

## How China's Largest TV Maker Invested in Georgia to Globalize its Brand

April 2017



## Preface

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For decades, bilateral investment has flowed predominantly from the United States to China. But Chinese investments in the United States have expanded considerably in recent years, and this proliferation of direct investments has, in turn, sparked new debates about the future of US-China economic relations.

Unlike bond holdings, which can be bought or sold through a quick paper transaction, direct investments involve people, plants, and other assets. They are a vote of confidence in another country's economic system since they take time both to establish and unwind.

The Paulson Papers on Investment aim to look at the underlying economics—and politics—of these cross-border investments between the United States and China.

Many observers debate the economic, political, and national security implications of such investments. But the debates are, too often, generic or take place at 100,000 feet. Investment opportunities are much discussed by Americans and Chinese in the abstract but these discussions are not always anchored in the underlying economics or a realistic investment case.

The goal of the Paulson Papers on Investment is to dive deep into various

sectors, such as agribusiness or manufacturing—to identify tangible opportunities, examine constraints and obstacles, and ultimately fashion sensible investment models.

Some of the publications in this Investment series look ahead. For example, our agribusiness papers examine trends in the global food system and specific US and Chinese comparative advantages. They propose prospective investment models.

Even as we look ahead, we also aim to look backward, drawing lessons from past successes and failures. And that is the purpose of the case studies, as distinct from the other papers in this series. Some Chinese investments in the United States have succeeded. They created or saved jobs, or have proved beneficial in other ways. Other Chinese investments have failed: revenue sank, companies shed jobs, and, in some cases, businesses closed. In this sense, past investments offer a rich set of lessons to learn.

Damien Ma, Fellow and Associate Director of the Paulson Institute think tank, directs the case study project.

For this case study of Hisense Group, we very much appreciate our Research Associate Joy Ma's dedication to this project and commitment to execute on it.

Case studies are reconstructed on the basis of the public record, personal interviews with participants, and journalistic accounts. They aim to reflect a best reconstruction of the

case. But they may have gaps and other inadequacies where the record is incomplete, facts are murky, or players chose not to share their views.

Cover Photo: Reuters/Jeff Haynes

## Timeline

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- 1969** The Qingdao Municipal Government in Shandong province establishes the Qingdao Number Two Radio Factory to manufacture radio receivers.
- 1984** The Qingdao factory purchases an advanced color television production line from Japan's Panasonic to transform it into a local manufacturing champion.
- 1992** Zhou Houjian becomes head of the factory and pursues an asset buying spree; he also renames the company "Hisense Group."
- 1996**
- March* Hisense is caught up in intense competition as Chinese TV producers engage in a race to the bottom on prices. Price competition prompts Hisense to reposition its strategy to focus on innovation and the global marketplace.
- October* Hisense establishes its first overseas subsidiary in South Africa.
- 1997** Hisense Electric Co. Ltd, the TV manufacturing arm of Hisense Group, lists on the Shanghai Stock Exchange.
- 2001** Hisense establishes its US headquarters, Hisense USA, in Los Angeles, whose primary focus is TV sales and imports targeted at the US market.
- 2003** The US International Trade Commission imposes a 21.49 percent antidumping tariff on Hisense's TV exports, leading Hisense to shift into selling higher-end flat panel TVs under the in-house brands of retailers such as Sears and Best Buy.
- 2007** Lin Lan, Hisense Group vice president of international operations, leads Hisense USA's relocation from Los Angeles to Gwinnett County, Georgia. The relocation is meant to lower transportation costs and set up post-sales services support.
- 2008** Hisense USA establishes a formal relationship with the Gwinnett County Chamber of Commerce.

- 2009** After a Gwinnett delegation visits Hisense Group’s headquarters in Qingdao, Hisense USA announces a new \$800,000 investment to build a sales and marketing center in Georgia, aiming to create 35-40 jobs.
- 2010**
- May* Hisense convinces its first American electronics retailer, hhgregg, to carry Hisense-branded TV sets.
- July* Hisense expands in Georgia, building a 7,000-square foot research and development (R&D) center that it expects to create 20 jobs.
- 2011** Hisense USA purchases another 36,000-square foot building in Suwanee, Georgia as its new headquarters, which is intended to house additional R&D capacity and its marketing department.
- 2015** Hisense acquires from Sharp Corporation a TV manufacturing facility in Mexico, as well as licensing rights to use Sharp’s brand in the Americas for five years, for a total of \$23.7 million.
- 2016** Hisense USA demonstrates its own brands and technology, as well as Sharp-branded products, at the popular Consumer Electronics Show in Las Vegas.

## Key Players

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### United States

#### *Gwinnett County, Georgia*

Second most populous county in the State of Georgia and home of Hisense USA

#### *Gwinnett County Chamber of Commerce*

Non-profit business advocacy organization in Gwinnett County and one of Hisense's main local contacts

#### *Georgia Department of Economic Development*

Lead state-level agency for attracting investments and assisting local businesses

### China

#### *Hisense USA*

US subsidiary of Hisense Group focused on competing in the US market with its own branded high-end televisions

#### *Hisense Group*

Local state-owned enterprise and the parent of Hisense USA

#### *Qingdao Municipal Government*

City government in Shandong province on the northeast coast of China and the ultimate owner of Hisense Group

## Glossary of Abbreviations

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*Cathode Ray Tube (CRT)*

Specialized vacuum tube that contains electron guns at the back and a phosphorescent screen in the front to create images

*Plasma Display Panel (PDP)*

Flat panel display that contains charged gas to emit light and create images

*Liquid Crystal Display (LCD)*

Flat panel display that puts a thin layer of liquid crystals in front of the backlight to utilize light-modulating properties

*Light-Emitting Diode (LED)*

Illuminating technology often used as the backlight for LCD screen technology

*Organic Light-Emitting Diode (OLED)*

Flat panel display that relies on organic compounds, which emit light in response to an electric current

*Ultra Light-Emitting Diode (ULED)*

Technology standard from Hisense Group that modestly improves on LED technology by using local dimming techniques to enhance color and contrast

*S-Ultra High Definition (S-UHD)*

Technology standard from South Korea's Samsung that is also an enhanced LED technology that uses nanocrystals to improve color performance

## Introduction

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The modern television was invented in California but perfected across the Pacific in Japan. American TV brands such as RCA and Westinghouse filled the homes of the baby boomer generation in the 1950s and 1960s. But these brands soon yielded to familiar Japanese household names—Sony, Sharp, and Panasonic—in the 1980s and 1990s.

The rise of Japan from a low-cost imitator of American products to the leading ranks of cutting-edge manufacturer and exporter of electronics and automobiles was, of course, controversial in the United States. For two decades, Japan was regularly accused of dumping low quality products into the US market and became embroiled in bilateral trade spats with Washington from the 1970s into the 1990s.<sup>1</sup>

But the perception of Japanese consumer technology products changed as the country's products improved significantly and its flagship companies developed a reputation among consumers as serious innovators. Perhaps one of the most important

breakthroughs came when Sony launched its iconic “Walkman” personal music player in 1979.<sup>2</sup>

Considered a revolutionary product at the time, the Walkman elicited an exuberant reaction among the global consumer class that was probably as breathless as when Steve Jobs unveiled the first Apple iPhone some 25 years later.

With Sony's innovation, the “Made in Japan” label finally won over not just discerning American consumers, but global consumers as well. Japan came to signify both innovation and quality.

Over subsequent decades, major Japanese conglomerates became credible and diversified producers of electronics and high-end consumer products for the US market. Indeed, American consumers simply could not get enough of Japanese products—from cars to television sets—perceiving them to be of higher quality and longer lasting than even American brands.

While US automakers rose to the challenge and confronted Japanese competition, most US television brands collapsed in the face of the

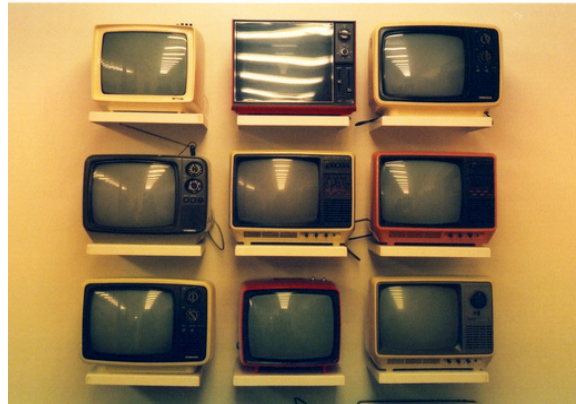


Photo: Flickr/Zé Pedro



Japanese onslaught. Many US brands found it difficult to compete and ultimately exited those business lines, making Japan the indisputable king of consumer electronics.

But being at the top is lonely and not sustainable, especially when competitors are nipping at the heels. From Taiwan to South Korea, new market entrants from the so-called East Asian “tigers” all followed a pathway similar to Japan’s industrial development.

These economies assiduously built their own manufacturing capabilities and transformed their companies into fierce competitors for Japanese industry.

The rise of these East Asian economic powerhouses in the 1990s and 2000s

can be seen in an array of industries, not least consumer electronics and particularly television sets.

In essence, East Asia came to form a supply chain spanning research and development (R&D) to inputs and assembly in consumer electronics. These manufacturing juggernauts counted on exports to consumer markets in Europe and the United States for their products. Over time, these Asian economies specialized, further integrating their supply chains and dramatically improving quality and branding.

Within a single generation, East Asian economies became reliable and highly

efficient producers of consumer electronics, effectively cornering the global market in this segment. For the gadget enthusiast, East Asia became the world’s emporium.

The heir to Japan’s throne has clearly been South Korea, whose Samsung and LG televisions now outnumber Sony and other Japanese brands in most US department stores. This is especially pronounced in the mobile technology segment, where Korean (and American) brands have now leapt over Japanese companies in market share and value.

By the first quarter of 2013, Japanese brands, including Sony and Sharp, had dropped out of the top six global smartphone makers. As of the fourth quarter of 2016,

Apple (18.3 percent), Samsung (18.1 percent), together with three Chinese brands Huawei (10.6 percent), OPPO (7.3 percent), and VIVO (5.8 percent), occupied nearly 60 percent of the global smartphone market.<sup>3</sup>

Similar trends are observed in the television market. The Taiwanese company Hon Hai Precision Industry’s (parent of Foxconn Technology Group) recent acquisition of Sharp, once a platinum Japanese technology company, has only reinforced the relative decline of Japanese consumer electronics manufacturers.

Indeed, to some, Foxconn’s acquisition of Sharp symbolized the end of an era.

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The Japanese company had been a pioneer in its field, introducing the first commercial liquid crystal display (LCD) television as early as 1988.<sup>4</sup> Over the following decade, Sharp invested heavily to enhance LCD display technology and came to own the high-end TV market uncontested for some two decades.

Sharp's success inspired national and local pride in Japan, as Japanese consumers were known to emblazon a sticker on their TV sets that read "sekai no Kameyama" (translated as "world-famous Kameyama"), the town where Sharp's television factory was located.<sup>5</sup>

But not all was well with Sharp. By the time the company's centennial anniversary rolled around in 2012, Sharp saw its worst financial performance in its 100-year history, losing \$5.37 billion.<sup>6</sup> Sharp's debt-financed R&D spending proved unsustainable, particularly in the face of mounting price pressure from South Korean competitors, such as LG and Samsung, that had begun to quickly climb the quality ladder.

On August 12, 2016, Foxconn—mostly known in the United States as the key supplier and assembler of Apple products—completed its \$3.81 billion acquisition of Sharp Corporation.<sup>7</sup> It was the largest foreign acquisition to date in Japan's protected technology industry. Not surprisingly, the acquisition raised eyebrows in the consumer electronics industry because, until then, the Taiwanese firm had been considered

merely a low-end assembler for Apple. Sharp, by contrast, was viewed as a TV pioneer with its own premium brand.

The enormity of the Hon Hai/Foxconn-Sharp deal eclipsed a quieter move by a Chinese firm, however. Even before the Sharp buyout closed, the Chinese conglomerate Hisense Group arranged not only to buy Sharp's factory in Mexico but also to license the Japanese brand for five years in both the North and South American markets for \$23.7 million.<sup>8</sup>

So who exactly *is* Hisense? With virtually no brand visibility, Hisense is, in a sense, the "largest technology company that no one has heard of," according to the self-deprecating tagline the Chinese company's own US subsidiary uses.<sup>9</sup> There is truth to this tagline, since most Americans would probably have no idea that Hisense is not just a state-owned enterprise (SOE) from Shandong province, but also has the largest market share for televisions in China and ranks third in global TV shipments after Samsung and LG.<sup>10</sup>

The Chinese brand's sheer obscurity belies the fact that it actually has had a presence in the US market for about 15 years. Its relative anonymity owes much to how it has operated and evolved in the US market.

Until recently, Hisense has primarily been an original equipment manufacturer (OEM) for firms like

Hitachi, Dynex, and Insignia, many of which are in-house brands of retailers such as Sears and Best Buy.<sup>11</sup> In other words, Hisense mostly made TVs for other companies’ brands but had no distinctive brand recognition itself.

A recognizable and distinct brand is of course essential to thrive in the dynamic and highly competitive US market. While Hisense USA has long recognized this branding deficit, it is only recently that the company has decided to focus on laying the groundwork for a strategic shift from an OEM to having its own branded products in the US market.

But building a brand from scratch as a late-comer in a mature market is obviously no easy feat. For Hisense, it has been made all the more difficult because televisions are a commodity product with low margins.

For instance, Hisense’s 2015 brand licensing deal with Sharp was part of this strategic shift to “allow Hisense to raise itself from the commodity-product swamp.”<sup>12</sup> But that is not all. In addition, Hisense USA has established a US beachhead in the state of Georgia, which the company has called home since relocating from Los Angeles in 2007. From its Georgia base, Hisense aims to further develop its branded products for the US market and be closer to the end consumer.

“It’s like a startup. How do you build a brand from essentially nothing to something?” notes JoAnne Foist, a marketing director for Hisense USA. “A complete rebranding, including a new logo, website, and consumer-focused marketing strategy, is crucial.”<sup>13</sup>

Committing to Georgia meant making tangible investments from Hisense USA, particularly between 2009 and 2011. These included an \$800,000 investment to build a showroom for Hisense-branded products,<sup>14</sup> a 7,000-square foot R&D center for product localization,<sup>15</sup> and the construction of another building to house

a customer support network and post-sales services.<sup>16</sup>

The spate of Hisense investments in

Georgia, as well as the acquisition of Sharp’s Mexico factory, appears to have proceeded uneventfully and without controversy. But how exactly Hisense made these investments is not quite as clear. Some of the details are murky, *even* to interviewees who have worked with the firm on these investments. Although there are few public records of Hisense’s investments in Georgia, the company’s building purchases presumably proceeded as typical property transactions.

Unlike other cases in this series, this study of Hisense’s efforts in the United States does not dwell on the transaction itself but focuses instead on how a Chinese company can brand itself, market

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its products, and ultimately compete successfully in the US market. The fact is, most Chinese consumer-facing companies today still struggle with the essential ingredient for success in the US market—namely, becoming a true global brand.

