



THE PERFORMANCE OF CONSUMER ELECTRONICS INDUSTRY IN INDIA'S GDP

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ABSTRACT

The Consumer Electronics Industry allocate in India's GDP has been broadly studied. The present revision based on secondary sources. The Consumer Electronics sector has witnessed the highest distribute in the total production of electronic goods in India. It also examined the trends in Indian Consumer Electronics Production and Exports and share in India's GDP. The growth rate of Consumer Electronics production is the uppermost in the year 2017-18 i.e., 36.32 percent and the lowest growth rate is recorded in the year 2020-21 i.e.-13.6 per cent. The share of Consumer Electronics export in total export as fine as its involvement to GDP has gradually increased over the years. The contribution of Consumer Electronics production for household use in GDP of India is increasing from the years 2011-12 to 2017-18 i.e., 0.379 percent to 0.621 percent; even then there are lot of variations in the share of Consumer Electronics household use in GDP. The government, in an effort to support manufacture of Consumer Electronics in India has altered the tariff structure significantly. It has been practical that the IT sector is not only contributes significantly to export earnings and GDP but also emerges as a major foundation of employment generation in the country.

KEY WORDS: Electronic Hardware, Consumer Electronics, Production, Production for Domestic Use, Exports and GDP.

INTRODUCTION

Gross domestic product (GDP) is the financial value of all finished goods and services made within a country during an exact period. GDP measures the financial value of goods and services produced inside a country's borders in a specified time period, regularly a quarter or a year. Gross Domestic Product is good appraise for an economy and with expansion in research and quality of data, statisticians and governments are trying to find out process to strengthen GDP and construct it a comprehensive indicator of National Income. GDP is significant because it gives information about the size of the economy and how a nation is performing. When the economy is crashing and GDP is increasing, there comes a point when inflationary pressures build up speedily as labour and fruitful capacity near full utilization. This leads the central bank to originate a cycle of tighter monetary policy to cool down the overheating economy and quell inflation.

India is among the fastest-growing country in the world and has been witnessing rapid urbanization and growth in the throwaway income of its citizens. This has aided growth in the utilization of consumer electronics products in the region. The consumer electronics sector has witnessed the highest contributes to the total production of electronic goods in India. India is accepted to appear as a potential future manufacturing hub for the region, provided the government shows sufficient support and focus towards this sector. The India consumer electronics market is likely to reach USD 118.4 billion in 2025.

OBJECTIVES

1. To evaluate the trends in Electronic Hardware production, Domestic Use, Exports of India and share in India's GDP.
2. To examine the Consumer Electronics Production in GDP of India.
3. To analyse the Consumer Electronics Exports and Share in GDP of India.
4. To examine the Consumer Electronics Production for Domestic use in India's GDP.

DATA SOURCES AND METHODOLOGY

The secondary data is used to investigate contribution of information technology industry in GDP of India. The main sources of secondary information are Statistical Year Books of Electronic and Computer Software Export Promotion Council of India, Ministry of Electronics and Information Technology and National Association of Software and Services Company (NASSCOM) Reports. Statistical tools like averages, percentages, growth rates, Average Annual Growth rate and Compound Annual Growth Rate are calculated to analyse the data.

ROLE OF ELECTRONIC HARDWARE INDUSTRY IN INDIA'S GDP

The Electronic Hardware Industry has evolved to offer numerous innovative products for the handiness of the mankind. Electronics devices have become integral part of human life and are playing a major role in their everyday routine activities. The electronics hardware industry is recognized as one of the greatest growing segment in terms of international trade. The Role of Electronics and Hardware Industry in India GDP is to certify the growth of the other industries and donate to the growth of the Indian economy. The Electronics and Hardware Industry depends on the mechanized of the semiconductors. Role of Electronic Hardware Industry in India GDP is critical for the development of the IT and ITES sector in India. Electronic hardware is major components of several industrial sectors such as Consumer Electronics, Telecom Equipment, Instrument Office, Medical Equipments, Electronic Components, and Computer Hardware etc.

