



ECONOMIC IMPACTS OF PACKAGED AND BOTTLED WATER BUSINESSES IN NIGERIA

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ABSTRACT

The increasing stress on freshwater resources brought about by ever – rising demand and profligate use, as well as by growing pollution worldwide, is of serious concern. The World Bank while commenting on the world water challenge stated that access to water supply services and sanitation is a major factor in reducing child mortality. Water, apart from being absolutely essential for life, is also the most common, most widely distributed and most useful liquid on earth. It is the most precious natural resource that exists on our planet According to a report, Nigeria water supply situation has not kept pace in meeting the Millennium Development Goal (MDG) target of 75% coverage for safe drinking water. To achieve the MDG target, Nigeria must increase the rural population with access to improved drinking water by 33%. Packaged and bottled water businesses in Nigeria suffer from various economic challenges such as high cost of production, epileptic power supply, distribution problems, littering or environmental pollution, integrity, quality, inspection or business feasibility concerns and inefficacy of government regulatory bodies. The aim of this research paper is to examine and discuss Economic Impacts of Packaged and Bottled Water Businesses in Nigeria with a view of identifying the Economic Impacts and to extend the existing literature on Economic Impacts of Packaged and Bottled Water Businesses in Nigeria. The main sources of data were journals, conference / seminar / workshop papers, text books, newspapers, magazines and the internet sources etc., which were used to review literatures in the Water Business field. The result shows that the economic impacts of packaged and bottled water businesses identified in this work were as follows: a business that provides business opportunities; it engages small scale packaged and bottled water manufacturers; it provides employment opportunities; it provides profits and wages; it offers a medium of economic growth; it provides a source of revenue to the government e.g. Tax etc. and it provides water at affordable prices. These impact Nigerians economically and also the business environment from which they operate.

Key Words: Bottled water, Businesses, Economic Impacts, Nigeria and Packaged Water etc.

INTRODUCTION

1.1 Background to the study

The extent to which water resources development contributes to economic productivity and social well-being is not usually appreciated, although all social and economic activities (related to water) rely heavily on adequate quality or quantity of freshwater supply (Odafivwotu and Abel, 2014). As population increases and development calls for increased allocations of ground water and surface water for domestic, agriculture and industrial sectors, the pressure on water resources intensifies, leading to tensions, conflicts among users, and excessive pressure on the environment. The increasing stress on freshwater resources brought about by ever – rising demand and profligate use, as well as by growing pollution worldwide, is of serious concern. Despite considerable humanitarian end eavor over the last three decades, almost 900 million people continue to lack access to safe water (One World, 2012).

The World Bank while commenting on the world water challenge stated that access to water supply services and sanitation is a major factor in reducing child mortality. It revealed that about 1.7 million deaths that occur every year worldwide (90 per cent of which are children) are attributed to inadequate and unsafe water (World Bank, 2007). A reliable supply of clean water is crucial for healthy living amongst the inhabitants of a geographical region (Mustapha and Adam, 1991).

Water, apart from being absolutely essential for life, is also the most common, most widely distributed and most useful liquid on earth. It is the most precious natural resource that exist on our planet (Musa, et al; 2008). Accessibility and availability of fresh clean water is a key to sustainable development and an essential element in health, food production and poverty reduction (Third World Water Forum on Water, 2003). Drinking water is an integral component and indispensable requirement in life. It therefore cannot be substituted for any other fluid (Aroh et al., 2013).

As with most developing countries, access to safe water is a major challenge in Nigeria. Nigeria, the eight most populous countries in the world, has begun grappling with issues of water scarcity across a number of its states – forcing infrastructure and long – term sustainability questions. The water scarcity issue is considerably daunting, given the fact that Nigeria represents the eight most populous nations in the world – with a total population of over 152 million people. Among the 152 million who reside in Nigeria, less than 30 percent have access to adequate drinking water (Krebs, 2010).

In Nigeria, Government-owned public water utilities, such as Water Corporations, are statutorily charged with the responsibility of supplying water from conventional water treatment plants that use water from impounded reservoir (Dams) flowing streams, lakes and deep boreholes (Adetunji and Ilias, 2010). The Nigerian government has a national water supply policy, whose aim is to provide potable water to all citizens by the year 2020. The objective is of the

policy is for all Nigerians to have access to adequate and affordable clean water through the active participation of the Federal, State and Local Governments, Non-Governmental Organisations (NGOs), Development Partners, Private sector, Communities, Households and Individuals (Federal Republic of Nigeria, 2000; WSMP, 2008).

