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EFFECTIVE USE OF TAX MECHANISM IN THE DEVELOPMENT OF INNOVATION ECONOMY

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Abstract. *This article examines the possibilities of effective use of the tax mechanism in the innovative development of the economy. Scientific and theoretical aspects of tax regulation of the innovative economy are also interpreted. The current state of tax incentives provided for research and innovation activities is critically analyzed. In particular, the impact of tax incentives on research and innovation activities of enterprises is analyzed. As a result of the research, conclusions were formulated, scientific proposals and practical recommendations were developed.*

Key words: *innovative economy, innovative activity, tax mechanism, tax benefits, innovative development.*

1. Introduction.

Without the innovative development of the economy of Uzbekistan, we cannot go to the next stage of economic development. After all, in achieving high competitiveness, the transition of the economy to the path of innovative development is a strategic priority. This requires a change in the model of economic development and radical structural changes in the economy.

Studies have shown that in world practice, tax mechanism is widely used in the introduction of scientific and technical works into production and acceleration of innovative activities. Consistent reforms are also being, carried out in Uzbekistan in recent years to create a favorable tax environment for business entities. However, now it remains to be, seen that the tax system of Uzbekistan does not have modern and effective tax laws aimed at the innovative development of the economy, the existence of which also does not necessarily yield results.

In particular, the practice of providing tax benefits, which is an element of the tax mechanism, causes a number of serious problems, such as providing without clear criteria and transparent justification, a low level of influence of tax benefits on innovation, as well as the lack of a mechanism for evaluating the effectiveness of the results of the benefits provided. In this regard, the need to develop scientific proposals and practical tools aimed at finding solutions to these problems and the effective use of taxation in the innovative development of the economy is due to the relevance of the chosen topic.

2. Literature review.

In modern-day data, there is abundant evidence on the effect of tax incentives on innovation. Most studies focus on the effects of direct tax breaks for innovation, e.g., R&D tax credits, with very few papers considering the indirect effects of general corporate taxation. On the latter topic, Schwellnus and Arnold (2008) report a negative effect of corporate taxation on productivity and investment for firms in manufacturing and services

across many countries. Atanassov and Liu (2020) study US publicly traded firms in the period 1998-2006 and find that corporate tax cuts lead to higher innovation output, as measured by the number of patents and citations per patent, especially for firms that are financially constrained, have smaller collateral assets and weaker corporate governance, and more frequently use tax avoidance strategies. In a study of European MNEs, Karkinsky and Riedel (2012) estimate that for the period 1995-2003, a 1 percentage point increase in the tax rate on royalty income leads to a decrease of -3.5% to -3.8% in the number of patents in a given country.

On R&D-specific incentives, most of the key papers find significant effects. Reviewing the US innovation tax policy in the 1980s, Hall (1993) finds an elasticity of R&D spending to R&D tax credits of around one. These findings appear to hold across OECD countries overall, for which Hall and Van Reenen (2000) find that a dollar in tax credit for R&D stimulates a dollar of additional R&D. Bloom et al. (2002) study the effectiveness of R&D tax credits in OECD countries from 1979 through 1994. They find that reducing the cost of R&D by 10% leads to a 1% increase in R&D in the short run and an almost 10% increase in the long run.

Moreover, Romero-Jordan et al. (2014) use EESE survey data for 1995-2015 to study the impact of two Spanish tax incentives for R&D. They estimate that tax credits exert a positive and significant effect on private R&D investments, but only for large firms. Public grants act very differently: They contribute to R&D investment by alleviating firms' financial constraints through a signal effect, which in turn simplifies access to external debt for firms that obtain the grants.

Dechezlepretre et al. (2016) exploit a change in the UK R&D tax regime in 2008 which raised the size threshold for a more generous SME" tax regime. The authors find that this led to an economically and statistically significant increase in R&D investment and patenting. Furthermore, they find no evidence of a fall in the quality of patents, which supports the idea, that R&D tax credits do not merely cause relabeling of existing spending. Concerning effectiveness, they estimate that the policy stimulated £1.7 of R&D for every £1 of subsidy and that in its absence R&D would be around 10% lower over the period 2006-2011. Their findings are supported, by Guceri and Liu (2019), who estimate an elasticity of -1.6 and 1.3£ of R&D for every pound of forgone corporate tax revenue in the UK for the same period.

