iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 8 **Issue:** XI **Month of publication:** November 2020

DOI: https://doi.org/10.22214/ijraset.2020.32067

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 8 Issue XI Nov 2020- Available at www.ijraset.com

Impact of FDI on GDP per Capita, Trade and Inflation: Evidence from Four Emerging Economies

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Abstract: FDI is often knowns as an important element for a country in order to maintain its global competitiveness. It is an important vehicle for transfer of skills and technologies, specifically from developed to developing nations.
In this study, an analysis of four emerging economies: India, China, Philippines and Vietnam is conduct in term their FDI, GDP per capita, Inflation and trade. Tools such as regression and correlation were used to identify the influence of FDI on GDP per capita, Inflation and trade. The results imply that there is a significant influence of the independent on the dependent factors.
Keywords: FDI, GDP per capita, Trade, Inflation, Globalization, Emerging Economies

I. INTRODUCTION

Majorly, FDI and trade are seen as a catalyst for economic growth in developing economies. Foreign Direct Investment (FDI) is deemed as an important source of income in the EME (emerging economies) and is often seen as an extremely welcomed development. This factor brings a positive economic growth and reduction in the external vulnerability. Over the years, the growth of FDI has stemmed through 3 sourced: Technological improvements in communication, IT and transportation and most importantly, there have been improved frameworks for international cooperation and liberalization, with deregulations in sectors like Agriculture, telecommunication and many other sectors in various emerging economies. FDI is not solely restricted to transfer of cash, however is outlined as foreign possession of skills, technologies, employment and the overall welfare.

II. LITERATURE REVIEW

An Glabalization has various pre- determined persepctive with it coming in various forms: Economic, social,political and technological globalization, finacial globalization (Yuriy Gorodnichenko, 2010). FDI, as one of the factors of globalizayion is seen a growth advancing tool. According to a research done by (Joyce, 2010), more the FDI, the lower the incidence of a financial crisis. (Mallikarjuna, 2019) mentioned the need to take advantage of internationalization strategy as it makes the labor force more efficient and skilled with introduction of innovation and technology.

Various researchers have classified FDI as an important source of human capital (Gurieva & Dzhioev, 2020) in form of intellectual capital. Foreign financial investment leads to a positive economic growth and closes the employment gap (Ogunniyi & Olagunju , 2019). The impact is not only limited to the overall macroeconomic aspect, however does affect the economy at a microeconomic level as well. Based on the evidence of the stock market returns (KARADAGLI, 2012) portrayed the overall performance of firms has improved due to FDI, which further lead to an increase in the employment level. (Marija Radulović, 2020) conducted an in-depth analysis of long-term and short-term analysis of the financial integration and concluded that economic globalization did have positive long term impacts.

However, (Popoola, 2020) opposed the sanguine view of FDI and mentioned that an external led growth leads to a structural unemployment. This research is further supported by (Kashif Munir, 2019) who by using three parameters, trade, financial and technological globalization, concluded that financial interaction increases the income gap, which leads to a reduced GDP per capita. In terms of the employment structure, a study done by (Teeramungcalanon & Chiu, 2020) revealed that FDI in Thailand led to positive impact on industry sector, but a negative impact on the agricultural sector as it increased the income gap. In terms of the inflationary pressures, Igwemeka Ebele Okafor (2016) investigated the relationship between the inflation in the home country and the effect of foreign investment in the home country in the context of Nigeria during the time series from year 1987 to year 2012 by using statistical tools such as Ordinary Least Squared technique, Augmented Dickey Fuller Test, and Granger Causality Test. A direct relationship is found between Foreign Direct Investment and Inflation in Nigeria and the impact of Foreign Direct Investment on the inflation is not significant.

The question remains whether FDI does trigger economic growth is an unresolved issue due to various other factors affecting the economics growth. In order to support the viewpoints, an empirical study is done

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III.RESEARCH METHODOLOGY

There are several reasons to study the relationship between the FDI and the economic growth as FDI is seen as a vital element for the emerging markets. Therefore, this research will empirically determine globalization on the macroeconomic dynamic of emerging economies in terms of GDP capita, employment levels and inflations. This leads to the research question: To what extent has FDI has an impact on the economic growth of the emerging economies? This is followed by sub-questions ton gain an in-depth understanding of the topic:

1) Does FDI have a great impact on the GDP per capita, Trade and levels of inflation of the emerging economies?
2) How have the employment sectors changed with the increase in FDI?

