
COOPERATIVE-LED GROWTH AND INSTITUTIONAL QUALITY: EVIDENCE FROM THE GLOBAL NORTH-SOUTH REGIONAL ANALYSIS

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Abstract

The role of cooperatives in fostering inclusive growth is unevenly distributed across countries and regions. This disparity is gauged by the World Cooperative Monitor (WCM) data on the top 300 performing cooperatives. This study analysed the effect of cooperatives on economic growth across Global North-South countries. Specifically, the study used available data from WCM to analyse trends and patterns of cooperatives' performance from 2016 to 2023. Comparative analysis on the role of cooperatives in bolstering inclusive economic growth was empirically analysed using descriptive statistics and a Bias-corrected linear dynamic fixed/random effect model and findings were validated by a dynamic GMM estimator. The study sample was drawn from 30 countries that were performing well in cooperatives. The findings reveal that cooperatives in the Global South performed less than those in the Global North due to low institutional quality values. Cooperatives in African countries were marginally represented in the global rank. Further analysis shows that cooperatives have positive and significant effect on economic growth and once supported with strong institutional frameworks, they tend to elevate further economic development. The findings shed light on the existing cooperative growth disparities across countries. This calls for cooperative members, leaders and development partners to foster contemporary cooperative transformative motives by emphasising policies related to bolstering institutional quality for inclusive growth. An interesting topic for a follow-up study would be to explore and design an integrated data infrastructure for the Global South which can further enhance empirical studies across regions.

Keywords: Co-operatives, Inclusive Growth, Institutional Quality, Cross Regions Evidence

AJCDT, Vol. 9 No. 1 (December, 2025), pp. 266 – 281, © 2025 Authors

INTRODUCTION

Cooperative movements are rooted in the 1844 Rochdale model that laid the foundational principles of today's cooperative enterprises. As autonomous associations of persons united voluntarily to meet their common economic, social, and cultural needs

and aspirations, cooperatives perform a dual role - as business organisations and as social entities. They are set to put members at the foremost front in mobilising capital, increasing bargaining power in accessing essential inputs and markets, improving members' welfare, creating employment,

distributing income, fostering entrepreneurship and empowering individuals, families and communities, thereby contributing to socio-economic development. Different types of co-operatives operate in various sectors of the global economy and members engage in co-operative businesses as service users, producers, independent business owners, consumers and workers (ICA, 1995; Bharti, 2021). The degree to which cooperatives contribute to economic growth differs across countries anchoring regional disparities (Gupta and Nath, 2024). The nexus between institutional quality and economic growth shows that stronger institutional quality is positively linked to economic growth (Bah and Dumbuya, 2022; Rawashdeh *et al.*, 2022). Building on the same argument scholars (e.g., Acemoglu *et al.*, 2019; Acemoglu and Robinson, 2021; Bardhan, 2022) advocate for a strong institutions in flourishing investment, entrepreneurship and innovation which in turn, increases efficiency in resource allocation and long-term economic growth. As institutions, cooperatives can significantly contribute to achieving sustainable and inclusive growth at various levels. The World Cooperative Monitor (WCM) groups cooperatives in eight categories based on social and economic sectors. The agriculture and food industries category encompass cooperatives that operate along the entire agricultural value chain starting from the cultivation of agricultural products and livestock farming to the industrial processing of agricultural, animals and fishing products. The industries and utilities category includes workers cooperatives that are active in the management of infrastructure for public services such electricity, rural gas and water. Cooperatives that are formed to purchase and supply goods and services in the interest of

their members fall under the category of producer and consumer cooperatives. Other categories include insurance cooperatives, financial services (cooperative banks and credit unions), education, health and social work (cooperatives that emanates from educational or health sector services or social works) and other services (housing, cooperative business services, communication and transportation). The performance of cooperatives is measured through various indicators including the number of employees and GDP per capita turnovers. Globally, the number of cooperative employees differs significantly across countries in the global North and South. For example, according to the WCM reports (2017-2023), the number of employees in cooperative sectors in Brazil increased from 40,495 in the year 2017 to 227,036 in the year 2019. Although this figure declined to 165,221 in the year 2020, it rebounded to 215,518 in 2021. The rest of the countries in the Global South have on average less than 5,000 employees except Malaysia which had 6,022 in the year 2021. Cooperatives in the Global North countries have more strength in employability. For instance, France and German cooperatives have on average 4 times the number of employees as compared to Brazil and 20 times compared to the rest of the Global South countries. Similarly, cooperatives in Japan, Italy, Switzerland, the Netherlands United Kingdom and the United States have significant numbers of employees. Looking at the cooperative turnover GDP per capita across the regions paints more picture of the role of cooperatives in fostering welfare and economic development. The overall picture reveals that cooperatives in the Global North perform better than cooperatives in the Global South. The dominance of Europe and North America in the global cooperative landscape

is rooted in their historical cooperative traditions, enabling legal frameworks (Battilani, 2014; Mirabel & Lomuscio, 2025, 2025; Münkner, 2015), mature institutional ecosystems (Renting & Van Der Ploeg, 2001; Taylor, 2021), and well-established organizational infrastructure that supports cooperatives (Boone & Özcan, 2014).

