COUNTRY BRIEFING HUNGARY

Vienna Institute for International Economic Studies

Industrial Policy for a New Growth Model

Country Briefing Hungary

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CENTRAL AND EASTERN EUROPE NEEDS INDUSTRIAL POLICY TO ESCAPE THE MIDDLE INCOME TRAP

Since the early 2000s, the EU member states of Central and Eastern Europe (EU-CEE) have achieved an impressive economic catch-up process. However, the previously successful model of taking over labour-intensive production steps as an 'extended workbench' of Western corporations has reached its limits. Combined with major global challeges such as decarbonisation and digitalisation, this makes it essential for EU-CEE to develop a new, innovation-based economic model. Only then will these states be able to complete the catch up with Western Europe in terms of productivity and living standards. The situation is exacerbated by the economic consequences of the war in Ukraine, such as permanently higher energy prices and higher inflation, which pose grave challenges for the region's external competitiveness.

The problem is that the central technological competences and those parts of production with the highest added value are located in the 'headquarter economies' of Western Europe. Meanwhile, the EU-CEE countries – Poland, Czechia, Slovakia, Hungary, Slovenia, Croatia, Romania, Bulgaria and the three Baltic states – are still extremely specialised in labour-intensive production. They depend heavily on lower labour costs, and this restricts their prospects of catching up economically with Western Europe. A good example of this is the car industry, which is so important for the region as indicated by its high share of value added, jobs and exports, especially in the Visegrád states, Romania and Slovenia.

The study shows that the EU-CEE countries have so far lacked a constructive approach to industrial policy in their development trajectories. They have had a very broad ranging FDI promotion policy, weak investment environments for start-ups, and the activities of state-owned enterprises have not been aligned with the greater development goals. In general, there is a lack of state entrepreneurship in these countries that could nurture promising industries. This is particularly challenging for regions that are lagging behind within countries, as they lack the technical capacities for industrial policy. Due to these factors, the study argues that the EU-CEE countries are struggling to get out of their middle income trap.

Their EU membership offers unique opportunities for industrial policy, but also challenges. On the plus side are access to funds, participation in research networks and the opportunity to shape industrial policy on the EU level. Importantly, industrial policy in the EU has taken a much more prominent role in recent years as shown by initiatives such as the European Chips Act or the Important Projects of Common European Interest (IPCEI). This provides some momentum for the development of industrial policy in the EU-CEE countries. Strict state aid rules and an EU competition policy that gives preference to free market principles, on the other hand, are challenges for an effective industrial policy.

As discussed above, the growth model of the EU-CEE countries must be made fit for the future. Decarbonisation, digitalisation and a shrinking labour force require massive efforts to be made. For countries like Poland, the green transition is a major challenge. This transition can only be managed through huge public investments in green technologies and digitalisation, combined with the right conditions for private enterprise to thrive, to create a fully joined-up approach combining the best of the public and private sectors and academia. This means more money for education, research and development, as well as active labour market policies to manage the transition.

Above all, however, the countries of the region need a strategically oriented industrial policy to support the emergence of more globally competitive companies and to emphasise their own economic strengths. While a true "entrepreneurial state" may be too ambitious for many EU-CEE countries in the coming years, steps in this direction are the way to go. We propose eight steps, that should be taken:

1. Create a national innovation system in each country, bringing together the private sector, universities, key ministries, and business agencies. Within this biotope, new ideas can be developed, tested, and financed. Each country should define which sectors and specialisations are promoted, rather than relying solely on external market forces.

2. Make full use of EU funds and maximise participation in EU research initiatives to advance industrial policy goals. Governments should also get more involved in industrial policy debates at the EU level. Greater participation in the EU's Horizon Europe research funding programme or in the EU's Important Project of Common European Interest (IPCEI) initiative would also be particularly important for the region's technologically less advanced countries.

3. Learn from each other's successes stories to emerge as frontrunners in the digital economy. Estonia is generally well prepared in this area and often raised as an example. However, there are also other positive cases in the region. Romania and Croatia have a particularly high proportion of graduates in ICT, relevant for digitalisation. Czechia shines with its digital start-ups, the Baltic states with the quality of their digital public services. The Visegrád countries and Slovenia have highly digitalised and automated industries.