This is likely the same rationale that prompted Foxconn, one of Hisense’s potential competitors in the United States, to acquire Sharp. Much like Hisense, the Taiwanese company also wants to shift away from its low-margin OEM business. Buying Sharp made sense for Foxconn from a corporate synergy perspective—the Japanese firm already provides roughly a quarter of iPhone screens, with a unit cost of \$52.50.<sup>17</sup> Equally important, Foxconn’s acquisition allowed it to own Sharp’s organic light-emitting diode (OLED) technology, the next-generation display that will compete with South Korean market leaders in OLED displays.

For its part, however, Hisense took less interest in Sharp’s OLED technology and more in acquiring its legacy brand. That is because Hisense has pursued a different approach in the US market: the Chinese company has invested in its *own* technology standard as a brand differentiator. Hisense calls its technology standard “Ultra-LED,” or ULED—a deliberate effort to evoke comparisons to Samsung’s and LG’s premium OLED technology.

In reality, ULED is not exactly a novel technology but mostly an improvement on existing LCD displays to perfect its LED backlight and achieve enhanced color performance.<sup>18</sup> The key selling point is that Hisense’s ULED television units cost just one-quarter to one-half of Samsung’s OLED units,<sup>19</sup> whose commercialization has been slow because production costs remain stubbornly high.

With most OLED patents firmly in Samsung’s or LG’s hands, Hisense’s decision to market its own ULED technology is, in essence, a bet that the performance improvement of a “good enough” technology will outpace the rate at which OLED’s cost declines.

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Whether Hisense or Foxconn, however, both the Taiwanese

and Chinese firms appear to be taking aim squarely at Samsung—that is, to transform themselves from low-end manufacturers into innovative technology firms whose brands hold tangible value. Hisense’s ambitions in the US market take place within the familiar context of prior Asian manufacturers trying to capture the global consumer electronics crown.

Hisense, like others before it, wants the ability to set technology standards that can lead to rising market share and brand recognition. That has been the hallmark of the TV industry, from

Sony's cathode ray tube (CRT) TVs in the 1990s and Panasonic's plasma technology in the 2000s to Sharp's LCD TVs and now Samsung and LG's dominance of OLED displays.

In its US strategy, then, Hisense appears to have internalized the lesson of the relationship between technology, standards, and market share. But Hisense is unusual in the sense that it is not a world-class global firm but a provincial-level SOE, the type of firm that even in China is usually perceived as sclerotic and unable to keep pace with a rapidly changing technology landscape.

Yet its identity as an SOE has not prevented Hisense, rather audaciously, from pursuing the creation of a distinctive brand in America. Even many of the top private Chinese consumer technology firms, such as Xiaomi and Huawei, have struggled to break into the US market and achieve consumer validation.

This case explores Hisense's effort to plant a foothold in the US market in the aftermath of its initial investment. It provides a corporate history, detailing Hisense's evolution from a local SOE to one of the world's biggest TV makers.

More important than the Georgia investment itself, the case primarily examines the rationale behind Hisense's globalization plans, its branding and localization strategy in the United States, and how it has sought to position its own technology to gain market appeal.

Just as important, the story of Hisense cannot be told without understanding the broader context of competition among Asian manufacturing giants, the rise and fall of industry leaders, and the evolution of different technologies and standards in the television business over the last few decades.

The case specifically illustrates a few notable lessons about Chinese firms and their investments in the United States:

- Not all SOEs are made the same. Despite a tendency to generalize about these firms, some have proven to be nimble and adaptive, where others are clunky and hidebound, weighed down by the state and its dictates. In the case of Hisense, however, it was able to leverage policy changes and market sentiment to become the national champion in China's TV industry.
- Emblematic of the "catch-up" approach of so many Asian consumer electronics manufacturers, Hisense developed its technical capacity by buying, studying, and improving technologies from more advanced industry peers.
- While the catch-up approach can drive growth for a long period of time, it does not necessarily enable a firm to become a top-tier producer. Much like other Chinese firms with the ambition to join the ranks of elite global brands, Hisense

has, in recent years, shifted to in-house R&D and focused on building brand recognition.

- Superior technology does not always win in the consumer electronics industry. The ability to drastically lower costs enabled Japanese firms to dominate the American market in the 1980s—a strategy that similarly aided Korean firms in the 2000s. Hisense, too, has bet that its more cost-effective ULED technology can take market share away from the Korean firms’ superior OLED technology at a premium price.
- Raising the value of its brand, thereby increasing profit margins, has been Hisense’s strategy in the US market for the last decade. That is the primary motivation behind its doubling down on Georgia as a commitment to compete in the US market. This strategy holds lessons for other would-be global brands among Chinese firms and, for that matter, late-comer consumer electronics manufacturers in general.

## The Evolution of Television: From Vacuum Tubes to OLED

For much of the 20th century, television was an essential part of the modern American household. The first successful demonstration of what would become the modern TV was conducted by Philo Taylor Farnsworth in San Francisco on September 7, 1927.<sup>20</sup> At the time, the set was simply a novel invention that met with obvious investor skepticism: “When are we going to see some dollars in this thing, Farnsworth?” famously said one.<sup>21</sup> To rebut investor concerns over the commercial potential of his invention, Farnsworth delivered a clear message on a TV screen during another demonstration in 1928: a dollar sign.<sup>22</sup>

Soon afterwards, Radio Corporation of America (RCA), jointly owned by General Electric (GE) and Westinghouse, made history in 1939 when it broadcast the first televised presidential speech, delivered by Franklin Delano Roosevelt. Later that year, RCA televised a baseball game between Princeton and Columbia universities. Newscasts, comedy shows, and films eventually joined the growing list of TV-based entertainment programs, and consumers soon flocked to stores to grab this dazzling new machine. By 1955, just about 30 years



Photo: Flickr/Michael Vance

after its invention, half of all American homes had a black-and-white television set in their living room.<sup>23</sup>

In short, televisions were the computers of their day—the must-have device for consumers and a centerpiece of any middle-class household. Such sustained and strong demand meant that other countries soon sought to develop their own television manufacturing industries. By the 1960s, Asian economies such as Japan, followed by South Korea

decades later, began to develop their own industries to compete with and in the United States.

With new Asian market entrants, television sets soon became a commodity product that looked and

functioned relatively the same, no matter the manufacturer. To differentiate their products and raise profit margins, TV makers had little choice but to rely on innovation and technological sophistication.

The general technological progression of televisions since the 1960s can be divided into three development phases: (1) vacuum tubes; (2) plasma and LCDs; and (3) OLEDs. Each phase of

technological change led to increasing obsolescence of the American television industry, replaced by successive rising East Asian economies that developed formidable firms and product lines.

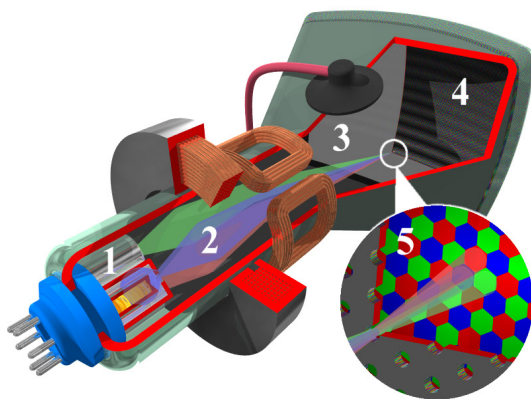
Understanding this technological evolution and competition is essential for grasping the context of Hisense's strategy today in the US marketplace.

### **Tubes and Dots**

The 1950s saw television programming transition from black and white to color broadcasting, which meant that TV technology had to keep pace. Among the various technologies that reproduced color images, the cathode ray tube (CRT) stood out because of its accuracy in color representation.

Although scientists had been using vacuum tubes for laboratory experiments as early as the 1870s, it was not until

**Figure 1. Color Cathode Ray Tube**



Source: Wikimedia Commons.

1907 that a Russian scientist, Boris Rosing, first used a vacuum tube to produce images.<sup>24</sup> (It was another two decades before Farnsworth, with a keen eye for business opportunities, turned this device once used primarily for scientific research into a functional consumer product.)

CRT technology is basically a specialized vacuum tube that contains electron guns at its back and a phosphorescent screen in front. The electron guns emit red, green, and blue phosphor dots, which form beams that hit a screen in front to create images (see Figure 1).

All electron beams are modulated and accelerated along the vacuum tube, an evacuated glass envelope that is often large, heavy, and fragile. Moreover, the cathode needs to be heated before it can release electrons.<sup>25</sup> This is why the early generation of television sets were bulky, weighed a ton, and needed extra warm-up time before functioning—they had to accommodate a large tube and heater.

RCA came to dominate the market for CRT color televisions, although the company did so not without some controversy. The US firm, which already enjoyed a virtual monopoly in the radio industry, saw the same potential as Farnsworth did in commercializing television sets on a large scale. So RCA offered Farnsworth \$100,000 to buy all of his patents, but Farnsworth rejected that rather meager offer.<sup>26</sup>



Undeterred, RCA instead figured out how to reverse engineer the CRT sets and flooded the marketplace with its products. Meanwhile, RCA went into litigation, a tactic that eventually became commonplace among competitors in the technology sector. The company dragged the inventor into court for an endless and expensive series of legal battles aimed at compelling Farnsworth to turn over his patents. Although RCA never did obtain those patents, it did win the market. By 1953, its products were so ubiquitous that they were officially adopted as the standard for American color televisions.<sup>27</sup>

American dominance of color televisions did not last long, however. By the 1960s, the booming postwar Japanese economy began to transition its industry into television manufacturing on a significant scale. The Japanese government implemented industrial policies that are often compared with China's today. Tokyo doled out subsidies to develop a domestic television manufacturing industry.

Japan's powerful Ministry of International Trade and Industry, for example, lent considerable support to domestic electronics manufacturers by facilitating the import of foreign (and particularly American) technology at low cost. In addition, large Japanese companies had access to preferential loans from Japanese banks to finance

their investments, technology acquisitions, and expansion.<sup>28</sup>

In 1959, the founder of Panasonic, Konosuke Matsushita, traveled to the United States and established its first sales office in New York.<sup>29</sup> This led to a flood of Japanese TV makers wanting to export production capacity that exceeded demand. Over the next decade, Japanese producers began dumping television sets into the US market. Their efforts were further fueled by the Japanese government's pro-growth policies that continuously injected cheap loans.<sup>30</sup>

These behaviors invariably fueled bilateral trade tensions between Japan and the United States. American firms first filed charges against Japanese trade practices in 1968.<sup>31</sup> On December 4, 1970, the United States Tariff Commission stated that "an industry in the United States is being injured by reason of importation of television receiving sets, monochrome and color, from Japan sold at less than fair value within the meaning of the Antidumping Act."<sup>32</sup> The two sides eventually reached a settlement of \$77 million in 1979 for damages and other penalties.<sup>33</sup>

Still, despite punishing Japanese manufacturers for anti-competitive behavior, the writing was on the wall for American TV manufacturers. The quality of Japanese televisions improved steadily while prices kept

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**Figure 2. Sony Trinitron TV Set and Betamax Videotape Recorder**

Source: Flickr/Marcin Wichary.

dropping. From 1968 to 1988, renowned American TV brands, including GE, RCA, and Westinghouse, all exited the manufacturing business or were acquired by foreign competitors.<sup>34</sup>

Also during this period, Japanese television manufacturers consolidated into what would become household brand names, including Panasonic, Hitachi, Toshiba, Sony, and Sharp. Among these firms, Sony emerged as the leader of the pack, built on its bedrock of innovative products, such as Betamax and the iconic Walkman.

In its TV segment, Sony invented a three-in-one electron gun that greatly reduced energy consumption and improved color accuracy. This new product, marketed under the brand Trinitron, was first released in 1968 to

wide acclaim for its bright images and reliability (see Figure 2).<sup>35</sup> When the Trinitron set was launched, many rival models of color TVs still struggled with wasteful and sometimes dangerous heat, known as “curtain burners.”<sup>36</sup>

### ***Bigger and Flatter***

Even as CRT technology dominated the TV market, it did see incremental improvements along the way. These included the development of sharper images and better color representation. But the very existence of a tube meant that televisions could not fundamentally escape their bulky form factor or significantly expand the size of their screen, because that would make the TV too heavy.

But this limitation was about to be removed. Invented at the University

of Illinois, the first plasma display panel (PDP) arrived in 1964.<sup>37</sup> This new technology would eventually replace the vacuum tube and enable television sets to be thinner and lighter, even as they grew larger.

Commercialization of PDP technology took longer than expected, however—nearly 30 years. That was because the cost of producing PDP was substantially higher than CRT, and was thus adopted for only limited commercial use initially. This meant PDP technology could hardly eat into CRT’s dominant market share when it was first introduced.

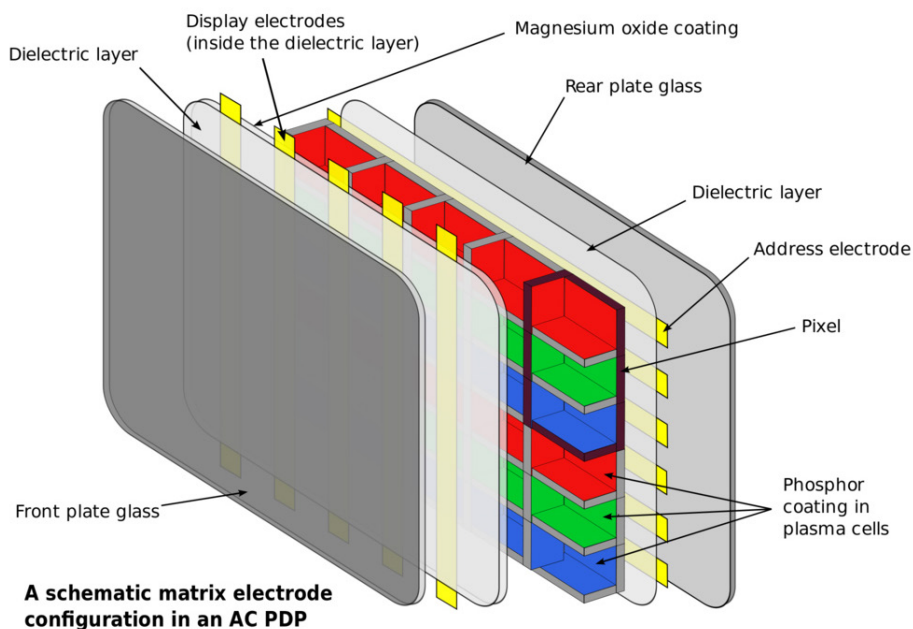
The prospect for PDP turned upward in 1993. That year, the “Digital HDTV Grand Alliance in the United States” was

formed, which was aimed at combining the best features of four competing digital approaches and streamlining the industry standard.<sup>38</sup> The alliance adopted a new High-Definition Television (HDTV) standard that raised the screen aspect ratio from 4:3 to 16:9.<sup>39</sup>

Ultimately, then, CRT technology fell victim to its own structural constraints. Ideally, a CRT should be perfectly circular to better contain its internal vacuum; but as the aspect ratio became more rectangular to accommodate higher definition, it became more difficult to make the tubes.

