

Quality, Reputation, and the "Made in China" Brand

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Good Morning,

Vice Chairman Zhou Taitong, Ms. Ren Wenyan, Chancellor Yu Lizhong and distinguished guests, it is a great pleasure and honor to address all you today!

The rise in the economic output of China over the last two decades has been quite remarkable. Naturally, the issue of sustainability of this growth rate is of great interest; can China maintain its economic trajectory into the future? How should the transformation from an economy of low cost to one of high value be managed? The two avenues open to the country in this respect are those of *Innovation* and *Quality*. The first approach focuses on creating value through the innovation process – the creation of novel products or services. The second approach creates value through the excellence of production process – by turning out an output of high quality products and services and establishing a corresponding reputation.

In the area of *Innovation*, I think the prognosis is very positive. You can clearly see it at places like NYU SH and other universities, where a new generation of young men and women – engineers, business majors, scientists, artists – are coming on the stage, who are curious, adventurous, entrepreneurial and ambitious. There is no stopping this new generation! I think in ten years the world will be flushed with very desirable products and services with the label "invented in China."

But how will customers, in China and abroad, view the *Quality* of products and services that are "made in China?" I think the verdict is still out on this, and I wanted to spend this session with you thinking about some of the issues involved. And while this relates to China in general, I think it is particularly relevant to a major commercial city such as Shanghai.

There is a lot to build on. First, there is a long tradition in China, and in Shanghai, of making objects of exceptional quality, and superb craftsmanship is highly appreciated. Second, many of the world's premier brands subcontract with Chinese manufacturers utilizing the most advanced Quality Management techniques with great success. Third, a large number of Chinese organizations have successfully created their own reputation of quality and excellence. For example, Goodbaby, a Chinese company which manufacturers nearly 35% of the world's strollers for international brands, has had great success selling products under its own brand name.

On the policy side, the 1993 Product Quality Law provides a legal framework for regulating the quality of products and services and defines the producers' responsibilities in this respect. A large percentage of state owned enterprises as well as privately held companies are already ISO9000 certified and TQM programs have been implemented in many companies and organizations. On the academic side, many universities have established programs in Quality Management, some in cooperation with business or governmental organizations.

Yet, there is still a pervasive negative perception of product quality in China, fueled by unfortunate episodes such as the milk scandals of 2008 and the product recall crisis of 2007, when over 100 million products made in China, including toys, were recalled for safety reasons by the US Consumer Protection Agency. So, is it feasible for us to think about "Made in Shanghai" or "Made in China" as a powerful brand, one that stands in the minds of customers all over the world, including in China, as a seal of approval that commands premium prices? My answer is yes, but that this requires a major, concentrated effort over the next decade, launched together by the business, academic, and governmental communities.

Before moving forward, I would like to dispose of an argument one often hears with respect to Quality Management in China, specifically that it does not work well in some cultures since it is basically a participatory, bottom-up activity that cannot work well in hierarchical, top down societies or cultures. In my view, this argument does not hold. Indeed, hierarchical structures are more generational than locational. The young men and women I see at NYU Shanghai and in schools and universities all over China are likely to be as averse to arbitrary hierarchical structures as their peers in other societies. They are proud and ambitious. They appreciate owning a quality product or experiencing a quality service, and they are perfectly able to produce one for their customers.

It is important to establish that the task will not be easy. If we look at the history of quality management in the West, we discover that the road is fraught with difficulties and disappointments. Many studies of companies that tried to implement various Quality Management systems such as TQM, Reengineering, or Six Sigma reveal very low success rates, often less than 10%. Why is building a reputation for quality so difficult? What can be done, in the context of China or Shanghai, to mitigate these difficulties? I think about these issues in terms of five types of tensions. First is the dual nature of quality: internal and external. Second is the inspection versus prevention dilemma. Third is the short versus long term view of business. Fourth is the "good enough" versus "strive for excellence" style of management, and finally we have the free rider conflicts. We will need the full cooperation of academia, business leaders, and government to tackle these five tensions.

So what is quality? There is no broadly agreed upon definition. However, all existing definitions are based on two complementary concepts: **conforming to specification** and **satisfying customers**. These two concepts give rise to two very different views of quality: internal and external, respectively (also known as 'little q' and 'big Q'). For example, if we were to measure the punctuality of a transportation system (airline, train, bus, subway and so on), we can measure by comparing the planned schedule to the actual ('on time performance'). This will be an internal metric for quality. An external measure would be, for example, a survey of passengers with a question such as 'how satisfied are you with the train's on time performance?' The key issue is that the internal and external systems perform very differently and are influenced by different factors. While the first is objective, specific, and feedback oriented, the second is subjective, diffused, and open to interpretation. The key skill is realizing that both aspects are critical and generating a management system that is able to work with both at the same time. This is often done by "breaking down" Big Q issues (customer satisfaction) into a sequence of narrower gaps, such as design gap, performance gap, delivery gap and so forth, until we zero in on "little q" (conforming to specifications).