A. Type Of Research And Research Design

The study follows a quantitative approach where numerical data for all four countries was collected. As this data is collected from already existing sources, it is categorized as secondary data. This study follows a causal research design which explores the influence of FDI on the GDP per capita, Inflation and Trade. The cause and effect relationship between the independent and dependent variables are analysed.

B. Sources of Data

The data set has been collected from reliable sources which are the databank of **World Bank and OECD.** These sources were chosen as they allow the freedom of data arrangement and be further arranged in the offline excel sheet. It further assists with graphical representation which provide clarity of the trend and plays a significant role in analysis and interpretations of data. Furthermore, on this platform, authentic and diverse range of data is available for all the countries. The data set uses consist of FDI which is as a percentage of GDP, GDP per capita in current US dollars, trade as a percentage of GDP and inflation which is as percentage based on CPI**.**

C. Variables

The variables used in this study are: FDI, GDP per capita, Trade and Inflation. FDI is an important vehicle for the transfer of capital, technology, and knowledge to host countries, thereby generating high-growth opportunities as mentioned by (Gurieva & Dzhioev, 2020) and a few other. It has a significant impact on the macroeconomic factors such as GDP per Capita, Inflation, Trade. The inflation rate is key indicator of fiscal and monetary policies of a country. A lower inflation rate should mean a better climate for investment, trade, and, therefore, economic growth. GDP per capita is used as a proxy for economic growth and it further incorporates population effect. Trade plays an important role in bringing in foreign currency and making a country globally competitive.

The human capital in a host country is critical for absorbing foreign knowledge and an important determinant of whether potential spillovers will be realized. In order to further analyze the impact of the economy, the employment growth and sectoral shift is analyzed. The data for this aspect is collected from the aforementioned sources. The shift is analyzed through the variables percentage of employment in manufacturing, agricultural and service over the specified years. This would give an exposure the impact of FDI on the human capital and skills of the economy, which would contribute towards the assessment of impact of globalization on these economies.

D. Data

Time series analysis have been used on the numerical data starting from 2010 to 2020 where the impact of FDI is observed on the dependent variables for each country. It is longitudinal in nature where correlation of variables is studied over a period of time (10 years).

TABLE I

Data Nature	Data	Observations
No. of countries	4	India, China, Vietnam, Philippines
No. of years	10	2010- 2020
No. of variables per country	4	• FDI (Independent) • GDP per capita, Trade, Inflation (Dependent)

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E. Tools Used For Analysis

1) *Simple Linear Regression:* To assess empirically the effects of FDI on GDP per capita, inflation and trade, linear regression is a common statistical technique which is used to derive the relationship between the two or more variables. It has been termed as a simple linear regression as only one independent variable is being chosen which is FDI which three dependent variables: GDP per capita, Inflation and Trade.

The hypotheses have been tested using simple linear regression

□□□□□□□□□□Trade + □□GDP per capita +□□□Inflation+ μ

Where □□□represents the independent variable FDI and the dependent variables are the gross domestic production per capita, Trade, Inflation. □□is the slope coefficient and the error term is denoted as **μ**

This research follows certain assumptions such constant technology, political stability, currency remains stable. Online tool Microsoft Excel was used for the regression function and it was conducted for each country. This gave an overview whether majority emerging economies follow the same pattern. If the R^2 value if close to 1, it means they have a strong positive influence of the independent variable in the dependent variable however, if it's close to 0, it means there is a weak influence the variables.

TABLE 2

	IMPACT OF FDI ON		
Countries	GDP per capita	Trade	Inflation
India	0.63	0.70	0.43
China	0.50	0.59	0.40
Philippines	0.75	0.45	0.46
Vietnam	0.89	0.47	0.5

The R^2 values are more than zero and positive which shows a positive correlation and further explains the degree of influence of FDI on the dependent variables.

2) *Hypothesis Testing:* This tool is used to determine whether the variable has a significant effect on the dependent variables. H0 (null hypothesis) means that the FDI (independent variable) does not significantly influence the dependent variables (Trade, GDP per capita, Inflation).

a) Research Hypothesis Framed

Foreign direct investment has a significant impact on the GDP per capita, Trade and inflation for all the four emerging economies.

