DOES THE LOCAL INVESTMENT IS MORE EFFECTIVE THAN FOREIGN INVESTMENT?

Shereen Yasseen Mohammad Alhamadani

Petra University, Faculty of administrative and finance science, Amman, Jordan

ABSTRACT

This study aims at estimating the production function for both kinds of the projects funded by local and foreign direct investment FDI sources in Jordan , Measuring the economic and social efficiency, and measuring the Average Total productivity (ATP) and partial productivity of factors used in these Investments.

The study concludes that the capital factor in foreign investment , has no impact on production . It was found also that the local investment depend on the labor in the generation of value-added, more its reliance on capital.

The results also show that the local investments , have achieved the highest average cost for the factors of labor and capital. The study concluded that local investments have achieved the lowest total average productivity of production elements compared to foreign investments.

Finally, This study The study suggested the necessity of formulating an incentives to encourage the local investment by Jordan Investment Board JIB.

Keywords: *Investment, Local investment, Product function, foreign investment.*

1. INTRODUCTION

Investment represents an important pillar among those that support the national economy, and its contribution to the achievement of sustainable economic development that is consistent with the higher economic and political interests of the country. Through investment, the target political, social, security and economic stability can also be achieved. This is performed through the activation of the interdependence between the economy and other components of the country and society, and supports it by an integrated system of procedures and legislations that promote domestic competitive potential in the areas of production, management and marketing, and in reducing the rate of poverty and unemployment.

The local orientation towards the local economic scheme is represented by drawing a national strategy to encourage investment, restructuring and economic reform, trade liberalization and openness to the surrounding free trade zones, and the Arab and international markets, as well. Further, the participation in international trade agreements is another trend to form a basis to provide a favorable investment environment to encourage and attract investment, and achieve sustainable economic development.

Despite the importance of investment on which different economies, especially the developing ones rely, these investments may be considered a source of negative impact on the economies of those countries in terms of negative exploitation of scarce economic resources that are available in those countries. In addition, the weakness of its economic and developmental role in employing the workers and absorb the surplus of it.

Perhaps, this study is an attempt to assess the role of economic and social role of the economic projects of the industrial sector funded by local financial resources. These include: governmental investment, Jordanians expatriate, Jordanian businessmen, and the household sector during the period 1997 – 2006. Further, the use of a set of leading econometric models that have been adapted for this purpose, where an abundance of statistical data in that period, and for being one of the most experienced periods of political and economic changes that have affected the whole of the Arab region.

Therefore, this study can be considered one of the authentic studies that are research in the assessment the role of economic and social projects financed by local sources, compared many studies that searched in foreign investment in its various forms.

2. PROBLEM FORMULATION

Most of the studies have addressed the subject of foreign investment in particular, and its role in the process of economic development, especially its role in reducing rates of unemployment and creating new jobs. However, because of political events in the Arab region since the fall of Iraq in 2003, and subsequent events in Palestine, which has significantly influenced the implications of the economic situation in the region, including Jordan. In addition, the lack of security and political stability were the most prominent factors in the migration of foreign private capital, and the financial crisis has increased such migration unit to cover the financial positions elsewhere.

From this point, this study is conducted to compare the role of local investments with foreign direct investments in national economy.

Therefore, this study tries to assess the economic performance for both kinds of investments in Jordan.

3. STUDY OBJECTIVES
The importance of this study is raised by trying to estimate the following:
- Estimate the production function for both kinds of the projects funded by local or foreign direct investment FDI sources in Jordan .
- Measure of economic and social efficiency for both kinds of the projects financed by local and FDI sources in Jordan, according to the Farrell criterion
- Measuring the Average Total productivity (ATP) and partial productivity of factors used in projects funded by local and FDI sources in Jordan.