Table -1

Electronic Hardware Production, Growth Rate and Share in GDP of India (Rs. Crore)

Years	Electronic Hardware Production	Growth Rate	GDP of India	Share of Electronic Hardware Production in GDP (Percent)
2011-12	143300	--	8736329	1.64
2012-13	177500	23.87	9213017	1.93
2013-14	196103	10.48	9801370	2.0
2014-15	199294	1.63	10527674	1.89
2015-16	229100	14.96	11386145	2.01
2016-17	301800	31.73	12196006	2.47
2017-18	405525	34.37	13010843	3.12
2018-19	468006	15.41	14003316	3.34
2019-20	546500	16.77	14569268	3.75
2020-21	507760	-7.09	13512740	3.76
	CAGR=15.09 %	AAGR=15.79 %		

Source: Electronics and Software Export Promotion Council, Statistical Year book, various issues.

Electronic Hardware production and growth rate and share on GDP of India has been shown in table 1. The table reveals that the production of Electronic hardware has increased from 2011-12 to 2019-20 i.e., Rs. 143300 crore to Rs. 546500 crore except the year 2020-21 when it was Rs. 507760 crore. The production of hardware has been increased due to the increased demand from households and businesses and also due to the increased purchases by industry verticals. The share of Electronic hardware in GDP of India was low i.e., less than four percent. The share of electronic hardware in gross domestic product (GDP) of India was 1.64 percent in 2011-12 and increased to 2 percent in 2013-14, while after that its share has decreased to 1.89 percent in 2014-15. The growth rate of hardware production was the highest in the year 2017-18 i.e., 34.37 percent and after that decreased to -7.09 percent in 2020-21.

Table -2

Production of Electronic Hardware for Domestic Use, Growth Rate and Share in GDP of India (Rs. Crore)

Years	Electronic Hardware Domestic Use	Growth Rate	GDP of India	Share of Electronic Hardware Domestic Use in GDP (%)
2011-12	100673	---	8736329	1.15
2012-13	133500	32.61	9213017	1.45
2013-14	149803	12.21	9801370	1.53
2014-15	162538	8.50	10527674	1.54
2015-16	191772	17.99	11386145	1.68

2016-17	263673	37.49	12196006	2.16
2017-18	366385	38.95	13010843	2.82
2018-19	409050	11.64	14003316	2.92
2019-20	466479	14.04	14569268	3.20
2020-21	429133	-8.01	13512740	3.18
	CAGR=17.48 %	AAGR=18.38 %		

Source: Electronics and Software Export Promotion Council, Statistical Year book, various issues.

The table 2 shows the Electronic hardware production for domestic use, growth rate and share in GDP of India. The table shows the production of Electronic hardware for domestic use was Rs. 100673 crore in 2011-12 and increased to Rs. 466479 crore in 2019-20. It decreased in the next year 2020-21 to Rs. 429133. It's clear from the table that the contribution of Electronic hardware domestic use in GDP of India is increasing from the years 2011-12 to 2020-21 i.e., 1.15 percent to 3.18 per cent, even then there are lot of variations in the share of Electronic hardware production for domestic use in GDP. The growth rate of Electronic hardware production for domestic use was the highest in the year 2017-18 i.e., 38.95 percent and after that decreased to -8.01 percent in 2020-21. The Average Annual Growth rate is 18.38 % and Compound Annual Growth rate is 17.48%.

CONSUMER ELECTRONICS INDUSTRY IN INDIA

Consumer Electronics industry is one of the major component in Electronic Hardware industry. The consumer segment in recent years has gained important popularity in the selling product categories in the retail industry. Consumer electronics are the electronic devices that are in use for daily use for the principle of entertainment and communications. The consumer electronics segment is categorized into different products which include Mobile Devices, Wearable, TV Sets, Laptops, and White goods. The consumer electronics segment in India reached a value of \$12 billion in 2021, witnessing a important increase of 15% from the earlier year this was mostly on account of growth in the retail product categories as the world saw a restoration in the overall demand post-pandemic Covid-19.

Growth in the Indian market for consumer electronics can be accredited to an increase in demand from households, altering lifestyles of individuals, easier admittance to credit, and growing disposable incomes. Intentional decline by the Government in the import bill, coupled with government and corporate expenditure, is anticipated to harmonize the positive demand in this market. The India consumer electronics sector has concerned several strong investments in the form of merger & attainment policies practiced by key participants of the global market and other FDI inflows. India's consumer electronics market is experiencing a rush in demand for reasonable smart phones due to rising internet penetration and digital literacy.