Chen et al. (2021) leverage China's "InnoCom" program, which provided large tax cuts for companies investing in R&D over a predetermined threshold. They find that this tax incentive significantly increased R&D investment over the period 2008-2011. However, they are also able to show that expense relabeling reduces the effective R&D investment by one fourth.

Several papers focus on innovation tax policy across US states. Wilson examines R&D tax incentives across US states between 1981 and 2004 and estimates that, on average, a 1 percentage, point increase in a state's effective R&D tax credit rate leads to a long-run increase in R&D spending of 3%-4% inside the state and a decrease of 3%-4% in R&D spending outside of it. A possible interpretation of this high elasticity is that there is ample cross-state R&D and business shifting (Wilson, 2009). Rao (2016) studies the impact of the US federal R&D tax credit over the period 1981-1991 and estimates that a 10% reduction in the user cost of R&D leads to a 19.8% short-run increase in the research intensity-ratio, measured as the ratio of R&D spending to sales. It is specifically, R&D deemed as qualified for the federal tax credit that increases the most. Long-run estimates suggest that the average firm faces adjustment costs when scaling up R&D and increases spending over time. Most of the increase in R&D spending seems to be accounted, for by additional spending on wages and research supplies.

3. Research methodology.

In the process of the study, a number of methods of financial and economic analysis as a methodological basis. In particular, economic, logical, scientific abstraction, comparative analysis, monographic research, study in dynamics, data grouping, induction and deduction, as well as fine statistics and regression analysis. In particular, through regression analysis, an analysis on the impact of tax benefits provided by enterprises for scientific research and innovation activities on their financial performance, in particular, the cost and gross revenue, and determined the level of impact of tax benefits provided to the scientific research and innovation activities of enterprises.

4. Analysis and results.

In recent years, a wide range of work has been, carried out to create suitable conditions for the innovative development of the economy in our country. An example of such work is the establishment of an innovation Technopark in Yashnabad district, Mirzo Ulugbek Innovation Center, as well as a fund to support innovative development and innovation ideas under the Ministry of innovation development of the Republic of Uzbekistan.

Innovation is a concept that characterizes the modern economy, which has made intensive development on account of the achievements in the sectors of Economy, namely industry, agriculture, service, foreign trade and foreign economic relations, science and technology in the management of the economy, the introduction of inventions, know - how, patents.

The innovative economy is primarily a human factor, that is, it ensures the effective use of human potential. Although signs of this type of economy were noticeable even in previous periods, they were not as relevant as they are today. Because global problems that cause serious concern to the world community in subsequent periods, that is, due to a sharp increase in the population, a reduction in raw materials, the need to eliminate environmental crises in the process of industrialization, in turn, force the transition to an innovative economy, which is considered, an important condition for optimizing production.

Innovative development strategy is a necessary factor of Uzbekistan's integration into the world community. Innovation economy is primarily a flexible, dynamic economy in which new companies are formed, old ones are lost, new markets are searched new market parts are mastered.

The innovation economy dictates that financial resources will be sufficient in the first place. The effective operation of banks, the increase in the quality of the services they provide is primarily due to the study of the customer market by the banks and the provision of banking services as a result, of their demand.