4. LITERATURE REVIEW
Despite the expanded search for literature r in a lot of scientific accredited journals, it was possible to obtain studies that can be considered relevant to the subject matter of this of study. Nevertheless, it was possible to obtain some studies close to the subject of the study, and that was all in favor of projects funded by foreign capital, with a minor reference to the importance of domestic savings to stimulate domestic investment, as follows:

The study of Alnsour (2011) entitled as "Estimating The Efficiency of Domestic Investment In Jordan : Econometric Study for Period 1997 – 2006 . the objective of this study is to estimate the production function for enterprises funded by domestic capital , estimating the socio economic efficiency and productivity indicators , besides that not only estimating the relative changes in prices of production factors on cost of labor and employment levels, but also estimating the marginal rate of substitution capital and labor that using in these enterprises funded by same resources. The study concludes that the domestic investments are labor intensive more than capital in creating value added . The study finds the wholesaling and retailing sector has more efficiency than others , increasing the cost of capital and employment levels is more affected on enterprises working construction and insurance sectors according to changes in prices of production factors , and not only finds that the domestic investments working in banks and financial institutions have more total productivity   , but also the transportation , storage and telecommunications sector has more average productivity of labor than others . The study suggests the necessity of formulating an incentives to encourage this investment by JIB and encouraging the banking sector to fund this type of investments .

The study of Al-Msaeed and Bataineh (2006), entitled as "Determinants of foreign direct investment in Southeast Asia, using the methodology ARDL. The objective of this study is to identify practically the effects of each of: local investment, human capital, exports, intermediary financing, and economic growth on the flow of foreign direct investment FDI to the countries Southeast Asia: Indonesia, Malaysia, Thailand, Singapore, and the Philippines. The study used a modern methodology to achieve this goal, that is "Autoregressive Distributed Lag Approach" ARDL, so that to identify the effect of these prior changes on the foreign direct investment in both the short and long run in the period (1986-2002).

The practical results show that there a direct relationship between foreign investment and its determinants that have already been referred to. In addition, he found that economic growth and local investment have a positive impact on increasing the flow of foreign direct investment FDI to Southeast Asia. Further, the evolution of both the financial and human capital and its development is considered of important influence on the process of attracting foreign investment. Finally, the researcher found that the policy of encouraging manufacturing for export along with the very stability of the exchange rate of the local currency would contribute to the promotion of foreign investment. The study recommended the encouragement of foreign direct investment along with the local investment; and to restore economic growth in Southeast Asia to what it was before the financial crisis 1997.

The study of Al-Rabiee (2005) entitled as "The impact of economic policies on the investment environment in Arab countries" shows that foreign direct investment played a dynamic and complementary role to local investment in developing countries over the past few years. In addition to its role in the process of capital funding, it is an important means of providing opportunities for employment, the transfer of production technology, modernization of local industries, development of the economic export- competitiveness, and the achievement of efficient use of the scarce resources. However, the multiplier effect that is generated by local investment can be less, if local economic policies do not provide appropriate investment environment, which creates the right environment for both local and foreign investment. In order to make sure of this fact in the Arab countries, indicators of economic policy, monetary and financial policy and external balance were analyzed, and the results of this analysis were used in the formation of a composite index to measure the economic environment. To support this analysis, a statistical model is configured to measure the impact of changes in the indicators of economic policies on the path of investment flows

towards the Arab countries. Finally, some proposals that can contribute to improving the investment environment in Arab countries were presented.

The study of Abdul Rahman(2004), entitled as "Determinants of foreign direct investment in the Kingdom of Saudi Arabia". This study aimed at investigating the determinants of foreign direct investment in the Saudi economy. the research investigated the performance of planned and actual foreign investments, and their sources, and sectored distribution, then discussed the determinants of these investments; where the focus was on the role played by key variables such as market size, trade openness, and wage rates, and risks of attracting flows to the Kingdom. Applied methods include the use of causality tests, and regression models; where, according to results, they indicate the moral level of GDP and its positive impact, while there was a negative impact of exports and the political and social risk variables on, foreign direct investment in the Kingdom.

The study of Al-Obaidan (2000) entitled "Foreign Direct Investment, and the outpouring of efficiency in developing countries". He confirms in his study through the framework offered by modern growth theory, the impact of foreign direct investment in terms of efficiency of forty-four developing countries. The study tested the hypothesis raised by many of those interested in the theory of global investment. The essence of the hypothesis was about the existence of a strong relationship between the level of foreign direct investment and technical competence. The model used was derived in the usual way, derived from the function of production curve. The results of the study indicate high technical competence in developing countries, which are characterized by a high level of foreign investment in them.