Plasma technology, on the other hand, faces no such limitations of size or shape. A PDP consists of two glass plates, with a

**Figure 3. Plasma Display Panel**



Source: Jari Laamanen.

thin layer of gas in between (see Figure 3). Each of these plates has several parallel electrodes running across it. The electrodes on the two plates are at right angles to each other. A voltage applied between the two electrodes causes a small segment of gas at the two electrodes to glow, creating images.<sup>40</sup>

Plasma panels, in other words, were thinner by default, which meant the screen size could be stretched to accommodate the new HD aspect ratio without adding significant weight. These advantages over CRT quickly won over consumers, so PDP began gaining market share. That led to the advent of the contemporary “flat panel” TVs, and, by the early 2000s, PDP was virtually the only type of large-screen TV available on the market.

Once again, it was Japanese firms that led the way, importing and digesting a technology invented in America to manufacture at scale and drive down prices, ultimately competing with their American counterparts. Companies such as Fujitsu and Panasonic, backed by ample funding, competed fiercely against American companies such as Xerox and IBM. In some cases, even though they possessed PDP technology that was 2 to 3 years ahead of the Japanese firms, American companies simply could not secure the necessary funding to expand and produce at scale to compete with Japanese rivals.

“Fifty million is the kind of ante you need to play in this poker game, and

you’ve got to be prepared to back that up after the betting starts,” said Richard Flasck, the founder of Alphasil, a flat-panel company shut down by its backer, Honeywell Inc., in 1989.<sup>41</sup>

The rise of plasma technology also led to a new pecking order among Japanese firms. High-flying Sony, perhaps too attached to its flagship CRT technology to abandon it wholesale, finally introduced a flat-screen FD Trinitron in 1998, after the basic Trinitron patent expired in 1996.<sup>42</sup> But the FD Trinitron proved to be a commercial bust, as consumers wanted the new plasma sets. Having clung too long to its once-innovative Trinitron tube technology, Sony paid a price: it lost its crown as the leader in the premium TV market.<sup>43</sup>

Instead, that honor now went to Japanese rivals Fujitsu and Panasonic, which ably adapted to the new technological trend. In 1992, Fujitsu introduced the world’s first 21-inch full-color PDP display, and then followed it up with an even larger 42-inch display three years later.

By 2005, Panasonic had risen to the forefront, selling enormous 65-inch flat panel TVs and controlling up to a quarter of the global plasma TV market. In order to scale up capacity amid increasing global competition, Panasonic in 2007 announced the construction of the world’s largest plasma display factory in western Japan for 280 billion yen (\$2.3 billion).<sup>44</sup>

### A “Good Enough” Technology

But PDP was not the only technology standard changing the marketplace. Even as Panasonic backed the PDP technology, another Japanese rival, Sharp Corporation, had designs on a competing technology that it viewed as a solid alternative. This technology was not necessarily superior to PDP, but it was “good enough” from Sharp’s standpoint and sufficiently economical to potentially threaten plasma.

This technology came to be known as liquid crystal display, or LCD, which takes advantage of the light-modulating properties of liquid crystals and puts a thin layer of it in front of the TV set’s backlight.<sup>45</sup> In 1968, an RCA researcher named George Heilmeyer made the world’s first LCD, an invention announced on Japan’s national public broadcaster NHK in 1969.<sup>46</sup> After hearing the program, a researcher at Sharp convinced management to begin research on LCD immediately.<sup>47</sup>

The development of LCD at Sharp took 16 years, far longer than originally anticipated. In fact, the development period was so long that RCA had by then been battered by Japanese competition and wound down its own efforts on LCD. So by 1985, when Sharp finally rolled out its first color LCD TV, it immediately set the market standard, even though the 3-inch display was far from sufficient

to make a viable commercial product.<sup>48</sup> Once again, a Japanese firm improved upon a technology invented in America.

Like most new technologies, LCD had both pros and cons. Although LCD screens were *supposed* to be more energy efficient, their main drawback was the significant limitation on screen size. Throughout the 1980s, for every 100 sets of 3-inch displays coming off the production line, Sharp might find that only a half-dozen were fully functional; for 14-inch displays, the number was next to zero.<sup>49</sup>

Even with substantial investments ploughed into the technology, by 2002, the largest LCD TV Sharp had managed to offer was just a 37-inch set.<sup>50</sup> Beyond this size, the cost could not be justified. In the 40-inch-plus high-end market segment, PDP continued to command the market.<sup>51</sup> And a secondary problem was that as the screen grew bigger, LCD display images became blocky and blurry.

As the industry shifted toward the HDTV standard in the early 1990s, consumers came to expect exceptional image clarity and quality. Many observers thought that these LCD limitations with respect to both screen size and image quality would deal a fatal blow to the nascent technology standard. Investors and other backers bet that PDP would experience economies of scale and fall

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*The rise of plasma technology also led to a new pecking order among Japanese firms.*

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in price. Gary Merson, editor of the *HDTV Insider*, for example, estimated in 2002 that the retail price of plasma TVs would drop by one-third each year until it hit parity with conventional CRT televisions.<sup>52</sup>

These optimistic projections for PDP were only partially correct. The cost of PDP did, in fact, decrease dramatically, due to massive R&D efforts led by Panasonic. For instance, a 50-inch plasma TV, which cost as much as \$20,000 in 2000, dropped to just \$4,000 in 2005.

But what surprised the market was that the price of an LCD TV dropped even further to as low as \$1,800.<sup>53</sup> The picture quality for LCDs also improved significantly, although for 50-inch and larger displays, “plasma still excels,” according to Panasonic’s then-president.<sup>54</sup> LCD thus became a “good enough” option for customers who were looking to replace bulky CRT sets with sleek flat panel ones at a lower price point than the plasma option.

During the 2007 Christmas season, LCD TVs officially out-sold PDP TVs.<sup>55</sup> By March 2013, Panasonic’s TV business accumulated \$3 billion in operating losses for the previous two years. Toward the end of that year, the Japanese company officially announced that “we will end sales of plasma TVs for consumer use and PDP-related products for commercial use.” As such, the curtain closed on the plasma era.

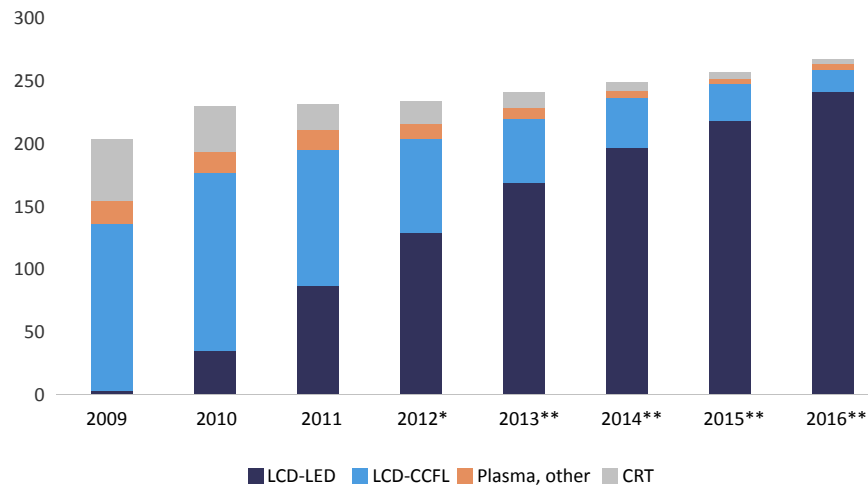
The defeat of plasma, even though it was actually a superior technology, took many industry insiders by surprise and did not sit well with tech professionals and gadget enthusiasts. “The last time I saw this many adults so weepy, it was during the first 10 minutes of ‘Up’ in the theater,” quipped James K. Willcox, a senior electronics editor at *Consumer Reports*, in his elegiac note to plasma.<sup>56</sup>

The failure of plasma, or, more precisely, the *success* of LCD, was a direct result of the different companies’ distinct approaches. The “PDP believers,” for instance, consisted of a few giant corporations that were protective of the core technology and relentlessly pushed for higher quality images. The “LCD devotees,” by contrast, took a more collaborative approach and aimed to commercialize a “good enough” technology at a more affordable price.

This second group’s approach appealed to late-comer firms from Taiwan and South Korea, including Samsung and LG. As *Reuters* estimated in 2006, total R&D spending on LCD was four times that of PDP.<sup>57</sup> “Globally, so many companies, so many investments, so many people have been working in this [LCD] area, on this product. So, they can improve so quickly,” remarked James Wu, CFO of Taiwan’s Chunghwa Picture Tubes.<sup>58</sup>

Put differently, LCD innovation was more diffuse than for PDP technology. Accumulated efforts and resources were able to overcome bottlenecks and lead to

**Figure 4. LCD Surpasses Plasma in the Global Market**



\*Estimate; \*\*Forecast;  
Source: IC Insights.

successive technological improvements. They also helped to achieve scale of production and quickly lowered costs. For the average consumer, the slight quality advantage of PDP over LCD was negligible, while the difference in the price tag was what determined a consumer’s decision to buy.

The rapid rise of LCD TVs also meant that Sharp hit its peak (see Figure 4) as South Korean rivals emerged with full force.<sup>59</sup>

**Seoul Rising**

Although plasma as a technology standard had gone down in defeat, competition in the TV industry had hardly ended. Sharp’s ascendancy on the back of rising market share in LCDs proved fleeting. Indeed, it did not take

long before South Korea’s Samsung begun making waves in the high-end TV industry, tracing a path not so dissimilar from the one Japanese firms had trodden before.

Like most late-comers, Samsung could leapfrog toward the technological frontier by rapidly absorbing existing technology. Established in 1938 as a seafood and noodle trading company, Samsung did not venture into consumer electronics until the 1960s.<sup>60</sup> At the outset, the Korean *chaebol*, or industrial conglomerate, produced black and white CRT television sets and telephones, much like its American and Japanese predecessors.

Samsung lifted liberally from the Japanese industrial policy playbook, benefitting from its *chaebol* status

with strong government backing and easy access to financing. The company spent liberally on R&D and was further aided by the low cost of labor and raw materials in South Korea. As a result, Samsung soon catapulted along the path of its Japanese predecessors and became another ubiquitous yet unremarkable TV producer in the 1990s.<sup>61</sup>

By the 2000s, however, much had changed. Once LCD began to gain an edge over plasma, Samsung saw an opportunity to join the elite ranks of consumer electronics brands. “We believe we can be No. 1,” Samsung America’s then CEO asserted in 2003.<sup>62</sup> The company began pouring resources into brand awareness and improving its product design.

Still, Samsung at the time had experience building only static image LCD displays, so the company was much less capable than its Japanese counterparts at making displays for moving images.<sup>63</sup>

With Sharp as the clear leader in LCD technology, Samsung decided to partner with rival Sony to take down the giant. The two firms formed a joint venture that combined Sony’s technological sophistication with Samsung’s low cost production. As part of the deal, Samsung would obtain Sony’s latest LCD technology.<sup>64</sup>

To be sure, although this deal appeared sensible at the time, the alliance

between two competitors was always likely to prove uneasy. For one thing, the patent-sharing component of their partnership was especially scrutinized and criticized—many Japanese firms were already tied up in court, accusing South Korean rivals of patent violations. For another, whatever Samsung and Sony’s motivations and inclinations, their partnership became proxy battles for each country’s national and industrial pride.

Yet in the end, Sony had few options: it could either collaborate with Samsung to improve profits today and tolerate the risk of creating a competitor for tomorrow, or else fend off fierce competition entirely on its own. So the

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*The fortune of firms in this industry seemed helplessly tethered to the cycles of creative destruction.*

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deal went through in 2004. Two years later, Samsung’s share of the global LCD TV market rose from 10.3

percent to 15.6 percent, followed by Sony’s 15.2 percent and Sharp’s 11.5 percent.<sup>65</sup>

For Sharp, meanwhile, the debt it had accumulated to develop LCD on its own had to be repaid just as the company’s revenue came under pressure from newly confident Korean rivals. By 2008, Samsung’s market share for LCD TV grew to 19.7 percent globally, double that of Sharp, which saw its own share fall to fourth place.<sup>66</sup>

In a fast-moving technology-based industry, where lawsuits over patent



infringement and intellectual property (IP) theft are common, Samsung also had to weather its share of legal actions initiated by Japanese competitors, chief among them Sharp. (Toshiba, Panasonic, Fujitsu, as well as Hynix and LG of South Korea, all faced off repeatedly in court at one point or another.<sup>67</sup>) The Japanese company accused Samsung of infringing its LCD patents, although the two finally settled the case in 2010 for an undisclosed amount.<sup>68</sup>

But the legal win was a pyrrhic victory for Sharp, and, in a sense, the beginning of the end of the dominant Japanese juggernaut. Despite losing the lawsuit, by the end of 2009 Samsung's share of the global TV market had actually *grown* to 23.6 percent, while Sharp's had declined to just 5.4 percent.<sup>69</sup> Seven years later in 2016, Sharp, the patriarch of LCD technology, was acquired by Foxconn, thus ending the firm's 100-year run.

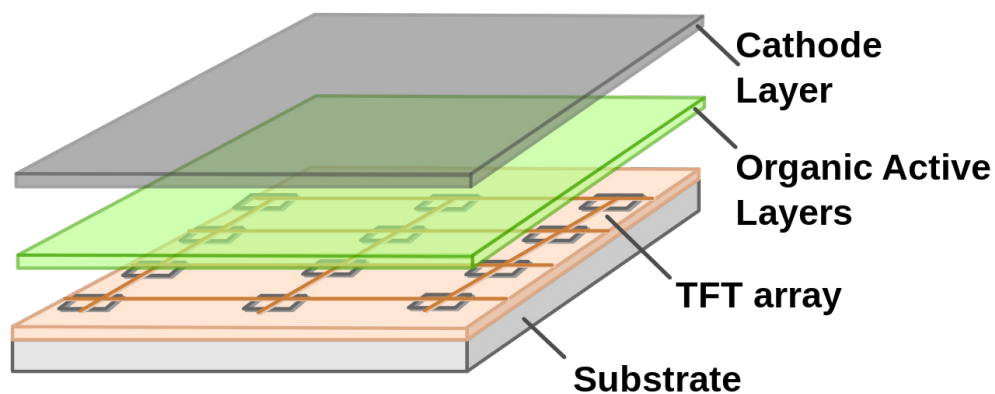
### ***Evolving Beyond LCD***

For Samsung, the triumph over Sharp was short lived. Market dominance of the TV business always seemed tenuous because a new technology could, as it had before, come along to disrupt the existing market equilibrium. The fortune of firms in this industry seemed helplessly tethered to the cycles of creative destruction. To avoid destruction, firms must double down on creativity or else lose their place at or near the technological frontier.

Samsung seemed to intuitively grasp this, especially in the fiercely competitive high-end TV segment. To remain one step ahead of its competition, as early as 2002 the Korean company began to produce its next-generation flat panel set, based on the OLED technology it had developed.

