

CHINA AND A SUSTAINABLE FUTURE: GREEN GROWTH AND SUSTAINABLE PUBLIC PROCUREMENT POLICIES AND STRATEGIES

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ABSTRACT: Over the last 30 years China has achieved phenomenal economic growth averaging about 10% of GDP per year. But this economic growth has come at a high environmental cost. In China approximately, 400,000 deaths a year are attributed to high levels of environmental pollution. With the recent 12th Five-year Plan China's leadership is seeking to launch a Green Revolution that would balance the need for robust economic growth with concern for the environment and combating climate change. This paper focuses on the development and implementation of Sustainable Public Procurement policies and strategies to achieve Sustainable Development in China.

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INTRODUCTION

For decades China has focused primarily on rapid economic growth as a means to increase its wealth and power and to ensure political stability. Recently Chinese leaders have become aware of the need to shift to a more Sustainable economic model which balances economic growth with a healthier environment. The 12th Five Year Plan sets both economic growth as well as environmental targets. China is attempting to launch a Green Revolution concentrating on the development of renewable energy technologies such as solar and wind. Part of the strategy to achieve a more Sustainable Development model employs the implementation of Sustainable Public Procurement. The paper begins with a discussion of the distinctions between Green and Sustainable Procurement. It continues with a consideration of the costs and benefits, as well as the stakeholders and the use of Sustainable Public Procurement by global and regional IGOs, NGOs, and developed countries. Asian countries including most prominently Japan and South Korea have also employed SPP for green growth initiatives. The final section of the paper considers the present state of development and implementation of SPP in China and some recent studies that provide cogent policy recommendations for further strengthening SPP as a policy tool for Sustainable development in China.

CHINA'S ECONOMIC RISE AND GREEN GROWTH STRATEGIES

Since the late 1970s China's gross domestic product (GDP) has increased more than tenfold as it maintained annual growth rates of around 10% annually. The success of China's development however comes with consequences not only for China itself, but for the rest of the world. China's economic growth up to recently has followed the traditional economic developmental pattern of rapid industrialization driving economic growth fueled primarily by fossil fuel resources, primarily coal. Recently, China has become the world's largest emitter of carbon and China's leadership recognizes that China will need to find a different developmental model that will allow growth without generating significant environmental pollution.

Consequently, they are launching a Green Revolution as set forth in the new 12th Five-Year Plan (FYP) unveiled in 2011. The preceding 11th FYP still held growth and development as its primary goal, but also reflected the government's growing concern with the environmental costs of China's development model. But the 12th FYP marks a significant change of course. After nearly 30 years of breakneck growth with all of the attendant difficulties and consequences of that model of development, the 12 FYP demonstrates a much more robust ambition to focus on Green Growth Initiatives and make the difficult transition towards a more sustainable model (World Bank, China 2030).

In order to achieve more sustainable development, the Chinese government is employing a variety of policy tools including command and control, taxes, subsidies, indigenous innovation, as well as Sustainable Public Procurement. This aim of this paper is to consider the viability of Sustainable Public Procurement as a policy tool to enable Sustainable Development in China.

WHY SUSTAINABLE PUBLIC PROCUREMENT?

Public procurement (PP), especially Sustainable (SPP) or Green Public Procurement (GPP), is an existing policy tool, which has exceptional potential for both addressing the problem of climate change, and encouraging green growth. All public authorities at all levels of government (local, state, national, and international) use public procurement to obtain necessary products and services from a wide range of providers. In recent years, an increasing number of governments, especially in the EU and Asia are implementing SPP.

CONCEPTS AND TERMS

Terms like green growth, green public purchasing, and sustainable public procurement are often used interchangeably. However, there are conceptual distinctions and policy implications that should be clarified to minimize confusion.

Public Procurement (PP) has been defined in numerous ways. In one well known, definition PP is the process used by governments, regional and local public authorities or bodies governed by public law (financed, supervised or managed for more than 50% by public authorities) to obtain goods and services with taxpayer money (Thai 2002, see also Prier and McCue 2009). Detailed rules and procedures have been established to ensure best value for money, equal treatment of bidders, and transparency of specifications and criteria.