According to a report, Nigeria water supply situation has not kept pace in meeting the Millennium Development Goal (MDG) target of 75% coverage for safe drinking water. To achieve the MDG target, Nigeria must increase the rural population with access to improved drinking water by 33% (WSMP, 2008; WHO/UNICEF, 2010; UNEP, 2010). Access to improved drinking water in Nigeria still lags behind demand, with urban areas having a higher proportion than those in rural areas who have access. Generally speaking, improved water supply in Nigeria only increased from 47% in 1990 to 58% in 2008 (WSMP, 2008); with a target projection of 90-100% water supply to the population by 2020 (Federal Republic of Nigeria, 2000; WSMP, 2008).

Nigeria is blessed with abundant water resources but largely untapped. In spite of the abundant water resources, government at all levels (federal, state and local) have not been able to successfully harness these resources to ensure a sustainable and equitable access to safe, adequate, improved and affordable water supply to its population (Muta'aHellandendu, 2012). However, giant strides were made by the private sector in form of packaged and bottled water businesses to fill this gap/ void by the government. These businesses operate in the environment and have impacts on the populace socially, economically and environmentally.

The term "Economic Impact" is not an easy term to define. Many professionals define it in many different ways such as; a macroeconomic effect on commerce, employment, or incomes produced by a decision, event, or policy (businessdictionary.com); The [effect](#) that an event, [policy](#) change, or [market trend](#) will have on [economic factors](#) such as [interest rates](#), [consumer confidence](#), [stock market activity](#), or [unemployment](#) (Investorwords.com); A [financial effect](#) that something, especially something new, has on a [situation](#) or [person](#) (Dictionary.Cambridge.org); [The total costs](#) and benefits that a particular event or situation can have on the [overalleconomy](#) (investorguide.com); the change in economic activity in a specified [region](#), caused by a specific business, organization, policy, program, project, activity, or other economic event and the study region can be a neighborhood, town, city, county, [statistical area](#), state, country, continent, or the entire globe (Wikipedia.org); The effects on the level of economic activity in a given area (Glen and Burton, 1997); It is usually viewed as the expansion or contraction of an area's economy, resulting from changes in (i.e., opening, closing, expansion or contraction of) a facility, project or program (Glen and Burton, 1997); The effect that can be caused by an activity on the [social fabric](#) of a community (Thelawdictionary.org).

From the above definitions, this research work simply defines Economic Impact as *"The effects on the level of economic activity in a specified [region](#), caused by an event, business,*

policy change, or market trend.”The particular area of interest for this research work is limited to economic impacts of packaged and bottled water businesses in Nigeria.

In Nigeria, a large percentage of the population still lack access to water in adequate quantity and quality. Of the total number of people in urban and semi-urban areas, only about 48% have access to portable water while only 39% have access in rural areas (Abubakar, 2006; Hall, 2006). The main sources of water are rain water, borehole water, ground water and pipe borne (tap) water. These sources are said to be unsafe sources of drinking water because findings indicated that ground water sources contain trace elements, dissolved solids and pathogens in excessive quantities that may be dangerous to the health of the people. The achievement or realization of the renewed global Commitments toward the Millennium Development Goals (MDGs) by 2015 required the development of locally sourced alternative low cost drinking water schemes that will provide sustainable access to safe drinking water in all areas in developing countries (UNDESA, 2004). An example of locally developed alternative low cost safe water provision in Nigeria is the drinking water sold in polythene sachets and plastic bottles.

1.2 Research Problem

Packaged and bottled water businesses in Nigeria suffer from various economic challenges such as high cost of production, unreliable grid supply, distribution problems, multiple taxation, littering or environmental pollution, integrity, quality, inspection or business feasibility concerns and inefficacy of government regulatory bodies. According to Ademoroti (1996); Dada (2009); Aroh et al. (2013), People still worry about the purity of the sachet water. The integrity of the hygienic environment and conditions where majority of the packaged water in the markets are produced has been questioned. CAMON (2007), as cited by Dada (2009); stated that “there are claims of past outbreaks of water borne illnesses that resulted from consumption of polluted sachet waters most of which are of unknown origin.”Adetunji and Ilias(2010), also stated that increasing number of private companies registered and unregistered, are getting involved in the packaged water business in virtually every district in the country. Edoga et al.(2008) noted that“ about 70 percent of Nigerian adults drink at least a bottled or sachet of water per day resulting in about 50 to 60 million used water-bottles and water-sachets disposed daily across the country.”This has led to a lot of littering of the disposables (empty bottle and the sachet) and by extension environmental pollution.