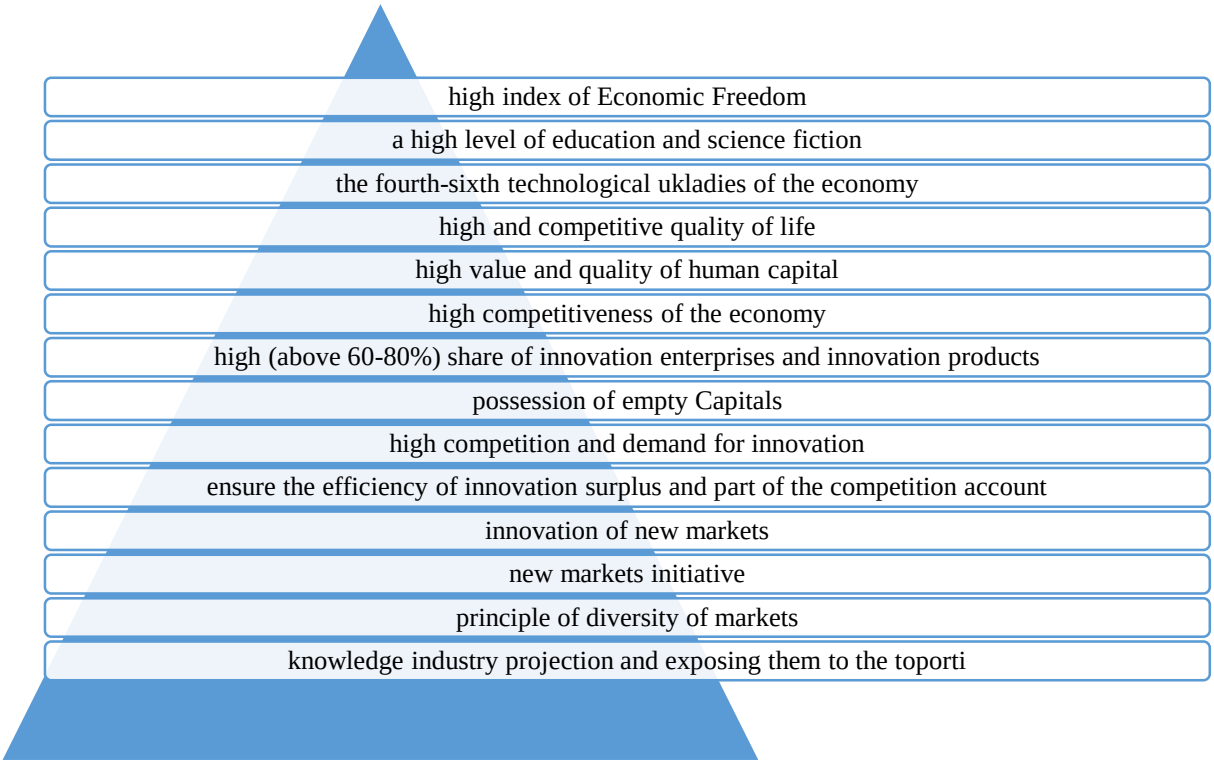
As a sign of innovation economy, we can indicate the following:

1. The presence of a reserve of personnel with high qualifications, able to implement new ideas and events, apply new techniques and technologies;

2. Striving to modernize its activities by constantly introducing new modern techniques and technologies and equipment into its activities;

3. The existence of advanced banking and financial institutions capable of ensuring the continuous provision of financial resources of innovation and investment activities of economic entities, etc.

Innovation economy (knowledge economy, intellectual economy) this is a form of economy based on the flow of innovations, constant technological improvement, production and export of high-tech products with very high added, value as well as technologies themselves.