Some prominent players in the India consumer electronics market include:

- Samsung Electronics Co., Ltd.
- LG Electronics, Inc.
- Godrej Appliances
- Sony Corporation
- Mitsubishi Electric Corporation
- Panasonic Corporation
- Haier Consumer Electronics Group
- Bajaj Electricals Ltd.
- Hitachi Ltd.
- Toshiba Corporation
- Whirlpool Corporation

Table -3

Electronic Hardware Exports, Growth Rate and Share in GDP of India (Rs. Crore)

Years	Electronic Hardware Exports	Growth Rate	GDP of India	Share of Electronic Hardware Exports in GDP (%)
2011-12	42627	--	8736329	0.49
2012-13	44000	3.22	9213017	0.48
2013-14	46300	5.23	9801370	0.47
2014-15	36756	-21	10527674	0.35
2015-16	37328	1.56	11386145	0.33
2016-17	38127	2.14	12196006	0.31
2017-18	39140	2.66	13010843	0.3
2018-19	58956	50.63	14003316	0.42
2019-20	80021	35.73	14569268	0.55
2020-21	78627	-1.74	13512740	0.58
	CAGR=7.04 %	AAGR=8.71 %		

Source: Electronics and Software Export Promotion Council, Statistical Year book, various issues.

The table 3 shows the Electronic hardware production for exports, growth rate and share in GDP of India. The table shows the production of Electronic hardware for exports was Rs. 42627 crore in 2011-12 and increased to Rs.46300 crore in 2013-14. It decreased in the year 2014-15 to Rs. 36756 crore and in 2016-17 again increased to Rs. 38127 crore, while in the next years, it further increased to Rs.39140 crore to Rs. 78627 crore in 2015-16. It's clear from the table that the contribution of Electronic hardware exports in GDP of India is increasing from the years 2011-12 to 2020-21 i.e., 0.49 percent to 0.58 per cent, even then there are lot of variations in the share of Electronic hardware exports in GDP. Firstly, the contribution of exports in GDP is

decreased from the 0.49 percent in 2011-12 to 0.42 percent in 2018-19. An increase in GDP has been noticed in the year 2019-20 to 2020-21, i.e., 0.55 percent to 0.58 percent. The growth rate of hardware exports was the highest in the year 2018-19 i.e., 50.63 percent and after that decreased to -1.74 percent in 2020-21.

Table-4 Consumer Electronics Production, Growth Rate and Share in GDP of India (Rs. Crore)

Years	GDP of India	IT Production	Electronic Hardware Production	Consumer Electronics Production	Consumer Electronics Growth rate	Share of Consumer Electronics Production in GDP (%)
1	2	3	4	5	6	7
2011-12	8736329	561565 (6.11)	143300 (23.94)	34300	---	0.393
2012-13	9213017	687200 (6.00)	177500 (23.21)	41200	20.12	0.447
2013-14	9801370	818326 (6.66)	196103 (27.77)	54463	32.19	0.556
2014-15	10527674	924003 (6.04)	199294 (28.00)	55806	2.466	0.530
2015-16	11386145	1073276 (5.21)	229100 (24.40)	55900	0.168	0.491
2016-17	12196006	1207109 (5.05)	301800 (20.21)	61000	9.123	0.500
2017-18	13010843	1349864 (6.16)	405525 (20.51)	83154	36.32	0.639
2018-19	14003316	1607702 (4.60)	468006 (15.81)	74000	-11	0.528
2019-20	14569268	1823500 (4.44)	546500 (14.82)	81000	9.459	0.556
2020-21	13512740	1919592 (3.65)	507760 (13.79)	70000	-13.6	0.518
				CAGR=8.25 %	AAGR=9.47 %	

Source: Electronics and Software Export Promotion Council, Statistical Year book, various issues.

