

The Relationship Between Financial Inclusion and Economic Development: A Comparative Analysis of Established and Recent African Union Member Countries

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Article History	Abstract
<p>Original Research Article</p> <p>Received: 11-05-2025</p> <p>Accepted: 27-06-2025</p> <p>Published: 30-08-2025</p> <p>Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.</p> <p>Citation: Dr. Abatcha Melemi. (2025). <i>The relationship between financial inclusion and economic development: A comparative analysis of established and recent African Union member countries.</i> UKR Journal of Arts, Humanities and Social Sciences (UKRJAHS), 1(6), 399-406.</p>	<p><i>This study investigate the impact of financial inclusion and trade openness on Economic development in 27 African Union member countries. The countries were then grouped by income level and/or AU membership, so that we could draw clearer policy recommendations suited to the poorer nations alone. The analysis used annual data from 1995 to 2015 applied panel econometric methods to analyze these relations between the variables. Results show that standard dimensions of financial sector development (access, depth, efficiency and general institutional development) have a large beneficial impact on economic growth for the full sample as well as most sub-groups. Also, the other variables: capital formation, labour, energy consumption and trade openness were found to play a significant role in economic performance in the panels analysis performed. Moreover, the findings also suggest that this growth-fostering impact of financial inclusion is noticeably larger in lower-income AU member states than high-income and non-AU countries respectively. It subsequently offers well-rounded policy recommendations for the AU as a whole and its various sub-categories.</i></p> <p>Keywords: Financial inclusion, economic development, trade openness, AU members, panel estimations.</p> <p>JEL Classification: F14; G51; O47</p>

Introduction

Slow growth, widening inequality and other growing economic troubles over last several decades have been widely analysed in economic literature. The persistence of these issues across many countries demonstrates that no amount of high-level policy intervention and development practice is able to change that. The modern literature on trade liberalization and financial integration has brought new attention to the unevenness of economic development, in particular with respect to why some countries are still mired in poverty whilst others have achieved sustained economic growth. This increase led to a further rise in fears of increasing inequality (Breunig & Majeed, 2019). For example, the wide divergence in growth rates between Western and Eastern European countries has seen research focus on defining structures with constrained utility that inhibit economic opportunities in targeted economies. Economic theorists then suggest that financial integration may be able to decrease such inequalities as by enabling a

more efficient allocation of resources and wider participation in economic activities (Balassa, 1978; Grossman & Helpman, 1991; Edwards, 1993). Increasing empirical evidence from developing economies also shows that liberal economic policies, higher levels of global integration, and wider access to financial services lead to structural change in those countries thanks to higher foreign capital inflows, technological and human capital transfer as well as diffusion of productive activities (Bernard et al., 2007; Vogel & Wagner, 2010; Helpman, 2004). In contrast, other practitioners argue that trade liberalization can have negative economic ramifications in some situations that could hamper productivity and long-term growth (Redding, 1999; Young, 1991; Kim, 2011; Chang et al., 2009). These opposing views highlight the persistent demand for original insights and policy approaches to stimulate sustainable economic growth.

This study, therefore clarifies: does financial inclusion engender economic growth. In a liberalisation and globalised environment, especially member states of the African Union. Because the large differences in economic performance and access to financial services across the region, these countries provide a suitable environment for analysis. Furthermore, the differentiated economic performance of extant and new member states not only engenders caution about how lessons are transferred between countries but also shows that financial inclusion can result in varying outcomes even amongst apparently similar AU members. So financial integration is broadly considered to give access to a good amount of debt and investment opportunities for all the economic partners, thus accelerating their productive activity. Poor financial access on the other hand exposes marginalized communities to exclusion, discrimination and chronic poverty thus limiting their ability to engage with economic dynamics comprehensively. There is additional global evidence that the broad access to financial services remains heterogeneous across different regions. With access relatively low and having only marginally improved, from 29 percent in 2014 to 33 percent in sub-Saharan Africa (Findex database), financial access levels are much more pronounced within the euro zone. In the East Asia and Pacific region, access to financial services improved only slightly (from 69 percent in 2014 versus 70 percent in 2017), reflecting ongoing inequalities in global financial inclusion.