In other words, the researcher through the study confirms the importance of foreign direct investment FDI, and is working towards confirming the results of previous studies in this subject which considered that foreign investment is the key to industrial development in developing countries. Despite the positive aspects of it, there are some signs of relevant negative effects ignored by the researcher in the study, nor did he provide any alternative to this investment, what is the appropriate form for the case of developing countries.

The study of Al-Momani (1987) study entitled as "The flow of foreign capital and its relationship to consumption and economic growth: the experience of Jordan from 1968 to 1987". This study aimed at investigating the impact of foreign capital on both consumption and investment in Jordan during the study period, in order to identify the underlying causes behind the phenomenon of the low productivity of foreign capital as referred by a previous study. The results showed that foreign capital has had a positive influence and strong significance on both consumption and investment. Therefore, the current study attributed the said phenomenon to two matters: convert a portion of foreign capital flows to the consumptive purposes, and investments that were financed by foreign financial resources were not of high productivity. The study recommended the need to review the distribution policy of foreign financial resources among economic sectors, and stressed the need to expedite the appropriate procedures for the mobilization of domestic savings, and to get rid of dependency on the outside- of which no doubt- will have negative effects in terms of economic and political future.

This study indicated clearly and explicitly to the importance of mobilizing domestic savings, and its role in increasing the volume of domestic investment, to reduce the gap of economic and political subordination to the outside, and perhaps that is one of the most prominent themes upon which the current study is based.

4. THEORETICAL FRAMEWORK

Developing economies, including Jordan, since the beginning of the eighties of the last century, have witnessed significant shifts in economic trends, particularly in the area encouragement of investment, both local and foreign. This occurred after the related theses have shown the important role played by investment in the economic development process, whether in the field of preservation of savings, and the development of the national capital, or as a means of absorbing surplus of labor supply. In addition, the transfer of modern production technology, modernization of existing industries, capacity development of export competitiveness of the economy, and achieving efficient use of scarce resources, and its role in raising the level of productivity both in terms of skills development and in terms of innovative capacity. Further, in raising the level of organizational competencies and management, improve quality goods and services products, deepen and expand the productive linkages, not to mention its ability to exploit the available production elements in a manner consistent with the objectives of the profitability of those institutions, and later with the national objectives of host countries.

The most significant features of this shift was the emergence of many economic problems faced by developing countries, especially when talking about the Jordanian economy processing. They almost form articulate points in Jordan development marsh, especially in the years 1989, 1994, and 2003. The weak of political stability and security on the level of the entire Arab region,, and the lack of many foreign capitals' confidence in this region, and the leakage of such capitals to safer areas in the world caused economic policies try to collect the national local savings, and stimulate using them in investment projects. Such projects would generate economical and social return to their owners. Further, many economic incentives and many precautionary policies were provided to encourage this type

of investment, as temporary replacement at least for large foreign investments carried out by large multinational companies.

Investment encouragement laws have promoted making a number of legal, legislative and financial amendments that stimulate local investment, and provide the necessary funding through financial institutions and banks. This procedure was coincided with the presence of strong support from the government as an indicator to create a favorable investment environment to encourage investment flows from its local sources. Such resources are; the household sector, government investment, Jordanians residing abroad. Despite the full awareness that this type of investment may not be a complete substitute for foreign investment, it may be a real complementary and supportive to it.

However, in terms of many negative economic practices recorded by foreign investments, especially those that came against the payment of the debt owed by Jordan, or in the Qualified Industrial Zones QIZ. Further, of what these types of investment had in terms of negative economic effects and social consequences that have emerged because of the removal, or disabling an important part of the successful existing local projects from continuing in the process of production and investment, and they were sold at low rates. In addition, in the same context there is a lot of convictions generated by the economists and the supporters of the Jordanian economic development school in the importance of local investment as most able to know the local needs, and adapted to the circumstances and the characteristics of the economy compared to other local investments.

The global report of investment reported that three factors together constitute the driving forces of foreign direct investment FDI flows towards developing countries. The liberalization of economic policies, the rapid technological change and the accompanying decline in the cost of transport and communications, in addition to increasing competition among multinational corporations, which holds the operations of investment. These factors created favorable conditions for these companies to look for new production sites to increase economic efficiency. They started to move part of its production to developing countries. Furthermore, the economic recession in the developed countries also contributed to increase the severity of competitive pressures. In addition, the increasing need to search for new sites of less cost, and have several relative advantages relative such as experiences, skills and rapid awareness of new technology, and low wages, as well (Al-Rabiee, 2005).