The WCM data further reveal that cooperatives with high turnover GDP per capita are unevenly distributed across regions and countries anchoring a significant regional disparity. Cooperatives in India, France, Japan, USA and Germany constitute higher turnover GDP per capita in aggregate as compared to countries in the Global North. Cooperatives turnover to GDP has portrayed a declining trend from the year 2016 to the year 2023 raising a notable concern regarding the contribution of cooperatives on economic growth. On the other hand, the Global South countries have less turnover GDP per capita with exception of Brazil whose cooperatives' GDP per capita shows an increasing trend. Countries such as Algeria, Philippines, Russia and South Korea appeared only once in the years 2017 and 2018. Other countries in the Global South including Argentina, Colombia, Saud Arabia, Turkey and Uruguay have shown consistency in the cooperatives' global ranking though with the low values of cooperative turnovers GDP per capita. In Africa, Kenya is the only country featured in the global cooperative ranking with most of its cooperative's turnover to GDP coming from the financial sector. These imbalances are largely reflective of historical and structural factors. According to Lele (1981), cooperatives in developed countries closed the gap between growth, distribution and equity because of the well-established marketing, credit and production system. Pedersen (2002) calls for developing

countries to leverage inclusive institutional frameworks and strategic engagement with dominant regional actors to transform cooperatives into agents of participatory regionalism and mitigate entrenched disparities through non-coercive, state-facilitated integration processes. Bianchi & Vieta (2020), emphasize the reciprocal role of organisations and societies in shaping complex socio-political systems within co-operatives. WCM is an annual report published by the International Cooperative Alliance (ICA) and the European Research Institute on Cooperative and Social Enterprises (EURICSE). The project collects robust economic, organizational, and social data about cooperatives, most notably ranking the top 300 largest cooperatives in the world. This study used the WCM data set to empirically analyse the way institutional quality indicators have shaped the role of cooperatives on economic growth across Global North-South regions. The study therefore explored the drivers of cooperatives' success across regions while ironing out the best practices.

Theoretical thinking: Unlike the foundation assumptions of standard organisations, cooperatives operate under two core principles. Self-management and non-tradability. Under these principles, decisions regarding the cooperative's size, investment and capital are made collectively and directly by identical current workers. Historically, the formation of cooperatives started with the assumption that any period t begins with a set of incumbent cooperatives normalized as $i \in I_t$. An incumbent cooperative i is endowed with an inherent capital stock k_{it} and a set of former workers l_{it-1} . The workers produce output modelled as:

$$y_{it} = F(k_{it}, l_{it}) \quad (1)$$

Where l denote both the set and the number of workers. The detail of the theoretical underpinning is presented in Appendix I.

Empirical model

Referring to the theoretical model, workers in cooperatives (labour) are treated as an entrant and the entrant's investment policy must maximise the objective for cooperative equilibrium to occur. However, investment is determined by factors outside the basic AK model. It is therefore of interest to extend the

AK model as others do to include the institutional quality variables and assess their impact on cooperatives growth across regions. Other control variables such trade openness, institutional index are also included. Following the Solow's model, the production function in its functional form is specified as:

$$Y_{it} = A_{it} K_{it}^{\alpha} L_{it}^{\beta} \quad (2)$$

Y_{it} denotes the GDP per capita of the country i at time t . K_{it} is the Physical capital L_{it} stands for labour inputs and A_{it} denotes the total factor productivity which captures the effects of technology and social structures.

Output elasticity of capital and labour are represented by α, β . Assume that total factor productivity is modelled by institutional quality and cooperative strengths as shown in equation (3) and when purged into equation 2 leads to equation 4.

$$A_{it} = A_0 \times Coop_{it}^{\sigma_1} \cdot IQlty_{it}^{\sigma_2} \quad (3)$$

$$Y_{it} = A_0 \times Coop_{it}^{\sigma_1} \cdot IQlty_{it}^{\sigma_2} \cdot K_{it}^{\alpha} \cdot L_{it}^{\beta} \quad (4)$$

Further assumption is made that:

$$\sigma_1 = \sigma_1^* + \delta \cdot IQlty_{it} \quad (5)$$

The intuition behind equation (4) and (5) is that the cooperative success is not constant. It depends on other factors such as intuitional quality across regions and other factors

captured by o vector χ . Let now introduce the interaction terms following (Nawaz et al., 2014; Pedersen, 2002; Siddiqui & Ahmed, 2013) in the log-linearized dynamic Cobb-Douglas growth model as follows;

$$\begin{aligned} \ln Y_{it} = & \theta \ln Y_{it-1} + \alpha \ln K_{it} + \beta \ln L_{it} + \sigma_1 \ln Coop_{it} + \sigma_2 \ln IQlty_{it} \\ & + \delta_1 (\ln Coop_{it} \cdot \ln IQlty_{it}) + \phi' \chi_{it} + \mu_i + \lambda_t + \varepsilon_{it} \end{aligned} \quad (6)$$