Public Procurement spending amounts to as much as 17% of the EU's gross domestic product, which is a sum equivalent to the GDP of Germany. Globally, PP comprises between 10-25% of most nations GDP. This purchasing power can have a significant impact on the market by influencing the suppliers and setting an example for private procurement. (Europa, Green Public Procurement, <http://ec.europa.eu/environnement/GPP>, retrieved 10/22/2011).

For many years, the single most important consideration in the practice of public purchasing was the economic factor. Environmental and social factors were seldom if ever taken into account. However, the importance of non-economic factors in public procurement increased significantly with the development of the concept of sustainable development. As understood by the 1987 Bruntland Commission, "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Europa, Green Public Procurement, <http://ec.europa.eu/environnement/SGP> retrieved 10/22/2011).

Green Public Procurement means that contracting authorities take into account "environmental elements" when procuring goods, services or works at all stages of the project and within the entire life-cycle of procured goods. The goal of GPP is to reduce the impact of the procurement on human health and the environment.

Procurement is called sustainable when it integrates requirements, specifications and criteria that are compatible and in favor of the protection of the environment, of social progress, and in support of economic development, namely by seeking resource efficiency, improving the quality of products and services and

ultimately optimizing costs. Through sustainable procurement, organizations use their own buying power to give a signal to the market in favor of sustainability and base their choice of goods and services on:

- 1) economic consideration: best value for money, price, quality, availability, functionality,
- 2) environmental aspects, i.e. green procurement: the impacts on the environment that the product and/or service has over its whole life-cycle, from cradle to grave; and,
- 3) social aspects: effects of purchasing decisions on issues such as poverty eradication, international equity in the distribution of resources, labor conditions, and human rights (McCrudden 2004).

The so-called three pillars of Sustainable Development are: economy, society and environment, also known as the “triple bottom line” (TBL) or “profit, people, and planet.” Through adopting the principles of sustainable development to the public procurement procedures, public authorities can provide industry with incentives to develop new and better technologies and encourage sustainable patterns of behavior. (Europa, Green Public Procurement, <http://ec.europa.eu/environnement/SGP> retrieved 10/22/2011).

The relevance and practical application of the “environmental” aspects of public procurement can be demonstrated relatively easily. Green requirements can be specified in the technical demands for the production technology and the selection of materials. Performance and quality standards included in the technical specification can be easily defined and introduced at any stage of the procurement process. In most cases, environmental requirements related to the production process of the product itself are relevant to characterize a product and can hence be used to describe it in the tender documents of a public tender bid.

But the relevance and specification of “social and ethical” aspects of sustainable procurement is much more difficult to demonstrate as it is often difficult to determine their effect on the characterization of the final product. Additional problems arise in terms of objective verification and quantitative benchmarking of

effects and benefits that would allow for accurate and fair evaluation of tenders. Some organizations focus primarily on SPP, while most others like many national governments focus on primarily on GPP.

Since the literature it is not always clear when SPP or GPP is being implemented, I will also use the terms interchangeably throughout this paper.

SPP – Costs and Benefits

Examples of SPP would include purchasing electric cars, energy efficient computers, energy efficient buildings, recyclable paper, and using energy from renewable energy sources. The costs of implementing SPP include developing and implementing new purchasing systems and standards, and training personnel. It is commonly believed that green products cost more, however in many cases green products cost the same or less, for example with recycled paper the products match conventional paper in quality and costs. When green products do cost more initially, they are often cheaper in the long term when life cycle costs are considered.

SPP may provide a variety of environmental, economic, health and political benefits including:

1) environmental– The financial power of public purchasing may be a powerful inducement to achieve environmental targets, and it may help to raise awareness of environmental issues and problems. Eco-labels can assist consumers to compare the environmental impact of product choices.

2) economic–SPP may increase competition and lower the prices of environmentally friendly products and services, and provide incentives to businesses to produce new greener products and services and to develop renewable energy sources that will encourage the develop of new industries and innovations that will result in new green jobs. By paying attention to the life cycle cost of products it may save money and resources in the long term, and it may have a “ripple effect” by encouraging the development of a greener supply chain.

3) health–Greener products and services will enhance the quality of life by creating a healthier environment with better quality of air and water.

4) political–SGP may promote the public awareness of environmental problems and the development of other environmental policies and practices at all levels of government.

