

**19<sup>TH</sup> INTERNATIONAL INPUT-OUTPUT CONFERENCE**

**Alexandria, Virginia**

**13 - 17 JUNE 2011**

**A Study of the Relationship Between Cultural Industry  
and Economic Growth in Guangdong Province**

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# **A Study of the Relationship Between Cultural Industry and Economic Growth in Guangdong Province**

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**Abstract:** In recent years, for speeding up the transformation of economic growth mode and upgrading the industrial structure changes in the economic and social development, study of the relation cultural industries and economic growth becomes more and more important in Guangdong Province. Using the input-output analysis method for researching the relation between the culture consumption and economic growth in Guangdong Province, we know that the cultural industries have made great contribution to economic growth and the culture industry help promoting other industries obviously, but the potential of the cultural industries pushing forward related industries is still not fully tapped. There are two reasons for it. On the one hand, the relationship between the cultural industries and other industries is so close that it has a large ripple effect for other industries. On the other hand, the industry of Guangdong Province is mainly labor-intensive without little capital-intensive and technology-intensive. Therefore, trying our best to develop the

cultural industry, making use of the cultural industry to promote economic growth and optimizing industrial structure can ensure the development of economic faster and better.

**Keywords:** cultural industry; economic growth; optimization and upgrade; input and output; Guangdong Province

The culture is not only the spirit and soul of a nation, but also the power of the national development. To enhance our national cultural soft power, hold on the direction of socialist advanced culture, improve the ethical quality of the whole nation, promote cultural innovation, deepen cultural restructuring, enhance vitality of cultural development, meet the growing cultural need of the people's, build the basic of public cultural service system, promote national cultural industries becoming a pillar industry, guide the society culture and education, promote the development of the function, construct the common spiritual home, and strengthen national cohesion and creativity, we should promote the culture<sup>[1]</sup>. The Fifth Plenary Session of the seventh party's in our country has reported that: the culture is the spirit and soul of our nation. It can not only enrich people's spiritual life, but also improve people's creativity, and then promote the social comprehensive development.

## **1. The Review of Literature**

For the study of the relationship between culture and economic growth, there are many scholars who analysis it. They make great achievements and the research is helpful for the posterity to continue. Review of these studies, we find:

### **1.1 Overview of the Abroad Study**

Max Weber(1904), a famous German political economist, said that after the western nation reformation, it bred a kind of "Spirit of Capitalism ", that is a supporting people to pursue the ideal of economic interests in his "The Protestant Ethic and the Spirit of Capitalism ". This spirit

have played a significant role in promoting the modern capitalism, the emergence and development. The new spirit inherited abstinence, hard work and dedication of Europe, which will help improve capital accumulation and the formation rate, and the rational management of economic figures in line for the foundation of modern economic growth conditions<sup>[2]</sup>. Lewis (1955) focused on human behavior from the perspective of cultural effects on economic growth starting and the behavior of individual choice, the growth of national wealth, historical factors, institutional reasons, the social orientation. By using the historical method, he affirmed the spirit of innovation, risk taking, property system played an important role in economic growth and said the direct cause of determining economic development was human behavior, the growth and using of knowledge and Capital accumulation and the factors that determined the direct cause was the culture system<sup>[3]</sup>. William Baumol, Robert Litan and Carl•Schramm(2008) believed that the developed market economies had growth record, largely thanking the innovation and innovation was due to free market forces firms to product and market innovation as the most important means of competition after they researched the the relationship between entrepreneurship and economic growth. In their book, good capitalism, bad capitalism, they said that people maid have creative instincts, because it maid entrepreneurs excessive taxes, excessive government intervention, the law is too complicated, low administrative efficiency, be directed to unproductive rent-seeking activities or other up. But growth would eventually depend on fair rules and customs, these rules and habits that would guide people's innovation capacity in the right direction, and the economy had sustainable growth<sup>[4]</sup>.