This technology uses organic compounds to emit light in response to an electric

**Figure 5. OLED Structure**



Source: Wikimedia Commons.

current and does not need a backlight like LCD (see Figure 5).<sup>70</sup> This means that OLED TV screens can be made even thinner and lighter than LCD screens, without compromising vibrant color performance and lifelike images. In 2005, Samsung unveiled its first 21-inch OLED TV.<sup>71</sup>

The quality of an OLED display has impressed many industry professionals and wowed prospective critics. For instance, after testing Samsung's KN55S9C model, a 55-inch curved OLED TV, *Consumer Reports* in 2013 gushed that "it's arguably the best all-around TV we've ever tested."<sup>72</sup>

The stunning images that an OLED screen can reproduce are truly exceptional, but one question is whether this new technology is destined for market dominance or will it fade away much like previous technology standards that were once thought as promising. In other words, would OLED's fate mirror that of LCD's success or be more akin to plasma's eventual marginalization?

Although it is still early days for OLED adoption, preliminary signs do not bode well for the technology's future. Its biggest drawback, again, is its hefty price tag. For instance, Samsung's curved OLED TV costs \$9,000, an equivalent price to some used automobiles. The OLED TV is clearly positioned as a premium product of exceptional quality, yet given that the television is no longer a centerpiece of a typical household, that price point is hard for many consumers to justify.

If Samsung, the pioneer of OLED technology, cannot significantly reduce the cost of its production without compromising quality, OLED may be destined to meet the same fate as plasma. What is more, detractors of the technology have emerged from within Samsung itself.

"I have always said it would take two to three years to consider [mass producing] OLED TV," argued Kim Hyun-seok, Samsung Electronics president and TV chief. "But now, when little progress has been made on its tricky production and high costs since our suspension back in 2013, I wouldn't say OLED is our future direction."<sup>73</sup>

In perhaps a more telling sign, Samsung has effectively put OLED on indefinite hiatus and turned to developing S-Ultra High Definition (S-UHD) technology, which inserts a layer of nanocrystal over the LED backlight to increase brightness and color accuracy.<sup>74</sup>

Meanwhile, as Samsung has exited the OLED space, its domestic rival LG has opportunistically seized on OLED development in the hope of achieving what Samsung has not: market dominance for its OLED products. LG's latest effort, coming in 2013 after years of R&D, is its own OLED TV.<sup>75</sup> Today, consumers still rarely see OLED TVs displayed on the shelves of retailers. The largest obstacle boils down to the same factor: high cost of production.

As screen size increases, OLED displays have so far proved to be uneconomical, especially when TV is no longer a “must-have” device for consumers. Even after LG poured billions of dollars into R&D, the cost of a 65-inch OLED TV still hovers around \$4,000<sup>76</sup> compared to \$2,000 for Samsung’s 65-inch S-UHD.<sup>77</sup>

Where OLED displays *do* seem to be cost effective is in the smartphone and tablet market. For instance, Foxconn’s recent \$800 million investment to expand Sharp’s OLED production is aimed largely at aligning with Apple’s next flagship iPhone in 2017, a device that is expected to come with OLED screens.<sup>78</sup>

Despite OLED’s cost issues, some major firms still seem to believe in its potential. At the 2017 CES in Las Vegas, Panasonic and Sony both showed TVs with OLED displays, perhaps in a bid to regain some of their past glory.<sup>79</sup> Yet perhaps no one knows better than Panasonic, the plasma pioneer, that superior technology does not automatically guarantee commercial success.

### ***Searching for the Next Samsung***

Samsung has scaled the consumer electronics mountain and reached its peak, smiting Japanese rivals and giants along the way. Its mobile devices are now spoken of in the same breath as Apple’s. The Korean firm’s very success means it is now a target for *new* competitors, namely Chinese and Taiwanese manufacturers.

Long associated with low-end assembly and lower quality, Chinese and Taiwanese firms are working assiduously to shed that image. Foxconn is representative of such a company, as it began exploring its own branded products in 2014.<sup>80</sup> Another new “kid on the block” is Hisense, the Chinese state-owned TV maker from the coastal city of Qingdao.

Little known outside of China, Hisense is hardly a corporate “kid.” It is, in fact, already a mature TV manufacturer that has quietly climbed up the global rankings in terms of market share. More important, Hisense has its eyes trained firmly on the big prize: cracking the US consumer market and becoming the next Samsung. And it has not been shy about telegraphing its intentions—in one product release conference, Hisense placed its flagship TV right next to Samsung’s.<sup>81</sup>

Intriguingly, Samsung and Hisense also share some similarities. More precisely, Hisense has echoes of 1990s Samsung—an “also-ran” TV manufacturer of little distinction and no brand recognition, at least not in the US market. Now, like Samsung decades ago, Hisense has made a strategic decision to compete head-to-head with top-tier brands.

The next sections detail Hisense’s rise in China, its decision to enter the United States, the development of its technology standard, and how it has banked on an investment in the state of Georgia to propel it into the ranks of premium TV brands and contest Samsung’s position.

## Hisense: A Different Kind of State-Owned Enterprise?

The transformation of Hisense from a state-owned factory to a consumer electronics behemoth is not entirely unique. Quite a few Chinese state firms had to grow out of the planned economy during the 1980s reform era. Many such firms became willing participants in national industrial policies for this or that sector. Their ranks include Haier, the more renowned Chinese consumer electronics and appliances maker that also hails from Shandong province. Indeed, for years, Hisense seemed to have lived perpetually in Haier's shadow, its bigger brother with a more recognizable brand that went global much earlier than Hisense.

Yet somewhere along the line, Hisense decided to take a different approach. A slight detour into Hisense's corporate history is therefore needed to understand its pathway from local SOE to potential global player.

### *Imitating Tianjin*

In China's command economy, all major industries were monopolized by the state. The Chinese consumer electronics

industry was no exception. Virtually all municipal and provincial governments had their own factories to manufacture consumer electronics, albeit with varying degrees of success. Among television manufacturers, Tianjin, not Shandong, was the trailblazer—in 1958, the city's "712 Factory" developed China's first indigenously produced black and white television.<sup>82</sup>



Photo: Flickr/Maurizio Pesce

By September 1969, the municipal government of Qingdao, a coastal city in Shandong better known for its beer, invested 107,000 yuan (\$15,500)<sup>83</sup> to

establish the "Qingdao Number Two Radio Factory." At the time, the factory had just a dozen employees and made a single product: a radio receiver under the brand name "Red Lantern."

Shandong had no television industry to speak of, but of course hoped to develop one just like many other provinces. Months after founding the radio factory, the Shandong provincial government instructed three employees to head to Tianjin to learn how to make televisions.

That knowledge transfer worked well for Shandong. Shortly after their

apprenticeship in Tianjin, the Qingdao factory workers assembled their first 14-inch vacuum tube television, primarily through a reverse engineering process that put together parts and components from the Tianjin factory.<sup>84</sup>

The highly fragmented Chinese TV industry of the 1970s was conducive to this development. It meant that the more economically prosperous regions and municipalities, such as Shanghai, could afford to invest in R&D to develop more advanced technologies. Yet in economically inferior regions, such as Shandong, many firms depended on coordination between local governments to learn and acquire technologies and components from industry peers in other provinces.

The Qingdao factory was no exception and relied on this approach to improve its products. By the end of 1971, the Qingdao factory had reached an output of 82 televisions per year.<sup>85</sup> Still, the factory ran into limitations on its technology. Around 1974, it started experimenting with improving a 9-inch CRT TV. But the experiment was unsuccessful, as all 300 televisions the factory manufactured fell far below technical standards and were sold at a large discount in 1976.<sup>86</sup>

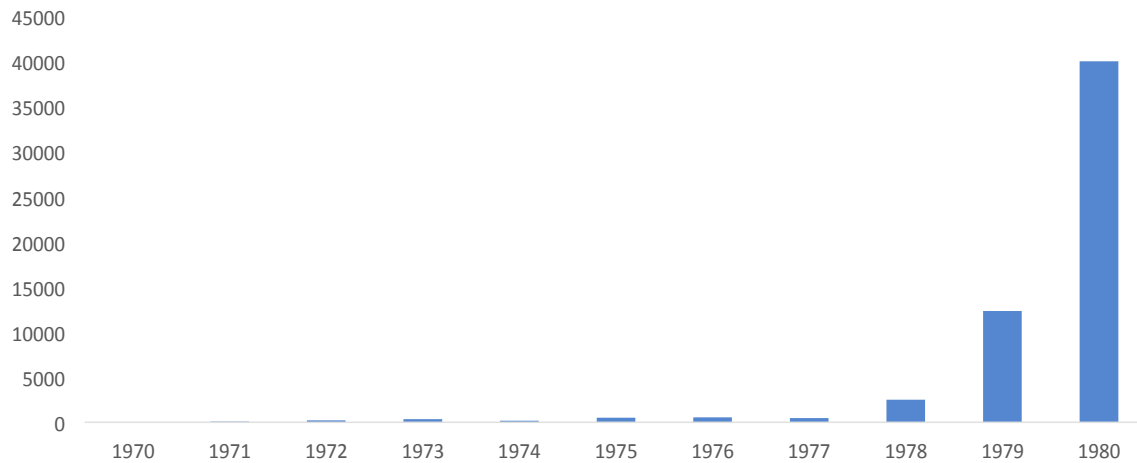
It took an intrepid and persistent engineer and designer to salvage the new product. That woman was Li Dezhen, who became a central figure in the Qingdao factory's pursuit of better

technologies. Her efforts arguably paved the way for the factory to evolve into the Hisense of today.

A 1965 graduate of Shandong Industrial College, just one year before the outbreak of the Cultural Revolution, Li joined the Qingdao factory in 1972 and quickly became the backbone of its design department. Confronted with the problem of improving the factory's CRT TVs, Li headed to Shanghai on a supplier mission, returning to Qingdao with model components from the Shanghai No. 18 Radio Factory in hand. A team of technicians was quickly assembled to learn about the models and how to build them.

Ten months later, the Qingdao factory restarted small-scale production of black and white televisions on three assembly lines. At the time, it was difficult to tell whether these experimental products actually met national standards because the factory could not afford proper testing instruments. A natural troubleshooter, Li decided to lug a prototype on a train to Guangzhou, Tianjin, and Beijing, where there was proper equipment, in order to have the factory's TVs tested. Finally, in 1978, the Qingdao JQ12-1 12-inch black and white television met all 40 national technical standards.<sup>87</sup>

About a year later in February 1979, the Qingdao factory's success attracted national recognition as China's Ministry of the Electronics Industry designated the factory a key TV manufacturer and

**Figure 6. Qingdao General Television Factory Production, 1970-1980**

Source: Shandong Provincial Government.

ordered three other electronics parts makers to merge with it, creating the “Qingdao General Television Factory.”<sup>88</sup> With more capacity in parts production and better access to resources as a designated producer, the factory decided to purchase two hectares of land to quickly ramp up production.

Outside the factory gate, big changes were afoot. The economic reforms launched by Deng Xiaoping at the end of 1978 had begun to bear fruit. Tight control over consumer markets was gradually lifted and many types of consumer goods showed up on Chinese store shelves, including, of course, television sets. Fueled by rising demand, the Qingdao General Television Factory produced more than 40,000 CRT TV sets in 1980, a dramatic spike from basically nothing before 1978 (see Figure 6).

At the same time, television technology was itself improving rapidly. In 1984, just five years after the factory merger, the Chinese government decided to accelerate the development of color televisions, which Japan and the United States had already mastered. As a nationally designated manufacturer, the Qingdao factory had to serve this national industrial policy objective.

### ***Playing Catch Up***

Once again, Tianjin’s 712 Factory was well positioned since it had already manufactured its first color TV as early as 1970. However, the quality and scale of production could hardly match that of Western counterparts at the time.

In Qingdao, Li, who had by now been promoted to deputy director, was also struggling to make a quality color

television. Li began to scour beyond China for technology to support the factory's manufacturing capabilities. She was a proponent of the technology "catch-up" strategy—one that China would eventually rely upon time and again throughout its economic rise.

That is, China would import and digest world-class technologies to converge with the global standard as quickly as possible. This was necessary, Chinese policymakers reasoned, because developing indigenous technologies from scratch would take too long, and time was of the essence if China hoped to industrialize in a hurry. That

approach, set within a Chinese context, was not so dissimilar from the one taken by Japanese and Korean firms a generation before.

The obvious target for the Qingdao factory was Japan, not just because of its sophisticated TV manufacturing capacity but also because of its geographic proximity to Shandong. Li eyed Japan's Panasonic specifically, since it had the leading-edge color TV technology. But any deal to purchase a production line from Panasonic would have cost \$3 million, an astronomical figure entirely beyond what the Qingdao factory could afford. A cheaper alternative was to acquire a line from Hong Kong's Kongli Television Company, which would cost only 900,000 yuan (\$130,800).<sup>89</sup>

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*China would import and digest world-class technologies to converge with the global standard as quickly as possible.*

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Not surprisingly, the factory management thought buying Panasonic technology was unrealistic. "Buying [a line from] Panasonic is completely head over heels...look how little money our factory has, we would go bankrupt together with this expensive technology."<sup>90</sup>

But Li was adamant that the factory had to focus on Panasonic's line. She had done her homework on the Hong Kong firm and discovered that Kongli had been making TVs for just three years.

More important, Kongli's technology struck Li as being no better than Qingdao's. "Buying Kongli, we will all be doomed," Li argued in a heated debate in the spring of 1984.<sup>91</sup>

Eventually in April 1984, her insistence won the day, having persuaded Qingdao's local government to foot the bill by granting a loan to the Qingdao factory to purchase a production line from Panasonic. Li led the technology department and sent 12 technicians to Japan.

Within months, the team had studied, digested, and established its own production line for color televisions based on the Panasonic technology and approach. While the new color TV sets were an immediate hit, Chinese consumers could only purchase them with a voucher, using a type of government-backed quota for

households to purchase scarce goods. The voucher itself cost as much as 1,000 yuan (\$145) on the black market, which was about 66 percent higher than average disposable income at the time.<sup>92</sup>

By the end of 1984, ten months after the purchase from Panasonic, Li's team had mastered the new production line. When the factory finally operated at full capacity, it could churn out 100,000 TV sets per annum, bringing in 7 million yuan (~\$1 million) of profit on 41 million yuan (~\$6 million) in sales.<sup>93</sup>

Li's decision to stick with Panasonic proved prescient since Kongli went bankrupt at about the same time.<sup>94</sup>

Years later, Hisense's Vice Chairman Xian Wang reminisced that the company was fortunate to have taken the Panasonic decision. "If we had chosen the [Kongli] line," he mused, "Hisense might not have existed."<sup>95</sup>

### ***Hisense Is Born***

Despite its success at making color sets, Qingdao General Television Factory enjoyed only a few years of provincial market dominance before China's economy slumped in 1989. The immediate trigger was China's acute political crisis, which froze economic reforms as hardliners reasserted

themselves and ultimately stalled growth. But a slew of problems had been building throughout the 1980s, not least persistently high inflation that ran as high as 40 percent.<sup>96</sup> Moreover, China's economy suffered from a credit crunch as international banks departed and industrial activity fell.

To make matters worse, in January 1989, the State Council had imposed a hefty tax, as high as 100 percent,

on luxury goods, including color televisions. This was the state's effort to curb demand and tame inflation but it had serious consequences for the price of the Qingdao factory's color TVs, which more than doubled

from 1,380 yuan (\$200) to 2,880 yuan (\$419) and effectively stopped consumers from setting a foot in a retail store.<sup>97</sup>

To revive reforms, after a period of hardliner resurgence within the Communist Party, Deng made his famous "Southern Tour" in 1992. Once again, an economic thaw began to take shape, sending a signal from above that it was once again safe to conduct business and pursue economic liberalization. Yet after three years of market stagnation, many Chinese TV manufacturers were already on the verge of bankruptcy.



