

Developing package printing in China

The Chairman of Printing and Printing Equipment Industries Association of
China

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Dear Mr. Thayer Long, President of NPES,

All distinguished delegates participating in the meeting,

Good afternoon, everyone!

First of all, I would like to welcome you to China-US Package Printing Forum on behalf of the Printing and Printing Equipment Industries Association of China and the Sponsor of the Forum.

Industry delegates of two print and package powers of China and USA can gather here today to evaluate the development trend, share development experience and seek for ways of the cooperation, which has important significance.

My speech will surround the topic of the “Developing package printing in China”, focusing on introducing the development status of China's package printing industry, opportunities and challenges faced and the development trend.

I. Development status of the industry

1. Development speed

In 2015, printing enterprise above designated size in Mainland China were 4,300 (accounting for 79% of total number of printing enterprises above designated size), achieving annual income of main business CNY 575.4 billion (accounting for 78% of annual income of main business of printing enterprises above designated size), with employees of 730,000 (accounting for 74% of total number of employees in printing enterprises above designated size).

From 2013-2015, the income of main business of printing enterprises above designated size in Mainland China increased from CNY 601.4 billion to CNY 740.2 billion, with a grow rate of nearly 19%, of which the share of 90% is contributed by print packaging. Package printing has become main force driving the growth of China's printing market, which is closely related to the development of light industry (big consumption). China's economic development has experienced a rapid development stage of consumption upgrading, and package printing is the beneficiary.

Since 2013, the inflection point of growth rate of package printing

appeared; with the macro adjustment of economic structure, overall development of China's manufacturing industry has slowed down, and the **growth rate of package printing** closely related to the manufacturing industry of consumer goods **decreased to 4-5% in 2015** from two digits of many years. The development of package printing has entered the period of speed governing and gear shifting from high speed to medium-high speed.

2.Regional distribution

For main business income of China's printing and packaging enterprises, divided as per the region, the top three are Guangdong, Shandong and Jiangsu, respectively.

In the process of continuous development, the concentration degree of China's package printing industry is rising continuously, of which one of significant signs is that: A group of leading enterprises have emerged, represented by Jinjia, YUTO, Hexing, Jielong, ZRP and Heshan Astros.

The industry distribution of package printing is highly consistent with hot spot regions of manufacturing bases formed since the reform and opening up in Mainland China. The computer, communication and other electronic equipment manufacturing industry, farm and sideline food processing industry, textile and garment, shoes and hat manufacturing industry, food manufacturing industry, wine and beverage manufacturing industry and modern logistics industry in rapid development have provided the huge market demand for the development of package printing industry in China.

3.Development momenta

In the past, the growth momentum of package printing industry was mainly driven by factors, that is, it relied on increasing the input of factors (labor, land and capital) to maintain high growth. Nowadays, the efficiency of industry factor input significantly decreased progressively. It finds the expression in the traditional market saturation, excess capacity, weakening of demographic dividend effect, increasing of labor cost, increasing of the pressure of environmental protection, therefore, enterprise profit is very difficult only relying on the old momentum, because the profit margin of enterprises in the industry is maintained basically below single digit, the critical period of new/old momentum transformation and transformation and upgrading has arrived, that is, the innovation including creating new consumer formats and other new momenta shall be relied on to drive the growth.

4.Product structure

According to the end-user classification, the package printing in China is used to be divided into: Food package printing, beverage package printing, package printing of medicine and health care products, package printing of

cosmetics and daily chemical products, package printing of industrial products (mainly household appliances, household utensils and electronic information products such as mobile phone, etc.), package printing of logistics and transport and package printing for other purposes.

After a very long period of rapid growth, food package printing, beverage package printing, package printing of medicine and health care products, package printing of cosmetics are now maintained a steady growth trend, but new formats represented by the package of electronic information products and express delivery is rising rapidly, of which the growth is amazing.

II. Opportunities and challenges faced

1. Medium-high speed development of China's economy

The package printing is close to and serves for main industries, it will neither separate from the light industry, electronics and other manufacturing industries to enter the independent market quotation, nor miss precious opportunities brought about by the development of main industries. Since 2015, economic trend in China fell back, single-quarter GDP year-on-year growth rate ran mostly in the lowest range since 2009, downward pressure of the economy continues to increase. The economy of China is undergoing structural adjustment. This is a gradual process. From 2016-2020, the mean annual growth rate of GDP set in National Economic and Social Development Plan of China is 6.5%.

However, China's economic consumption upgrade is still on the road, not to the end, with the speeding up of adjustment and transformation of China's economy from investment to consumption, contribution rate of the consumption among the "three carriages" will still increase, and still have the fundamental aspect for rapid development. Therefore, the development potential of package printing still has a good prospect.