SPP- Challenges, Barriers and Training:

There are numerous barriers to the implementation of SPP in most governments including lack of political support, the perception that green products cost more, lack of legal expertise in applying environmental criteria, lack of training, lack of tools and information, lack of co-operation between authorities and upper management, and limited established environmental criteria for products/services. These challenges necessitate access to support and resources to meet needs such as: staff development and education, information sharing and capacity building, coordination and cooperation, sustainability branding, eco-labeling, policy and procedure development, and applied research.

In order to meet these needs governments and other institutions have developed a variety of educational programs, workshops, and training manuals, websites and other materials and sustainability plans. For example, the United Nations has recently published, the “Guide on Sustainable Procurement for the UN System” (2010), the OECD published “Tools for Delivering Green Growth” (2010), the European Commission published “Assessment and Comparison of National Green and Sustainable Public Procurement Criteria” (2010). National governments have also recently produced manuals and websites. The UK issued the “CDP Public Procurement Programme 2010”, the Korean Global Green Growth Institute produced, “Green Growth in Motion: Sharing Korea’s Experience” (2010), and the US EPA produced a webinar, “Sustainable Purchasing Best Practices”.

SPP- Stakeholders

The stakeholders in SPP include public authorities (i.e., governments at all levels), private businesses including large corporations, middle sized and small businesses, NGOs (especially environmental groups), universities, and private sector participants comprised of citizen/consumers.

Public Authorities at the global and regional level that are involved in SPP includes the United Nations and its many associated agencies including the United Nations Environmental Program (UNEP), and the World Bank, the World Trade Organization (WTO), OECD, and the European Union countries.

Corporations include; Toyota, Sony, Fujutisu, Walmart, Starbucks, Nike, Sun Microsystems, North Face, Patagonia, and many more large, medium and small businesses. Many of these businesses subscribe to notions of corporate social responsibility (CSR). In addition to maintaining profitability these businesses are also attentive to the impact of their activities on the environment, consumers, employees, and all other members of the public sphere.

NGOs play a primary role in promoting and implementing SPP, and they include; The International Green Purchasing Network (IGPN), the International Council for Local Initiatives (ICLEI), Eurocities, NIGP, Public Procurement Network, and many others.

At the national level, most of the developed countries in the EU countries including Germany, the UK, Denmark, Norway, and Sweden are well along in implementing SPP. The Asian SPP movement includes China, Taiwan, Hong Kong, India, Korea, Indonesia, Malaysia, Thailand, Singapore, Australia, New Zealand, the Philippines, and Japan. The US uses SPP at the national level, and increasingly in many state and local governments.

SPP is practiced to some extent in over fifty countries, and the countries briefly described here are some of the leading countries in GGP. In addition to China, other Asian countries that have taken a lead in developing SPP include most prominently, Japan and Korea.

JAPAN

The Green Purchasing movement in Japan began as a popular movement in the 1990's pioneered by environmentally conscious companies and local governments. The Green Purchasing Network (GPN), established in 1996, plays a leadership role in Japan for promoting Green Procurement. It is an independent non-profit organization with more than 2,500 members. GPN was able to involve a wide array of businesses, Non-government and public organizations allowing them to successfully translate GP into a nationwide social trend (Koh 2010).

In 2000, the Japanese Government passed the Green Purchasing Law. This law mandates that all government bodies implement a green purchasing system and annually record all green purchases made. Government bodies are required to buy products from a government-approved list of products in 18 categories. In 2007, 95% of the purchased goods in these categories were evaluated as "green products." These evaluations are based upon the product criteria from the Ecomark eco-labeling program and from Energy Star or another third party program (Ho, Dickinson and Chan 2010; Ministry of the Environment 2010).

In 2007, Japan took another stride towards sustainability. The Law Concerning the Promotion of Contracts Considering Reduction of GHG Emissions by the State and Other Entities ("Green Contract Law") requires heads of each ministry or agency to consider environmental conditions when contracting bids for electric power, automobiles, energy service company projects and building designs. These two pieces of legislation establish the framework for Japan's SGP (Ho, Dickinson and Chan 2010). As of 2007, all central government ministries, forty-seven (47) provisional governments, twelve (12) designated cities and 68% of 700 cities are obliged to comply.