Photo: Flickr/Rob Bole



The Qingdao factory was no exception. It faced both internal and external challenges: weak demand from China's domestic market had crippled the factory, while poor management had left the door open to employees to engage in embezzlement.<sup>98</sup>

A change in management was needed, if the factory was going to return to better performance and make technological progress. As an SOE owned by the local government, the Qingdao municipal authorities had final say in appointing key personnel at the factory. After compiling a shortlist of candidates, the government appointed Zhou Houjian as the new head of the factory, while Li was moved up within the provincial government and appointed to the Shandong Province Electronics Industry Department.<sup>99</sup>

Zhou's formative years had been shaped by the Cultural Revolution, but he was among the first wave of Chinese students that managed to re-enroll in college once conditions normalized after Chairman Mao Zedong's death in 1976. Zhou entered the School of Radio at Shandong University in 1978. That year, only 400,000 of the more than six million students who took the college entrance exam were admitted to a university.<sup>100</sup> Zhou was one of them, as he managed to achieve a test score that placed him third among examinees in Shandong province.<sup>101</sup>

Upon graduation in 1982, Zhou joined the Qingdao factory as a technician, a

role he would retain for 10 years before being plucked and moved upward to run the factory. A technology enthusiast, Zhou was also known for plainspoken bluntness, a personal trait that shaped Hisense's culture over the following decades.

After assuming his new position, Zhou quickly settled on a strategy of regional expansion. But he faced a dilemma: why painstakingly build production capacity and distribution networks from scratch if instead you could, as he put it, "look at the market from a capitalist point of view"?<sup>102</sup>

In other words, Zhou wondered whether the company might not leverage capital markets to acquire assets. His proposed strategy coincided with significant economic structural reforms in the 1990s that aimed to restructure loss-making SOEs and consolidate various industries through mergers.

In 1993, China's central Ministry of the Electronics Industry in Beijing proposed a "Big Corporation Strategy,"<sup>103</sup> which was later revised by Premier Zhu Rongji into the slogan "grasp the big, let go of the small" (*zhua da, fang xiao*). The underlying intent was clear: the Chinese government wanted less fragmentation in many state-owned sectors and pushed for vertical integration to create large national champion firms. In this context, the Qingdao factory went on a buying spree, snapping up some ten provincial companies in the following decade and

earning Zhou the moniker of a “red capitalist.”<sup>104</sup>

Of course, Zhou did not go it alone in this endeavor. He had plenty of help from the government during this phase of buyouts. Most of the negotiations took place at the local government level and the various deals often took an “innovative approach of transferring state-owned assets under the supervision of different administrative authorities in different cities.”<sup>105</sup>

To put that another way, Zhou’s strategy essentially involved the large-scale, state-enabled transfer of municipal government-owned assets at below market prices. As a result, by 1998, the Qingdao factory had less than 300 million yuan (\$43.6 million) worth of assets itself and yet the combined value of its acquired assets totaled some 3 billion yuan (\$436 million).<sup>106</sup>

A good illustration of this approach was Zhou’s acquisition of the Zibo City Television Factory; it exemplifies how the transfer of various state assets worked during this period.

In February 1994, the Zibo factory was on the verge of bankruptcy, so the Qingdao firm seized on the opportunity to directly negotiate with the Zibo municipal government, concluding a deal that included 15 million yuan (\$2.2 million) in cash plus 2.7 million yuan

(\$392,000) in intangible assets for a 51 percent stake in the Zibo operation. As part of the deal, and in exchange for creating 400 jobs while ramping up production, the Qingdao factory also received for free a 21,000-square foot parcel of land that would have been worth 9.8 million yuan (\$1.4 million). In total, Zhou paid just 10 to 20 percent of market value of the various assets.<sup>107</sup>

Integral to Zhou’s overall strategy was a wholesale rebranding of the Qingdao company beyond its state factory roots. The company aimed to leap into the modern era with a new identity by shedding the “Qingdao” in its brand name. Not only did the old name evoke provincialism but the scope of the company’s business was now no longer confined to the city itself.

A debate invariably ensued, with some in management arguing that abandoning the name “Qingdao” meant forfeiting years of customer loyalty to the brand and its products. But Zhou believed otherwise, insisting that a new branding effort would mark a turning point for the factory and an escape from the shackles of the planned economy. He argued it would facilitate the transformation of the firm into a more modern corporation positioning itself for global recognition.

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Group,” or *Haixin* in Chinese.<sup>108</sup> The Chinese name consists of two characters meaning “ocean” and “trustworthiness.” Wang Ruiji, Hisense’s brand manager, suggested at the time that, over the next decade, the Chinese name *Haixin* would gradually fade while the English name Hisense would become the only brand associated with the company.<sup>109</sup>

### **Price Wars**

But rebranding was easy, involving a decision and a name change. To survive, much less prosper, in the China market is harrowing business. The process of gradual liberalization and fierce local competition can make for a toxic combination that incentivizes Chinese firms in *any* industry to fight for market share rather than profitability.

That is because every locality and region tends to seek its own manufacturing industry and “national champion.” Often in China, when a sector opens up, a frenzied race to enter the sector ensues between firms and government entities. This can lead to bubbles and high levels of fragmentation, both of which having been enduring features of Chinese economic development for decades. China’s auto sector offers a case in point, although this phenomenon is also evident in industries from steel to solar. China’s TV industry, too, was not immune.

The post-1978 reforms yielded numerous new entrants in the Chinese TV industry, all of them anticipating rapid growth in consumer demand as ordinary Chinese found money in their pockets and new incentives to buy. By 2000, the domestic TV industry was already experiencing significant overcapacity. With more than 70 TV manufacturers and over 100 production lines, China had reached a total annual capacity of 40 million television sets, twice as large as domestic demand.<sup>110</sup> To increase marginal revenue, TV production firms had little choice but to expand market share at the expense of their profits, thus catalyzing a race to the bottom on prices.

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For instance, Changhong, another provincial SOE in Sichuan initiated the first price war in the television industry in the mid-1990s. At the time, Changhong reportedly maintained an inventory of more than one million units with an estimated value exceeding 2 billion yuan (\$29 million).<sup>111</sup> This enormous inventory surplus was unsustainable—and the company urgently needed cash flow.

As a result, on March 26, 1996, Changhong announced a price cut of 8 to 18 percent for all of its color TV sets.<sup>112</sup> The sudden move caught most other Chinese TV makers off guard. Some were angered by its “reckless” move but could not afford as large

a price cut to compete. The price war turned out to be quite rewarding for Changhong, whose market share nearly doubled from 16.7 percent to 31.6 percent.<sup>113</sup>

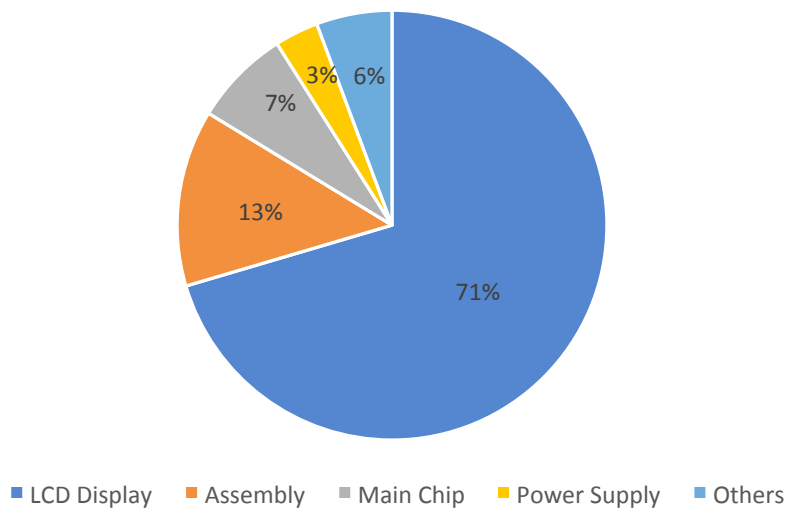
Survival among domestic manufacturers was more challenging still because the country was also opening its economy to foreign competition at the same time. Foreign TV brands entering the China market commanded a 20 percent price premium over local brands and occupied the high-end market. Domestic TV makers had to resort to selling in mid- to lower-tier market segments.<sup>114</sup> Moreover, China also cut tariffs on imported televisions by 51 percent as it prepared to join the General Agreement on Tariffs and Trade, the precursor to the World Trade Organization.<sup>115</sup>

**Innovating Out of the Slump?**

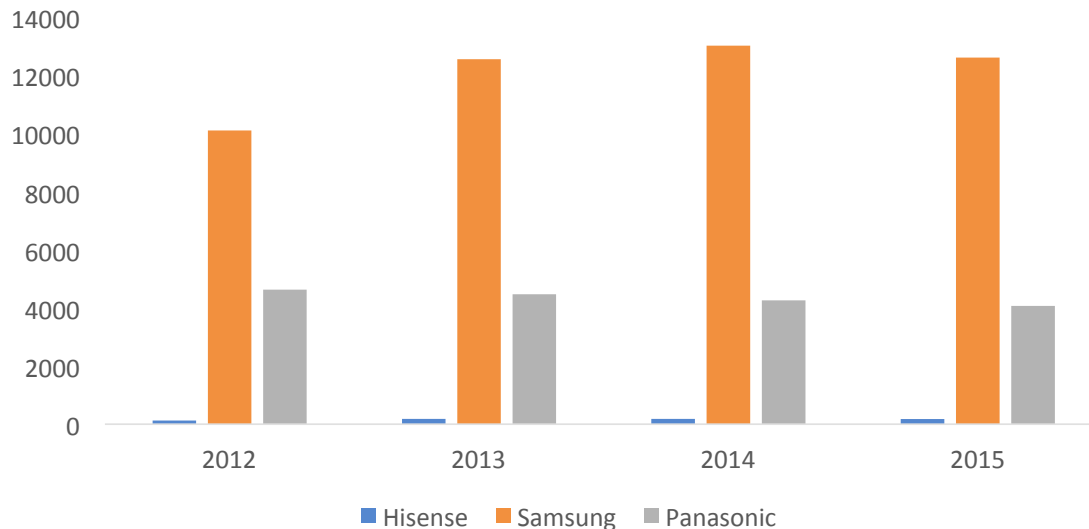
Boxed in by price wars and increasing foreign competition, Hisense sought a way out of the morass. One major reason that the Chinese TV industry has always been prone to price wars is because firms, by and large, sell highly substitutable products filled with similar imported components. Indeed, Changhong’s slogan, “Same Technology, Lower Price,” captured the dynamics well. In an interview, Hisense’s Zhou illustrated this chronic problem, “We are not entrepreneurs; we are just heads of factories for foreign firms.”<sup>116</sup>

Consider LCD TVs as an example. In the 1990s, LCD was considered an advanced technology that only a handful of Korean and Japanese firms had mastered and controlled. To produce an LCD TV, Chinese

**Figure 7. Samsung’s 46-inch LCD TV Cost Structure**



Source: IHS Electronics and media reports.

**Figure 8. R&D Spending Across Chinese, Japanese, and Korean Firms**

Source: IHS Electronics and media reports.

firms had to first import the flat panel, the most crucial component and about 70 percent of the cost of the product, from a Korean or Japanese firm. Then, the Chinese firm also had to import chips and other key components, about 20 percent of the overall unit cost.<sup>117</sup>

To break this dilemma down even further, the diagram below shows that nearly 80 percent of the total cost of a Samsung LCD TV comes from the display and main chip (see Figure 7). Chinese companies, such as Hisense, could produce *neither* of these two costliest but most profitable components, so they could only derive profit from the assembly cost. Since virtually all TV makers around the world use similar technology and rely on the same panel suppliers, the only way to boost profits was to increase market share by cutting price.

“Chinese firms are like fruit dealers,” Zhou has remarked. “They will package whatever fruits that are selling well in the market. They don’t produce fruits, let alone high-quality fruits.”<sup>118</sup>

The approach for TV makers like Hisense has been to innovate out of the market malaise and distinguish oneself from the pack. That solution sounds intuitive of course, but is exceptionally difficult to achieve in practice.

One major issue is that, over the past three decades, Chinese TV makers have become dependent on foreign technologies while neglecting investment in their own R&D. Only in recent years has Hisense, for example, begun to catch up to its Korean rivals in the proportion the firm spends on R&D (5 percent of revenue for Hisense

compared to 6 percent for Samsung). Still, in absolute terms, Hisense's R&D budget remains miniscule compared to Samsung's massive investments (see Figure 8).<sup>119</sup>

At the time it conceived of its global expansion, Hisense did not have nearly the budget to pursue cutting-edge R&D. If the firm hoped to sustain innovation and make progress in its technology offerings, Hisense would have to be strategic, focusing only on R&D and technical investments that made the most sense relative to cost and budget constraints.

#### **Tackling the Core Problem**

Zhou decided that Hisense should devote its resources to

improving the chip, the "brain" inside the television that processed images and audio. He argued that outstanding firms, such as Samsung, all designed their own chips that defined their products from the get-go.<sup>120</sup> As of 2004, all 70 million TV sets produced in China used imported graphics chips.<sup>121</sup> For Chinese TV makers, chips were still viewed as a somewhat "mysterious" technology.

Subsequently, Zhou dispatched a small team of technicians, including a recent college graduate named Zhan Jiajin, to Silicon Valley for a chip-related training session.<sup>122</sup> Although Zhan recounted that the training did not help much in gaining

knowledge about patent-protected designs, it did demystify the concept of how to make a chip. "It is like if you like a dish in a restaurant," said Zhan, "then you want to go back in the kitchen and see what the ingredients and process are." Zhan later led Hisense's chip development department.<sup>123</sup>

Hisense proceeded to establish its Application Specific Integrated Circuit (ASIC) development department in 2001. This was not an isolated or sudden move. The Chinese government had been backing such firm-level R&D efforts for years. Echoing Japan's pro-growth policies

of the 1970s and South Korea's pro-*chaebol* policies of the 1990s, China's industrial policies in the early 2000s also provided

many perks and subsidies to foster domestic R&D capacity.

The integrated circuit (IC), or chip, industry was one such sector that received priority support. In fact, just a year before Hisense set up its chip department, the State Council in 2000 issued a policy to "Encourage Software and Integrated Circuit Industry Development."<sup>124</sup> The policy offered tax cuts, waived import taxes, and pledged to provide capital and establish special zones for IC-related firms.<sup>125</sup> Zhan's ASIC department resided inside the Shanghai National IC Industrial Park, a zone that had been created in direct response to this accommodating policy environment.<sup>126</sup>

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*Aided by lower costs of production, Hisense gained momentum and rose to become the top flat panel TV producer in the domestic market.*

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Zhan was placed in charge of developing an indigenous chip. His first key decision concerned whether to adopt a “forward design” or a “reverse engineering” approach.<sup>127</sup> The latter is a common practice among many Chinese firms: it involves disassembling imported chips to study the components piece by piece and then replicating them. This approach requires much less upfront investment and usually gets faster results. Still, reverse engineering rarely leads to breakthroughs or significant innovations.