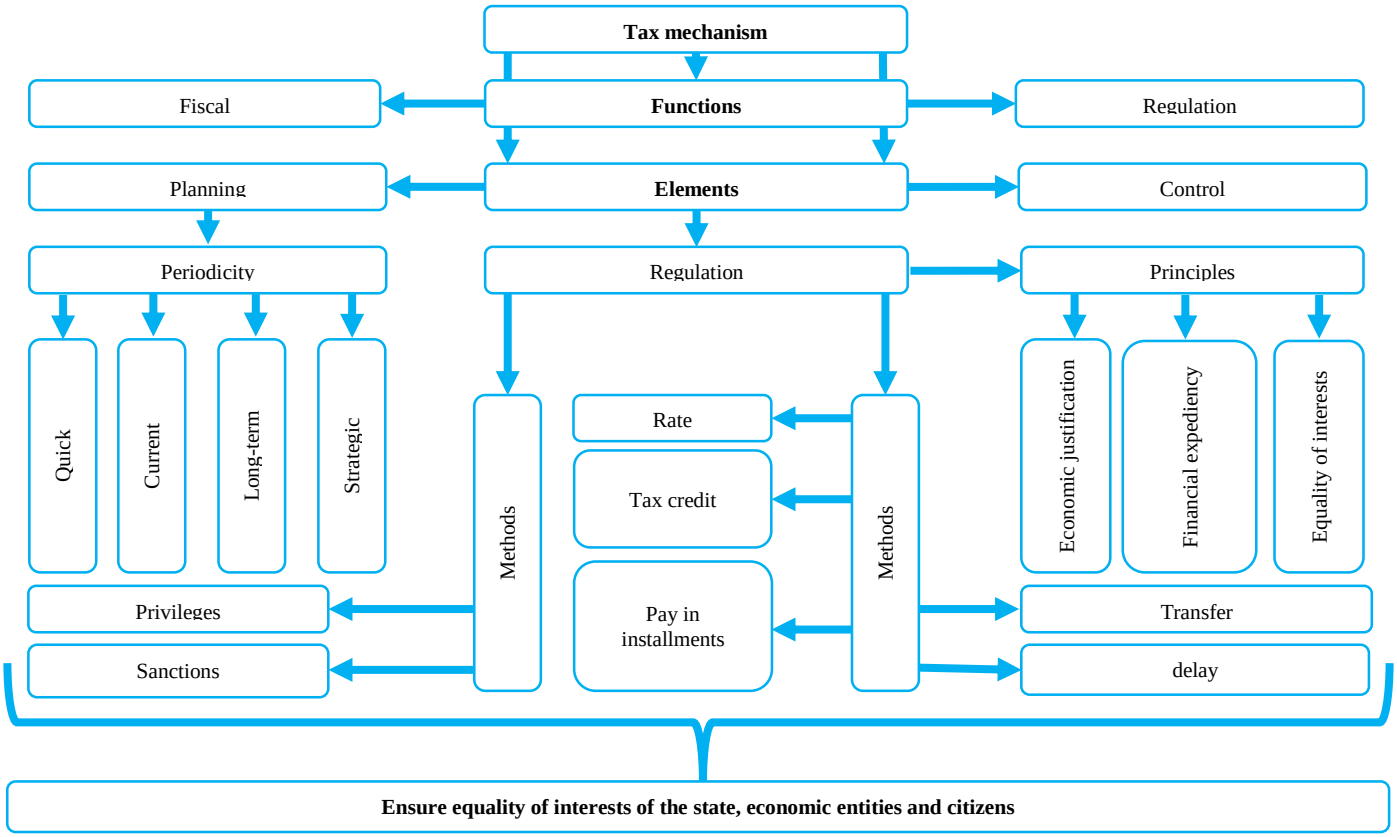


Picture 1. Base indicators of innovation economy (Giyasov, 2019)

As you know, the market economy has the ability to regulate itself. The existence of self-regulation seems to exclude the need for state intervention in the economy. However, to date, the issue of the role of the state in the economy in the form of a market remains controversial. For example, not only is there a "perfect" market by nature and, as a consequence, the need to apply outside regulatory measures, but also is manifested as a prerequisite for the actions of political institutions of the state and society, the emergence of stable economic and market relations.

One of the most important pillars in the effective impact of innovation development on the economy is the tax mechanism. The tax policy is implemented through - the tax mechanism. The tax mechanism is a set of methods and rules of tax relations that ensure the achievement of tax policy objectives. The internal essence of the tax policy is - formed in accordance with the essence of taxes, that is, with two functions: it is fiscal and regulatory, which presupposes a balance between general, corporate and personal interests (Picture 2).

Elements of taxation it is planning, regulation and control. Tax planning is a system of economic based forecasts of tax revenues, taking into account real economic conditions. In terms of planning periodicity is - divided into operational, current, long-term and strategic planning types. The main task of tax planning is an expression from the provision of qualitative and quantitative indicators of the socio-economic programs of the country on basis of the current tax legislation. The state-scale role of tax planning determines the calculation of the volume of tax revenues to the budget based on the analysis of factors such as tax revenues, their growth rates and the increase in the tax base (Giyasov, 2019).



Picture 2. Functions, elements and purpose of tax mechanism (Giyasov, 2019)

Regulation through taxation is a system of economic measures aimed at rapid intervention in production processes. Regulation through taxes is - based on such principles as economic justification, financial expediency and equality of interests. The main tasks of the regulation through taxes are the creation of a common tax environment for the internal and external activities of economic entities, as well as provision of preferential tax conditions for promoting the movement of priority sectors and funds to territorial destinations.