As a result, and cumulatively, 95% of all purchased products within the designated categories were identified "green products" (Yu 2009). "Green product criteria" have been mainly adopted from the Japanese Ecomark Eco labeling program and the Energy Star [energy-efficient products] Program or specially developed and promulgated

for this initiative in order to guide the government purchasers in deciding and selecting preferable and identifiable green products.

Even though the Green Contract Law focuses more on greenhouse gases (GHG) reduction aspects of specific products and services, it complements the Law on Promoting Green Purchasing in terms of establishing a Japanese legal framework for government green purchasing. Further, when combined with Japan's national eco labeling program and national and multinational green purchasing networks, the two laws offer strong incentives and stimuli for considerable and quick expansion of GP activities in Japan.

KOREA

In Korea, legislation on the promotion of the purchase of environmentally preferable products was enacted in December 2004, and enforced in July 2005. The Law authorizes the Ministry of the Environment (MoE) to set up "Purchasing Guidelines for Environmentally-friendly Products", and directs public agencies to prepare and announce purchasing strategy plans and initiatives and report on these annually. Government agencies are obliged to purchase designated green products from the list of products qualifying for and labeled with the Korean Eco-label, Energy Saving Mark or Good Recycled Mark. Since 2005, the implementation of the Green Purchasing Law has resulted in a tremendous increase in the amount of green purchasing in the Korean public sector from USD 255 million in 2004 to USD 770 million in 2005 and USD 850 million in 2006 (Yu 2009, Adjei 2010).

Korea Eco-Product Institute officials predicted that the level of green purchasing will reach USD 1400 million in 2010, representing 80% of all government purchasing (Moon 2006). Korea has taken aggressive action towards positioning itself at the forefront of the evolving green revolution. Korean leaders have worked diligently to ensure the cooperative efforts to ensure the expansion of a green economy in Korea. In a government press release on June 29th 2010, the Korean Environmental Industry & Technology Institute (KEITI) and the Ministry of Environment announced the launching of a website which provides information on green products. The website seeks to

demonstrate the advantages of green living in an attempt to integrate green values into the popular culture. On the website consumers can access information about green products, statistics and performance standards of public institutions as well as share opinions about various green products.

Going beyond Green Purchasing, in 2009 the Ministry of Strategy and Finance announced that will spend US \$36 billion from 2009 to 2012 and will create 960,000 jobs by financing a Green New Deal Plan accounting for nearly Korea's entire fiscal stimulus package. The Korean government announced its intentions to invest US\$72.2 million into a renewable energy fund to attract private investments in solar, wind and hydroelectric power projects. The development of these renewable energy sectors is projected to create 3.5 million new jobs by 2018. (Barbier 2010, 175).

Korea's plan for sustainable development goes further than perhaps any other countrywide schemes for Green Growth. In January 2011, President Lee Myung-bak signed the Basic Law on Low Carbon Green Growth (see Schwerin and Kim).

In accordance with this new legislation the Korean Government has pledged to spend two percent of annual GDP to support the objectives of this new law. President Lee also, in November 2009, announced Korea's intentions to reduce emissions four percent below 2005 levels by 2020. This is the equivalent to thirty percent below business-as-usual levels. A Presidential Committee is currently formulating policies for a national cap-and-trade law that will limit CO₂ emissions and create an emissions trading scheme; a significant commitment for a nation which holds no obligations under the Kyoto Protocol (O'Donnell 2010).

CHINA

Chinese Government officials have recognized that SPP can and should contribute significantly to national environmental and sustainable development policy strategies and goals. A government procurement law – Order No. 68 of the President of the People's Republic of China - was approved in June 2002 and enacted in

January 2003 (Geng and Doberstein, 2008). With this enactment, total government purchasing in 2003 reached US\$20 billion (or 6.7% of the national GDP), and represented an increase of 64.4% over the 2002 total of US\$12.21 billion. It is noteworthy that in some provinces, the proportion of government purchasing in the annual provincial financial budget has been even greater, including 39.6% in Fujian and 37.8% in Shangdong in 2003. Since these proportions are large and in many cases rising, most suppliers have paid increasing attention to the government purchasing policies in order to meet with the interests and requirements of government agencies and not lose out on this huge and continually expanding market segment. In 2007, close to 3,000 products were listed within 14 categories under China's ISO Type I Environmental Labeling Program, and the total value of Chinese Government green purchasing amounted to 3.5 billion US dollars (Yu 2009).