The following hypothesis are applicable across the 4 countries:

H_o= The independent variable FDI is not significantly influencing the dependent variable Trade

H_A= The independent variable FDI is significant influencing the dependent variable Trade

H_{o1}=The independent variable FDI is not significant influencing the dependent variable GDP per capita

H_{A1}= The independent variable FDI is significantly influencing the dependent variable GDP per capita

H_{O2}= The independent variable FDI is not significantly influencing the dependent variable Inflation

H_{A2}= The independent variable FDI is significantly influencing the dependent variable Inflation

The significance is established through the p-value where if the p-value is smaller than the significance level (5%), the null hypothesis will be rejected

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TABLE 3

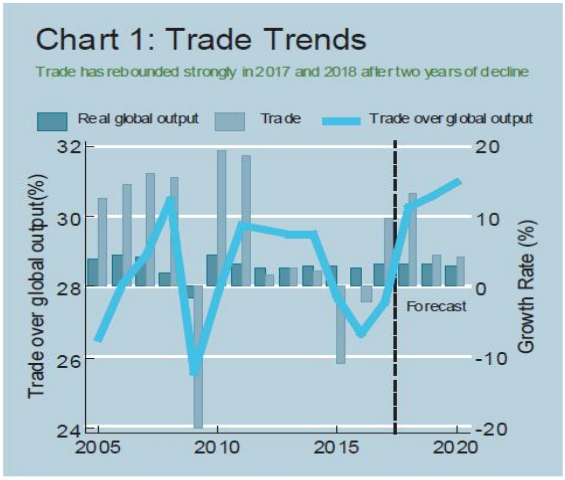
Country	Hypothesis	Variable	p-value	Hypothesis decision
India	Ho	FDI and Trade	0.002	Rejected
	Ho_1	FDI and GDP per capita	0.004	Rejected
	Ho_2	FDI and Inflation	0.03	Rejected
China	Ho	FDI and Trade	0.009	Rejected
	Ho_1	FDI and GDP per capita	0.004	Rejected
	Ho_2	FDI and Inflation	0.03	Rejected
Philippines	Ho	FDI and Trade	0.04	Rejected
	Ho_1	FDI and GDP per capita	0.001	Rejected
	Ho_2	FDI and Inflation	0.05	Rejected
Vietnam	Ho	FDI and Trade	0.000	Rejected
	Ho_1	FDI and GDP per capita	0.000	Rejected
	Ho_2	FDI and Inflation	0.02	Rejected

The null hypothesis has been rejected and alternative hypothesis has been proven true. This suggests that FDI has a significant impact on the dependent variables across all the 4 countries.

3) *Diagrams and Graphs:* As the data was taken over 10 years, in order to analyze the trend of the growth, graphs and diagrams were used. It gives a clear picture of the growth if the various variables in order to draw interpretations and analyze the changes. The growth in GDP of each country is represented in terms of a line graph which represents the pattern over the years and makes it easier to compare with the growth of the other countries. Furthermore, this paper further analyzes the impact on the employments patterns with the changes in FDI which is represented in line chart for the three sectors: Manufacturing, Service and agriculture.

IV. RESULTS AND DISCUSSION

The recent development has presented the unprecedented growth in globalization and its impact on the cross border trade. The Chart 1 (Nations, 2018). It is evident that it remains volatile, however, in the recent and upcoming years the trade trends show an exponential growth. It shows a direct relation with the Global GDP where an increase in real global output leads to increase in the trade, evident in 2020.