Regulation through taxation is carried - out in different ways and methods. Methods: privileges and sanctions, methods: tax credit, delay, become-become payment, trasferts and others. The tax rate in the regulation of income is one of the important instruments in the implementation of Public Policy. The tax rate determines the percentage of the tax base or part of it, the value of its money is the amount of tax. When the government changes the tax rate, it can regulate the economy through taxation, without making any major changes to the tax legislation. Tax policy achieves a sensuous effect through reduced or stratified tax rates on taxpayers of certain categories in individual regions and sectors.

The tax rate provides for the relative mobility of financial legislation and allows the government to quickly, and efficiently change priorities in revenue regulation policies. The tax rate plays an important role in the implementation of the state policy, allowing the use of various tax rates, such as proportional, progressive, regressive and strict

Progressive and regressive rates are of particular importance, they are an effective tool in regulating not only the level of income of taxpayers of different categories, but also the formation of budgetary revenues of different levels.

The centralized unified tax system has sufficient flexibility in calculating tax rates, which guarantees annual clarification of tax rates and bringing tax policy in line with the real economic situation. In addition to the tax rate, the tax deduction is an effective means of conducting tax policy. This is due, to the fact that individuals and legal entities that meet the established requirements can be exempt from full or partial taxation.

It is difficult to systematize the tax benefits that are - used in the world practice of taxation. The reason can be establishes in any cases in which there is a tendency for the development of entrepreneurial activity of the state and with which it is ready to stimulate or restrict certain sectors of the economy, regions, types of entrepreneurial activity.

While the state provides certain tax benefits to taxpayers, it will primarily FA its impact on economic processes. Forms and methods of granting benefits in any state are constantly evolving. We can quote the following basic forms of tax benefits:

- full or partial exemption from taxation of profit, revenue or other item;
- to be able to win the dice in future periods;
- application of reduced tax rates;
- Tax (full or partial) exemption of income from a particular type of activity or from such activity;
- tax exemption of individual social groups;
- delay or become-become payment of tax payments.

In most cases, those or those tax benefits that are grant are assess only at the stage of its introduction. Then the budget losses coming from it will not be adequately assessed, the economic effect that must be achieved on the given preference efficiency will not be analyzed.

Only one example was the regression analysis on the account of tax benefits provided for scientific research and innovation activities in order to determine the extent to which funds remain at the disposal of enterprises, influence on the volume of products produced by them.

As, a result of this analysis, it is observed that the level of impact of the tax deduction provided on the profit tax in the form of full exemption for scientific research and innovation activities on the cost of enterprises (Figure 2, line 020) is low. That is, we can observe the low level of exposure of the funds that remain at the disposal of the enterprise to the account of the tax deduction provided for the profit tax for scientific research and innovation activities to the volume of expenditure on the production of innovative products (work, services) (Picture 3).

VARIABLES	(1) Fixed effects	(2) Random effects
STP	1.36e-06***	1.36e-06***
	(2.75e-10)	(2.75e-10)
VAT	1.41e-07***	1.41e-07***
	(0)	(0)
Profit		-0.0155
		(4.977)
SSP	3.50e-06***	3.50e-06***
	(1.71e-09)	(1.71e-09)
Propetry		4.15e-07
		(1.50e-06)
SF		-0.000939
		(0.0141)
Constant cost price		13.64***
		(0.170)
Constant lnalpha		2.448***
		(0.0631)
Observations	294	646
Number of nom	100	409

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Picture 3. Results of regression analysis on the impact of tax benefits provided for scientific research and innovation activities on the cost of enterprises (Giyasov, 2020)

Similarly, the impact of the tax deduction provided on the profit tax in the manner of full exemption for scientific research and innovation activities can not be considered positive for the gross income of enterprises. That is, the tax deduction is indicative of the low level of exposure of enterprises to the net proceeds from the sale of products (goods, work and services), as well as the volume of production of products (Picture 4).

Based on the above analysis, we believe that it is necessary not to introduce new tax incentives intended for research and innovation, but to increase the efficiency of existing ones. To do this, it is necessary to abandon the practice of providing tax benefits in the form of full exemption from all types of taxes for an indefinite period for scientific research and innovation and instead apply the following:

- application of reduced tax rates from tax types;
- application of forms of tax credit for payment of profit tax received as a result of commercialization of innovative product, which is considered the result of innovative activity;
- deduction from the taxable profit of expenses made to these types of activities.