2. Attach great importance to environmental treatment

In recent years, the emergence of extreme weather and severe haze in Mainland China has made industrial personnel be fully aware of that the development mode to trade the GDP growth by sacrificing the environment has come to an end. In June 2015, the Ministry of Finance, Development and Reform Commission and the Ministry of Environmental Protection of PRC jointly promulgated "the Pilot measures for charging pollution discharge of volatile organic pollutants", decided to charge for pollutants discharging from pilot industry enterprises for discharging VOCs to atmosphere directly from October 1, 2015. Two industries of print packaging and petrochemical industry had been included in pilot industries to be levied for the VOCs pollutants discharging. Up to now, there are nearly 20 provinces having promulgated the charging criterion for VOCs treatment, to charge ranging from CNY 1.2, to 20,

40 based on pollutional equivalent or kilograms; In the meanwhile, many regions have set up environmental protection police force, to establish the gridding regulation system, carrying out real-time monitoring on key enterprises for VOCs emission; The “Environmental Taxation Law” approved and adopted at the end of 2016 even starts from the tax lever, announcing that from January 1, 2018, the change of charging for discharging pollutants to environmental protection tax will be officially launched, which force enterprises to reduce discharging pollutants.

3.The government implements the industry access system

Mainland China executes the printing business license system. The “Regulations on the Administration of Printing Industry” (Revised Edition on February 6, 2016) issued by relevant government departments has been implemented. There are some changes in the revised version of the Regulations: The scope covered by the printing business license system is extended from the establishment of printing enterprises to being engaged in printing business activities, namely, the operational typesetting, plate making, printing, binding, printthrough, photocopying, printing and other activities. According to the definition on "printed matter of package and decoration" in the Regulations, it includes trademark sign, advertising and propaganda materials and the paper, metal, plastic and other printed matters used as product packaging and decoration. It covers all of printing of packaging and trademark and most of business printing. In addition, for the package related to the safety of the food and medicine, the market access system will also be established in the form of legislation.

4.Remove continuously excess capacity

The protuberant performance form is the failure of transmission mechanism of product price. Because the effect of cutting excessive industrial capacity of resource type upstream industries has appeared, in the second half of 2016, the paper price rose and even soared, prices of entire line and all kinds of papers had been adjusted, of which the overall increase amplitude had reach about 30%. The package printing cannot be transmitted to downstream because of the overcapacity. Paper packaging production enterprises with the ratio of raw materials accounting for the cost up to 80% even face unbearable heavy pressure.

5.Solve excessive packaging seriously

There is obvious difference between Chinese and Western cultures and aesthetic preference. In the era of shortage economy, the phenomenon of "neglecting product packaging" once appeared in China. After the market

opening, economy being active and material being rich, the phenomenon of "excessive packaging" appears then. The packaging cost final consumption products is even higher than the product itself. In order to pursue the exquisite degree of the package, complex printing process and post-print working process are often adopted, resulting in serious waste of resources and too heavy environmental load. Regarding this, national and local governments have introduced policies and regulations in succession to regulate. More and more people of vision in the industry are reaching such a consensus: The package printing shall develop from the "excessive packaging" to "reasonable packaging" direction. What is a reasonable packaging? It is believed that there are three signs: ①Be customer-oriented, to take meeting actual need of customers as the goal; ②Enhance the efficiency of resource utilization, and protect strictly the environment; ③Promote the combination of the design with packaging, to be combined with various printing methods.

6. Great impact of technological revolution

In the new round of technological revolution featuring the Internet, Internet of things, big data, cloud computing and intelligent manufacturing, compared to the publication printing, it can be said that the package printing has not been suffered from the impact of substitutability and subversiveness, instead, the new format bred by the Internet, Internet of things and intelligent manufacturing and other high and new technique has brought new business opportunities to the package printing, elongated the industry chain. The new format has blurred the boundary between the package printing and commercial printing, and put forward more intelligent functional requirements, such as the anti-counterfeiting, traceability, identification, certification, monitoring, early warning and so on.

Developing the cloud printing, co-publish printing, online printing and digital personalized printing (including tagging variable printing) and new packaging printing methods through +Internet, package printing enterprises can achieve enhancing the quality and increasing the efficiency, to create new competitive advantage.

III. Development trend

1. Maintain medium-high speed development

The mean annual growth rate of GDP set in the National Economic and Social Development Plan of China (2016-2020) is 6.5%. Referred to the previous relevance of the growth of package printing industry and the growth of macroeconomic GDP growth, and the fundamental aspect of China's economy transformation from investment to consumption of people's livelihood, it is believed that the pattern of being steady towards better will continue, and the mean annual growth rate of package printing industry during next five years

will be slightly higher than GDP, being maintained ranging from 7- 7.5% .