## **1.2 Overview of the Internal Study**

Liao Bibo(2001) noted that the current expansion in China's consumer demand through economic means had failed, and the impact of consumption of deep-seated reasons expanded the consumer culture from the perspective of consumer culture. From five aspects of consumer culture, concept of consumption, consumption level, consumption quality, consumption structure and consumption of the system, he recommended the adoption of consumer culture, education, and created a consumer environment and guided measures to boost consumer attitudes consumption growth, promoting economic health and rapid development<sup>[5]</sup>. With deep cultural level of the traditional

"home" concept and the market economy, Feng Yaping(2006) analyzed Chinese economic reform and opening up policy and the relationship between traditional culture drawn is difficult to match the allocation of resources. She therefore considered that cultural values should change the traditional sense of the culture concept, replaced by a market economy, 'economic man' and 'rational man' concept. This would make Chinese economic growing rapidly and efficiently<sup>[6]</sup>. Yan Lei(2008) agreed that there was some relationship between culture and economic growth, but the overall lacking of information on the cultural uncertainty made it difficult to construct the relationship between the two models. Therefore, he proposed a nonlinear, discontinuous assumption of rational behavior and function of cultural values, preferred and selected the same assumptions and the using of fuzzy knowledge of economics based on values constructed basing on a microscopic model of individual choice to explain the cultural values for the conditional convergence between economic growth and provide a way to culture as an explanatory variable of economic growth, but the logical starting point was not the trusting of the previous studies, religion and so on. The logic of the study was: the main value orientation option determined the behavior, and behavior selection system had promoted the organization of informal and formal design of the system, then associated with the economic performance occurs<sup>[7]</sup>. Luo Hao(2009) established a cultural endowments and economic performance of the theoretical framework from the impact of culture on the various elements of economic development, technology and the system of analysis, demonstrated how the role of culture in economic development, and Confucian culture with a typical Paradox cultural influenced on the case illustrates the process of economic performance<sup>[8]</sup>.

### **1.3 The Evaluation Summary**

From the overviews, we can see that: for the relationship between culture and economic growth, it is a hot topic and experts and scholars have done in-depth inquiry. However, the internal and abroad research mainly analyze the relationship between the two from theory, but involving empirical analysis is rare. Therefore, this article attempts to research the relationship between cultural and economic growth by using the input-output analysis with the Guangdong Province's latest data as the main source of information and explore the reasons that cause this relationship.

Finally, we propose a number of responses.

## **2. Cultural Industry and Economic Growth Research and Analysis processing**

### **2.1 Data instructions**

This paper derived from the relevant data of Guangdong Province in 2002 and 2007 input-output tables. According to our current culture industry standard "culture and its related industries category", the departments of input-output table will be divided into four sectors which are agriculture, industry, services and cultural industries .The Specific division situation is as follows: Agriculture includes agriculture, forestry, animal husbandry, fishery including farming, forestry, animal husbandry and fishery services. Industries include coal mining and dressing industry, oil and natural gas mining industry, Black ore mining industry, Nonferrous metal mining ,non-metallic minerals and other mining industry, Grain polished industry, feed processing industry, Vegetable oil processing industry, the sugar industry, slaughtering and meat processing industry , Aquatic products processing industry, other food processing, The convenience food industry, the liquid milk and dairy products manufactured, condiment , Fermentation products manufacturing , other food manufacturing , the Alcohol and wine manufacturing industry, soft drinks and refined tea processing industry, tobacco, cotton, chemical fiber industry, Woolen textile and dyeing pure processing industry Enterprise. silk textile and fine processing industry Textile products manufacturing Knitwear, basketworks and its products manufacturing Textile clothing shoes, hats manufacturers, leather, fur (feathers ) products, wood processing and wood, bamboo, rattan, palm fiber and straw products, furniture manufacturing industry , petroleum and nuclear fuel processing, coking industry, Basic chemical raw materials manufacturing industry, fertilizer manufacturing, pesticide manufacturing, composite materials manufacturing industry, special chemical products, household chemical products, manufacturing, pharmaceutical manufacturing, chemical fiber manufacturing, Rubber products, plastic products, cement, lime and gypsum industry, cement and gypsum products manufacturing, brick, stone and other building materials