Estimation strategies

It is imperative to adopt an estimator capable of addressing endogeneity, feedback effects, and unobserved heterogeneity to examine the relationship between cooperative-led growth and institutional quality across regions (Arellano & Bond, 1991; Arellano & Bover, 1995; Mehmood et al., 2023). By employing

lagged levels of endogenous regressors as instruments, dynamic GMM corrects for simultaneity bias (Arellano & Bond, 1991; Khatib, 2025; Ullah et al., 2018). Unlike static estimators such as OLS or fixed effects models, which are limited in dealing with dynamic endogeneity biases (Khan et al., 2023; Kiviet, 1995), dynamic GMM offers

consistent and efficient parameter estimates in panels with short time dimensions and persistent explanatory variables (Farzana et al., 2024). As suggested earlier by Arellano & Bover (1995), the use of the dynamic GMM estimator improves estimation precision by incorporating additional moment conditions in both levels and first differences. The dynamic GMM estimator is particularly suited for modelling persistent variables such as institutional quality and cooperative development, while effectively addressing endogeneity and bidirectional causality in the cooperative-growth relationship (Arellano & Bond, 1991; Roodman, 2009). For a robustness check of the result, a bias-corrected linear dynamic model is also employed following Breitung et al. (2022) and as applied by Kweka (2023; 2024).

Data Types and Source: This study utilized the available secondary data compiled by WCM since 2010. However, due to some data inconsistency in the WCM reports, we organize the data into panel set up only from the year 2016 to 2023. The data were compiled from the top 300 cooperatives in the world. The Turnover GDP per capita (a proxy variable for cooperative performance) were aggregated par cooperative sectors of the country. Thus, only 30 countries were used to inform the analysis. Five variables namely control of corruption, government effectiveness, voice and accountability, regulatory quality, and rule of law were used to compose an additive index for the institutional variables. These institutional quality variables were sourced from the World Development Indicator (WCM, 2016 - 2023).

Table:1 Data source and measurements

Variable	Measurement Unit	Type	Data Source
GDP per capita	Annual growth rate (%)	Growth Rate	WDI
Capital formation	Gross capital formation (% of GDP)	Percentage of GDP	WDI
Labor force	The annual growth rate of the labour force (%)	Growth Rate	WDI
Cooperative performance	Turnover/GDP per capita	Percentage of GDP	WCM
Trade openness	Trade (% of GDP)	Percentage of GDP	WDI
Institution Index	Additive index	0-100	WID

RESULTS

Performance of cooperatives across regions and sectors: Turnover GDP per capita from agriculture and food industries varies widely across regions and countries. Based on the data from WCM for 2016 to 2023, there were only five countries from the Global South whose cooperatives turnover GDP per capita were ranked high. Figure 1 presents the cooperatives' turnover GDP per capita coming from the agriculture and food

industries whereby Brazil, Argentina Colombia, Turkey and Uruguay had consistently ranked among the countries with the top 300 cooperatives performing well in the world. However, their performance is less than the counterpart Global North Countries whose turnover GDP per capita are higher than that of the Global South. Furthermore, there are 21 countries whose cooperatives in agricultural and food industries consistently remain among the best 300 cooperatives.

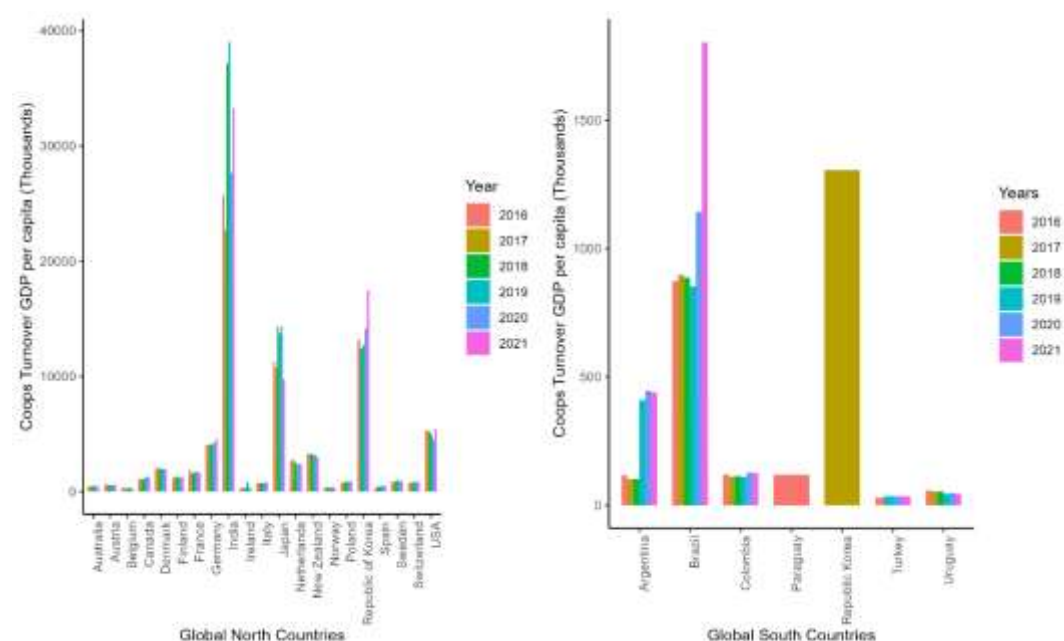


Figure 1: Agriculture and Food industries turnover GDP per capita: Global North and Global South regions (WCM report 2016-2023).