“Forward design,” on the other hand, means to start from scratch, requiring significant investment and a long-time horizon. Such an approach inherently carries with it higher risks and requires a higher tolerance for sunk cost, often in significant amounts.

Not surprisingly, a fierce debate broke out among technicians, the design team, and Hisense management over precisely these issues.<sup>128</sup> Legitimate concerns were raised that at this stage of Hisense’s growth, a misstep at such a critical juncture could seriously hamper the company’s market position, potentially even forfeiting the market altogether to competitors.

After much research, discussion, and intense debate, Zhan and Zhou, uncharacteristically for the management team of a state firm, decided on the bolder approach of pursuing some “forward designs.” Their rationale was that even if the reverse engineering approach

proved effective, Hisense could still only catch up to current frontrunners but would never surpass them. Engineering an entire complex model from scratch might well fail, but if it succeeded, then Hisense would be able to acquire a leading position in the marketplace with its own technology and IP.

This did not prove easy. Chip development took Zhan and his 11-person team five years, which was longer than they initially expected. But their effort did eventually bear fruit—on May 25, 2005, the first batch of Hisense TVs came off the line with their own “Hiview” high-definition digital video processing chip.<sup>129</sup>

Hiview was the first image processing chip that included patents wholly owned by a Chinese entity. So it immediately attracted attention from the industry but also from the Chinese government. Hisense put its chip to use in its flat panel TV production line. Aided by lower costs of production, Hisense gained momentum and rose to become the top flat panel TV producer in the domestic market, with a 15-percent market share.<sup>130</sup> The firm also won accolades from the highest level of the central government, with former Premier Wen Jiabao and other leaders all sending their greetings.<sup>131</sup>

### **“Secret Weapons”**

With its success in producing its own chip and role in the domestic market,

Hisense turned to the next challenge—improving the television display.

The display is probably the most important, but costly, component of a TV. Industry history has shown clearly over 40 years that whichever firm wins the battle of screen technologies can win the market, even if only temporarily. But industry dynamics are not simply about a race toward the best display; rather, the key to success is to find a balance between the best image quality and the lowest cost.

For Hisense, finding that balance became a major question of firm strategy. The company was now seeking to compete in a mature LCD TV market dominated by Korean firms. Over the last decade, Hisense, too, has developed its own LCD TVs by buying technology from both Samsung and LG. Yet much like the decision it made to develop Hiview, Hisense did not intend to simply follow Samsung or LG in adopting *their* technology standards. Although a second-tier player with little international brand recognition, Hisense again aimed to make it on its own.

“LG reached out to us quite a while back [about its OLED technology], but why did we never make a move [in OLED]?” mused Dai Huizhong, a general manager of Hisense Electric Co. “We believe it is

still hard to say if OLED technology will make it...The entire OLED production line is in the hands of Korean firms. If Chinese firms simply follow them, we don’t add much value and this is detrimental to the entire [Chinese] industry. We have to work on our own ‘secret weapons’.”<sup>132</sup>

From the firm’s standpoint, one of its key “secret weapons” is Hisense’s proprietary ULED standard, which it touts as an improvement over traditional LCD technology. ULED’s differentiation, according to Hisense, is that it divides the backlight into multiple sections, each of which has an individual control. This allows the TV display to produce various colors independently and achieve better color contrast while taking full advantage of the low-cost LCD. In addition, Hisense has experimented with a display-less laser TV, a technology that has attracted attention from startups, such as JmGo<sup>133</sup> and Anker.<sup>134</sup>

Hisense certainly hopes that its ULED technology will be able to go toe-to-toe with the likes of Samsung and LG in the US market. But before the Chinese company even began to contemplate a presence in America, it decided to initiate its global push in a less competitive market—Africa. Johannesburg is where the story of a more globalized Hisense begins.



## Going Global: Hisense Gets Its Feet Wet in South Africa

The United States was not on Hisense's radar when it first decided to pursue a global strategy. Instead, the company targeted South Africa in the 1990s for several reasons. For one, South Africa lacked domestic TV production at the time—in part because its television and broadcast industry was effectively under state control. But the end of apartheid in the early 1990s began to boost the income of the black majority in South Africa, which, in turn, led to higher aggregate demand for consumer goods across the country. In 1993, Hisense started exporting TV sets to South Africa and subsequently set up a local subsidiary in 1996.<sup>135</sup>

Hisense was not alone in this endeavor. Other Chinese TV makers, many of them also bogged down by overcapacity and seeing margins squeezed by the domestic price wars

in China, also looked to South Africa's market for profit and to absorb some excess capacity. In 1992, domestic TV production capacity in South Africa was just 311,000 sets, worth \$180 million, while potential demand was estimated to be double that size.<sup>136</sup> As a result, Chinese firms including TCL, Konka, and SVA rushed to export TV sets to this new emerging market.

### *From Trade to Factory*

Hisense soon discovered that the export business was not terribly profitable, not least because the South African tariff on fully assembled TV sets sourced from outside the European Union, the European Free Trade Area (EFTA), and the Southern African Development Community (SADC) was as high as 25 percent in 2011 (see Figure 9). But since no tariff was levied on the import of TV

**Figure 9. South Africa's Import Tariff Rates, 2011**

Classification Code 8528.7	Television Types	Tariff Rate			
		General	EU	EFTA	SADC
8528.72	Color				
8528.72.20	CRT	25	3.25	13	free
8528.72.40	Other, with a screen with no side exceeding 45cm	free	free	free	free
8528.72.50	Other, with a screen size exceeding 3m * 4m	free	free	free	free
8528.72.90	Other	25	3.25	13	free
8528.73	Black and White				
8528.73.20	CRT	25	3.25	13	free
8528.73.40	Other, with a screen with no side exceeding 45cm	free	free	free	free
8528.73.50	Other, with a screen size exceeding 3m * 4m	free	free	free	free
8528.73.90	Other	25	3.25	13	free

Source: Koichiro Kimura.

parts and components, Hisense retooled its strategy.

In 1997, the company established a factory near Johannesburg that simply assembled components. This strategy proved to be more effective and profitable than export from China. By 2001, Hisense had purchased a local factory from Korean TV maker Daewoo for \$4 million. That acquisition instantly bolstered the Chinese manufacturer’s local production capacity to 200,000 sets a year.<sup>137</sup>

In this operation, Hisense imported components and parts from China but then completed final assembly in the South African plant. In doing so, Hisense was able to capitalize on its low-cost base in China because, although return

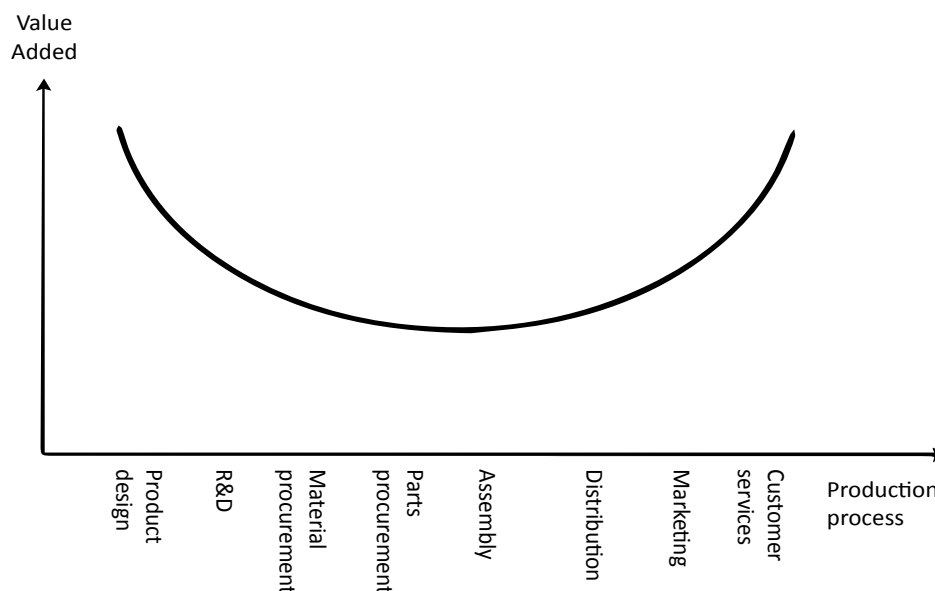
on capital was lower in South Africa, the Chinese company was still able to maintain a reasonable profit margin.

**From OEM to Branded Products**

In South Africa, Hisense received a crash course in the importance of marketing and branding. It sold a product with no brand recognition in a foreign market and, in doing so, competed with other, credible and more established global brands. Compared to the Korean brands, such as Samsung or LG, which also exported to the South African market, Hisense was barely on the radar screen of any local consumer.

As the “Smile Curve” in Figure 10 illustrates, Samsung and LG already occupied both the upper left and upper

**Figure 10. The Smile Curve**



Source: Satoshi Inomata.

**Figure 11. Chinese TV Makers in the South African Market**

Name	Headquarter	Entry Year	Business in South Africa	Local Firm	Remarks
SVA	SOE of Shanghai	1993	Local Production	Defy, Pick n Pay	
Hisense	SOE of Shandong	1993	Export - Local Production	Sansui	No OEM Business in 2011
XOCECO	SOE of Fujian	1998	Local Production	Game	

Source: Koichiro Kimura.

right sides of the curve with the highest values. South African domestic players occupied the low-end market and also established brand recognition through marketing, seen in the upper right part of the curve. In South Africa, Hisense had none of these advantages of home brands and so, ultimately, was left to pursue the low value-added segment at the bottom: namely, product manufacturing and assembly.

This meant that, Hisense, much like other Chinese TV makers who had established production facilities in South Africa, had little choice but to partner with local brands as an OEM (see Figure 11). Hisense would assemble TV sets for local South African distributors, who would then sell the TVs under their own brands.

Perhaps the world's best-known OEM today is Foxconn, which supplies to platinum brands such as Apple. But even Foxconn, as noted earlier, has attempted in recent years to shift from the OEM model, as seen in its acquisition of Sharp.

OEMs face an exceptionally tough operating environment, usually with

razor-thin margins. For example, an OEM's sales tend to fluctuate with the distributors' own prospects, and so expansion plans and pricing strategy are usually contingent on the distributors' performance. Ultimately, the success of any OEM owes much to the question of scale—that is, the OEM business is primarily based on volume, rather than value.

Yet in a foreign market, it is often difficult to achieve economies of scale, since an OEM's distributor may not have a steady business. Whether a firm seeks to operate as an OEM or promote its own brand often depends on the individual firm's objectives and vision. For certain Chinese TV makers, such as TCL and Konka, the OEM business in South Africa became a useful strategy to absorb overcapacity, but they had to tolerate low margins.

Hisense took a different approach ultimately because it proved less willing to tolerate the limitations of the OEM business and nurtured an ambition to build a "global brand."<sup>138</sup> Instead of a partnership with a low-end supermarket

or discount store, Hisense joined forces with JD Group, a retailer that operated more than 1,200 stores in South Africa.<sup>139</sup> The partner carried both OEM-made and Hisense’s own branded products. The very fact that Hisense’s own brand now sat in those stores provided some, albeit modest, product validation.

In the mid- to low-end markets, “consumers are not too concerned with the origins of the brand, but rather look at price, quality, technology, and service. We focused on these aspects,” recalled a manager of Hisense South Africa during a celebration of the firm’s \$39 million investment in Cape Town in 2013.<sup>140</sup>

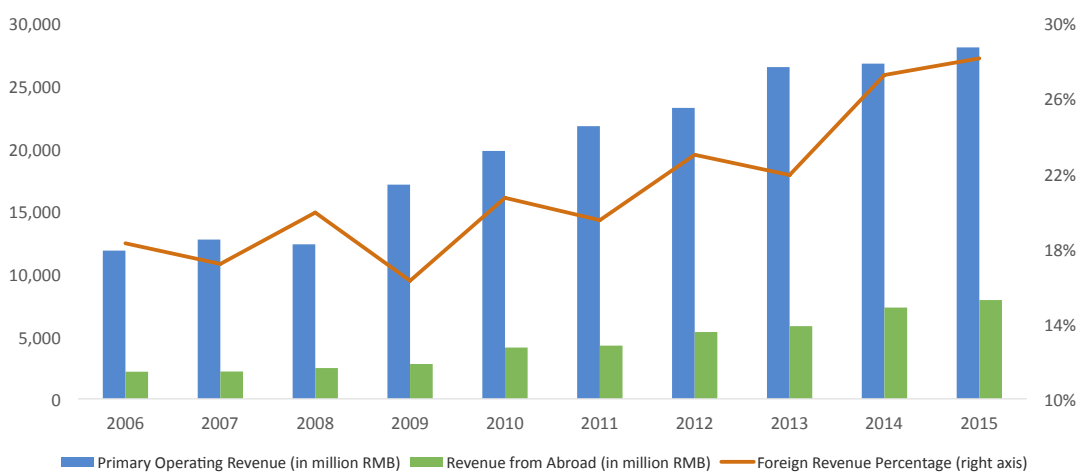
Hisense settled in South Africa on what might be considered a “B Brand Strategy.” It offered products of better quality than domestic low-end

alternatives but kept prices 10 to 15 percent lower than top global brands such as Samsung. That strategy worked for Hisense in South Africa because it could leverage its low-cost production base in China. By November 2016, Hisense sold more units for the year than Samsung or LG, and thus became the largest TV seller in South Africa.<sup>141</sup>

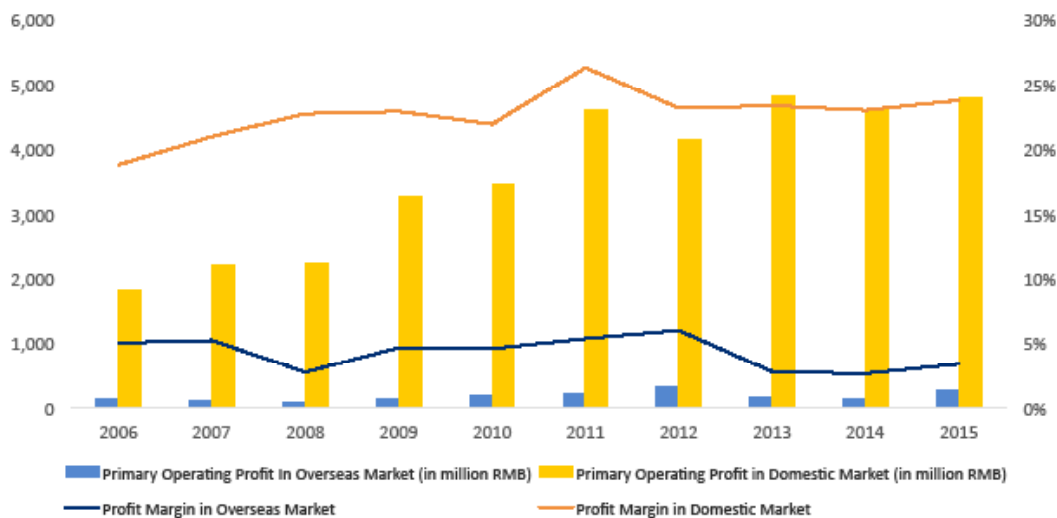
This South African experience emboldened Hisense, so it pursued the same strategy in emerging markets from Pakistan and Indonesia to Brazil and Iran. The majority of Hisense products, including TVs, microwaves, and other home appliances in these markets were sold under its own brand.