industry, glass and glass products manufacturing, ceramics manufacturing, manufacture of refractory products industry, graphite and other non-metallic mineral products manufacturing, iron industry, steel industry, steel rolling processing industry, ferroalloy smelting industry, the nonferrous metal smelting and alloy manufacturing, non-ferrous metal pressing industry, fabricated metal products, boilers, and the original motive manufacturing, Metal working machinery, lifting and transport equipment manufacturing, pumps, valves, compressors and similar machinery manufacturing, and other general equipment manufacturing industry, mining, metallurgy, construction equipment manufacturing, chemicals, wood, metal processing special equipment manufacturing, agriculture, forestry, animal husbandry and fishery machinery manufacturing, and other special equipment manufacturing, rail transportation equipment manufacturing, automobile manufacturing, shipbuilding and floating equipment manufacturing, other transportation equipment manufacturing, motor manufacturing, transmission and distribution and control equipment manufacturing, other electrical machinery and equipment manufacturing, computer manufacturing, electronic components manufacturing industry, home audio-visual equipment industry, and other electronic equipment, instruments manufacturing, scrap waste, electricity, heat production and supply, gas production and supply, water production and supply industry and construction; services, including rail transport, road transport, urban public transportation, water transport, air transport, pipeline transport, loading and unloading transport and other transport services, warehousing, postal services, computer services, software services, wholesale and retail trade, accommodation, catering, banking, securities and other financial activities, insurance, real estate, leasing, business services, geological prospecting, water conservancy management industry, environmental management industry, public facilities management industry, Resident Services and other services, education, health, social security sector, social welfare, sports, and public sector management and social organizations; cultural industries, including paper and paper products, printing and reproduction of recorded media, Educational and Sports Goods, coatings, inks, paints and similar products manufacturing, wire, cable, fiber optic cable and electrical equipment manufacturing, household electric and non-electrical equipment manufacturing, communication equipment manufacturing, radar and radio equipment manufacturing industry, culture, office machinery manufacturing, handicrafts and other manufacturing, telecommunications and other information transmission services, tourism,

research and experimental development industry, professional and technical services, technology exchange and promotion services, news and publishing, radio, television, film and audiovisual industry, culture and the arts and entertainment industries.

## **2.2 Cultural Industry Contribution to the Economic Growth**

### **2.2.1 The culture industry's contribution to economic growth analysis**

An economic system is composed by the Circulation system which is a part of a closely linked after the mutual convergence. Market economy is strictly followed this law, only the starting point and the traditional economy are different. Under the market economy, economic flow link starts from the end consumer, targeted in the final consumer-oriented marching investment, production. Production will have a corresponding economic value adding, this is the common indicators that we measure the development speed of an economy.

According to the input and output related theory, the final demand (including final consumption, the capital formation, output etc) is the main factor that affect production. The final demand decides the total output. The structure of demand will decides the final structure of the total output, total output would affect the structure of the added economic value in turn, that is GDP. Thus, by the end consumer and the quantitative relationship of total output and the number of deduced relationship between total output and value added, which deduces the number of relationships between final consumption and the increased value. Here, we take the latest input and output of Guangdong Province in 2002 and 2007 data input-output tables as main data, the relationship between the final consumption and the value-added calculated by the sub-sectors and departments is as following Table 1.

**Table 1 Guangdong Province in 2002 and 2007 induced the various department's value-added of final consumption table.**

Industry department	2002 induced final consumption value	2007 induced final consumption value
Agriculture	10509187.01	14036755.54
Industrial	19626113.23	30508095.82
Services	45998216.32	110492227.70
Culture industry	9425322.80	18260889.89
Aggregate	85558839.36	173297968.95

As input-output tables are compiled once every 5 years, therefore, the relationship between economic growth and the final consumption of industrial sector compared with the formula as following

$$\bar{v} = \sqrt[5]{\frac{\Delta G_i}{G_0} + 1} - 1$$

Where is the average annual growth rate for each sector (this can only be 5 years of economic growth projected average annual growth rate due to input-output tables compiled once every 5 years),  $\Delta G_i$  is the Final consumption for the i-sector value added growth induced by volume, as the GDP of the base amount (here is all of GDP for the 2002 input-output table).

From the data in Table 1, the relationship between the final consumption and economic growth calculates the contribution of economic growth. For final consumption, in the final four sectors the specific results are shown in Table 2.

**Table 2 Final consumption of each product sector's contribution to economic growth table**

Industry department	Final consumption induced economic growth
Agriculture	0.38
Industrial	0.31
Services	5.49
Culture industry	0.28
Aggregate	6.46

From the Table 1 and Table 2, we can see that the cultural industry consumption of Guangdong Province has made great contributions to economic growth, though the added value of agriculture and industrial much large than the cultural industry for the contribution to economic growth, the growth gap between culture, contribution to economic growth and agriculture, industry's contribution to economic is relatively small. In addition, we also found that the service sector contribution to economic growth in Guangdong is very large, accounting for more than half of economic growth in Guangdong (the period of economic growth in Guangdong Province rate at 10.8%). Therefore, we should develop the service sector and cultural industries vigorously, in order to promote steady and rapid economic growth.