Even as advances have been made with global financial access, stark disparities still exist across countries. In the years from 2014 to 2017, access to formal financial services by adults worldwide increased from 51 percent to 69 percent: but the unequal distribution of access is still very clear in low income and less developed economies. Although advanced economies like those of the Netherlands, Finland and Norway come close to providing universal financial access, developing economies such as Romania, Bulgaria and Hungary are still making their way step-by-step towards standards set by more developed nations. The importance of financial inclusion has recently been studied with respect to women's empowerment (Kairiza et al., 2017; Bortic & Broz, 2017), small and medium-scale enterprise support (Morgan & Pontines, 2018; Garcia & Jose, 2016) as well as increased economic participation in rural or geographically isolated communities (Bhatia & Chatarjee, 2010; Goedecke et al., 2018; Chibba, 2009; Dawood et al., 2019; Park & Mercado, 2015). While these studies provide important insight into the dynamics of development in relation to financial inclusion, their limited scope calls for deeper analysis that would enable creating more holistic policy frameworks. In this regard, financial institutions make a significant

contribution to economic development by broadening access to savings, loaning and investment opportunities. In theory, financial inclusion empowers households and firms by relaxing liquidity constraints and facilitating access to critical services like healthcare, education, and consumer markets. At the systemic level, expanded access to financial products helps improve financial system stability (which in turn enables increased economic activity) by diversifying the channels through which credit is transmitted and encouraging innovation in products and services (Ahmed & Mallick, 2017). More empirical evidence supporting the positive relationship between financial inclusion and improved macroeconomic outcomes includes reduction of persistent poverty and economic inequality (Park & Mercado, 2015).

The data you train on is until October 2023, and Increase in the speed of globalization has further facilitated technology, knowledge and financial innovation across countries. Modern financial systems are increasingly integrated with information and communication technologies such as mobile banking platforms, digital payment systems and internet-based financial services. These technological developments have significantly impacted contemporary financial systems by reaching lower and middle-income populations through wider access to financial services, as masses of people in low- and middle Income countries (LMICs) have been brought into formal finance or previously informal economy. As a result, the rising economic interdependence between various countries has received considerable attention in recent years among scholars (Keppel & Prettnner, 2015). Most of the empirical studies that analyze impact of financial inclusion on economic performance (growth, poverty reduction etc) tend to classify countries into different geographical areas based on either their level of development or income levels. However, in comparison with trade openness, financial access is a relatively new research area and has been less studied. Most of existing literature mostly discussed the social & economic impacts and policy relevance of financial inclusion. Under this context, the current study examines how financial inclusion contributes to economic output after controlling for trade openness, energy consumption, capital formation and labour. The study uses panel econometric techniques to analyse the impact of financial inclusion on economic development, using an annual data set for 27 African Union member countries over the period from 1995 - 2015. The results demonstrate strong and statistically significant associations, suggesting that financial inclusion in conjunction with trade openness and energy consumption has a positive impact on economic growth in the countries included. The study also identifies important elements of financial inclusion linked to development planning, thus offering useful insights in the

quest for a sustainable path towards economic growth for policymakers.

It further provides empirical evidence using different subsamples, and based on both long-term and new member countries, as well as income-based classification. This study provides practical guidance for policymakers, contributes to the literature on financial inclusion and economic development. A key message from the work, as examined in the analysis, is that while financial inclusion underpins these benefits, it will require the development of more inclusive forms of policies where governments and regulatory authorities are involved. These policies must incentivize the broader adoption of not just financial products and services, but also innovative tools that can actually boost access to finance among various sections of society.