Environmental measures reaching beyond green purchasing in China are significant and worth consideration in any environmental evaluation of the country's policy outlook. China is already the leading global producer of solar cells, wind turbines and solar water heaters. Its renewable energy sector is valued at US\$ 17 billion, and it employs close to one million people or 0.1 percent of the working population. China is currently embarking on the largest railway expansion in history that will take the nation's railway network from 48,000 miles today to 75,000 miles in 2020 (Gordon *et al.* 2010). They are also the largest source of Clean Development Mechanism carbon emission credits and green fiscal spending in China accounts for 47% of total global green spending (Barbier 2010, 48).

Some recent studies of Green or Sustainable Public Procurement in China have reviewed current practices, identified some of the major challenges and barriers, and offered possible solutions and policy recommendations to enhance the impact and practice of SPP in China.

For example, Yuhua Qiao and Conghu Wang (2010) argue that the implementation of GPP in China is hampered by unfavorable legal, economic, and political environments. First, there is a lack of publicity and media promotion and the public has little awareness of

the importance and goals of green procurement. The legal environment is problematic because the laws to set up the green procurement system are very general and do not specify rules and regulations, or define eco-friendly products.

In terms of the market environment, the structure of green products is not well developed, technology investment is low, green production is not subsidized, and there is rampant 'greenwashing', where non-green products are sold as green products. There are also problems with GPP program management because China does not have a single designated agency charged with managing green procurement, which results in confusion and lack of communication and coordination among public procurement agencies.

Sustainable Public Procurement is somewhat more complex than traditional public procurement that focuses primarily on "best quality for the best price." It is complicated in China by lack of uniformity in product definition and evaluation criteria. First definitions of green products are not consistent or clear and second, green product evaluation criteria are confusing according to Qiao and Wang.

They also argue that China has not provided sufficient resources for green procurement, including insufficient funding and human resources. The information infrastructure is inadequate, and procurement personnel are not given any formal and systematic training in green procurement.

Finally, they argue that China relies too heavily on administrative orders and regulations to implement green procurement, which lack legal enforcement power. As a result government agencies have the option to implement it or not, or to compromise the implementation.

It should however be noted that many of the issues and obstacles that Qiao and Wang have identified are also found in many other developing and developed nations that are trying to implement SPP, especially lack of sufficient funding, political support for SPP, and the need for adequate training for procurement professionals.

Based on their analysis of the challenges and obstacles, Qiao and Wang offer a number of policy recommendations to improve China's Sustainable Public procurement system including:

- 1) Creating a more favorable legal environment, promoting green procurement, increasing public awareness of the issues, and improving the green product market,
- 2) Building SPP organizational capacity by enhancing green procurement leadership, clarifying the best approaches for green procurement implementation, and promoting communication and interaction between environmental protection agencies and procurement agencies,
- 3) Setting appropriate GPP standards and criteria by speeding up the construction of the environmental production certification system and expanding and constantly updating the energy and environmental lists which are the primary policy tool employed to guide green procurement,
- 4) Increasing human resources and setting up training centers that focus on general procurement skills, communication skills, and product knowledge and green procurement certification,
- 5) Building a GPP information infrastructure where procurement personnel and suppliers can obtain the most up to date green procurement information,
- 6) Facilitating Green procurement with subsidies and tax policies to offset the initial higher cost of purchasing many green products, to help suppliers cover their production costs and to encourage more businesses to enter the green product industry. Tax breaks can also be used to encourage green production and green consumption, and products that cause pollution can be penalized with higher taxes.

In another recent study of China's Sustainable Public procurement, Fuguo, Yuying, and Fen (2010) also provide a similar in-depth analysis of the problems and flaws embedded in the current system. As a result of their analysis they argue for a "consolidated Green Public Procurement Code" that would confirm, clarify, coordinate and improve the current green procurement system and thus contribute to sustainable development goals in general. They

suggest that the proposed Code could either be in the form of hard law, or in the form of a soft law, which might better achieve better policy awareness, coordination, certainty and consistency. Their proposed Code is somewhat similar to the Mayor of London Code, which has been established for some years in the UK (see Mayor of London).

