CASE: SM-213(A)
DATE: 01/06/13

GOKALDAS EXPORTS (A): THE CHALLENGE OF CHANGE

[Lean] is not an easy medicine – you don't just write a check and everything will be fine after that. It requires changing the way you do business, changing the organization, changing the compensation system. It requires a totally new way of thinking. It's not for the faint of heart.

-Anand Sharma, President & CEO, TBM Consulting Group[1]

Gokaldas Exports was a family-owned business founded in 1979 that had grown into India's largest apparel exporter by the mid 2000s.[2] Its founder, Jhamandas H. Hinduja, had bequeathed control of the company to three sons, each of whom brought in his own son. By the end of 2004, Gokaldas had 43 factories with 258 production lines scattered in and around the southern India city of Bangalore. It had more than 35,000 workers, which was nearly double the number it employed in 1999- 2000, and its total sales had increased at an annual compounded growth rate of 19.67 percent over this period. The company was valued at approximately $215 million and exported nearly 90 percent of its production. However, to maintain its already slim margins in an increasingly competitive environment, Gokaldas needed to become more efficient. Company leaders hoped to improve profits by 10-15 percent without adding resources and Gaurav Hinduja, COO of the sportswear division and a third generation family member, became convinced that Lean would be the best means to make this happen.

To implement major changes in a successful, closely-held family business would not be easy. Gokaldas prided itself as a one-stop-shop able to produce virtually any type garment required by its clients. To ensure customer satisfaction, it adhered to a business philosophy of "punctuality,

[1] All quotes from Sharma come from an interview conducted by Nicholas Bloom and Sheila Melvin on March 10, 2012.

[2] Information in this section is based on 2012 interviews with former Gokaldas sportswear division COO Gaurav Hinduja and former Executive Director Dinesh Hinduja and on the Gokaldas Exports Limited *Prospectus*, April 13, 2005, http://www.gokaldasindia.com/prospectus.pdf (accessed September 29, 2012).

Sheila Melvin, Professors Nicholas Bloom and John Van Reenen prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

quality, reliability, speed, transparency and flexibility." It emphasized continuous innovation and escalating productivity while striving to control every aspect of its supply chain, from "design to delivery," even holding equity in a shipping yard at the port. Over the years, Gokaldas had won many of the top export awards given to garment manufacturers in India including, in 2004, the coveted "Highest Exporter Award" from the Confederation of Indian Apparel Exporters. Its clients read like an A-list of the world's top apparel retailers: Nike, Gap, Old Navy, Banana Republic and Abercrombie & Fitch.

However, by the mid-2000s, pricing pressure was on the rise while productivity was declining and quality slipping. Overtime was increasingly required to meet deadlines – in 2003-2004; several orders had even been partly rejected due to delayed delivery. Gokaldas executives worried about the demands that the company's recent rapid growth might place on management and resources. Moreover, the global apparel export environment was about to change when the Multi-Fiber Arrangement (MFA), which had governed trade in textiles and apparel since 1974, ended on January 1, 2005. This was exposing Gokaldas to relentless competition from Chinese producers. But when Gaurav Hinduja suggested Lean as a means for addressing these problems, his fellow executives – who were also his father, uncles, and cousins – were unconvinced.

Lean is a management philosophy that began at Toyota, where it is also known as the Toyota Production System (TPS).[3] The TPS pursues efficiency by aiming for "the complete elimination of all waste" in its production processes. TPS is based on two basic concepts. The first is *jidoka*, which is generally translated as "automation with a human touch" and means that equipment is stopped the moment a problem is discovered so defective products are not made. The second is "Just-in-Time," which means that each process makes only what is immediately needed for the next in one continuous flow. Continuous improvement and the elimination of *muda* (Japanese for waste) are the hallmarks of Lean which has been extended from auto production to other parts of manufacturing and, more recently, to services like retail and healthcare. But Lean was alien to the garment industry in India and, with the time and considerable consulting fees it entailed, was an expensive undertaking. The Hindujas had been running Gokaldas successfully for nearly three decades – most family members saw little need to rock the boat. Why bring in expensive consultants to fix a firm that had grown to become the largest and most successful apparel firm in India?