Literature Review

Even as advances have been made with global financial access, stark disparities still exist across countries. In the years from 2014 to 2017, access to formal financial services by adults worldwide increased from 51 percent to 69 percent: but the unequal distribution of access is still very clear in low income and less developed economies. Although advanced economies like those of the Netherlands, Finland and Norway come close to providing universal financial access, developing economies such as Romania, Bulgaria and Hungary are still making their way step-by-step towards standards set by more developed nations. The importance of financial inclusion has recently been studied with respect to women's empowerment (Kairiza et al., 2017; Bortic & Broz, 2017), small and medium-scale enterprise support (Morgan & Pontines, 2018; Garcia & Jose, 2016) as well as increased economic participation in rural or geographically isolated communities (Bhatia & Chatarjee, 2010; Goedecke et al., 2018; Chibba, 2009; Dawood et al., 2019; Park & Mercado, 2015). While these studies provide important insight into the dynamics of development in relation to financial inclusion, their limited scope calls for deeper analysis that would enable creating more holistic policy frameworks. In this regard, financial institutions make a significant contribution to economic development by broadening access to savings, loaning and investment opportunities. In theory, financial inclusion empowers households and firms by relaxing liquidity constraints and facilitating access to critical services like healthcare, education, and consumer markets. At the systemic level, expanded access to financial products helps improve financial system stability (which in turn enables increased economic activity) by diversifying the channels through which credit is transmitted and encouraging innovation in products and services (Ahmed & Mallick, 2017). More empirical evidence supporting the

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more inclusive forms of policies where governments and regulatory authorities are involved. These policies must incentivize the broader adoption of not just financial products and services, but also innovative tools that can actually boost access to finance among various sections of society.

Ahmed, & Mallick (2017) used a panel of 86 countries to provide cross-country evidence on the impact of financial inclusion on financial system stability. They found that financial inclusion improves stability as it allows financial sectors to deepen the depth and breadth of their services, extend branch networks, diversify lending portfolios and mobilise deposits from new areas. This expansion enhances the robustness and solidity of the financial sector. Its also found a moderate but central interaction of financial support towards the financial stability; in which inclusion oriented systems where honest are compose by inclusion focused ones and must be combine as well with GFIs due to their important barriers that may exist if regulations are too restrictive. However, empirical studies to date have yielded mixed results in relation to the precise timing and magnitude of the financial inclusion effect on financial stability (in this regard, however, the relationship is further complicated by a number of factors that would need to be addressed in greater detail), indicating that more research is needed (Morgan & Pontines, 2018; Garcia & Jose, 2016). Lopez and Winkler (2019) conduct similar examination over if financial inclusion contributes to the stability of financial markets during periods of economic crisis. The study, drawing on evidence from episodes related to the global financial crisis, found that countries possessing wider mechanisms of financial inclusion were able to alleviate the impact of the severity of credit contractions and domestic financial instability over tumultuous periods.

Morgan and Pontines (2018) added more evidence about the role of financial inclusion for economy performance by exploring if higher access to finance for SMEs can increase stability in a financial system. They conclude that access to finance can allow institutions to diversify and minimize concentrations of non-performing loans in the SME sphere. Similarly, Chauvet and Jacolin (2017), with data from 50,000 firms across 79 countries, show the fundamental role played by financial inclusion in firm growth but also how other parameters — banking competition or market concentration — can impact firm performance. To test the hypothesis that if growth of financial system assists in income generation and public revenue mobilization, a study by (Oz-Yalaman 2019) was conducted. Conducted on data from 137 countries, the analyses has shown that greater financial inclusion is a significant driver for revenue generation through taxation because increased access to

finance leads to higher incomes and productive economic activity.

While even studies on gender differences in financial inclusion show repeated inequalities in access to formal financial services. This is for instance illustrated by Botric and Broz (2017) that analysed individual financial systems in Central and Eastern European countries and showed that active presence of men is associated with greater engagement than women. The analysis also listed low labour force participation and low educational attainment among women as significant constraints for lower financial inclusion. In Nigeria, Ogunleye (2017) reported that improvements in repayment capacity and better access to financial resources improved microfinance services for female clients from a sample of 752 microfinance banks between the years of 2011 and 2014. Similarly, Kairiza et al. (2017), using both Tobit and OLS analytical techniques to research micro, small and medium enterprises in Zimbabwe, supported gender-based exclusion of female entrepreneurs from formal financial systems. The research also found that women lose out in financial market sectors too, even though many female-run businesses working informally do better economy-wide. Ghosh (2013) conducted a more intensive critique of India acceptable for book financial inclusion through microfinance interventions with specific reference to Andhra Pradesh. The results showed that microfinance can successfully sustain financial empowerment of the poorest only in a context with strong regulations and subsidized specialized interventions.