Note:

- Figures in brackets for 3 column is proportions of consumer electronics production s in IT production
- Figures in brackets for 4 column is proportions of production of consumer electronics in Electronic Hardware Production

The table 4 depicted the Consumer Electronics production, growth rate and share in GDP of India. The table shows the production of Consumer Electronics was Rs. 34300 crore in 2011-12 and increased to Rs.83154

crore in 2017-18. It decreased in the year 2018-19 to Rs. 74000 crore and in 2019-20 again increased to Rs. 8100 crore, while in the next year, it further decreased to Rs.70000 crore in 2020-21. It's clear from the table that the contribution of Consumer Electronics production in GDP of India is increasing from the years 2011-12 to 2017-18 i.e., 0.393 percent to 0.639 per cent, even then there are lot of variations in the share of Consumer Electronics production in GDP. Firstly, the contribution of production in GDP is decreased from the 0.639 percent in 2017-18 to 0.518 percent in 2020-21. The growth rate of Consumer Electronics production is the highest in the year 2017-18 i.e., 36.32 percent and the lowest growth rate is recorded in the year 2020-21 i.e., -13.6. On an average Annual Growth Rate is 9.47 per cent and Compound Annual Growth Rate is 8.25 per cent.

The table 5 shows the Consumer Electronics production for domestic use, growth rate and share in GDP of India. The table reveals the domestic use of Consumer Electronics was Rs. 33073 crore in 2011-12 and increased to Rs. 80820 crore in 2017-18. It decreased in the next three years from Rs.70849 crore to Rs. 64949crore It's clear from the table that the contribution of Consumer Electronics production for domestic use in GDP of India is increasing from the years 2011-12 to 2017-18 i.e., 0.379 percent to 0.621 per cent, even then there are lot of variations in the share of Consumer Electronics domestic use in GDP. Firstly, the contribution of production in GDP is decreased from the 0.621 percent in 2017-18 to 0.481 percent in 2020-21. The growth rate of Consumer Electronics production for domestic use is the highest in the year 2017-18 i.e., 41.4 percent and the lowest growth rate is recorded in the year 2020-21 i.e., -16.04. On an average Annual Growth Rate is 9.09 per cent and Compound Annual Growth Rate is 7.79 per cent.

The table 6 indicates the Consumer Electronics Exports, growth rate and share in GDP of India. The table shows the Exports of Consumer Electronics was Rs. 1227 crore in 2011-12 and increased to Rs. 5051 crore in 2013-14. It decreased in the year 2014-15 to Rs. 4848 crore to Rs. 3640 crore in 2019-20, while in the next year, it further increased to Rs.5051 crore in 2020-21. It's clear from the table that the contribution of Consumer Electronics exports in GDP of India is increasing from the years 2011-12 to 2013-14 i.e., 0.014 percent to 0.52 per cent, even then there are lot of variations in the share of Consumer Electronics production in GDP. Firstly, the contribution of electronics in GDP is decreased from the 0.052 percent in 2017-18 to 0.037 percent in 2020-21. The growth rate of Consumer Electronics Exports is the highest in the year 2013-14 i.e., 215.69 percent and the lowest growth rate is recorded in the year 2017-18i.e., -39.27. On an average Annual Growth Rate is 30.01per cent and Compound Annual Growth Rate is 17.02 per cent.

Figure 1

The Percentage Share of Consumer Electronics Production, Domestic Use, Exports in India's GDP