The challenges facing Gokaldas mirrored those of the wider Indian economy. The country had enjoyed tremendous growth since the dismantling of the License Raj[4] in the 1980s and the liberalization of the 1990s. But by the end of the 2000s productivity levels lagged behind other emerging economies like China. Average management quality scored poorly in Indian manufacturing relative to other countries [see Exhibit 1]. This low average score was caused by a "long tail" of very poorly managed firms compared to more developed countries like the US [Exhibit 2]. What could be done to bring the mediocre to the best and to make the best in India - like Gokaldas - even better?

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[3] Information on Toyota production system from http://www.toyota global.com/company/vision_philosophy/toyota_production_system/

[4] The "License Raj" was an elaborate system of licenses and regulations required to establish and run a business in India between 1947 and 1990.

COMPANY HISTORY

Gokaldas Exports was founded by the late Jhamandas Hinduja in Bangalore in 1979.[5] Hinduja had moved to Bangalore from Pakistan prior to the 1947 partition of India and established a business that manufactured silk scarves and stoles. On a trip to Copenhagen in 1971, he had his flash of inspiration that started his success story. One of his business contacts asked him to copy two shirts, a request, it turned out that was incredibly fortuitous as the market for silk scarves was increasingly saturated. Hinduja was in need of a new business model and shirts appeared to be the way forward.

"Those two cheesecloth shirts became the cornerstone of our business," said Hinduja's third son, Dinesh, who joined Gokaldas at its founding and would go on to run the company with his brothers, Madanlal and Rajendra.[6]

Manufacturing conditions in the early years were rudimentary.

"I entered the industry in 1979, with $5,000 (Rs 50,000 then) and 40 leg machines in a 1,000 square foot rented space," Dinesh Hinduja explained. "We worked in shifts, making garments in the morning and packing them towards the evening in the same area."

The company targeted export markets – primarily the United States and Europe – and began to expand through partnership arrangements, the most conducive approach to growth in the regulatory environment of the time, which favored small-scale industry. In 1981-1982, the Apparel Export Promotion Council of India's Ministry of Textiles awarded Gokaldas its "Top Exporter Award," one of dozens such accolades the company would receive in coming years. As volume grew, technology was introduced, starting with an HCL Workhorse, India's first desktop computer. The screen glowed green, it had a five-inch floppy and a heavy putty-grey keyboard. Hinduja senior did not trust it and insisted that manual accounting records be kept in the event of a computer breakdown. Gradually, however, the factory floors were transformed as the second generation of Hindujas introduced increasingly advanced, computer-controlled machines to replace those run on leg power.

"Everybody thinks garment manufacturing is a dignified tailoring shop," said Hinduja. "But, you'd be amazed at the kind of IT that goes into a manufacturing setup of our size. We are more like Toyota's assembly line - we have the systems they have."

Gokaldas factories were fully integrated, meaning they also made labels, tags, elastics, cords, cartons and packing materials – everything needed for any garment produced. The 70 or 80 manual patternmakers – once a source of numerous problems – had been replaced by five to six

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[5] The company name was changed from "Gokaldas India Private Limited" to "Gokaldas Exports Private Limited" on December 8, 2004 and to "Gokaldas Exports Limited" on January 7, 2005. See *Prospectus*, p. 56.

[6] All quotations from Hinduja in this section come from, Kanika Goswami, "Weaving IT Into the Fabric of Design: Dinesh Hinduja," *CIO*, August 15, 2007, http://www.cio.in/ceo-interviews/weaving-it-fabric-design (accessed October 19, 2012). Additional background information is drawn from *Prospectus*.