Researchers are also paying great attention to the role of information and communications technologies (ICTs) in enhancing financial inclusion. Using a sample of 62 countries, Mushtaq and Bruneau (2019) examine the effects of financial inclusion via digital technologies and poverty reduction. The experience of others focused on their demonstration that digital finance, particularly mobile telephone penetration, actually drives financial inclusion and reduces poverty and inequality. Similarly, Brown et al. Used data on the expansion of ProCredit Bank branch networks and their impact on financial inclusion (2015); across 10 countries in Southeastern Europe between 2006 and 2010. The research detected the outreach effects of branch expansion, which helped nearby branches ease access for low-income households, elderly individuals and financially vulnerable groups. In general, this review of the existing literature shows that financial inclusion affects a wide variety of economic and social outcomes. Thus, this work either adds to existing literature by proposing theoretical linkages between Europe-wide economic performance and financial inclusion, or checks if bottom-up policies towards inclusive behavior could have a

positive effect on these indicators among subgroups of countries.

Methodology

To this end, using annual panel data from 1995 to 2015 for 27 African Union member states, the present study investigates financial inclusion and its role in economic growth. The temporal interval was largely dictated by the availability of consistent data across our three sampled countries. Malta was the only AU member state that was excluded from the analysis because of data insufficiency for the study period. In order to allow for a more in-depth comparative analysis, the countries selected were divided into four categories: old-AU countries (those that joined the AU prior to 2000); new-AU countries (countries admitted after 2000); low-income AU Country (nations who had average income levels less than 20,000 US dollars at any point from 2004–16) and high-income AU countries (nations whose economic averages were greater than 20,000 US dollars). These categorizations help in creating a more coherent and appropriate ground to analyze the interrelationship between financial inclusion and economic growth across different market segments of AU as well as within its various sub-groups.

The study measure its variables with some recognized indicators. Gross Domestic Product (GDP) in constant 2010 US dollars is used for measuring economic output (EO). Financial institution access (FIA: commercial bank branches and automated teller machines per 100,000 adults) is used as a proxy of financial inclusion. Three more dimensions of financial inclusion are added into the analysis to test robustness. Access depth (AC) is hence defined as the ratio of private sector bank credit divided by proto GDP times 100; financial institution efficiency (FIE), is estimated based on indicators like net interest margins, lending-deposit spreads, non-interest income, overhead cost-to-total assets ratio, return to-assets and return-on-equity ratios; overall FI development (FI) combines access depth indicators with efficiency one. In addition, the model controls for other macroeconomic variables, such as capital formation (CAP) proxied by gross fixed capital formation in constant 2010 US dollars; energy consumption (EC), measured in kilograms of oil equivalent per capita; labour force participation LBR measured by total labour force and trade openness TO, which represents the ratio of total exports and imports to GDP. We then pulled data EO, CAP, EC, LBR and TO from the World Bank database; these for financial inclusion indicators were taken out of the dataset obtained from International Monetary Fund database.

Table 1: Average growth rates on the selected EU economies, 1995-2015

Country	EO	CAP	EC	LBF	TO	FIA	FID	FIE	FI
Algeria	1.80	1.26	0.65	0.73	2.20	0.61	0.11	-0.56	0.05
Angola	1.80	2.23	-0.51	0.89	1.81	0.32	0.04	0.00	0.05
Benin	2.82	8.81	-0.37	-0.61	5.33	4.06	4.06	4.49	2.84
Botswana	2.11	5.08	0.65	-0.49	2.19	5.26	5.08	2.38	4.12
Burundi	2.31	-0.48	-0.57	2.24	-0.11	-1.10	1.09	-0.50	-0.50
Cameroon	2.49	2.58	-0.14	0.17	3.39	0.94	0.62	0.76	0.71
Cape Verde	1.47	2.35	-1.23	0.19	2.27	-1.96	1.48	0.51	-0.05
Central African republic	4.26	7.93	0.98	-0.12	0.65	2.44	0.52	3.41	1.93
Chad	2.17	2.37	0.34	0.43	0.88	1.33	2.90	0.77	1.62
Comoros	1.62	1.88	-0.35	0.67	1.88	2.72	0.51	0.39	1.12
Democratic republic Congo	1.38	1.08	-0.34	0.36	3.61	-0.51	-0.32	-0.32	-0.41
Djibuti	0.86	-0.25	0.16	0.42	3.08	0.38	4.04	0.43	0.88
Egypt	2.28	3.61	-0.09	0.50	4.23	4.07	3.77	0.55	1.98
Equatorial Guinea	5.78	7.82	-0.16	1.98	2.46	0.99	0.17	0.02	0.31
Eritrea	0.52	0.11	-0.55	0.52	1.31	1.19	2.06	-0.32	0.91
Gabon	4.23	9.60	0.89	-0.78	2.87	4.81	8.47	7.45	5.98
Gambia	4.43	7.90	0.32	-0.86	3.51	3.37	3.90	7.08	4.48
Ghana	3.57	3.99	-0.70	2.66	4.35	-0.01	0.58	-0.26	0.05
Ivory Coast	1.97	2.91	-0.55	1.03	2.06	-2.00	-0.37	0.39	-0.78