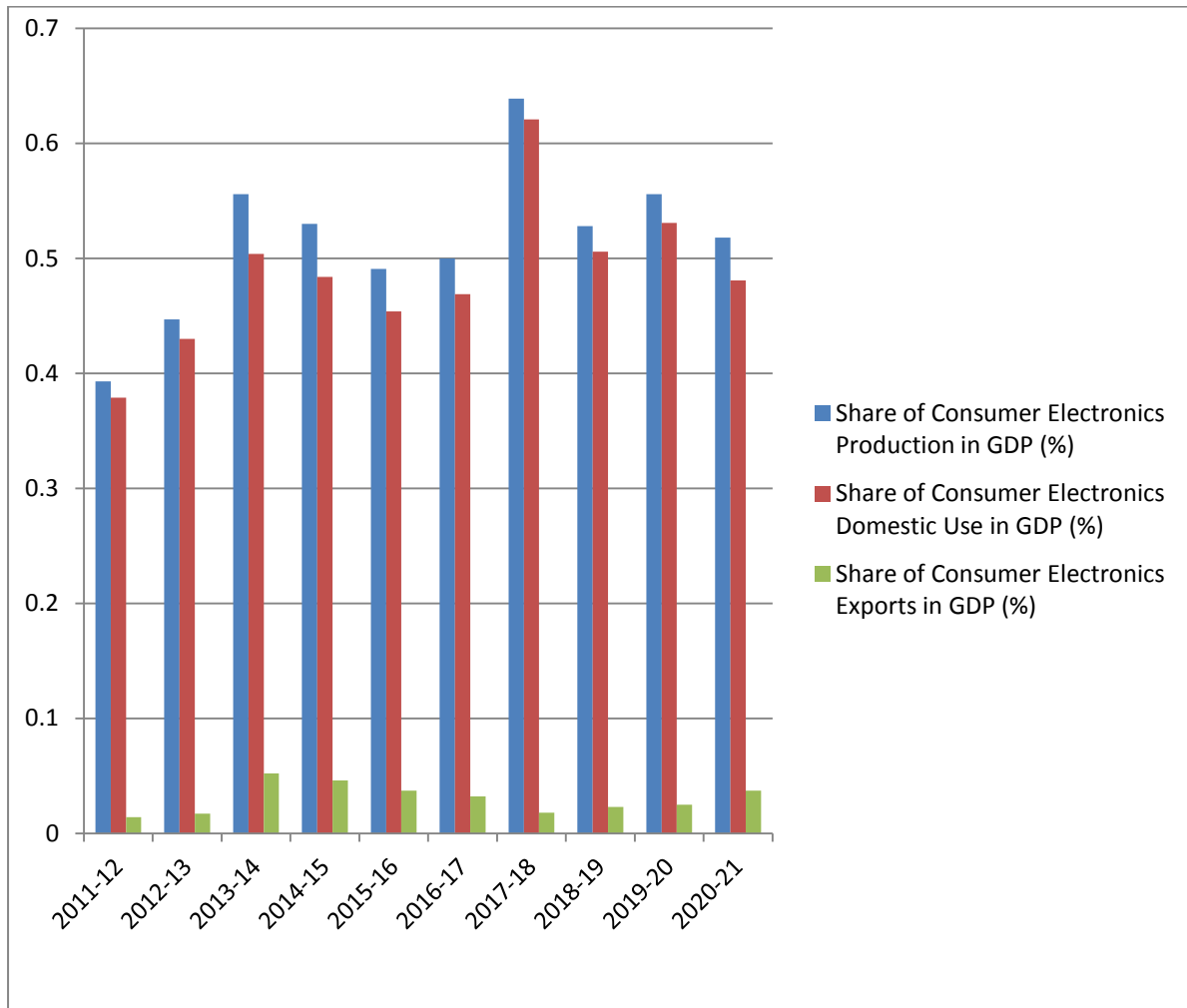


Table-5

Production of Consumer Electronics for Domestic Use, Growth Rate and Share in GDP of India (Rs. Crore)

Years	GDP of India	IT Production for Domestic Use	Electronic Hardware Production for Domestic Use	Consumer Electronics Domestic Use	Growth rate	Share of Consumer Electronics Domestic Use in GDP (%)
1	23	3	4	5	6	7
2011-12	8736329	192438 (17.19)	100673 (32.85)	33073	---	0.379
2012-13	9213017	238200 (16.62)	133500 (29.66)	39600	19.74	0.43
2013-14	9801370	264526 (18.68)	149803 (32.98)	49412	24.78	0.504
2014-15	10527674	293578 (17.36)	162538 (31.35)	50958	3.129	0.484
2015-16	11386145	335413 (15.40)	191772 (26.93)	51648	1.354	0.454
2016-17	12196006	424617 (13.46)	263673 (21.68)	57157	10.67	0.469
2017-18	13010843	537204 (15.04)	366385 (22.06)	80820	41.4	0.621
2018-19	14003316	604826 (11.71)	409050 (17.32)	70849	-12.34	0.506
2019-20	14569268	736415 (10.50)	466479 (16.58)	77360	9.19	0.531
2020-21	13512740	755965 (8.59)	429133 (15.13)	64949	-16.04	0.481
				CAGR=7.79 %	AAGR=9.09 %	

Source: Electronics and Software Export Promotion Council, Statistical Year book, various issues.

Note:

➤ Figures in brackets for 3 column is proportions of consumer electronics production for domestic use in IT domestic use.