It could be argued that the process of relocation of endemism of the multinational companies have adopted a number of interrelated factors. The most important of these factors are: the extent of existence of stable political and legal environment, and good management of the integrative economy, and whether there are financial incentives and liberal and unrestricted tax and economic policies. In addition, the pivotal role played by the existing production circumstances in the host countries, particularly the abundance of skilled workers of low cost. Despite the growing flows of foreign investment during the period 1975 - 2000 by more than 50-fold to about 735 billion dollars, the share of developing countries was only 28% or of $ 205 billion dollars, while the share of Arab countries did not exceed more than (1%) (Al-Rabiee, 2005).

Most of those flows moved to the South East Asia. Jordan achieved the fifth rank in the total investment after all of Morocco, Algeria, Egypt and Tunisia. Nevertheless, the poverty and unemployment rates in those countries, especially in Jordan is still at a standstill. On the contrary, the implications of new projects restructuring ere rather reflected in an increase of employment leakage, and low rates of real wages. Further, most of these investments did not contribute to improve the contribution of commodity production sectors, and to increase its developmental share clearly.

5.   TEST OF THE HYPOTHESIS

Ho1: There is no a significant differences between the local investments and foreign investments that using labor and capital in Jordan.

The general form of the known production function Cobb-Douglas is used here, which is defined as the relationship between the physical quantities of production that can be obtained from the use of inputs of labor and the capital. this relationship can be expressed as follows:

$$Q = A \, L^{B0} . \, K^{B1} \text{----------------------------- (1)} \, 1$$

In order to measure the role both of local and foreign investments in increasing the employment of workers, the above-mentioned formula is converted to a logarithmic function, and add the random error term (€), which is assumed to meet the conditions of application of the method of least squares OLS. Then consequently, estimate the parameters of the above-mentioned equation No. (1) in order to calculate returns (savings) of the scale achieved by projects financed by local sources.

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[1]**A :** Technology Level**, Q** : Value Added ، **B0 & B1 are Elasticity of production for both of labor & capital respectively . L & K labor and capital respectively .**

The indicative rule shows that if the value of total transactions (B0 + B1) is larger than one (1.00), which means, "Increasing Return of Scale", and vice versa, i.e. If it less than one, it means," Decreasing Return of Scale", while if it is equivalent to one, the return scale is of the fixed kind "Constant Return of Scale", (Al-Nsour, 2009, p 214)
Based on the results of the logarithmic function estimate, and after adjusting the assessment process, which is considered as a problem of Auto Correlation indicated by the preliminary estimates according to D-W statistics. The results of Table 1 show that the capital component B1 in foreign investment, has no impact on production in these sectors as measured by value-added. This result is shown through the calculated values of t-test compared to those tabulated one . It was found also that most of the projects funded by local sources (local investment) depend on the labor in the generation of value-added, more its reliance on capital, and by comparing the value of the tabulated and calculated t-test values for each investment .

Table No 1 : Results of Estimating Production Function

Source of investment	Return of Scale	B1	B0	Statistical Indicators
Local Investments	Increased	0.213 (3.316)	1.674 (11.678)	r= 0.995 R^{-2} = 0.987 Siq.=0.00 F= 78.893 t*= 2.306 D-W = 1.845 A= - 4.319
Foreign Investments	Increased	0.456 (1.236)	1.888 (1.248)	r= 0.916 R^{-2} = 0.976 Siq.=0.00 F= 56.3 t*= 1.86 D-W = 1.186 A= - 3.934

It was also found that the both of two kinds of investments are characterized by increasing returns of scale , which means they achieve economies of scale, and located in the stage of increasing yield.
Through the value of B0, it was found that local investment during the period of study is labor intensive, and relies on it heavily to increase production as measured by value added. Therefore, the text of the first hypothesis, which considers that there is no a significant differences between the local investments and foreign investments that using labor and capital in Jordan, is rejected