4. Harmonise investment schemes to attract foreign companies with national industrial policy. Instead of providing blanket support for all investments by foreign companies, national governments should strategically consider which sectors and parts of the value chain they want to attract, and create incentives that maximise the potential for spillovers from foreign giants to domestic firms.

5. Identify and exploit promising niches. Given the lack of technological experience, the establishment of the semiconductor industry in the EU-CEE countries, for example, would not be very promising. However, each country has traditional strengths that should be built upon.

6. Institutional reforms. In some states of the region, the quality of public institutions has declined significantly in recent years. This is worrying. Countries in East Asia have a lot of experience in building adequate institutions for an active industrial policy, even if the framework conditions there partly do not meet Northwest European standards. This experience should be used.

7. Structural change must be cushioned socially in order not to lose the support of the population. EU-CEE countries should aim for a flexible labour market to ease the transition from old to new jobs, but underpin this with extensive retraining programmes and a social safety net that means that workers themselves do not bear the costs of the transition.

8. Each country needs a tailor-made industrial strategy adapted to its specific needs. While the Baltics, for example, are well positioned for the digital transformation, they are struggling above all with distribution problems and a shrinking population. Czechia, Poland or Slovenia are industrially the most advanced, but must make the transition from ‘extended workbench’ to innovative economy. For the less developed parts of EU-CEE such as Bulgaria and Romania, the priority should be on maximising the transfer and knowledge and innovation from big foreign investors.

COUNTRY BRIEFING HUNGARY

COUNTRY OVERVIEW

Hungary is a high-income country with medium-high level of industrialisation. The share of manufacturing is about to shrink below 17 per cent of GDP on account of expanding services and construction activities. The country's industrial competitiveness is about the EU average. Hungary specialises on industrial activities with relatively high sophistication which is the result of deep integration in international value chains generated by FDI. Thanks to the modernization efforts of established companies and the addition of new highly productive manufacturing lines, Hungary is ranked 18th in the EU as regards labour productivity (gross value added per worker employed) in the manufacturing sector, ahead of Czechia and Poland. The best labour productivity ranks have been achieved in the chemical, the pharmaceutical and the automotive industries.

The automotive industry is the largest industry by size. It includes both assembly plants such as Suzuki and Mercedes Benz and component suppliers e. g. the engine factory of Audi. A BMW plant to produce electric cars is under construction in Debrecen with an investment volume of EUR 2bn. The electronics industry is to large extent integrated with the car industry. The subsidiaries of Robert Bosch GmbH produce various electronic car components and operate R&D facilities. CATL from China has started an EUR 7bn investment for producing batteries for cars. The plant will have capacity of 100 gigawatt hours, enough to power more than 1 million cars. The pharma industry has long tradition in Hungary and together with other areas of the life science industry and universities in the field they are leading in R&D among the industries in Hungary. EGIS and Gedeon Richter Plc. are renown for developing new pharmaceutics and biotechnological products.

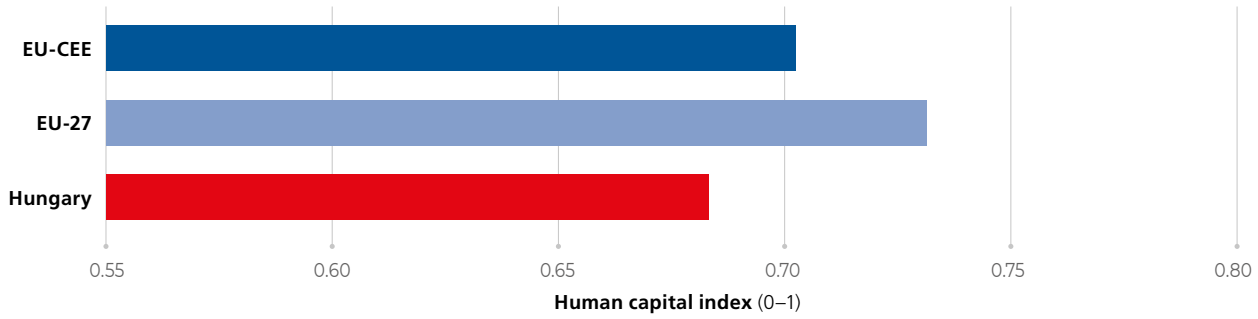
The modern industrial base contributes to better than average quality of the environment. Given its landlocked position and high dependence on Russian energy imports, the issue of energy security represents a particular challenge for future industrial competitiveness. Human capital is a weak point of the country; especially poor health conditions stand out. The HCI value for Hungary decreased from 0.69 to 0.68 between 2010 and 2020 due primarily to worsening quality of education. Hungary stands out with very poor performance in governance transition by which it is the last among the EU members. Transparency, corruption and rule of law have major shortcomings. In this context, the government passed legislative improvements to unblock the Multiannual Financial Framework 2021–2027 and the Next Generation EU funds at the end of 2022, but future disbursement will depend on making commitments work and on fulfilling additional conditions.