VARIABLES	(1) Fixed effects	(2) Random effects
SPT	9.69e-07***	9.69e-07***
	(1.14e-10)	(1.14e-10)
VAT	1.26e-07***	1.26e-07***
	(0)	(0)
Profit		-5.14e-05
		(5.23e-05)
SSP	2.85e-06***	2.85e-06***
	(9.16e-10)	(9.16e-10)
Property		1.82e-07
		(9.49e-07)
Income		-0.00340*
		(0.00199)
SF		-0.00726
		(0.00899)
Constant Gross income		14.60***
		(0.108)
Constant lnalpha		1.543***
		(0.0560)
Observations	362	647
Number of nom	125	409

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Picture 4. Results of regression analysis on the impact of tax benefits provided for scientific research and innovation activities on the gross profit of enterprises (Giyasov, 2020)

At the same time, it is more effective to reduce the tax rate or apply forms of tax credit due to the introduction of the results of scientific research into practice and the receipt of patents. This is based on the information that the results were put into practice by the relevant competent authorities and patents were obtained.

At the same time, it is more effective to reduce the tax rate or apply forms of tax credit by introducing the results of scientific research into practice and obtaining patents. At the

same time, it will receive information from the relevant competent authorities on the implementation of the results in practice and obtaining patents.

In addition, the lack of monitoring of the results of the provision of tax benefits does not allow us to establish certain criteria for the provision of tax benefits, which considered one of the factors that reduce the effectiveness of tax benefits. This does not guarantee the accuracy, openness and transparency of the guidelines for submitting preferences. Another important reason for the low efficiency of tax benefits is that they are issues without any conditions and are not subject to refund. The user of privileges does not assume any obligations to improve the quality of products produced by the enterprise increase the volume or increase the volume of exports.

5. Conclusion.

Tax incentives intended for innovative activities are based on the results achieved, such as gross income, Gross Profit, Net Profit, annual wage fund, average monthly salary, number of workers, growth in export volumes, the financial results of enterprises, that is, it is desirable to be presented on the principle of "benefits-innovation-results".

For scientific research and innovation activities, it is necessary to develop and apply the procedure for the application of the result-oriented investment tax credit instead of the tax benefits provided without any conditions in the form of a full exemption for an indefinite period.

In order to increase the efficiency of the tax deduction provided for by VAT for scientific research and innovation activities in the tax code, it is necessary to apply tax benefits not only from the account of budgetary funds, but also to the scientific research and innovation work carried out from the account of non-budgetary funds and private funds. It is also effective to apply a reduced rate of qqs due to the results of activities instead of a full exemption from qqs for the value of such works.

Monitoring the results of tax benefits the implementation of the tax benefits law in practice serves to ensure the accuracy of the results achieved in the tax benefits account, forecasting the losses in the budget to the account of tax benefits, increasing the efficiency of tax benefits, determining and canceling ineffective tax benefits, and increasing the responsibility of users of tax benefits.

Scientific research and experimental design work carried out from the budget funds will lead to qualitative improvement of the results of scientific research and experimental design activities, as well as intensification of its implementation, due to the introduction of the results of these activities on the income received within the framework of the project.

In order to improve the standard of living of Uzbekistan and the people, it is necessary to solve their problems during the transition to innovative development. An innovative economy that provides all kinds of resources for the well-being of the next generation as an economy through innovation and high quality. Through the analysis of human development indices, it is necessary to take into account the indicators of population growth in Uzbekistan and the trends of resource reduction in harmony with the growth of the economy in today's indicators

The strategy of innovative development is a necessary factor in the integration of Uzbekistan into the world community. An innovative economy is primarily a flexible, dynamic economy in which new companies are being formed, old ones are being lost, new markets are being searched new market segments are being developed.

Stimulating business entities to engage in innovation and investment activities, the production of innovative products considered the main task of any modern state in regulating the economy. In particular, the rapid development of the economy of Uzbekistan, the influx of investments, the rapid introduction of modern innovative technologies, the widespread use of scientific and technological achievements in economic,

social and other spheres is a very important and urgent issue that the state must solve today and in the near future.

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