According to Nwanya et al. (2013), the unreliable power supply is the cause of reliance on self-generating sets for production. As a result of the foregoing, cost of packaging operation is high. Ekechukwu et al. (2011) stated that “the problem of high cost of production is there because of inability to quantitatively predict energy and pool of trained manpower required for a continuous operation”.Nwanya et al. (2013) also stated that “distribution of the produced water is a problem due to bad roads. For example a distance that will take a vehicle one hour, may last for three hours because of bad roads and this results in consumption of more fuels and damaging of vehicles used for distribution. On multiple taxation concern, the water factories should unionize, impliedly, the solidarity canvassed for here is meant to guarantee protection to major variables

that drive cost of production- energy, labour and material if the entrepreneurship must be successful.”

Packaged and bottled water businesses in Nigeria engage people of different status in the society. These range from the Packaged and bottled water producers/manufacturers, whole sellers, retailers, consumers, government regulatory bodies, consumer protection organizations and pressure groups. Each views the impact differently. Hence, the need to study the economic impacts of the Packaged and Bottled Water Businesses in Nigeria.

1.3 Research Aim

The aim of this research paper is to examine and discuss Economic Impacts of Packaged and Bottled Water Businesses in Nigeria with a view of identifying the Economic Impacts and to extend the existing literature on Economic Impacts of Packaged and Bottled Water Businesses in Nigeria.

1.4 Research Methodology

The main sources of data were journals, conference / seminar / workshop papers, text books, newspapers, magazines and the internet sources etc., which were used to review literatures in the Water Business field and help in examining, identifying and narrowing some of its economic impacts. These help in understanding the Water Businesses, especially Packaged and Bottled Businesses in Nigeria.

2.0 LITERATURE REVIEW

2.1 Packaged and Bottled Water Businesses in Nigeria

The ever-expanding demand for water by the world is growing, more prosperous and increasingly urbanised population, combined with the impacts of climate change policies and responses, mean that water is of increasing strategic importance for business and economic prosperity. Yet water scarcity is a reality in many parts of the world and with it, livelihoods, human health and entire ecosystems are under threat (Nestlé, 2011).

In Nigeria, although there is temporal and spatial variation in water availability between the north (precipitation of 500 mm) and the south (precipitation over 4,000 mm), the country is considered to be abundantly blessed with water resources (Federal Republic of Nigeria, 2004). Despite numerous efforts by the Nigerian three tiers of Government, external support and donor agencies to enhance efficient water supply and distribution to all, there is still a general consensus that water supply and distribution is inadequate (Kuruk, 2004). An alternative to the seemingly inadequate water supply is found in Packaged and Bottled Water.

Increasing number of private companies registered and unregistered, are getting involved in the packaged water business in virtually every street (Adetunji and Ilias, 2010). It is also expected that total bottled water will record a total volume compound annual growth rate (CAGR) of 9% over the forecast period, driven by population and urbanization growth (Euromonitor

International, 2016). Therefore, it is paramount to identify the economic impacts of packaged and bottled water businesses in the country. The economic impacts or effects are a sub-part of environmental analyses for any given product or business operating within an environment.