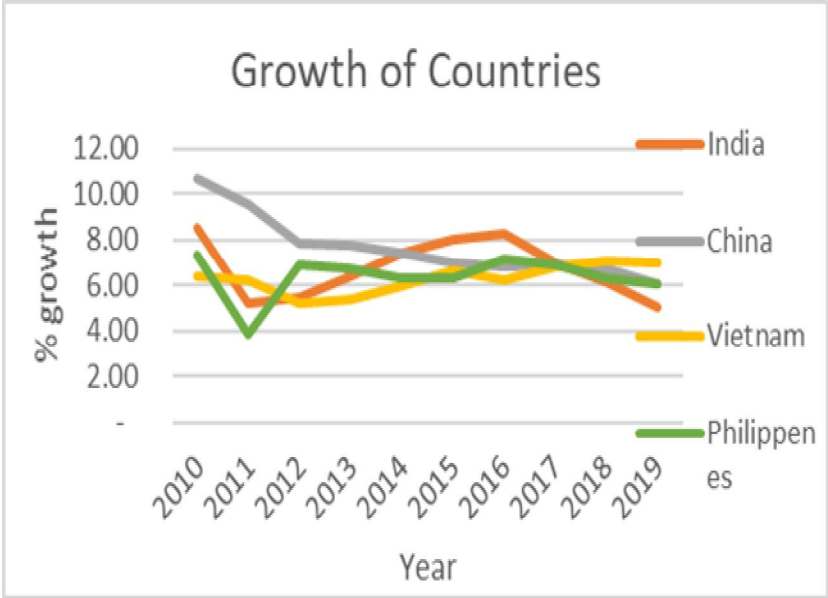


Source: UNCTAD secretariat calculations based on UNCTADSTAT and IMF data.

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The effects of FDI was tested on trade, inflation and GDP per capita of cross country equations utilizing data from 4 emerging economies over the last 10 years. These economies growth has been highly volatile as foreign inflow has a significant impact

Chart 2: Growth Of The 4 Emerging Economies



The graphical representation of the growth highlights upon upward and constant increase their GDP over the years. In the cent years, the primary reason for the decline in the growth was due to the detreating economic situations as the major advanced economies growth has also decreased. (Key Statistics and Trends in International Trade 2018). Indeed, growth pattern on the EME's find that trade opened is associated with higher GDP, as presented by the graph, where most the economies were impacted by the conditions prevailing un the globalized market (Yavuz Arslan). Furthermore, greater openness has led to a decline in the volatility in the countries.

The level of impact of globalization, in terms of FDI, on the macroeconomic dynamics of the 4 EME's has been analyzed. The estimated R^2 value is low but reasonable given the nature of the data as the data is to some extent influenced by the external factors. The results for all the four countries are as follows:

The Table 2 above represents the results of the data analysis. The r^2 value represents the percentage of variance in the dependent variable that the independent variables explain. From the table above, it is evident that there is some correlation between the FDI and its impact on GDP per capita and Trade. There has been a very weak impact on the inflation percentage of the country.

V. DISCUSSION

Table 2 represents the relationship between the variables and it reflects the strong correlation between GDP per capita and FDI for majority of the countries. The effect on trade was relatively lesser for majority of the countries and the influence on inflation was weak. The case for India and China is different as compared to Philippines and Vietnam. FDI in India and China have a larger impact on trade as compared to inflation. These two countries are known as the fastest growing countries have contribute a large volume to the global trade market. The inward FDI in the country improves the countries global competiveness, hence chancing its trade capabilities. The primary reason for this is that there are various other factors that are affecting the inflation rate such a taxation, purchasing power and other political, economic and social factors. FDI in Philippines and Vietnam has comparatively high impact on GDP per capita but lower on trade. Countries like Vietnam and Philippines strongly absorb the FDI in their GDP and GDP per capita due to its large an upcoming market size.

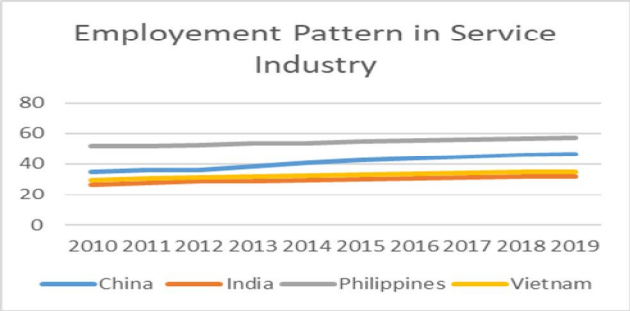
However, the effect on inflation has been weak for all the four countries. The primary reason for this is that there is no direct impact of FDI on inflation. FDI does lead to increase in employment and income but inflation is a long term building of an FDI. The tangible results come into the picture after a long term investment, therefore, it is difficult to detect the actual impact of FDI on the inflation percentage in the 4 economies.

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A. Employment Patterns

The data taken from World Bank suggest that there has been a structural shit in the employment patterns. There has been upward trend in the service industry employment and declining growth in agriculture employment.