### **2.2.2 Cultural industries of the industrial structure**

In the economic activities, there are many extensive, complexes and closely technology economic links among industries and this links are called industrial economic ties. These links among industries are decided by supply and demand. The different position are result in the links are different and we can divide them in two classes: the prior related relationship and after related relationship. As the name suggests: prior related relationship is the output of an industry departments in the industrial which absorbed by other follow-up industries department. It means upstream sectors. And this department developed the other industry. After related relationship is the industry departments that consumption the other department's output and we can name it downstream industry department. The downstream industry department can promote their supply

department. Based on theory of industry association of input-output quantitative relationship, we got Guangdong province's correlation coefficient of 2002 and 2007's, the related data is shown in table 3.

**Table 3 Guangdong Province in 2007 and 2002 comparative table of various department correlation coefficient**

Industry sector	By 2007 the correlation coefficient	After 2007, the correlation coefficient	Before 2002, the correlation coefficient	After 2002, the correlation coefficient
Agriculture	0.7395	0.3990	0.5177	0.4409
Industrial(except culture industry)	0.8024	0.7735	0.7832	0.7521
Services (except culture industry)	0.4489	0.4017	0.5264	0.4438
Culture industry	0.5230	0.7544	0.4809	0.7208
Total input	0.6843	0.6843	0.6541	0.6541

The table 3 shows that cultural industries although prior to the correlation coefficient is relatively small, but the correlation coefficient is very large. This indicates that in Guangdong Province, the cultural industry of other industries mainly driven primarily, but not play role in promoting the proper role, which is our further development, and reform of cultural industries be aware of when consumption of the main problems.

Generally speaking, the industrial sector in the production process of a change all will be through the relationship between industries of the spillover effect of other industries. Typically, the industry has been a ripple effect to other industries as sensitivity, but it spread to other industries, the role of known impact. By the theory of input-output coefficients and the influence on the sensitivity coefficient of the number of relationships, by our calculations, of Guangdong Province in 2007 and 2002 the industrial sector and influence coefficient sensitivity coefficients are shown in Table 4.

**Table 4 Guangdong Province in 2007 and 2002, sensitivity coefficients and influence coefficient comparison table**

Industry department	2007sensedegreecoefficient	Influence coefficients In 2007	2002 sense degree coefficient	2002 influence coefficient s
Agriculture	0.4543	0.7522	0.5091	0.7959
Industrial(except culture industry)	2.2515	1.2720	1.9600	1.2231
Services (except culture industry)	0.6765	0.7268	0.8563	0.7955
Culture industry	0.6177	1.2489	0.6746	1.1855
Average	1.0000	1.0000	1.0000	1.0000

It can be seen from the table 4: on the one hand, cultural sensitivity coefficient of the industry is relatively small, indicating that the culture industry is relatively stable and it is not easy affected by the role because of the changes in other industries; on the other hand, the influence of cultural industries larger coefficient, which shows the cultural industry effect of other sectors through the ripple inter-industry obvious, a unit of cultural industries changes will be consequential in other relevant departments have doubled the number of changes.

### **3. Impact of Cultural Industries Path of Economic Growth**

The consumption expenditure of cultural industries, as one of the final consumption indicators in Guangdong macroeconomic, gets the economic development following the several ways.

#### **3.1 As an important consumer activity, they stimulate economic growth**

The economic and social always run in links of the three cycle investment, production and consumption. The sequential starting point is different, while in a different period of development or in different economic development approach. In 1992, the party's congress clearly put forward the goal of establishing a socialist market economy, with the development and growth for twenty years, the market economy has been established and continuously improved, the operation of economic gradually transformed form the mainly through the national program management by the past into through the development of the market to adjust itself. In such a universally popular model of economic development, economic development with the market for the target, consumer-centric, with the consumer demand as the leader. Economic cycle from the consumer demand as the start and then induce investment, finally drive manufacturing.

When it comes to the Consumption expenditure specifically, in the special background that the training of the next generation in such a scientific and cultural quality will be put in an important position in china , Cultural consumption spending often occupy a family disposable income, a large part of the cultural products consumption growth effects cannot be ignored . The empirical analysis of Guangdong province also show that Although the contribution of cultural products consume to the value GDP is less than the agriculture, industry and services, the contribution of cultural consumption to GDP growth is much bigger. This special service product, culture, also promotes the development of associated industries, which in turn stimulate the development of the next part of industry sector, so continue to spread and promote economic doubled. The former mentioned empirical results also confirmed this, in 2007 and 2002, the cultural industry and influence to the coefficient of correlation coefficients are very large. This shows that, in Guangdong province, cultural sector of the industry sectors associated lead a strong leading role.

