informal economic activity which might bias the findings. Further, the models applied might not include all those factors that have an impact on the global presence and performance of the banks such as geopolitical and cultural factors. The fixed effects model is able to capture unobserved heterogeneity but might poorly capture changes that occur with time.

The findings can be applied to other countries that have different regulations and economic conditions, since the external validity of the results is restricted to the Chinese banking industry. The inferences rely on past statistics, and these might not give an idea of what is to come. The study finds correlations between Global Value Chain (GVC) integration and banking outcomes, however, it is not clear whether it is causal, and may be impacted by unobservable confounding factors, which means that the results should be interpreted with caution.

The report fails substantially to explore the impact that recent geopolitical events, such as trade wars and economic sanctions have had on the functions of Chinese banks in the context of the global economy. Despite the fact that there is lack of information about the extent to which these disputes are affecting the present status of glasses globally financial position, the degree of influence is significant. The lack of data on economic shocks such as the outbreak of the CoronaVirus is also another factor restricting the usefulness of the findings. Consequently, the conclusions of the study will only be hypothetical and cannot be deemed definitive. As a result, the research is not conclusive enough to understand the changes that are now taking place in the financial ecosystem. Consequently, the research, despite the fact that it does present some information that are valuable, is not conclusive.

Conclusion

Due to the fact that the study proved that the integration of the global value chain (GVC) is a powerful influence on the overseas growth and the financial performance of Chinese banks, the results of the research has important implication for policy. By expanding different control structures, by making trade and investment more, innovation and sustainable, and by promoting upgraded trade and investment, these banks have the potential to rapidly turn out to be global rivals. The limits of the study, on the other hand, suggest that there is a need for further research and a more dynamic approach to policy measures, in order to take in the actuality of the financial climate that is global in nature.

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