The performance of insurance cooperatives in terms of GDP per capita across Global South and Global North Countries are presented in Figure 2. Interestingly, for the first time Kenya, an East African Country, was ranked among the top 300 cooperatives. Insurance cooperatives in Kenya, contributed around 91,792.48 turnover to GDP surpassing those of South Africa, Philips and Argentina in the year 2017. However, since then these countries could not maintain their status for

the subsequent years. The contribution of insurance cooperatives to turnover GDP per capita in countries like Argentina, Colombia and Saudi Arabia has consistently improved, however, their performance is quite below the Global North countries. The turnover GDP per capita contributed by the insurance cooperatives are very robust in countries like Japan, Germany, France, the USA and the Netherlands, see Figure 2 on the left panel.

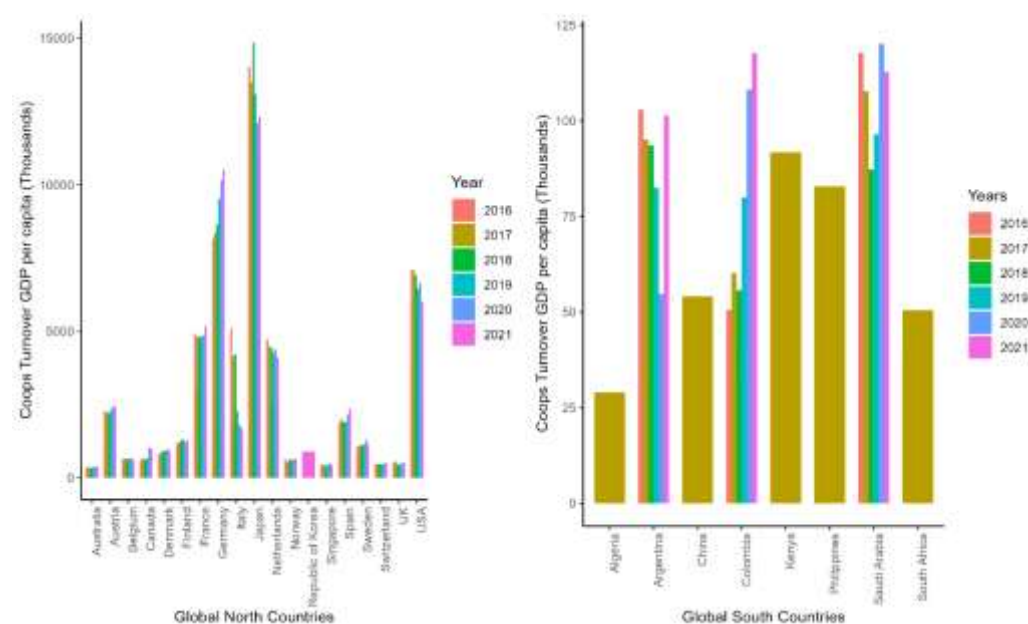


Figure 2: Turnover GDP per capita of Insurance Cooperatives: Global North and Global South regions (WCM report 2016-2023).

Regarding financial cooperatives, five countries from the Global South (Brazil, Kenya, Malaysia, Argentina and Mexico) were ranked among the top 300 between the year 2016 to 2023. Though most cooperatives in the Global South are formal, however, somehow, they still operate in the dark economy which entail less compilation of cooperatives GDP per capita data. As shown in Figure 3, turnover GDP per capita emanating from the financial cooperatives in Brazil exhibit higher turnover GDP per capita rising from around 400,000 in the year 2016 to over 450,000 in the year 2021. This growth

reflects the strength of the cooperative economy, positioning Brazil as a leading example of cooperative development in the southern hemisphere. Interestingly, the cooperative turnover GDP per capita denote a stable performance in Kenya, again, the only African country that featured among the top 300 in financial cooperatives. The turnover GDP per capita stood at 370,980.82 in the year 2016 but declined to 327,999 in the year 2019. This performance reflects that Kenya has strong cooperative infrastructures, and institutional resilience in cooperative enterprises, especially in the financial sector.