Industrial development – I

	Competitive industrial performance index	Manufacturing value added (MVA) (% of GDP)	Medium- and high-tech MVA (% of total MVA)
Hungary	0.13	18	53
EU-27	0.14	15	41
EU-CEE	0.10	17	38

Note: 2020 values. The CIP index assesses the strength and complexity of an economy's industry, with Germany claiming the maximum score in 2020 at 0.42.
Source: UNIDO

Human capital quality



Note: A Human Capital Index of 0.75 means a child born today will be expected to be 75 percent as productive at the age of 18 as they would against a scenario of having enjoyed complete education and full health.
Source: World Bank

INDUSTRIAL COMPETITIVENESS – SWOT

Strengths

- With tax revenues amounting to 37 per cent of GDP and eligible EU funding of 4–6 per cent of GDP annually, the government has substantial potential resources to spend on R&D, green transition and industrial modernisation in the coming years.
- Attractive conditions including state subsidies to manufacturing FDI and embeddedness in global value chains enable the access to state-of-the-art technologies and know-how. The relatively modern industrial base limits carbon emission.
- Progress has been made in digital economy; the DESI score is 44 against the EU average of 52. The internet infrastructure is advanced allowing the use of digital services across the country.

Weaknesses

- Inadequate economic policy measures, increasing controversy with EU partners and slow adaptation to the new international environment has manoeuvred the country into a situation where fiscal consolidation and energy security overrules long-term development goals. Currency instability, high current account and fiscal deficits prompt ad-hoc economic policy measures which reduced transparency and accountability; increasing instability of profit expectations hinder investments.
- Innovation expenditures have increased in recent years; however, the efficiency of the innovation system is still low, only 57 per cent of the EU average.
- Big discrepancy exists between large companies and SMEs in digital technology integration. Business R&D capacities are mostly concentrated in foreign-owned companies while government R&D spending stagnates.
- General shortage of ICT specialists and engineers hinder the utilisation of advanced technologies. The current education system is unprepared, its financial means are inadequate to increase ICT literacy and provide high quality workforce.
- Public investments do not prioritize industrial modernization and green transition. Sports infrastructure investments have enjoyed priority over other public investments including energy saving.

Opportunities

- Advanced clustering in the automotive, electronics and pharmaceutical industries can attract more capital, technology and R&D.
- Centralised state ownership in utilities allow the government, at least in theory, to implement large-scale, coordinated investment programmes to improve energy efficiency and waste management.
- More green energy could be generated by supporting the utilization of wind energy resources.
- Improving ICT literacy is in demand and could be developed with adequate training. The country participates in related EU programmes which give access to knowledge and financial support.

Threats

- If EU funding is not arriving on time due the government's reluctance to meet necessary conditionalities, the funding of development programmes gets in danger.
- The recently imposed extra taxes drain the windfall profits not only of energy companies and banks but also of the pharma industry and cement manufacturing which will block their modernisation.
- Green transition suffers delay if the current short-term measures remain in effect for a longer period. Currently the government supports energy intensive industries suffering from high energy prices instead of energy saving programmes. Tight government control and low regulated tariffs in waste management and other utilities discourage investments and energy saving.
- Digital education, business support and R&D programmes cover all necessary areas but may remain on paper if they do get priority in the curricula of the education system and in government policy.