Figures in brackets for 4 column is proportions of domestic use of consumer electronics in Electronic Hardware for domestic use.

Table-6

Consumer Electronics Exports, Growth Rate and Share in GDP of India

(Rs. Crore)

Years	GDP of India	IT Exports	Electronic Hardware Exports	Consumer Electronics Exports	Growth rate	Share of Consumer Electronics Exports in GDP (%)
1	2	3	4	5	6	7
2011-12	8736329	369127 (0.33)	42627 (2.88)	1227	---	0.014
2012-13	9213017	449000 (0.36)	44000 (3.64)	1600	30.399	0.017
2013-14	9801370	553800 (0.91)	46300 (10.91)	5051	215.69	0.052
2014-15	10527674	630425 (0.77)	36756 (13.19)	4848	-4.019	0.046
2015-16	11386145	737863 (0.58)	37328 (11.39)	4252	-12.29	0.037
2016-17	12196006	782492 (0.49)	38127 (10.08)	3843	-9.619	0.032
2017-18	13010843	812660 (0.29)	39140 (5.96)	2334	-39.27	0.018
2018-19	14003316	1002876 (0.31)	58956 (5.34)	3151	35.004	0.023
2019-20	14569268	1087085 (0.33)	80021 (4.55)	3640	15.519	0.025
2020-21	13512740	1163627 (0.43)	78627 (6.42)	5051	38.764	0.037
				CAGR=17.02 %	AAGR=30.01 %	

Source: Electronics and Software Export Promotion Council, Statistical Year book, various issues

Note:

➤ Figures in brackets for 3 column is proportions of consumer electronics exports in IT exports.

➤ Figures in brackets for 4 column are proportions of exports of consumer electronics in Electronic Hardware exports.

MAJOR FINDINGS OF THE STUDY

A little of the findings from the study are:

1. Large amounts of the produced electronic waste from developed countries is exported, and handled by the informal sector in countries like India, despite the fact that exporting electronic waste to them is illegal.

- 2.Desktop monitors and laptops produce major physical health concerns for humans when bodies are forced into positions that are unhealthy and uncomfortable in order to see the screen better.
- 3.Poor infrastructure is another cause that seems to have alleged back the industry. Regular power supply is essential for any consumer electronics product. But that remains a foremost hiccup in India.
- 4.The rising rate of growth of GDP, growing purchase power of people with higher inclination to consume with preference for sophisticated brands would provide stable impetus to growth of white goods industry segment.
- 5.Inadequacy of familial investment, incapacity to attract foreign investment, mega investments from multinational companies.

MAJOR RECOMMENDATIONS

- 1.The government, in an attempt to encourage manufacture of consumer electronics in India has changed the tariff structure significantly.
- 2.While the consumer durables market is opposite a decelerate due to saturation in the urban market, rural consumers should be provided with simply payable consumer finance schemes and essential services, after sales services to suit the infrastructure and the active amenities like electricity, voltage etc.
- 3.Currently, rural consumers acquire their durables from the nearest towns, important to increased expenses due to transportation. Purchase essentially done only during the harvest, festive and wedding seasons – April to June and October to November in North India and October to February in the South, supposed to be months 'good for buying', should be renewed to routine regular feature from the seasonal character.
- 4.The vigorous marketing efforts being made by the domestic majors will help the industry. The Internet now used by the market functionaries that will guide to intelligence sales of the products. It will help to maintain the demand boom witnessed recently in this sector.

CONCLUSION

From the consumer electronics market analysis it can be concluded that this sector has huge potentialities to grow in near future in India. The India consumer electronics market size was appreciated at USD 73.73 billion in 2022 and is expected to grow at a merged annual growth rate (CAGR) of 6.8% from 2023 to 2030. India provides a worldwide chance for short to medium-term growth in consumer electronics expenses. Minimal saturation rates, as against other upcoming markets, portray a better outlook to sell to first-time buying households, along with replacement devices to the middle class. The present government's initiatives "Make in India" could perform as a maximum opportunity to this sector. It is concluded that the determinants like income, the level of education of household head have significant positive effect on the demand for most of the major items. Income is one of the important determinants which have significant positive effect on the demand for the major durables. The share of Consumer Electronics export in total export as well as its donation to GDP has steadily increased over the years.

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