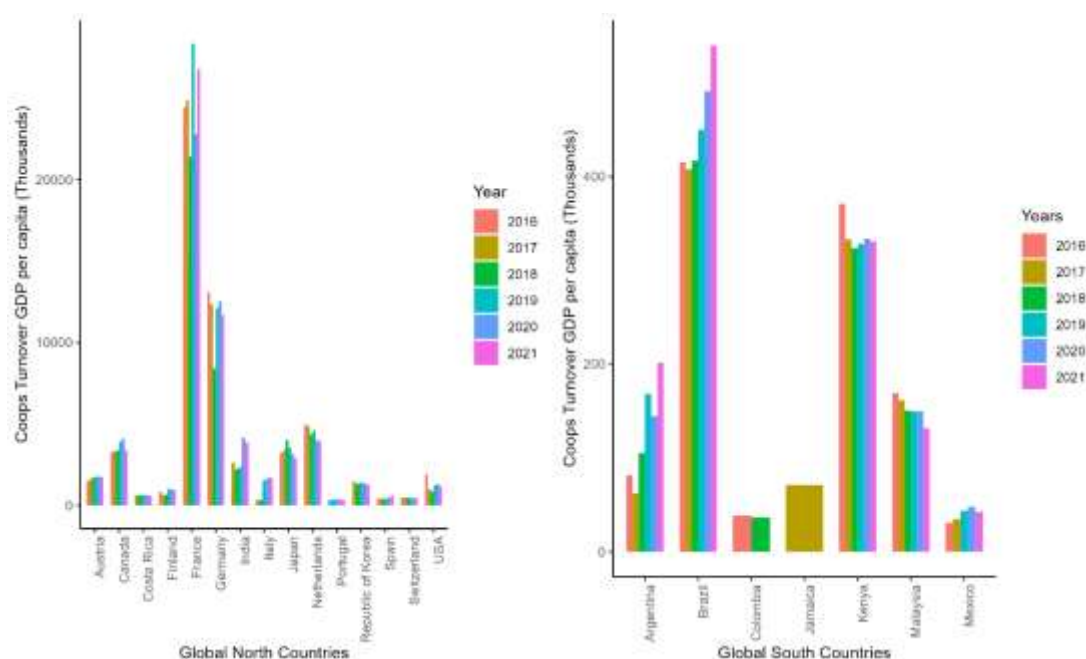


Figure 3: Financial Cooperative Turnover GDP Per capita: Global North and Global South regions (WCM report 2016-2023).

Consistently, countries such as France and Germany have the highest values of turnover GDP per capita exceeding 10,000,000. Netherlands, Canada, India, Italy and Japan have turnover GDP per capita exceeding 20,000 (Fig. 3). The performance of financial cooperatives in the Global North is attributed to the strength and institutional maturity of their cooperative structure. Education, health

and social work cooperatives are less common in both the Global North and South countries. There are only five countries in the world with notable cooperatives with turnover GDP per capita in this category though their performance is relatively low (Figure 4). The USA is leading by examples followed by Spain and Japan from the Global North countries.

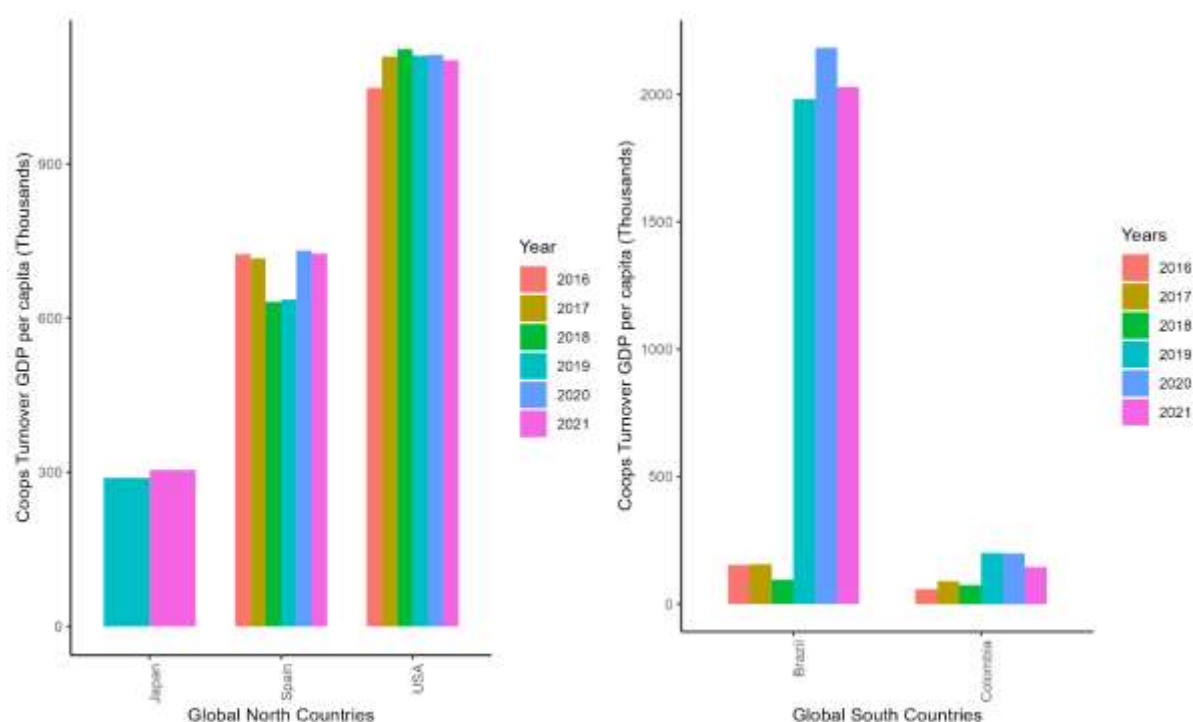


Figure 4: Education, health and social work Turnover GDP Per capita: Global North and Global South regions (WCM report 2016-2023).