INDUSTRIAL POLICIES AND STRUCTURAL REFORM DEVELOPMENTS

FDI promotion and value chain upgrading

- Economic and FDI policy aim, since 2017, to change Hungary from a „manufacturing hub" to an „advanced manufacturing & innovation centre". New forms of cash incentives and tax grants were introduced to en-

hance corporate R&D activities and technology-intensive investments. Investors in new production capacities are eligible for cash grants to cover half of the training costs for employees. Individual 'VIP support packages' were introduced for the most significant projects which gives priority treatment by government offices. Contractual research services have also become eligible for cash grants benefiting R&D projects and the country attracted several digital service centres. The government's aim is to maintain the car industry in the electric car age by attracting battery manufacturers. Foreign policy has targeted Asian investors, mainly from China and South Korea.

– The government initiates and promotes national ownership in all other economic sectors than manufacturing. Support is provided to national investors to overtake foreign owned businesses in banking, retail, telecommunication, etc. Companies in these sectors, still to large extent foreign owned, are subject to surtaxes which drain their profits and may prompt them to leave. National investors concentrate in those sectors which serve the domestic market and can benefit from public procurement. The FDI screening mechanism is stricter than the EU recommendations and enables the government to hinder foreign takeovers of assets put up for sale and initiate national take-over.
– The most recently identified priority of industrial policy is military industry. New production facilities involve FDI or other forms of international cooperation.

New technologies, digitalization, innovation

– The 2014–2020 industrial policy (Irinyi-plan) set the target to expand the share of industry in the Hungarian economy. Re-industrialisation could not be realised because the progress of industry depended more on its service content than on new production capacities. But the broader aim of increasing the employment rate and attracting FDI could be attained. Efficiency and competitiveness overtook as main priorities more recently, but the overall political and institutional adjustment is missing. It is not the government but the National Bank which came forward with a comprehensive competitiveness programme.[1]
– Longer-term government programmes are financed mainly from EU funds. The Economic Development and Innovation Operational Programme (EDIOP) is Hungary's biggest programme focussing on investments in SMEs with a total allocation of EUR 8.8 billion over seven years. Its scope was expanded in 2020 to fight the negative impacts of Covid.
– The Digital Workforce Program aims to digitally prepare current employees throughout sectors and occupations and increase the number of professionals engaged in the ICT sector in Hungary. The Digital Success Programme 2030 is an integrated programme to increase the level of digitalisation across industries, public services and education.
– Many of the objectives of a new industrial policy enjoying EU support have been put into brackets by the recent protectionist policies which aim at maintaining the current level of economic performance of SMEs with preferential credits and government grants.

Green transformation of industry

– The volume of greenhouse gas emissions in Hungary per employed person stood at 11 tonnes in 2020, below the European Union average of 13.6 tonnes. The country reduced emissions since 2010 by 34%, thus the government sees no problem in reaching the 55% target by 2030 in accordance with EU law. The greening target faces problems mainly in transportation and households, not in the industry. On the European Eco-innovation scoreboard Hungary ranked 27th in 2019. Investments in green transformation are inadequate. Environmental resource management activities achieve low results in an over centralized management system applying lower than cost covering tariffs.
– The share of renewables in total energy consumption stagnates at around 14% since 2010. Progress in energy generation greening has been achieved mainly on account of solar energy. The government considers nuclear power the most important source of electricity and expands capacities relying on Russian investments with risky outcome.

COUNTRY-SPECIFIC RECOMMENDATIONS

In the main part of the study, we identify Hungary as one of the most industrialised countries of the region, but as one falling behind the most developed EU-CEE peers in multiple aspects. Therefore, we suggested that the core focus ought to be on leveraging the wide presence of MNEs to create deeper linkages with the domestic economy, as well as on diversifying the sectoral and functional structure. Specifically, we propose the following policy priorities:

– **Re-define goals and means of an entrepreneurial state in a broad social and economic dialogue.** The party in power for twelve years controls all resources and decision-making power to run a developmental state it has failed to support functional upgrading and technological progress. This approach contrasts itself with the policy recommendation 5.1 of the main report, whereby we emphasise that an entrepreneurial state needs to take a collaborative approach to policymaking. This entails involving a plethora of stakeholders and building an effective feedback loop for new ideas and markets to be financed, tested, assessed and adjusted to be developed further. In this sense, following the mainstream European policy trajectory would increase efficiency and support modernisation. Normative rules should take priority over discretionary interventions.