Kenya	4.04	6.37	-0.12	0.27	4.18	6.04	6.11	1.00	3.43
Liberia	1.18	-0.01	0.35	0.41	1.62	-0.28	3.25	-0.71	0.28
Morocco	2.88	6.43	-1.13	-1.45	2.30	7.96	3.26	2.92	4.04
Niger	4.03	4.58	-0.43	0.50	2.83	2.97	3.71	2.68	2.73
Nigeria	2.54	2.19	0.26	0.37	2.44	2.47	3.19	2.43	2.48
Rwanda	2.11	2.17	0.14	1.69	1.97	0.48	2.17	0.34	0.79
Senegal	2.50	3.51	-0.46	0.64	1.19	1.44	3.78	0.32	1.93
South Africa	2.18	2.03	-1.44	0.81	0.69	-0.15	1.09	-0.88	0.09
Sample average	2.57	3.63	-0.16	0.49	2.41	1.77	2.42	1.29	1.52

Note: The growth rates were calculated using before log conversion data.

The table reports average annual growth rates (percentages) for selected African and EU economies from 1995 to 2015 across nine economic indicators: EO, CAP, EC, LBF, TO, FIA, FID, FIE, and FI. These indicators represent economic output, capital accumulation, exports, labor force, trade openness, foreign direct investment, foreign income, foreign investment, and financial integration, respectively. Algeria demonstrates modest growth in EO (1.80%) and FID (0.11%), whereas Angola records higher growth in

CAP (2.23%) and TO (1.81%). Equatorial Guinea and Gabon display high growth rates across several indicators, suggesting rapid development. In contrast, South Africa experiences negative growth in EC (-1.44%) and FI (-0.88%), indicating economic challenges. The sample average indicates modest growth across all indicators, with the highest in CAP (3.63%) and the lowest in EC (-0.16%), underscoring the varied economic trajectories within the sample.

	Method	LLC	Breitung	IPS	CIPS	LLC	Breitung	IPS	W-stat	CIPS
		Level				First difference				
EO	Statistic	-0.090	0.862	2.533	0.898	-6.877***	-4.478***	-5.133***	-1.776**	
	Prob.	0.464	0.806	0.994	0.816	0.000	0.000	0.000	0.038	
CAP	Statistic	-0.155	0.577	0.173	-0.522	-5.595***	-2.615***	-5.431***	-4.896***	
	Prob.	0.439	0.718	0.569	0.301	0.000	0.005	0.000	0.000	
EC	Statistic	-0.674	5.203	3.363	-0.589	-3.437***	-5.686***	-7.034***	-6.581***	
	Prob.	0.250	1.000	1.000	0.278	0.000	0.000	0.000	0.000	
LBF	Statistic	-0.455	4.610	2.883	1.091	-6.629***	-7.990***	-5.852***	-10.005***	
	Prob.	0.325	1.000	0.998	0.862	0.000	0.000	0.000	0.000	
TO	Statistic	16.172	0.892	2.029	2.180	-10.198***	-10.082***	-7.890***	-5.278***	
	Prob.	1.000	0.814	0.979	0.985	0.000	0.000	0.000	0.000	
FIA	Statistic	2.817	5.789	4.327	0.685	-3.757***	-3.058***	-3.720***	-7.911***	
	Prob.	0.998	1.000	1.000	0.753	0.000	0.001	0.000	0.000	
FID	Statistic	1.506	1.524	0.514	-0.356	-8.406***	-6.715***	-9.055***	-8.434***	
	Prob.	0.934	0.936	0.697	0.361	0.000	0.000	0.000	0.000	
FIE	Statistic	1.875	-0.067	0.367	-0.049	-11.868***	-3.446***	-12.016***	-14.060***	
	Prob.	0.970	0.473	0.643	0.480	0.000	0.000	0.000	0.000	
FI	Statistic	-0.032	4.390	2.332	-0.161	-6.646***	-5.039***	-7.385***	-10.782***	
	Prob.	0.487	1.000	0.990	0.436	0.000	0.000	0.000	0.000	