### **3.2 As a social investment, promoting economic growth**

In the market economy system, once social has consumer demand, it will attract people to invest heavily in the industry to produce the appropriate product to meet these needs. With the development of economic, the living standards of people improved. With the service products and consumer spending more and more, accordingly, the demand for goods for services is also growing.

The Demand for cultural services is an important component of demand for services. The same with other service needs, where there is a demand for cultural products, it will attract the investment community and cultural services, such as social organizations and units of cultural products and their related industries, production, investment. The community through investment for the cultural industries led to the development of related industries, related industries and promote the development of associated industries, such extension of waves and ultimately bring the entire economy has grown exponentially.

### **3.3 Improve the quality of workers, increase production efficiency**

We always pay attention to the great role played by science and culture to the governance in national affairs, from the theory clearly stated in the "Science and technology are primary productive forces" put forward by Deng Xiaoping to the development from the "technology and education in our country for the grand goal of achieving socialist modernization development strategy " and today Fifth Plenary Session of the Seventeenth Party Congress stressed that the focus on the development of culture, which are the government running the country and bringing peace to play a function of people's cultural quality of the concrete manifestation.

Not only to bring peace to science and culture outside the country, but also to accelerate the pace of economic development and construction. Because culture can improve the receiver to improve the quality of ideology, culture, conservation and scientific knowledge, and strengthen the recipient's thinking ability, to increase the recipient's job skills, and ultimately enhance the productivity of the recipient, thus promoting the overall social and economic progress.

### **3.4 Talents for economic development, optimizing industrial structure**

After the Reform and Opening up, because of the limited social background, the quality of workers in general is relatively low and level of education is not high, resulting in economic development of Guangdong Province are mainly labor-intensive industry, the extensive mode of economic development. The main features of this mode of production are: the need for a lot of labor, technology and content is not high, the added value brought about by the work less

contribution to the lack of sustained economic growth. In the early days of reform in this regard consistent with China's national conditions and social development, it could improve people's living standards; but on the other hand, its disadvantages are also obvious, because the quality of worker is low, technical level is not high, production processes in the value chain to the bottom of poor international competitiveness. Scientific and cultural education are fundamentally solve this problem, through culture and education to raise people's cultural knowledge, science and technology and work skills to enhance the comprehensive ability in all aspects of workers, laborers and then there will be a general increase in capacity at higher value chain corresponding industrial sectors. In such industries, the complexity of the work of workers have increased, science and technology will increase the added value of labor will also increase, the international competitiveness of products, can also become strong. Thus, economic development has gradually changed from the labor-intensive and technology-intensive, economic development will also shift from extensive to intensive development pattern, and ultimately achieve economic and social optimization and upgrading of industrial structure.

## **4. The Policy Advice and Attention**

After this cultural industry of Guangdong province relationship between consumption and economic growth, we find that consumption of cultural industries contributes to economic growth can not be ignored, and the culture's role in promoting the development of other industries is obvious, but to promote the role of cultural industries, there exists large enough. Therefore, for these facts, we propose some suggestions and attention to the following issues in order to make Guangdong's economic development have some reference value:

### **4.1 Vigorously develop the cultural industry to promote economic development**

In Guangdong Province, cultural products, the contribution of consumption to economic growth is huge, even more than agriculture, industry, final consumption of even greater contribution to

economic growth. Thus, we should vigorously develop the culture of our province, to promote economic better and faster development.

#### **4.2 Focusing on cultural industries in promoting the role of other industries**

In contrast, the culture industry's role in promoting other industries other than its role in promoting the industry is clear a lot. This shows that we are not fully utilized the potential of culture to promote economic growth, promoting the role of culture in consumer behavior is culture as a contribution to economic growth, and cultural activities as an investment role in promoting economic development should be the cultural industries main functions. Therefore, we should strive to integrate cultural development and practice, full using cultural role in promoting economic development.

#### **4.3 The culture of evaluation results should be integrated**

The intention is to make culture-round development of people lost their very nature and machine is no different. Therefore, we evaluate the development of cultural industries should not be achieved only emphasizes the contribution of culture to economic development, how much should also consider the contribution of culture to social stability and unity of people the role of spiritual life, so that it is more complete, comprehensive.

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