At this point, Hisense’s overseas operations were growing faster than the company itself, with foreign revenue as

**Figure 12. Hisense Electric Co. Revenue Breakdown, 2006-2015**



Source: Hisense financial reports.

**Figure 13. Hisense's Profitability in Domestic and International Markets, 2006-2015**

Source: Koichiro Kimura.

a percentage of total revenue steadily climbing from around 18 percent in 2006 to 28 percent in 2015 (see Figure 12).<sup>142</sup> In short, Hisense's global business was becoming an ever more important part of the company's overall strategy.

### **Coming to America**

The company had leveraged its initial South African adventure to gain a foothold in many developing markets and had built a brand beyond China's borders. Yet there was a pervasive sense inside the company that its brand could not be truly "global" without recognition in more advanced markets, particularly the United States. It became clear that Hisense needed to consider a strategy of cracking the elusive US market.

As early as January 2005, Hisense's chief reflected in a somber speech,

"The Hardship and Challenges We Are Facing,"<sup>143</sup> that the company was punching below its weight in the European and American markets. Zhou's speech dampened the celebratory mood then—Hisense had emerged from 2004 with the top spot in China for total TV shipments.

But despite rapid revenue growth in emerging markets, the profitability of its overseas business remained lackluster. Hisense's average profit margin in its global business from 2006 to 2015 was just 4.2 percent, less than a fifth of that in its domestic market and contributing little to overall corporate profitability (see Figure 13).<sup>144</sup>

Hisense found that it could only penetrate these advanced markets by operating as an OEM initially, and this was a far cry from its intent to sell a

distinctively branded product. Hisense's global footprint had become extensive, but only if it could capture the high-end market would the company achieve real and enduring profitability.

A case in point is Hisense's struggle to break through in Europe. Throughout the 1990s, the European Union accused Chinese TV makers of unfair pricing and dumping practices, subsequently slapping a hefty 40 percent tariff on Chinese TV exports.<sup>145</sup> Hisense could have skirted the tariff by adopting a similar strategy to the one it had deployed in South Africa: start making TVs in Europe instead of exporting them from Chinese plants. But operating costs in the EU member states at that time were too expensive for Hisense to manufacture locally.

When several Eastern European countries finally joined the European Union, this changed the Chinese company's calculus. Hisense executives

headed to Hungary, Poland, and the Czech Republic in August 2003 to scope out manufacturing possibilities in these countries. Eventually, they decided to take the leap, establishing a factory in an industrial park in western Hungary.<sup>146</sup>

Unlike South Africa, however, Hisense was subject to local content requirements in Hungary, where 60 percent of a product's value had to come from a local factory. Higher manufacturing costs in Europe, which can be three times those in China, coupled with the need to buy crucial but expensive technologies that Hisense did not possess, prevented the Chinese company from employing the same pricing strategy in Hungary and Europe as it had in other developing markets. With prices only marginally lower than its competitors, such as Samsung and Sony, and with no indigenous technology as a brand differentiator, Hisense found it difficult to persuade European customers to buy its unfamiliar brand.

## Hisense USA: A Firmer Footing

To most Americans, Hisense is an unrecognizable brand. But the Chinese company has had a presence in the US market since 2001, when it established its North American headquarters in Los Angeles, operating essentially as little more than a sales office.

In those earliest days, Hisense faced similar struggles selling into America as it did in Europe. Relying on the same strategy it adopted in emerging markets, Hisense first exported TV sets made in China to the United States, hoping to sell both branded products and establish OEM partnerships in America.



Photo: Flickr/David Berkowitz

But Hisense quickly ran into very strong resistance in the United States. Lawrence Li, CEO of Hisense USA, acknowledged the difficulty of overcoming the stereotype of Chinese-made products as cheap and poorly made. Unlike in South Africa where Hisense successfully broke into the market by selling its own branded products at a competitive price, American customers were willing and able to pay a premium for quality goods. “People here [in America] used to look at us through ‘colored glasses,’” Li once remarked.<sup>147</sup>

### Minimal Presence

That kind of uncertainty in the US market led Hisense to keep a low profile for years, focusing primarily on its OEM business. In 2003, Hisense sold only about 10,000 CRT TV sets to American department stores, such as Best Buy and Wal-Mart under the retailers’ in-house brands such as Best Buy’s Insignia.<sup>148</sup>

Even so, Hisense’s US business was soon to be squeezed even further.

In a replay of what Japanese companies had dealt with in the 1980s, the US International Trade Commission ruled on June 16, 2003 that CRT TV sets from China

and Malaysia had been sold below fair market value and imposed a 21.49 percent tariff on Hisense exports.<sup>149</sup> That was a blow to Hisense’s business, forcing it to recalibrate its strategy. Moving into the high-end TV market segment was the only way to continue exporting to the United States.

Still, despite these headwinds and the fact that Hisense USA barely harvested any profit in its first few years,<sup>150</sup> the company did not give up on the US market. Hisense made the adjustments,

shifting to the export of flat panel TVs and continuing to rely on the OEM model to build relationships with local retailers and gradually establish its brand reputation in the United States.<sup>151</sup>

Hisense’s commitment to the US market was premised on a simple fact: the sheer size of the American consumer goods market was too large for any such manufacturer to overlook. As of 2015, TV exports to the US amounted to 40 million units,<sup>152</sup> accounting for more than 20 percent of the total global TV market.<sup>153</sup> And American consumers tended to be early adopters of technologies, relishing the latest gadgets and devices. This has made the US market a strategically important battleground for any consumer electronics maker that hopes to prove its technological capability.

Hisense’s persistence had much to do with that innate desire to prove itself in one of the most dynamic and competitive consumer markets in the world, just as Sharp and Samsung had before it. “If Hisense’s products can gain a foothold in both Chinese and American markets,” Zhou said pithily, “other parts of the global market would be a piece of cake.”<sup>154</sup>

**The Branding Problem**

Hisense’s plan to build relationships and reputation through its OEM business

did not materialize, at least not during its first eight years operating in the US market. Unlike South Africa, where Hisense quickly won local retailers’ trust, the US market proved to be more difficult to crack.

Although Hisense sells millions of TV sets around the world, its US market tagline remains “the biggest technology company you’ve never heard of.”<sup>155</sup> Such a tagline happens to accurately reflect a recognition by the company of just how difficult it can be to sell a commodity product in a mature and saturated market in which top- and

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*“If Hisense’s products can gain a foothold in both Chinese and American markets, other parts of the global market would be a piece of cake.”*

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low-tier segments are already filled with established players.

The US market is challenging, and

yet many of the issues Hisense encountered can be attributed to its own missteps, not just the dynamics of the American marketplace. Hisense had made its tough situation worse with some poor strategic choices.

Originally, the company intended to imitate its approach from emerging markets and rely on the strategy of offering “good enough products at competitive prices.” But that involved a fundamental misunderstanding of the US TV market, as Hisense quickly discovered. Simply put, there was no room for another “B Brand” in the American TV market. That market segment had already been occupied



by brands such as Vizio, Polaroid, and Westinghouse.<sup>156</sup>

Hisense's pricing strategy positioned it directly in competition with Vizio, a longstanding producer of affordable flat panel TVs that had built its brand quickly in the US market. "Vizio successfully seized the opportunity of technology upgrades from CRT to flat panel and made its name. But for Hisense, the window had already closed," says Liu Qinghua, a manager of Hisense USA.<sup>157</sup>

Another stumbling block in Hisense's branding efforts is that it has yet to develop its own customer service functions, a major lacuna that needs to be filled if it wants to sell branded products. For instance, if a customer returned a Hisense-branded product, the company had to ship it back to China to get it repaired, an ordeal that could take at least a month and unacceptable to US consumers. This is a disaster in the consumer electronics industry, where customer reviews are crucial to the success of a product, especially for a newcomer and Chinese company like Hisense.

Word-of-mouth is important to building brand loyalty, and offering exceptional customer service can contribute significantly to that loyalty. Lin Lan, the Hisense Group vice president in charge of international operations, captured this by admitting in an interview that while "our global shipments in gross volume rank No. 5 to No. 6...this does not mean we are in the first league.

We are very aware of our goal to make our brand rank no. 3 globally."<sup>158</sup> But the company's OEM legacy, through which it could rely on its American partners for post-sales services, has thus far precluded it from building this important service.

### ***From West Coast to East Coast***

While Hisense first sited its US sales office in Los Angeles, its principal goal was to capture the benefits of port accessibility and the city's international connections. Yet as the company's sales grew, transport costs within the United States began to multiply.

"Many Chinese firms chose LA as their starting point when they first entered the United States [but] without much strategy other than a concept of testing the market," noted Stella Xu, Director of China Initiatives at the state-level Georgia Department of Economic Development (GDED), which would play a role in moving the Hisense operation to the state. Xu added, "LA is too far from most parts of America."<sup>159</sup>

Beyond the distance factor, however, Hisense also needed to demonstrate its seriousness about the US market and desire for a viable brand by ramping up R&D efforts to customize and localize its more generic products. The firm also hoped to establish a full customer service network for its own branded offerings.

These considerations prompted Hisense USA to relocate from the west coast

to east coast in 2007. The search for a new location was not so easy, however, since all of the firm's employees in Los Angeles were Chinese nationals with limited experience working in the United States.<sup>160</sup> The task of finding a new home fell to Lin, the vice president of the parent company, who had studied in the United States.

An engineer by training, Lin had come to the United States to pursue a doctorate at Tennessee Technological University. Upon graduation, he joined GE as a researcher. After working in the company for a few years, he thought that, as a foreigner, language and cultural barriers would hamper his career advancement prospects, "I could not see much room for professional development."<sup>161</sup>

So in 2002, he decided to join a Chinese firm, re-situating himself in Hisense's R&D department back in China, saying that he preferred its "simple" environment and atmosphere with "less office politics."<sup>162</sup>

Toward the end of 2007, the firm made its decision to relocate to Georgia. How and why Lin picked Georgia for the new Hisense headquarters is not entirely clear. In fact, the move was made so quietly

that some interviewees in the Georgia state government were not even aware of Hisense's relocation to their state. In 2007, the new operation involved little more than a small office with two-dozen employees. Its sudden appearance in Gwinnett County, just outside Atlanta, attracted little attention at the time.

### ***Doubling Down on Georgia***

It was perhaps a surprise, then, when Nick Masino, Senior Vice President at the Gwinnett Chamber of Commerce (GCC) received an unsolicited query in December 2008. The query came from Steven Cohen, Senior Director of Sales and Marketing at Hisense USA. Coming immediately on the heels of the financial crisis and as turbulence

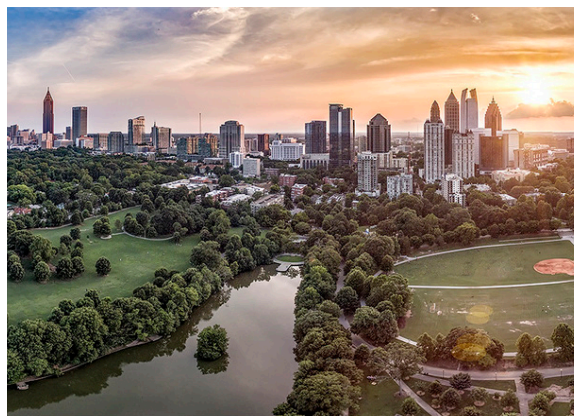


Photo: Flickr/Richard Cawood

continued to percolate through global markets, Cohen was dealing with the fact that Hisense might need to prepare itself for a potential collapse of American demand.

"You know, not everything collapsed but it [was] on its way," recalled Masino. "Hisense was "trying to understand what was going on in the United States."<sup>163</sup> The GCC soon organized a luncheon for representatives of Hisense and the president of the China Home Appliance Association.

“Chinese industries are all regulated,” said Masino, “and you know how important those associations in Beijing are. We were able to put the right people in front of them so they got the questions answered. That was also when they [Hisense] realized how helpful we [at the GCC] can be.”<sup>164</sup>

Over the next few months, the relationship between the GCC and Hisense USA blossomed. From December 2008 to February 2009, chamber representatives participated in four events with Hisense USA, culminating in a visit by GCC representatives to Hisense’s Qingdao headquarters. The China trip apparently made an impression on the Georgia delegation and cemented “... the very strong relationship that led to the state of Georgia actually leasing and opening an economic development office in Hisense’s [Qingdao-based] headquarters building,” according to Masino.<sup>165</sup>

The Georgia delegation did not leave Qingdao empty handed, either: Hisense USA reciprocated and announced an investment of \$800,000 to build a 6,000 square-foot office for sales and marketing. The Chinese company said that it aimed to create 35-40 high-paying jobs, with an average salary of \$55,000, over the next three to five years.<sup>166</sup>

Around this time, Hisense also got a bit of good news. Years of dogged pursuit of retailer relationships in the American market had finally begun to bear some

modest fruit. In 2009, Li, the CEO of Hisense USA, struck a deal with hhgregg, a publicly owned American electronics retailer, to carry Hisense-branded flat panel TVs. To both Hisense’s and hhgregg’s surprise, the three branded models sold more than 10,000 sets in the first month.<sup>167</sup> By May 2010, Hisense televisions had entered 175 hhgregg stores.<sup>168</sup>

Earlier in 2010, Hisense made its “American debut” at the popular CES show in Las Vegas. Long accustomed to seeing Japanese and Korean brands capture the spotlight at such technology conventions, the audience was surprised to see a Chinese company’s CEO, Zhou Houjian, giving the keynote speech. Standing on stage, Zhou unabashedly declared his intent to make the Chinese company a “worldwide leading consumer electronics brand.”<sup>169</sup> Masino, along with three other members from the GCC, were in the audience to lend support.

Six months later in July 2010, Hisense USA bet on Gwinnett again: it announced an expansion involving a 7,000-square foot R&D center, which, it said, aimed to create 20 local jobs. The R&D center was to focus on new technology and product development to facilitate Hisense’s US market expansion. (The R&D center later signed a cooperation agreement with the Massachusetts Institute of Technology’s Media Lab to sponsor training and some research in human-computer dialogue and artificial intelligence, an effort by

the firm to learn and potentially apply “smart” technologies to its assessment of consumer preferences that might affect its future products.<sup>170</sup>)

With this physical expansion, Xu, who noted that Hisense had been very proactive about asking for the state’s assistance via the GDED, also helped to organize a series of seminars that would link Hisense with university professors as a potential pool of talent. “Georgia Tech is right here. We would put Hisense in touch with the school. Sometimes they look for employees there with specific skill sets,” Xu said.<sup>171</sup>

By spring 2011, Masino received yet another call from Hisense USA: the company had run out of space again.