In the Global South countries, only Brazil and Colombia featured in the category of education, health and social work cooperatives. Industry and utility cooperatives ranked among the top 300 cooperatives using turnover GDP are skewed to the Global North countries. Indeed, there

are only four (Spain, India, Italy and the USA) countries that have shown consistency from the year 2016 to 2023. As shown in Figure 5, Belgium appeared in 2017, and Japan was seen on the list in the years 2019, 2018 and 2020.

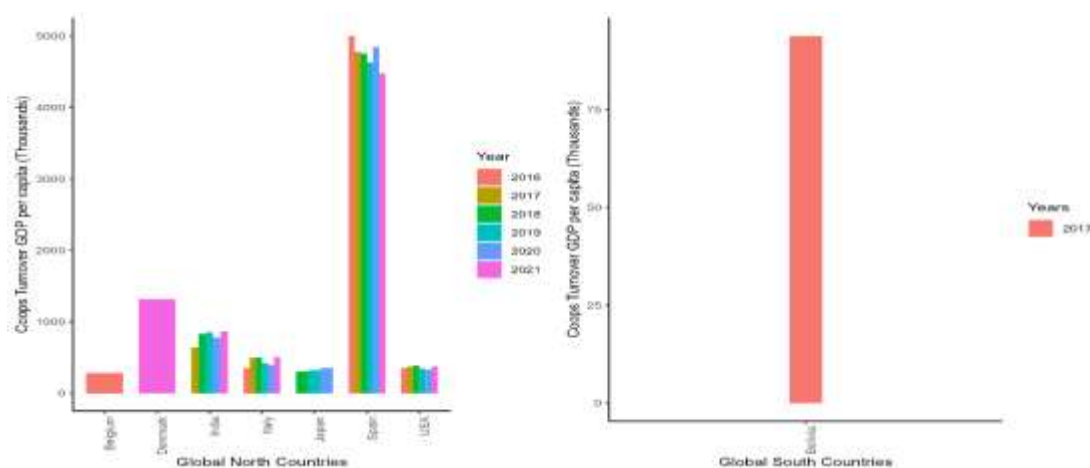


Figure 5: Industry and Utility Turnover GDP Per capita: Global North and Global South regions (WCM report 2016-2023).

Industry and utility cooperatives turnover per capita data shows that Spain, India and USA had good performance and Denmark re-

emerged in the year 2021 in the global rank. In the Global South, only one country (i.e., Bolivia) appeared on the list in the year 2017.

This shows that industry and utility cooperatives are less established in the Global South countries perhaps due to their focus on

agricultural and informal services often entrenched with limited industrial capital and weak institutional quality indicators.

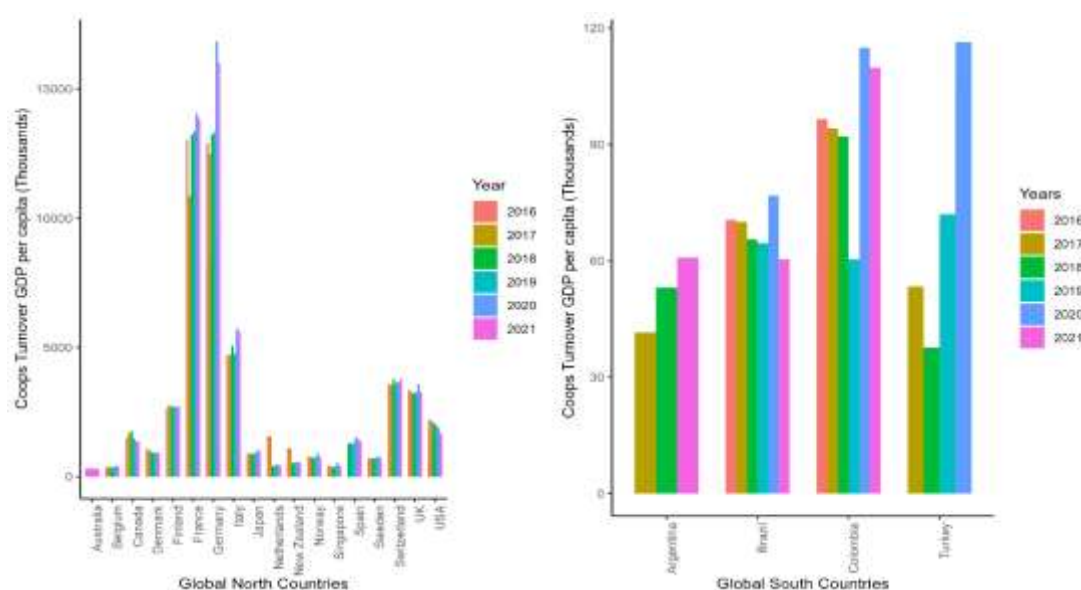


Figure 6: Wholesales and Retails Cooperative Turnover GDP per capita: Global North and Global South regions (WCM report 2016-2023).