Test the second Hypothesis:
H02: Local investments are not considered economically the most efficient in terms of exploitation of the available productive resources compared with foreign investments in Jordan.
the advanced economic theory considers that the productive efficiency represents, in essence, the relationship between output and elements of production used to obtain it. In order to clarify the idea of production efficiency, and the expression of the decisions of the institutions that operate within the economic sectors, the following figure (Fig.1) may help. It represents the Iso Quant curve of productive projects which is symbolized as (PP). Similarly, Iso Cost line is symbolized as (Aa). The slope of Iso cost curve of the two institutions A and B reflects the relative prices of production elements assuming the existence of two production elements in a homogeneous function, which are labor and capital.
According to the economic approach Farrell, it reflects the level of technical competence by the extent of relative proximity or distance to a combination of production elements that are used with the Iso Quant curve. On the other hand, economic efficiency is thus expressed by the extent of relative proximity or distance to a combination of production elements that are used with the Iso Cost line. In addition, if the corporation is located at the tangent point between both the Iso Quant curve and Iso Cost curve, it then satisfies the productive efficiency point (technical and price). Finally, each point on the iso-quant curve represents a combination of both elements of production used to produce a specific quantity of the commodity (Al-Nsour, 2009).
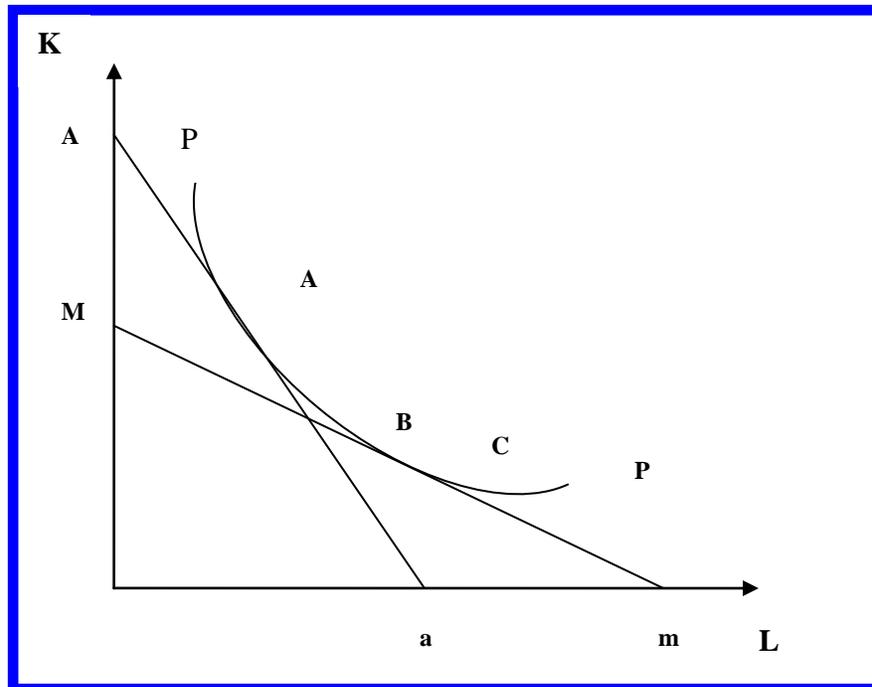
Farrell adds that an institution is classified as efficient if it could achieve a lowest average cost per unit produced. This is not carried out but by using a combination of factors of production that makes this average as less as possible, and can be expressed in this standard as follows:

$$ r\,K + w\,L) / Q \quad \text{------------------------- (2)} ^2 \quad \text{(Minimum}$$

Table No 2 : results of estimating second formula by using Actual wage in 2009 .

Source of Investment	Interest rate %	Actual Wage	Capital	Labor	Value added	Farell Criterion
Local Investments	9.09	324	21342452	48920	1705700	10.4
Foreign Investments	9.09	698	313765780	32447	64808000	0.708

The source : Central Bank of Jordan , Department of Statistics , 2009 .

The results show that the local investments , have achieved the highest average cost for the elements of labor and capital against every Dinar being generated from value-added. Perhaps the main reason is due to the high rates of real wages for workers in the latter finding, as well as higher average interest rates, which are awarded based on loans, and to the capital needs including equipments and machinery in excess of the needs of the service sector. In addition, the cost of investment in productive sectors increases for reasons of low wages of the workers. Further, such sectors are considered of the large size, which absorb large numbers of workers, and thus its role in the employment may be greater than the rest of the sectors.
 Accordingly, by this result, we accept the null second hypothesis, which sees that Local investments are not considered economically the most efficient in terms of exploitation of the available productive resources compared with foreign investments in Jordan.