Masino proceeded to find Hisense a real estate agent who had a foreclosed building for sale. It was located in Suwanee, a small city also in Gwinnett County. Hisense decided to purchase this nearly 36,000-square foot building, in which it now plans to invest \$7 million to \$10 million.<sup>172</sup> In fact, it has become the new home of Hisense USA’s headquarters, with R&D functions also housed inside it.<sup>173</sup>

“I think they have at least 100 employees,” said Masino. “They’ve got a call center, customer service, finance, marketing, logistics, communication, everything.”<sup>174</sup> Gwinnett County has, quite clearly, been good to Hisense

USA, and the firm has embraced the county through its rapid expansion. Cohen, the marketing director for Hisense USA, agreed. “We find the business environment [in Gwinnett] to be extremely productive, and this has contributed to our monumental growth in the United States.”<sup>175</sup>

But the deepening relationship between the Chinese company and Gwinnett County owed largely to the personal relationship that developed between Masino and Cohen. “If it were not for him [Cohen], none of this would have happened regarding our relationship with Hisense now. That is a lesson for Chinese companies,” said Masino.<sup>176</sup> Indeed, Cohen spent seven years in China, spoke fluent Mandarin Chinese, and served as

the spokesperson for Hisense USA for his first two years with the company.

Then there is Masino himself. A Georgia-based executive, Masino has taken 13 trips to China since his first meeting with Hisense. During the first few of these trips, Masino traveled with some Taiwanese businesspeople who could “culturally coach me.”<sup>177</sup> He quickly learned basic business etiquette such as how to *ganbei*—Chinese for making a toast—and how to present a business card formally with both hands instead of the usual American custom of using just one.

“I always remember what my boss, a Motorola executive who used to live

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*Gwinnett County has, quite clearly, been good to Hisense USA, and the firm has embraced the county through its rapid expansion.*

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in Singapore for five years, told me,” Masino recounted. “Don’t be a typical American who flies to a place, goes to the hotel, finishes the meeting and goes back. Instead, go there early, learn a little about the culture, so on the next day during the meeting, you can say, ‘oh, I visited these places.’”<sup>178</sup>

### **Getting the Name Out**

Now that Hisense USA has ramped up its physical infrastructure and head count, it clearly has to execute its branding and marketing strategy if it wants to grow and thrive.

The firm has been present in the US market for a decade, but Hisense USA has become cognizant of the limitations of its “B Brand + Competitive Pricing Strategy.” Hisense has no choice but to market and publicize its brand name. “It was a mistake that we emphasized production rather than marketing in the past,” admitted an executive vice president of Hisense.<sup>179</sup>

As a result, Hisense USA has begun a more aggressive approach to marketing and publicity campaigns. It has, for example, become much more active in local and national technology exhibitions to showcase the firm’s most advanced products, which it hopes will gain traction with industry professionals and tech reviewers. The “flagship product parade” strategy has been effective for others because it signals technical capability and so, Hisense

reasons, could instantly put a Chinese-made product into a category with top-tier producers.

That is precisely what Hisense attempted to do at the 2015 CES in Las Vegas, where its 65-inch ULED TV debuted at a price point on par with Samsung’s S-UHD at \$2,000 and only half the cost of LG’s 65-inch OLED.<sup>180</sup> Hisense deliberately positioned its product in between LG’s and Samsung’s products, an effort to signify its equal status in the high-end market.

This marketing tactic proved at least somewhat effective, as technology reviews hailed Hisense’s ULED as “the next-best option for picture enthusiasts after OLED.”<sup>181</sup> So when Hisense returned to CES in 2016, it brought in tow a mammoth 98-inch ULED that ginned up new buzz, leading *PC World* magazine to gush that “We expect great things from this TV...it’s at least equal with Samsung and Sony’s best and also rivals LG’s OLED.”<sup>182</sup>

Another branding strategy Hisense has pursued is common to Chinese consumer technology brands, including Haier, Huawei, and ZTE. That is, Hisense has taken on sports sponsorships and naming rights for stadiums. Hisense targeted tennis, Formula One, and soccer as its main sporting sponsorship opportunities. “We need to find the right customers to talk to when it comes to marketing, rather than wasting our resources,” said Lin, the vice president of Hisense Group.<sup>183</sup>

At the 2009 Australian Open in Melbourne, for instance, Hisense signed the title sponsorship to re-name the Vodafone stadium to “Hisense Arena.” “This is a very successful decision for us. There are over 600 million households watching the Australian Open this year...many of which could see our name up there,” Hisense Australia’s general manager has said.<sup>184</sup>

Another of the company’s sports sponsorships was the June 2016 European Cup in Paris. Banners around the soccer field read in Chinese “海信电视, 中国第一” (“Hisense: China’s #1 TV Brand”) and the visuals may have been seen by a total of seven billion viewers, including 1.2 billion in China.<sup>185</sup> That kind of advertisement may have led to a bump in sales: Hisense’s sales in Europe grew 65 percent in June 2016 compared to the same month in the previous year.<sup>186</sup>

Although Hisense has barely begun to pursue sports sponsorships in the United States, it could certainly ramp up quickly. The company’s only US sponsorship to date is the 2015 National Association for Stock Car Auto Racing Xfinity Series. One of the

key reasons behind that decision was simply that the racetrack was located nearby Hisense’s home in Georgia.<sup>187</sup>

But the publicity may have subsequently generated some positive momentum for Hisense’s brand value. According to Lin, the sponsorship led to a 2 percentage point increase in Hisense USA’s profit margin, although it is difficult to ascertain whether there was, in fact, such a correlation.<sup>188</sup>



Photo: Flickr/Joe C

### **Product Diversification**

Beyond display technology, Hisense is also attempting to diversify its product lines. In the 2017 CES lineup, Hisense brought to American consumers a 100-inch TV screen, or, more precisely, a short-throw laser TV projector.

Projectors have been around for a long time, especially for movie enthusiasts. Hisense claims, however, that its “laser TV” is novel because it has a brightness of 300 nits, is capable of being used in a well-lit room, and can project ultra high-definition (4K) images. The cost: only 20 percent of a 100-inch LCD TV.<sup>189</sup>

In addition, and like other high-end brands, Hisense is attempting to make its TVs smarter by integrating

its Android-based VIDAA smart TV platform. According to Hisense's 2015 financial report, there were more than 840,000 active monthly users of its smart TV platform.<sup>190</sup>

However, it is a tall order indeed to persuade customers to buy a \$2,000 ULED or laser TV from a brand name that few of them have ever heard of.

These recent efforts may have had an impact, but Hisense's brand is still far from sticky in the US market. According to David Katzmaier, a reviewer at the respected CNET technology review website, "The big question is whether anyone will want to pay a premium price for a TV from a relatively unknown brand that, until now, sold mostly entry-level models."<sup>191</sup>

## Conclusion: Hisense Bets that the Future Will Be Televised

From a radio factory in Qingdao to the world's third-largest TV manufacturer, Hisense's story can be viewed as a proxy for the rise of China's consumer electronics industry writ large. Yet what makes Hisense stand out from its peers is its deep roots in China's command economy.

Born as an SOE nearly a half century ago, Hisense enjoyed all of the attendant benefits of a privileged Chinese state firm: cheap land, cheap assets, and cheap loans to buy foreign technology. That was the company's inception.

But whether state-owned or private, Hisense's development was arguably

influenced more by broader secular and market forces that lay beyond its control.

One such force has been the technological progress that shaped the global TV industry. Another involves the shift of manufacturing capability and cost among East Asian economies, including Japan, South Korea, and China. Much of the firm's story can simply be chalked up to the nature of the consumer electronics industry and its winner-take-all ethos. In the TV business, whoever defines the next-generation technology and standards also gets to define the global market.

From the dominance of Japanese firms in the 1980s and 1990s to the rise of

Korean powerhouses in the 2000s, *change*, in fact, seems to be the only constant in the TV industry—today's corporate king may yet lose the crown. This is a ruthless and fiercely competitive industry, where seemingly secure giants have been repeatedly toppled from the throne.

But is a new era dawning—one in which Chinese firms are on the cusp of dethroning Korean companies, just as the Koreans once supplanted Japanese competitors? That is Hisense's hope,

*In the TV business, whoever defines the next-generation technology and standards also gets to define the global market.*

particularly now that it has become so determined to compete with its own ULED standard. But it

is of course too soon to make definitive statements.

At least one executive at Hisense has struck a note of inevitability, "In the 1960s, after the Tokyo Olympic Games, a lot of Japanese brands became global brands. In 1988, after the Seoul Olympics, Samsung, Hyundai, LG became global brands. And of course, (in 2008) we had the Olympics in Beijing. It is, I think, our time."<sup>192</sup>

But such confidence does not automatically lead to the transformation of a firm from a producer to a market setter, much less a globally reputable brand. Hisense still has much distance to cover.



Internally, Hisense USA has recently faced high turnover, usually a leading indicator of future problems if left unaddressed. Cohen, who was apparently instrumental in establishing the company's relationship with Gwinnett County, left the firm after three years. Foist, who replaced Cohen, had an even shorter stint of less than one year. Another half-dozen mid- and entry-level employees stayed with the company for just 4 to 15 months.<sup>193</sup> Currently, most of Hisense USA's directors were recruited from Sharp, in the wake of the Hisense acquisition of its Mexican factory.

Part of the story here may be a lack of cultural integration with the local community, despite having been present in Georgia for nearly a decade. "The most interesting thing about Hisense USA is their 'Chinese characteristics'," Xu remarked, "they have a Chinese style canteen."<sup>194</sup>

Penelope Prime, a director at the Georgia China Alliance, a nonprofit organization that promotes business exchanges between China and Georgia, expressed frustration in an interview at the lack of traction in efforts to involve Hisense USA in the local business community. Prime recalled, "To be honest, it was really, really difficult to get the Chinese companies to participate. For us, it is part of community engagement and corporate social responsibility. But it is just not a priority for them."<sup>195</sup>

Hisense USA may aim to sell to American consumers and be recognized as a platinum brand in the United States. But to achieve that objective, it will, like so many other firms before it, need to first win over its local American community even as it seeks national recognition.

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<sup>194</sup> Interview.

<sup>195</sup> Interview.

## The Paulson Institute's Program on Cross-Border Investment

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There are compelling incentives for the United States and China to increase direct investment in both directions. US FDI stock in China was roughly \$60 billion in 2010, yet a variety of obstacles and barriers to further American investment remain. Meanwhile, Chinese FDI stock in the United States has hovered at around just \$5 billion. For China, investing in the United States offers the opportunity to diversify risk from domestic markets while moving up the value-chain into higher-margin industries. And for the United States, leveraging Chinese capital could, in some sectors, help to create and sustain American jobs.

As a nonprofit institution, The Paulson Institute does not participate in any investments. But by taking a sector-by-sector look at opportunities and constraints, the Institute has begun to highlight commercially promising opportunities—and to convene relevant players from industry, the capital markets, government, and academia around economically rational and politically realistic investment ideas.

The Institute's goal is to focus on specific and promising sectors rather than treating the question of investment abstractly. We currently have two such sectoral efforts—on agribusiness and manufacturing.

The Institute's aim is to help develop sensible investment models that reflect economic and political realities in both countries.

The Paulson Institute currently has four investment-related programs:

### ***US-China Agribusiness Program***

The Institute's agribusiness programs aim to support America's dynamic agriculture sector, which needs new sources of investment to spur innovation and create jobs. These programs include:

- A US-China Agricultural Investment Experts Group comprised of some of the leading names in American agribusiness. The group brainstorms ideas and helps in the Institute's effort to develop innovative investment models that reflect economic and technological changes in global agriculture.
- Periodic agribusiness-related investment workshops, bringing key players and companies together. The Institute held the first workshop in Beijing in December 2012. Attendees included CEOs and experts. It has since held smaller sessions in the United States focused on specific technologies or aspects of agribusiness.



- Commissioned studies that propose specific investment models, including for commodities, such as pork, or value chain opportunities, such as collaborative research and development (R&D).

### ***US-China Manufacturing Program***

In June 2013, the Institute launched a program on trends that will determine the future of global manufacturing and manufacturing-related capital flows. We aim to identify mutually beneficial manufacturing partnerships that would help support job growth in the United States. The Institute's principal manufacturing programs include:

- Investment papers that the Institute is co-developing with private sector and academic partners.
- Periodic workshops in Beijing and Chicago with Chinese, American and global CEOs and executives, focused on technological change, sectoral trends, and investment opportunities.

### ***Case Study Program***

The Institute publishes in-depth historical case studies of past Chinese direct investments in the United States, examining investment structures and economic, political, and business rationales. These detailed studies are based on public sources but also first-hand interviews with deal participants on all sides. They aim to reconstruct motivations and actions, and then to draw lessons learned.

### ***State-Level Competitiveness Program***

The Institute works closely with several US governors to help them hone their teams' approach to attracting job-creating foreign direct investment. Our core competitiveness program is a partnership with states in the Great Lakes region, but we work with other governors as around the United States as well.

- Paulson Institute-Great Lakes Governors Partnership: Working closely with the Council of Great Lakes Governors, the Institute is honing pilot strategies to help match the "right" investors and recipients to the "right" sectoral opportunities. Work is also focusing on how to connect Great Lakes/St. Lawrence-based R&D and innovation to foreign deployment opportunities while opening markets in China. The Council includes the governors of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin, as well as the Canadian premiers of Ontario and Quebec.

- American Competitiveness Dialogues: The Institute convenes an ongoing series of competitiveness forums around the United States. These aim to address the implications of the changing global economy for US competitiveness, opportunities and challenges associated with foreign direct investment.
- R&D+Deployment (“R&D+D”): Working with partners, including McKinsey & Company and a small number of universities, the Institute is exploring new models that would link Chinese investors to the US innovation engine, especially in areas linked to demand-side needs in the China market. The aim is to design fresh models that capture value in both countries but do not sacrifice America’s innovation edge or intellectual property protection. Our dialogue in this area aims, ultimately, to lead to a pilot initiative.

## About The Paulson Institute

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The Paulson Institute, an independent center located at the University of Chicago, is a non-partisan institution that promotes sustainable economic growth and a cleaner environment around the world. Established in 2011 by Henry M. Paulson, Jr., former US Secretary of the Treasury and chairman and chief executive of Goldman Sachs, the Institute is committed to the principle that today's most pressing economic and environmental challenges can be solved only if leading countries work in complementary ways.

For this reason, the Institute's initial focus is the United States and China—the world's largest economies, energy consumers, and carbon emitters. Major economic and environmental challenges can be dealt with more efficiently and effectively if the United States and China work in tandem.

### Our Objectives

Specifically, The Paulson Institute fosters international engagement to achieve three objectives:

- To increase economic activity—including Chinese investment in the United States—that leads to the creation of jobs.
- To support urban growth, including the promotion of better environmental policies.
- To encourage responsible executive leadership and best business practices on issues of international concern.

### Our Programs

The Institute's programs foster engagement among government policymakers, corporate executives, and leading international experts on economics, business, energy, and the environment. We are both a think and "do" tank that facilitates the sharing of real-world experiences and the implementation of practical solutions.

Institute programs and initiatives are focused in five areas: sustainable urbanization, cross-border investment, climate change and air quality, conservation, and economic policy research and outreach. The Institute also provides fellowships for students at the University of Chicago and works with the university to provide a platform for distinguished thinkers from around the world to convey their ideas.

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5711 South Woodlawn Avenue  
Chicago, IL 60637  
[paulsoninstitute.org](http://paulsoninstitute.org)