Environmental analysis is a strategic tool used to identify all the external and internal elements, which can affect the organization's performance. The analysis entails assessing the level of threat or opportunity the factors might present. These evaluations are later translated into the decision-making process. The analysis helps align strategies with the firm's environment. Businesses are greatly influenced by their environment. All the situational factors which determine day to day circumstances impact firms. So, businesses must constantly analyze the trade environment and the market. The most used detailed analysis of the environment is the PESTLE analysis. This is a bird's eye view of the business conduct which is used to foresee where the organization will be in the future (pestleanalysis.com)

PESTLE analysis consists of various factors that affect the business environment. Each letter in the acronym signifies a set of factors. These factors can affect every industry directly or indirectly. The letters in PESTLE, also called PESTEL, denote the following things:

- i. Political factors
- ii. Economic factors
- iii. Social factors
- iv. Technological factors
- v. Legal factors
- vi. Environmental factor

This study is limited to the economic aspects / impacts / effects of Packaged and Bottled Water Businesses in Nigeria. Economic factors involve all the determinants of the economy and its state. Businesses analyze these factors because they can conclude the direction in which the economy might move. It helps to set up strategies in line with changes. These include but not limited to: the inflation rate, the interest rate, disposable income of buyers, credit accessibility, unemployment rates, the monetary or fiscal policies, the foreign exchange rate etc. (ibid)

2.2 Economic Impacts of Packaged and Bottled Water Businesses in Nigeria

Water is one of the key and probably the most fundamental and indispensable of the natural resources. It is essential to life, the environment, food production, hygiene, industries and power generation. The importance of water for socio-economic development is globally recognized but with increased population growth and rapid industrialization and the demands for water for various uses, water scarcity seems to be looming in many countries of the world. The unavailability of water can also place a limit on economic growth and social development (Rademeyer and Snyman, 2004).

In Nigeria, the main sources of water are rain water, borehole water, ground water and pipe borne (tap) water. These sources are said to be unsafe sources of drinking water because findings indicated that ground water sources contain trace elements, dissolved solids and pathogens in excessive quantities that may be dangerous to the health of the people (UNDESA, 2004). Since independent, Nigeria has spent a lot of money on developing water supplies. However, there are still many health problems in both urban and rural areas due to polluted drinking water and a shortage of water for daily hygiene. Rural areas face specific problems not encountered in the towns. It is simply too expensive to provide a house - to - house water supply because homes are so widely scattered. Many rural people have low incomes and find it difficult to fund or maintain a water supply. They also lack the skills needed to maintain the water source (DFID, 2003). Pipe borne potable water is also inadequate both in quantity and quality (Adekunle et al, 2004; Voanews.com).

In terms of quality and quantity of public water supply, the inadequacy of pipe borne water in Nigeria is almost endemic. As studies have shown that standard industrialized world model for delivery of safe drinking water technology is not affordable in much of the developing world (Gadgil and Derby, 2003). The achievement or realization of the renewed global Commitments toward the Millennium Development Goals (MDGs) by 2015 required the development of locally sourced alternative low cost drinking water schemes that will provide sustainable access to safe drinking water in all areas in developing countries (UNDESA, 2004). As the country population grew and industries increased, the supply of water by the public utilities became inadequate in quality and quantity (Adetunji and Ilias, 2010).

According to Akunyili (2003), it is the inability of the Government to persistently provide adequate potable water for the growing population that has tremendously contributed to the proliferation of the packaged and bottled water businesses. The bottled water price is within the reach of the tautology — that is elite (Adekunle et al, 2004). Whereas, packaged water notably, offers the most accessible and quickest means of assuaging the feeling of thirst. The relatively cheap and inexpensive nature of the packaged water compared to bottled water makes it a cherished and preferred commodity in the hands of many (Aroh et al., 2013). Although this form of drinking water is easy to get and the price is affordable, people still worry about its purity (Dada, 2009).

Packaged and bottled water businesses were established for the purpose of making profits by the provider or owners of the enterprise. Packaged water if improved upon has been suggested as a low cost, readily available alternative water provision that could help bridge the gap and ultimately allow contributions from local initiatives in the drive towards economic development and achieving the Water target of the Millennium Development Goals (MDG) marked for 2015

(Dada, 2009). In the MDG target, packaged and bottled water businesses increases access to portable water and also helps to avoid water borne-diseases (Nwanya et al., 2013).

As a business venture, packaged and bottled water businesses can add more than 3600 new jobs in 36 States of Nigeria, thus, providing income, employment, and business opportunity for the growing population (Nwanya et al., 2013). Packaged and bottled water sales remained strong and there are now several brands of these types of packaged and bottled water marketed in Nigeria and other developing nations (Ogan, 1992 and Kassenga, 2007). As noted by Edoga et al. (2008), about 70 percent of Nigerian adults drink at least a sachet of pure water per day resulting in about 50 to 60 million used water-sachets disposed daily across the country. Also, with the growth of the urban population, there is an increase in on-the-go consumers needing water as they travel to work and back (Euromonitor International, 2016).