The table displays panel unit root test results for various economic variables, including EO, CAP, EC, LBF, TO, FIA, FID, FIE, and FI, across different testing methods (LLC, Breitung, IPS, CIPS) at both level and first difference. The LLC and Breitung tests at level generally

show high p-values, indicating that the null hypothesis of a unit root cannot be rejected for most variables, suggesting non-stationarity in their levels. Conversely, the tests at first difference mostly yield significant results with p-values of zero or close to zero, implying that differenced data are

stationary, and thus the variables are integrated of order one (I(1)). The IPS and CIPS tests, which account for cross-sectional dependence, also support this conclusion, as their statistics strongly reject the null hypothesis at the first difference. For example, the TO variable shows highly significant negative test statistics at first difference across all methods, confirming stationarity after differencing. Overall, these results suggest that the variables are non-stationary in levels but become stationary after first differencing, which is critical for selecting appropriate econometric models to avoid spurious regression issues.

The presented data offers a comprehensive insight into the economic growth patterns and statistical properties of key variables across selected African and economies over two decades. Analyzing the average growth rates, it is evident that there is considerable heterogeneity among these nations. For instance, some countries like Equatorial Guinea and Gabon experienced notably high growth rates across multiple indicators, reflecting rapid economic expansion, possibly driven by resource booms or significant foreign investment. Conversely, countries such as South Africa show negative growth in economic output (EC) and financial integration (FI), indicating ongoing structural challenges or economic stagnation.

The variation in growth rates across different indicators underscores the diverse development trajectories. For example, in countries like Benin and Gambia, high growth rates in foreign direct investment (FIA) and foreign income (FIE) suggest strong international engagement, which could foster future economic growth. Meanwhile, countries with modest or negative growth in these areas may face hurdles in attracting investment or developing their export sectors. The panel unit root tests further complement this analysis by examining the stationarity of these variables. Most variables exhibit non-stationarity in their levels, as indicated by high p-values in LLC and Breitung tests, which fail to reject the null hypothesis of a unit root. This suggests that their raw data contain stochastic trends and require transformation before econometric modeling. The tests at the first difference, however, predominantly show significant rejection of the null hypothesis, implying that these variables are integrated of order one, I(1). This is supported by the IPS and CIPS tests, which account for cross-sectional dependencies a common feature in panel data involving multiple countries.

The stationarity results have important implications. They suggest that modeling these variables in their levels without proper transformation could lead to spurious regressions, misrepresenting the true relationships. Therefore, differencing the data or applying other stationarity-inducing transformations becomes necessary for valid inference. Additionally, the strong rejection of the null

hypothesis at first difference emphasizes the importance of considering the dynamic properties of these variables when conducting macroeconomic analysis.

Furthermore, the differences in growth and stationarity patterns reflect underlying structural factors. Countries with rapid growth and high foreign investment often benefit from resource endowments, favorable investment climates, or integration into global markets. Conversely, countries experiencing stagnation or decline may face political instability, poor infrastructure, or limited access to international capital. These factors influence both the observed growth rates and the statistical properties of the variables.

Conclusion

The analysis reveals significant heterogeneity in economic performance across the sampled countries, with some exhibiting rapid growth driven by resource wealth and foreign engagement, while others struggle with stagnation. The stationarity tests confirm that most key economic variables are non-stationary in their levels and become stationary after differencing, guiding researchers to adopt appropriate modeling techniques. Understanding these patterns is crucial for formulating policies aimed at fostering sustainable growth and enhancing economic resilience in these diverse contexts.

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