CHART 3: EMPLOYMENT PATTERN



VI. CONCLUSION

This reflects the fact with more GDP growth and more incoming FDI, the employment patterns are more inclined in the service industry, due to is exponential increase in these emerging economies. With the growing FDI, there has been a growing concern about the disemployment in the various sectors, especially in the manufacturing with automation and technology becoming the frontrunners. It is known to be one of the consequences of globalization. This paper does have certain limitations such as limited such as keeping the external factors contrast, where in reality, external factors do have impact on FDI, GDP per capita, Inflation and trade. The study can be used to analyse the future impacts of FDI with the changing geopolitical landscape of the economies, in order to quantify the impact of FDI.

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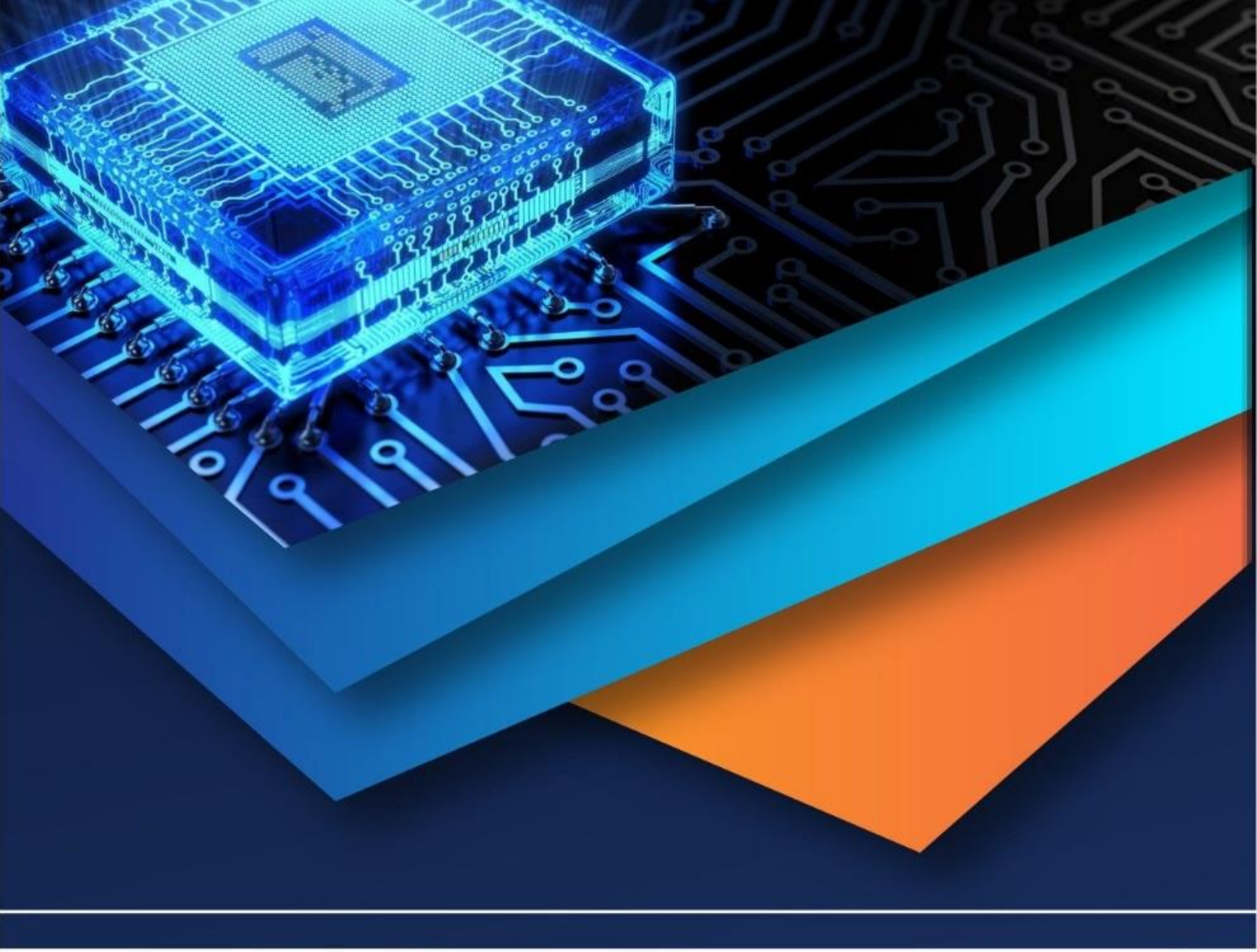
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