The performance of wholesale and retail cooperatives also shows huge disparities across regions (Figure 6). Wholesale and retail cooperatives in Global North countries have an average turnover GDP per capita ranging from 1,000,000 to over 15,000,000 while that of Global South ranges from 30,000 to 120,000. Wholesale and retail cooperatives in the Global South countries-maintained consistence in the global ranks, however, only four countries emerged though with very small values of cooperative

turnover GDP per capita as compared to the Global North Countries. The cooperative turnover GDP per capita in the category of other services across the two regions, only four countries (Argentina, Brazil, Colombia and Turkey) from the Global south emerged in the cooperative global ranks. Further observation indicate that these countries appeared only once in the year 2016, however, with small values of turnover GDP per capita compared to the Global North countries (Figure 7).

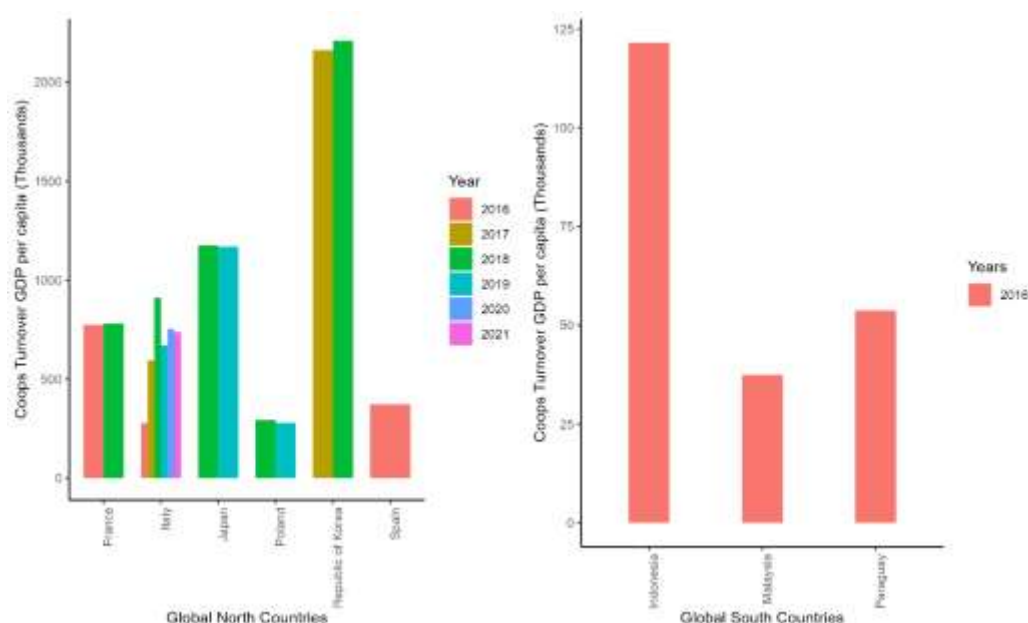


Figure 7: Other Services Cooperative Turnover GDP per capita: Global North and Global South regions (WCM report 2016-2023).

The performance of cooperatives in this category consistently noted to Italy while other countries in the Global North were ranked once and twice in the global cooperatives landscape. The intuition of this finding shows that the performance of other services turnover GDP per capita are notably low in global perspective.

Effects of cooperatives on economic growth: The diagnostic results from the Arellano-Bond dynamic panel estimation provide compelling evidence that supports the reliability of the estimated model. The Arellano-Bond autocorrelation test reveals significant first-order (AR(1)) and second-order (AR(2)) serial correlation in the first-differenced both rejecting the null hypothesis of no serial correlation. However, the Sargan-Hansen test of overidentifying restrictions indicates no evidence against the validity of the instruments. The null hypothesis of valid instruments is not rejected. This lends credibility to the choice of instruments and

supports the internal consistency of the estimation procedure. Panel cointegration tests confirms the existent of long-run relationship between cooperative growth and economic growth (Appendix II). Empirical findings indicate that the lagged GDP per capita variables have a negative and statistically significant coefficient. The intuition is that countries with higher income levels tend to grow more slowly. In context, a one-percent increase in GDP per capita in the previous year leads to a 0.35% to 0.49% reduction in current growth indicating the expected moderation in growth as economies mature. Consistent with the growth theories, Gross Fixed Capital Formation, a proxy variable for capital investment has a positive and significant effect on economic growth. This highlights the perseverance and importance of capital investment in countries with the highest cooperative turnover GDP per capita in the world.

Empirical findings

Table 2: Short-run Effects across Estimation Methods

	B-CLD-REM	B-CLD-FEM	Two Step-Dynamic-GMM
L.GDP per capita (Annual%)	-0.4199*** (0.077)	-0.3472*** (0.110)	-0.4966*** (0.042)
Gross Fixed Capital Formation (Annual%)	0.0279*** (0.005)	0.0219** (0.009)	0.0160** (0.007)
Population (% Total)	0.1844** (0.081)	0.1888 (0.723)	0.6015 (0.581)
Cooperative Growth (%)	0.2979** (0.116)	0.3970** (0.176)	0.6095*** (0.123)
ln(InstIndexx)	-0.5350 (0.574)	3.1756 (11.942)	11.4730* (6.470)
Cooperative Growth × Labour Force	-0.2181 (0.134)	-0.0095 (0.163)	0.6316** (0.265)
Cooperative Growth × GFCF	0.0035** (0.002)	0.0034** (0.002)	0.0007 (0.002)
Cooperative Growth × Trade	-0.0693*** (0.019)	-0.0743*** (0.020)	-0.0729** (0.035)
Cooperative Growth × ln(InsIndex)	2.6899* (1.523)	0.1332 (2.002)	7.9890** (3.496)
Inflation	0.0230*** (0.005)	0.0442*** (0.014)	0.0494*** (0.007)
Constant	-11.6173* (6.780)	-35.9033 (78.788)	- -
<i>Sargan Hansen Test (P-Value)</i>			1.0000
<i>AR(1)</i>			0.0048
<i>AR(2)</i>			0.6346
<i>N</i>	149	149	149