The most extensive and far reaching experiment in Sustainable Public Procurement Project up to this point was the case study of China's SPP in three urban centers which was recently completed in December 2011. This was a three year project begun in December 2008 and coordinated with the 11th Five Year Plan that had began to recognize and emphasize the importance of environmental issues along with the continued need for economic growth. (Ju, et.al. 2009, Ju, et.al. 2011, Zhang 2009)

The project Sustainable Public Procurement in Urban Administrations in China (SuPP-Urb China) was focused on adapting and using sustainable public procurement standards in Municipal Public Procurement Centers (MPPCs) in three target cities including, Tianjin, Qinhuangdao and Lanzhou, and to mainstream its application in China. The project was designed to contribute to reduced resource consumption and emissions, and thus it supported achieving the environmental targets of China's 11th five year plan and fostered sustainable consumption at the city level.

This well funded Project and case study involved an extensive partnership including academics and procurement practitioners from the European Union and China. The consortium was led by the Wuppertal Institute for Climate, Environment and Energy. Local partners from the selected target cities of Qinhuangdao, Tianjin and Lanzhou implemented public procurement. The Environmental Management College of China, Nankai University, Lanzhou Environmental Protection Bureau and the UNEP/Wuppertal Institute Collaborating Center on Sustainable Consumption and Production supported the cities in their activities.

The SuPP-Urb project aimed to transfer the experiences from three years of implementation of SPP in the three cities into policy recommendations for the improvement of the legal and regulatory

framework for SPP in China, and to mainstream sustainable public procurement standards.

At the conclusion of the Project, and case study of the three cities the consortium made the following policy recommendations that to be considered at both the national and urban levels:

- 1) In the short run, the two primary purchasing lists (energy and environmental) should be constantly updated, the quality and performance standards of the products listed should be improved, and the lists should to be widened in scope.
- 2) In the mid to long term, the government should consider moving beyond the lists to develop a new design including obligatory environmental characteristics or benchmarks.
- 3) It was recommended that life cycle costing be made mandatory for all Public Purchasing Centers (PPCs) in China to reveal the cost efficiency barrier of green versus less environmentally friendly products.
- 4) Environmental criteria should be weighted more heavily in the selection criteria of PPCs, to expand the procurement of green products and services.
- 5) Since capacity building is necessary for effective SPP in most PPCs, the budgets should be increased.
- 6) In regions where environmental awareness is low, more information should be provided to raise the awareness of procurement professionals, suppliers and the public.
- 7) Finally, a national monitoring and evaluation system should be established to provide both incentives to perform SPP and a control mechanism against corruption (Phillips, et.al. 2011)

The final project report based on three years of SPP experiences in China suggested that in order to make substantial progress in implementing SPP it is necessary and desirable to formulate a well integrated policy package which takes the multiple levels of SPP governance in to account and which can provide standards for the translation of national standards into practical guidelines that can be implemented at local levels.

CONCLUSION

On March 14, 2011, China officially adopted its 12th Five-Year Plan which has been hailed as a turning point for China's green development. It deepens China's ambitions to be green, both as a strategy for the next phase of industrialization and in hope of remedying its domestic environmental crisis. Environmental protection is highlighted as a pillar industry. Investment in low-carbon technologies, including electric cars and other targeted sectors, will help to position China as a leading player in the next generation of technologies, with benefits both for the economic balance sheet as well as the environment.

Will China succeed in its ambitions to achieve greener growth in the 12th Five-Year Plan? Five-year plans which set down and clarify national strategy are one of China's most important policy tools. Just as they have helped to drive China's economic success over recent decades, so can they play an important role in putting China on a greener developmental path. Environmental pollution, the development of renewable energy such as wind and solar, as well as the threat of climate change presents a long-term, complex and gigantic challenge for China. It will demand a long-term development strategy and broad goals, as well as near-term action plans and concrete policies. If China is able to develop and implement a Sustainable Public Procurement program it can be a very powerful policy tool to help China achieve both the environmental, as well as the economic goals set forth in the 12th FYP.

In addition, if China is successful in developing and implementing an effective Sustainable Public Procurement program it might also provide a model for other Asian countries that are attempting to balance economic growth with green growth initiatives.

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