2. Advance towards medium-high-end level

With unceasingly deepening of the supply-side structural reform and accelerating of the momentum transformation from the old to the new, the package printing will advance towards medium-high-end level in the development quality. Concentrated expression: ①Promote the innovation, to expedite the birth of new formats and new growth points; ②Optimize the stock, to form the new competitive advantage taking the technology, quality, brand and service as the core. What calls for emphasizing is that: The servitization of products processed of package printing (such as integrating the creative design and processing and production of the package printing as a whole) is the major value-added point in the value chain.

3. Adhere to green development

Industry enterprises in the development shall undertake the responsibility of protecting the environment, which has been raised to the law level, becoming the bottom line that must be adhered to in seeking for industry's development.

Environmental problems of package printing in China mainly focuses on the VOCs emission during the curing process of printing ink and the pollution of ink containing heavy metals in the printing of food and medicine packaging, and waste water discharge in the process of printing plate making. Moreover, the reducing consumption and recycling of the energy and packaging material substrate in the course of processing are also main contents of green package printing. The key to solve environmental problems of package printing lies in materials and equipment, in the future, depending mainly on technological innovation of these two aspects, the development of green package printing will be driven by double wheels. Develop emphatically: ①Environmentally-friendly ink, environmentally-friendly plate materials, environmentally-friendly substrate (degradable); ②Environmentally-friendly equipment - equipment suitable for using environmentally-friendly materials, equipment requiring for low-consumption materials, equipment saving energy and equipment with environmental protection processing functions.

Flexo printing is an environmentally-friendly printing mode using non-solvent printing ink, the proportion of flexo printing in the United States is much higher than that in China, but under the pressure of environmental protection, the proportion of flexo printing in China also presents a rising trend. In addition, the way to use micro-corrugated paper instead of ordinary corrugated paper to save paper resource is also concerned by the industry.

The advocacy of being free from corruption and the improvement of social atmosphere are being transformed into the market force to suppress excessive

packaging, to promote the packaging style to develop towards being simple, applicable and of multi-function.

3R+1D is the reduction, reuse, recycling of waste and degradable, being the development tendency of green packaging.

4. Technological revolution promotes industrial change

The new round of technological revolution will guide the package to develop towards the direction of green packaging, safe packaging, smart packaging and standard packaging. Because the package printing is of order-based and customized production mode, and the intelligent manufacturing features mass customization production mode, the intelligentization of package printing processing and production process will be the major direction of package printing industry, of which main contents are to construct the advanced digital package printing system, to utilize the Internet, big data, artificial intelligence and other technologies to develop cloud printing, co-publish printing, online printing and digital personalized printing (including tagging variable printing) and other new packaging printing methods.

The interaction of new technological revolution and new business modes will be an important force to expedite the change of package printing industry. New business modes bring not only new challenges but also new opportunities: With the growing trend of consumer personalization, more "small packaging" consumer goods in the market are needed, which is a new opportunity for the development of package printing; The express delivery industry sweeping the land of China with exceptionally rapid developing has also put forward new demand for package printing. Promoting the standardization of packaging materials of the express delivery brings us not only a brand new market, meanwhile, huge amount of social resources can be saved.

5. Increasing industrial concentration degree

The final force of "cutting excessive industrial capacity" is the market, the result of shuffling will surely be that industrial resources concentrate to dominant large enterprises with higher production efficiency and lower cost, and the implementation of government's environmental policy and industry access policy will boost the capacity integration and distribution adjustment of package printing enterprises, promoting the industry to develop towards the direction of large-scale and specialization.

Epilogue

China is the world's largest developing country, subject to over thirty years of continuous efforts, China's printing market has ranked the world's Top 2. While making considerable progress, it may be clearly seen that, for China's printing industry, the innovation capability (technology innovation and business

model innovation) is to be further enhanced, industrial structure is to be further optimized, and the green development road is to be further explored. The United States is world's largest developed country, possessing very mature experience in technological progress, industrial development, market operation and other aspects, including the whole printing industry containing the package printing, so there are many advantages in the United States being worthy to be studied and referred to by China. The successful organizing of today's Summit Forum is a good start.

China's personnel in printing industry are advancing on the road of ceaseless self-improvement. We want to advance better, more steadily and more distant. In this process, we shall learn from beneficial experience of the United States and other countries, to nourish ourselves with international experience and to enhance ourselves with continuing efforts, exploring a development way being in line with the industrial development law and with our own characteristics.