– **Support more competitive markets, and faster adoption of new technologies, to accelerate technological upgrading and the digital transformation of the economy.** Suppress rent-seeking, encour-

1 https://www.mnb.hu/en/publications/reports/competitiveness-programme/competitiveness-programme-in-330-points

age the flow of domestic capital from local monopolies into internationally competitive activities. The institutional backsliding witnessed over recent years augments the risk of costly failed policy interventions. In this sense, policy recommendation 5.6 of the main report, which stresses institutional improvement as a vital pre-requisite for a successful national industrial policy and a National Innovation System, proves particularly relevant in the case of Hungary. Furthermore, given relatively large disparities within the country, improving institutional capacities at the sub-national level also proves key for increasing the effectiveness of Smart Specialisation Strategies.

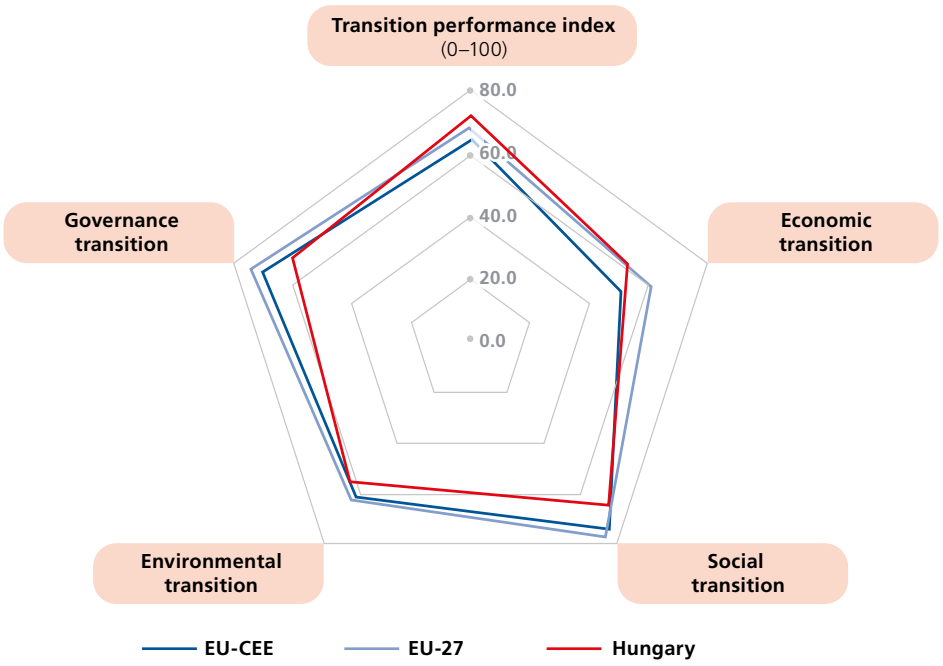
– **Increase the budget for education and healthcare to improve the availability, skills and mobility of human capital.** In education, the curricula need modernisation to match digital age requirements. To this end, Hungary would benefit largely from unlocking and effectively utilising EU financial inflows. At the same time, the linkages and synergies between higher education, research institutions and corporate R&D must strengthen. The integration process in life sciences and pharmacology may give the example.

Industrial development – II

Sector	% of manufacturing employment
Motor vehicles, trailers and semi-trailers	12,8
Food products	12,3
Fabricated metal products, exc. machinery and equipment	10,8
Rubber and plastic products	7,4
Machinery and equipment n.e.c.	7,2
Electrical equipment	7,1
Computer, electronic and optical products	6,5

Note: 2018 values.
Source: Eurostat Structural Business Statistics.

Transition performance scorecard



Note: 2020 values. The TPI scores countries based on 4 pillars of a transition to a more sustainable, inclusive and resilient economy.
Source: European Commission

Hungary

COUNTRY OVERVIEW

Hungary has a medium-high level of industrialisation and is deeply integrated into international value chains generated by FDI.

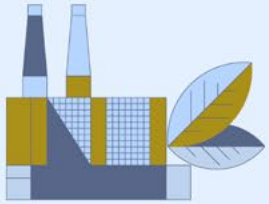
The automotive industry is the largest industry. Pharma industry has a long tradition and is leading in R&D efforts.