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ and InsIndex denotes institutional index

The estimated coefficients of the interaction terms trade openness and cooperative growth reveal a negative and significant effect on economic growth. For instance, a one per cent increase in the interaction term leads to a reduction of GDP on average by 0.06 percent as shown by both bias-corrected linear dynamic random and dynamic GMM models. The intuition of these findings is that cooperatives may face competitive disadvantages and may not fully align with the repaid dynamics of global trade. In the same vein, the interaction terms (cooperative growth and fixed capital investment) have a positive effect on economic growth. Further

analysis shows that cooperatives have a positive and significant effect on economic growth. Thus, one-point increase in the growth of cooperatives is associated with the 0.29, 0.39 and 0.60 percent respectively (Table 2). Interesting findings emerged as institutional quality interacted with cooperative growth. The estimated coefficients have positive signs, and they are both statistically significant at 10 and 5 percent levels for B-CLD-REM and Two Step-Dynamic-GMM. These findings emphasize the important roles of good governance, regulatory quality, and institutional stability in general in helping cooperatives to function as effective contributors to economic growth. Intuitively,

the findings suggest that cooperatives have huge potential to contribute to economic growth, however, their economic impact is highly dependent on the supportive institutional framework.

DISCUSSION

The findings in this study indicate that cooperatives in the Global North perform better than those in the Global South in terms of GDP per capita and the number of employments. These findings align with the literature such as Gupta and Nath (2024) who pointed out that cooperatives contribute variously to economic growth across countries. The study also finds a positive impact of joint effect of institutional quality and cooperatives on economic growth. The findings emphasize the important roles of good governance, regulatory quality, and institutional stability in helping cooperatives to foster inclusive economic growth. This finding is corroborated by other scholars (Acemoglu *et al.* 2019; Acemoglu and Robinson, 2021; Bardhan, 2022) who argued for a strong institutions in flourishing investment, entrepreneurship and innovation which in turn, increases efficiency in resource allocation and fosters long-term economic growth. Developing countries are required to leverage inclusive institutional frameworks and strategic engagement with dominant regional actors to transform cooperatives into agents of participatory regionalism and mitigate entrenched disparities through non-coercive, state-facilitated integration processes. Similarly, ICA (2020) advocates for cooperatives in the Global South Countries to improve professional management, supportive legal frameworks and integrate their services into high-productivity value chains to foster inclusive growth.

CONCLUSION

This study explored the channel through which institutional quality affects economic growth using a pooled dataset for 30 countries with the top 300 performing well cooperatives in the world. Due to data limitations, the study used estimators that are sensitive to low time horizons data. It was found that, cooperatives in the Global South hemisphere performed less than the cooperatives in the Global North and the disparities in terms of the number of employment and turnover GDP per capita is very huge. Cross-examination through turnover GDP per capita of cooperatives across sectors finding shows that the cooperatives in the Global South are left far away by their counterparts in the Global North though the magnitude differs across sectors. Brazil is a good example of the countries with cooperatives doing well in the Global South. Further observations reveal African countries have not featured in the global cooperative landscape in aggregate from the year 2016 to 2123. One of the interesting findings when considering sectorial contribution is that insurance and financial cooperatives in Kenya emerged as an outlier in bolstering the success of cooperatives in African countries. Further empirical analysis shows that cooperatives have positive relationship with economic growth, which is amplified by institutional quality.

RECOMMENDATION

Cooperative actors should advance institutional reforms to reduce the performance gap between cooperatives in the Global South and those in the Global North. Stakeholders must strengthen the regulatory framework, enhance enforcement capacity, improve governance transparency, and reinforce sector-specific oversight. These measures, complemented by expanded

technical, financial, and managerial support, will improve cooperative efficiency and foster growth in high-impact sectors such as finance and insurance, drawing on successful examples from countries like Brazil and Kenya. By strengthening institutional environments, countries can indirectly increase the contribution of cooperatives to employment, turnover, and GDP per capita, thereby narrowing the performance disparity between the Global South and the Global North and positioning cooperatives as strategic instruments for sustained and inclusive economic development. A valuable area for future research is the systematic exploration and development of an integrated data infrastructure for the Global South to support rigorous regional empirical analysis and policy design.

ACKNOWLEDGEMENT

We gratefully acknowledged the management of Moshi Co-operative University for the moral and material support it provided throughout the preparation of this article.

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