Test the Third Hypothesis:
H03: The Total productivity of factors of production in local investments is not considered the largest comparing to those in foreign investments in Jordan.
To test this hypothesis we used the integrative measurements of the average productivity. the average of the total productivity ATP of production elements is defined as the average of production size as measured by value-added of all production elements used in production. This scale can be expressed by the following formula:

$$ ATP = Q / (B0\,L + B1\,K) \text{----------------------------------(3)}$$

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^{2} r is the interest rate , W is an actual Wage , K is an capital , L number of labor , Q is the value added .

In order to estimate the average total productivity of production elements in the projects financed by local sources, and to achieve constant returns of scale hypothesis, we have distributed the values of B0 and B1 previously estimated in Table 1 as their weights in the regression equation according to the following formulas:

$$B0^* = B0 / (B0 + B1) \ \text{---(4)}$$

$$B1^* = B1 / (B0 + B1) \ \text{---(5)}$$

Where B_0^* and B_1^* represent the weighted production elasticity values. Such values will be compensated based on their weights in the equation of the average total productivity of production elements, equation No.3 referred to Table 3.

Table No 3 : results of estimate formula 3bu using data of 2009 .

Source of Investment	B^*_1	B^*0	Capital	Labor	Value added	Total Production
Local Investments	0.1128	0.88712	21342452	48920	1705700	0.696
Foreign Investments	0.1954	0.8054	313765780	32447	64808000	1.056

The source : Central Bank of Jordan , Department of Statistics , 2009 .

From this table, it is concluded that local investments have achieved the lowest total average productivity of production elements compared to foreign investments. Such result support the hypothesis of many researchers, which states that the foreign investments in Jordanian economy are leader and responsible on the economic growth in Jordan. Despite that the context of that result agreed with the text of the third hypothesis, which was supposed to be in the favor of the foreign investments.

Table No 4 : The Average Productivity in 2009.

Source of Investments	Q/K	Q/L
Local Investments	0.0799	34.86
Foreign Investments	0.2065	1997.34

On the other hand, both kinds of investments achieved negative average for the total productivity of production factors. The partial measures of productivity are those that deal with each element separately. They indicate the average of production volume as measured by value-added for each element of production. These measures can be calculated by dividing the value added by each of the elements of production. The results of Table 4 show that local investments have recorded the lowest average of labor productivity compared to the other foreign investments.
On the other hand, local investments also recorded low averages of capital productivity. This result supports the fact that projects to which foreign investment is attracted is labor-intensive and rely on it heavily in the generation of the value-added. Further, this type of projects may be the closest to the needs and aspirations of the local labor market for its ability to absorb the surplus of labor supply.
The average productivity of the labor in local investment recorded the least rates of the productivity. This productivity is still below the required level, because of its inability to meet the requirements of wages and the quality of employees in such projects.

6.   THE DISCUSSION
The results show that the capital factor in foreign investment , has no impact on production measured by value-added. It was found also that the local investment depend on the labor in the generation of value-added, more its reliance on capital.
It was also found that the both of two kinds of investments are characterized by increasing returns of scale , which means they achieve economies of scale, and located in the stage of increasing yield.
The results also show that the local investments , have achieved the highest average cost for the factors of labor and capital against every Dinar being generated from value-added. In addition, the cost of investment in productive sectors increases for reasons of low wages of the workers. Further, such sectors are considered of the large size, which absorb large numbers of workers, and thus its role in the employment may be greater than the rest of the sectors.
Finally the study concluded that local investments have achieved the lowest total average productivity of production elements compared to foreign investments. On the other hand, both kinds of investments achieved negative average for the total productivity of production factors. The partial measures of productivity show that local investments

have recorded the lowest average of labor productivity compared to the other foreign investments, and also recorded low averages of capital productivity. The average productivity of the labor in local investment recorded the least rates of the productivity. This productivity is still below the required level, because of its inability to meet the requirements of wages and the quality of employees in such kind of investments.

This study The study suggested the necessity of formulating an incentives to encourage the local investment by Jordan Investment Board JIB.

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