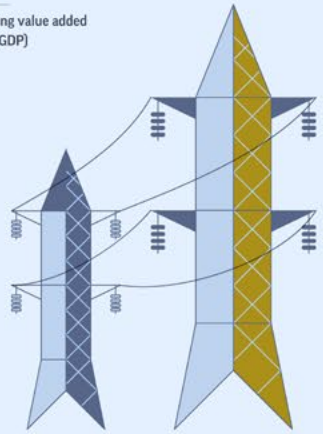
Given its landlocked position and high dependence on Russian energy imports, energy security represents a challenge for future industrial competitiveness.

INDUSTRIAL DEVELOPMENT

	Competitive industrial performance index	Manufacturing value added (MVA) (% of GDP)
HUNGARY	0.13	18%
EU-27	0.14	15%
EU-CEE	0.10	17%

Note: 2020 values.
The CIP index assesses the strength and complexity of an economy's industry, with Germany claiming the maximum score in 2020 at 0.42.
Source: UNIDO





INDUSTRIAL COMPETITIVENESS – SWOT

STRENGTHS

- Substantial potential government resources to spend on R&D, green transition and industrial modernisation.
- Attractive conditions enable the access to state-of-the-art technologies and know-how.
- Limited carbon emissions thanks to the relatively modern industrial base.
- Progress in the digital economy; advanced internet infrastructure allows the use of digital services across the country.

WEAKNESSES

- Inadequate economic policy measures and effects of controversy with EU partners hurt long-term development goals.
- Low efficiency of the innovation system and stagnating government R&D spending.
- Big discrepancy between MNE and domestic SMEs in digital technology integration.
- General shortage of ICT specialists and engineers.
- Public investments do not prioritize industrial modernization and green transition.

OPPORTUNITIES

- Advanced clustering in the automotive, electronics and pharmaceutical industries can attract more capital, technology and R&D.
- State ownership in utilities would allow implementation of large-scale, coordinated investment programmes to improve energy efficiency and waste management.
- Space and demand for improving ICT literacy exists and country takes part in related EU programmes.

THREATS

- With lack of EU funding various development programmes are at risk.
- Extra taxes drain on windfall profits could negatively affect not only of energy companies and banks but also of the modernization of pharma industry and cement manufacturing.
- Delayed green transition due to financial government support for energy intensive industries and regulations that discourage investments and energy saving in some sectors.
- Digital education, business support and R&D programmes may remain on paper.

WHAT SHOULD BE DONE?

COUNTRY-SPECIFIC RECOMMENDATIONS

- **Leverage the presence of MNEs to create deeper linkages with the domestic economy and diversify the sectoral and functional structure.**
- **Re-define goals and means of an entrepreneurial state in a broad social and economic dialogue,** prioritizing normative rules over discretionary interventions.
- **Support more competitive markets, and faster adoption of new technologies, to accelerate technological upgrading and the digital transformation of the economy.**
- **Suppress rent-seeking, encourage the flow of domestic capital from local monopolies into internationally competitive activities.**
- **Increase the budget for education and healthcare to improve the availability, skills and mobility of human capital.**
- **Strengthen** the linkages between higher education, research institutions and corporate R&D.

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Industrial Policy for a New Growth Model: A Toolbox for EU-CEE Countries

This country briefing is a short summary of a much broader study that deals with the perspectives of industrial policies in Central Eastern and Southern Eastern Europe and the question how these countries can avoid to get stuck in a middle-income trap. The study has been authored by a team of experts from the Vienna Institute for International Economic Studies on behalf of Friedrich-Ebert-Stiftung.

The study argues that the EU-CEE countries have so far lacked a systematic approach to industrial policy in their development trajectories. They have had a very broad ranging FDI promotion policy and weak investment environments for start-ups, while the activities of state-owned enterprises have not been aligned with the greater development goals.

Hence, the growth model of the EU-CEE countries must be made fit for the future. Decarbonisation, digitalisation and a shrinking labour force require massive efforts to be made. This transition can only be managed through public investments in green technologies and digitalisation, education and infrastructure, combined with the right conditions for private enterprise to thrive.

The study includes eleven country profiles that analyse the economic and industrial structures for their strengths and weaknesses and identify possible courses of action for an active industrial policy.

The full study can be found here:
http://library.fes.de/pdf-files/bueros/budapest/20260.pdf

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