As most Nigerian homes do not have running water, or at least not water that is clean enough to drink. As a result, people drink water from small plastic bags sold on the streets. Since the 1990s a familiar scene has regularly played out in Nigerian markets and busy intersections. A youth balanced on his head is a bucket of clear plastic bags, each containing about a half liter of water. The product is known as “pure water.” For a little more than 10 cents, customers rip off a corner of the bag with their teeth and suck the water in. It is a cheap way to stay hydrated and a much needed business opportunity for youths and adults struggling to stay alive in a country where most people live in abject poverty (Voanews.com).

At first, there were worries about the purity of packaged water. In recent times, packaging of potable water in form of sachet water has gradually gained wider acceptability in our major cities. Demographic and socio-economic variables are largely responsible for the choice and preference for this product. It is usually packaged and sold to members of the public in sealed nylons. This occurs in almost all parts of the country, like motor parks, markets, public functions and street corner shops thereby engaging many of the locals. The growing popularity of this potable water unit in our cities singles it out as one of the fastest growing small scale businesses in Nigeria, thus, providing a source of revenue for the government (Aroh et al., 2013). Whereas, the hot weather and limited electricity system contributed to the growth of bottled water, as many consumers buy chilled water from both off-trade and on-trade outlets (Euromonitor International, 2016).

The lack of access to safe drinking water is probably directly related to poverty, insecurity and in many cases to corruption and the inability of governments to develop the political will to provide

water systems for their citizens (World Bank and Federal Ministry of Water Resources, 2000). Sustainable management of water resources provides great benefits to a society and the economy as a whole. It is crucial because it involves both men and women in water resource management and to ensure that the specific needs and concerns of men and women from all social groups are taken into account (Wijk-Sijbesma and Christine, 1998). Convenient access to drinking water increase privacy, reduce crime rate and risk to women and girls of sexual harassment/assault while gathering water (Health, Dignity and Development, 2005). The emergence of the packaged and bottled water enterprises has not only just provided profit, employment opportunities, stability and source of revenue to the government; it has also served as a medium of economic development because unavailability of water constraints economic growth and social development.

2.3 The Economic Impacts of Packaged and Bottled Water Businesses in Nigeria

From the reviewed literature above, the table below shows the summary of Economic Impacts of Packaged and Bottled Water Businesses in Nigeria.

Table 2-1: Summary of Economic Impacts of Packaged and Bottled Water Businesses in Nigeria

S/N	Economic Impacts of Packaged and Bottled Water Businesses in Nigeria	Sources
1	Provides business opportunities	[Aroh et al., 2013]; [Euromonitor International, 2016]; [Akunyili, 2003]; [Nwanya et al., 2013]
2	Engages small scale packaged and bottledwater manufacturers.	[Dada, 2009]; [Ogan, 1992]; [Kassenga, 2007]; [Aroh et al., 2013];
3	Provides employment opportunities	[Euromonitor International, 2016]; [Voanews.com]; Aroh et al., 2013]; [Nwanya et al., 2013]
4	Provides profits and wages.	[Dada, 2009]; [Ogan, 1992]; [Kassenga, 2007]; [Euromonitor International, 2016]; [Aroh et al., 2013]
5	Offers a medium of economic growth	[Dada, 2009]; [Nwanya et al., 2013]
6	Provides a source of revenue to the	[Aroh et al., 2013]

	government e.g. Tax etc.	
7	Provides water at affordable prices	[Voanews.com]; [Dada, 2009]; [Aroh et al., 2013]; [Adekunle et al, 2004]

Source: Authors, from literature review

2.4 Economic Impacts of Water Businesses in Nigeria

2.4.1 Provides business opportunity.

The Nigerian government overreliance on oil, which accounts for over 90 percent of export earnings, has exposed the economy to major risks amid declining oil prices. Certain actions have been taken to diversify Nigeria's industries. An example of such action is the proliferation of packaged and bottled water businesses. The packaged and bottled water has provided numerous business opportunities for the growing population of the country. These range from the Packaged and bottled water producers, whole sellers, recyclers, distributors and retailers.