What is the best way to achieve quality? The most intuitive approach is by imposing a rigorous system of inspection: checking out the units produced and separating the good ones from the bad. For example, to avoid errors in a hospital setting, a pharmacy issues medicines and a nurse is charged with checking that the medicine is correct before it is dispensed to the patient. In a factory, an inspection department could be set up to make sure that products conform to standards. On the service side, a restaurant could hire an abundance of extra personnel to ensure that no orders are misplaced, and to take care of customers in case they are. Oftentimes, this approach to quality management is tied to an incentive system under which we reward or punish individuals based on the quality of their outputs. Although this seems a very reasonable way to ensure quality, in actuality it is very ineffective for two reasons. First, it increases the cost of operations since things have to be done twice: you have to make it and then you have to inspect it. Thus, there will always be pressure in the

workplace to circumvent the system – to cut the cost of inspection in order to increase profits. In other words, inspection creates a fundamental tradeoff between cost and quality, and often the cost side wins. More fundamentally, inspection can never discover all the defects in a given system and often gives the false sense that everything is right. Paradoxically, in an inspection-based system, the more defects the inspectors find the more certain one can be that some defects have slipped through.

The fundamental result of this is that in order to operate at a high level of quality the emphasis has to move from inspection to prevention – from a focus on the product or service to a focus on the process that creates the product or service. Indeed, it is amazing to note that some of the best practitioners of Quality Management avoid inspection entirely in some parts of the operation!

The short term versus long term tension is another source of difficulty. Indeed, one of the reasons QM projects often fail is the long lag time between the investments in effort and resources, which is concrete and significant, and the resulting rewards which are diffuse and uncertain. This is due to the major asymmetry of information that is inherent in the Quality Management enterprise – while the producer knows directly the quality level of a given product, the customer, in most cases, can only find this out through experience, which may occur long after the product is purchased. In order to compensate, customers will rely on reputation. However, reputation takes a long time to build (but can be lost overnight!). This is already happening to some extent. For example, JWTIntelligence, a trends research center, reported that manufacturing standards in China have improved in the last 10 years and that most consumers have not had any negative experiences with Chinese made products, but Chinese manufacturers have yet to escape a poor reputation for quality.

A "good enough" or "cost-benefit" business mentality requires a manager to compare the costs and benefits of each improvement action. For example, a US-based automotive manufacturer becomes aware of a defect in a small part of the ignition switch. This approach requires the costs of fixing this problem to be determined first. These costs are then compared to the costs of inaction. If the costs of improving are higher than the costs of doing nothing, then it is "optimal" to not act. The 'strive for excellence' approach, on the other hand, is guiding managers through a very different decision making process: if something is not perfect, then the question to ask is 'what is the most reasonable way to make the system more perfect?' This approach creates a continuous improvement trajectory that delivers phenomenal levels of operational excellence. The paradox is that a sequence of actions, each of which can seem superficially wasteful, can be transformed, when taken together, into a major source of customer satisfaction, profits, and reputation.

Finally, the third tension is between individual interests and community growth, also known as the free rider problem. For the "made in China" brand of quality to improve, *all* companies and organizations have to move together and invest in quality. For example, the Wall Street Journal reported at the end of last year that the quality gap was closing significantly between some Chinese construction and mining equipment manufacturers, giving US companies like Caterpillar and Joy Global a run for their money. Yet, the quality of Chinese made equipment varied greatly from company to company. While the payoff for these quality manufacturers will come to fruition, the payoff for the entire economy will be thwarted because it is tempting for some individuals to skirt the effort – to continue building inferior products relying on others to carry the burden. This is the famous 'prisoner's dilemma' paradox that can prevent general progress. It would require the creativity and knowhow of academics, the resolve of business leadership, and the steady hand of government to coordinate such an effort.

As we have seen, the difficulties are many. However, the rewards could be transformational. If academia, business, and government work together and set this as an overarching objective, I believe we will all see the "made in China" brand as one of the most coveted brands in the world.

Before we move on to question and answer, I want to point out that a city can establish a reputation distinct from its country. The label "made in NY" was intended to boost local manufacturing in New York's fledging garment district but is now also synonymous with the growth of innovative startups in the city. From t-shirts to websites, the "made in NY" stamp carries with it a unique connotation of

Quality and **Innovation** that exists independently of the "made in the USA" brand. Is this idea appropriate for Shanghai?

With that, I'd like to thank the Shanghai Municipal Commission of Commerce, the Shanghai Municipal Bureau of Foreign Experts, and the Shanghai Jiading District People's Government for having me here today. I'd be happy to take any questions you might have.