2.4.2 Engages small scale packaged and bottled water manufactures.

According to Adetunji and Ilias (2010), In Nigeria, increasing number of private companies are getting involved in the packaged and bottled water businesses. Increases in small scale businesses are an extremely important indicator of the economic well-being of any nation. In fact, some have claimed that small businesses hire more employees than larger corporations and, thereby, contribute more to addressing unemployment and poverty.

2.4.3 Provides employment opportunities.

In a country where the majority of the population lives in poverty and unemployment rate keeps rising, the packaged and bottled water businesses in Nigeria has reduced the rate of unemployment and poverty by engaging hundreds of thousands if not millions of Nigerians. These range from the packaged and bottled water manufacturers, whole sellers, retailers, government regulatory bodies, consumer protection organizations and pressure groups.

2.4.4 Provides profits and wages.

The demand for potable water will keep rising for it is an integral component and indispensable requirement in life. This is especially true in Nigeria's case where the population keeps increasing. The packaged and bottled water businesses in Nigeria have provided millions of Nigerians with a much needed income stream in the form of profits for the owners and wages for the workers. And with the increasing population and urbanization, this trend is expected to continue which will invariably lead to increase in consumer spending.

2.4.5 Offers a medium of economic growth.

The packaged and bottled water businesses in Nigeria have provided a medium of economic growth by providing income streams to millions of Nigerians because profits and wages are correlated with a rise in GDP, for they reflect an increase in savings levels and investment levels and therefore encourage job creation. They also increase stock market performance as investors look for places to invest income.

2.4.6 Provides a source of revenue to the government.

Income taxes paid by individuals, payroll taxes paid jointly by workers and employers and corporate income taxes paid by businesses are one of the largest if not the largest source of federal revenue of any nation. With increasing number of private companies getting involved in the packaged and bottled water businesses in Nigeria, these businesses has provided the government with a steady revenue source that keeps on increasing driven by the increasing population and urbanization.

2.4.7 Provides water at affordable prices.

Higher price tags naturally impact consumer spending on goods significantly because higher inflation rates erode purchasing power, making it less likely that consumers have excess income to spend after covering basic expenses such as food, clothing and housing. The packaged and bottled water businesses in Nigeria have provided alternative cheap and affordable potable water to members of the upper class, middle class and lower class of the society. These prices are within reach for it takes only a very small proportion of their earnings to have any significant impact and thereby reducing the cost of living in the process.

3.0 SUMMARY AND CONCLUSIONS

This study discusses the economic impacts of packaged and bottled water businesses in Nigeria. The literature reviewed in this work was used to identify, tabulate and discuss the main economic impacts of packaged and bottled water businesses in Nigeria.

The economic impacts of packaged and bottled water businesses were identified as: a business that provides business opportunities; it engages small scale packaged and bottled water manufacturers; it provides employment opportunities; it provides profits and wages; it offers a medium of economic growth; it provides a source of revenue to the government e.g. Tax etc. and it provides water at affordable prices.

In Nigeria, the deficiency of the quality and quantity of public water supply is a serious problem. Although, the packaged and bottled water businesses face numerous challenges like high cost of production, distribution problems, epileptic power supply, integrity, quality, and business feasibilities concerns, however, this study found that the packaged and bottled water businesses in Nigeria has positive economic impact in the country; for it provides business opportunities for the growing population by engaging small scale packaged and bottled water manufacturers. By

involving the small scale manufacturers, this led to increase in employment opportunities and income, hence providing profits for the owners and wages for the workers thereby increasing savings levels. In addition, the packaged and bottled water businesses has not only provided water at affordable prices which reduced cost of living, but also provided the government with a growing source of revenue e.g. tax etc., because increasing number of private companies are getting involved in the packaged and bottled water businesses which invariably served as a medium of economic development; for increases in small scale businesses are an extremely important indicator of the economic well-being of any nation.

4.0 LIMITATIONS OF THE STUDY AND FURTHER RESEARCH DIRECTION

This study has been carried out with an aim to examine and discuss economic impacts of packaged and bottled water businesses in Nigeria with a view of identifying the economic impacts and to extend the existing literature. Further research is suggested to explore the factors impacting these businesses in the country; assess the factors and also to critically analyze the packaged and bottled water businesses in Nigeria's business environment.

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