CAD systems. Huge industrial washing machines churned denim garments to give them the look of the hour – stonewashed, acid-washed, bleached – while other garments were manually spray-painted, sand-blasted or laser-engraved. Massive multi-head embroidery machines emblazoned shirts and jackets with appliqués, badges, and embroidery. Gokaldas was able to provide its clients with "any kind of garment right from ultra-formal to ultra-casual across men's, women's and children's wear."[7] Eventually, it specialized in outerwear, like coats and jackets; active wear, like warm-ups and swimsuits; bottoms, like trousers and shorts; and casual wear, including shirts, blouses and dresses. (Exhibit 3)

INDUSTRY BACKGROUND

The textile and clothing industry is one of the oldest in India, a keystone of the national economy responsible for 4 percent of GDP and 17 percent of the nation's export earnings.[8] In 2010 the industry employed 35 million people - many of them women and members of the historically disadvantaged Scheduled Castes and Tribes – and was the second largest employer after agriculture. As of 2008, India was the fifth largest exporter of textiles and clothing and the sixth largest exporter of clothing (behind Bangladesh, Turkey, Hong Kong, European Union, and China), with readymade garments accounting for nearly 45 percent of its total textile exports. It is a major producer of cotton, the major producer of jute, and the second biggest producer of silk (behind China).

For many years, government policy favored small-scale factories and discouraged mechanization to ensure that the textile and clothing industry remained labor-intensive and employed many people. Historical sensitivities played into such policies. India's textile industry was decimated by imports from Britain during the colonial era, leading Indian nationalists of the early twentieth century – including Mahatma Gandhi – to boycott British-produced clothing in favor of that homespun in India. The image of a shirtless Gandhi spinning yarn on a rustic spinning wheel remains iconic. However, beginning in the mid-1990s, policy reforms were introduced which permitted greater mechanization and encouraged more efficiency.

Bangalore, which is in the state of Karnataka, is one of ten major garment-manufacturing clusters in India, accounting for about 30 percent of the ready-made garments produced each year.[9] It is sometimes called "The Garment Capital" of India. The apparel industry – unlike textiles – has low-entry barriers and requires comparatively little capital for equipment purchases. As Dinesh Hinduja put it, "Anybody can start a garment company in India." The only issue is that it is labor intensive with a high attrition rate; Bangalore-based garment factories employ an estimated 500,000 workers of whom the vast majority are women, many of them migrants from rural areas of the state. The garment sector is export intensive, comprising 40-45 percent of total textiles

[7] Gokaldas Exports Limited Company Brochure, section entitled "Geared for Growth."

[8] Ministry of Textiles, Government of India, "Annual Report 2010-11," http://texmin.nic.in/annualrep/ar_10_11_english.pdf (accessed October 19, 2012).

[9] Dr. Mallikarjunappa NL, "Observance To International Labor Standards, A Study on Selected Units In Bangalore Apparel Cluster," *International Referred Research Journal*, November 2011.

exports.[10] Revenue for garments exported from Bangalore reached US$2.82 billion in 2009-2010.[11]

INTERNAL AND EXTERNAL CHALLENGES

As the largest apparel manufacturer in India and an award-winning exporter, Gokaldas looked to be in a strong position. But, while the company's efficiency rate of 30-35 percent was high for India, it lagged well behind the 50-55 percent rate in China; whereas a Gokaldas employee produced, on average, two to two and a half garments per day, a Chinese worker made between four and five. Gaurav Hinduja saw numerous areas where improvement was needed:

> …it seemed everything was a firefight. Material would come just in the nick of time, or the day before, or the day after, and we could never time it to perfection in terms of when we would be able to start a manufacturing process. We were always running against the clock, we were doing overtime to make sure goods shipped in time. Quality began to slip because instead of having 30 days to manufacture, you only had 20 or 25 which could be a good thing, but not when you end up going overtime four to five hours a day – the quality of people's work just reduces. So, it was literally firefighting and it was a struggle to get each and every garment out of the line.[12]

In fact, Gaurav had jokingly said at times it felt like rather than aiming for Just In Time they were operating a Some How In Time system. Compounding this, high rates of absenteeism and labor turnover were a constant challenge.

"We had labor attrition of close to 100 percent," Gaurav explained, "and you can imagine with 40,000 people, you have almost 30-40,000 people turning over every year, that's more than 100 a day. So that became very difficult to make any kind of productivity improvement."

The MFA had permitted textile quotas to be negotiated on a bilateral basis, thereby allowing importing countries to place quantitative restrictions on imports they felt damaged their domestic industries. However, once the MFA expired, it was expected that production sites would shift, import patterns change, and new competitors emerge. In a post-quota world, it was also likely that prices would fall in the absence of trade barriers that had kept them artificially high. As Dinesh Hinduja explained,

> Up to [2005] we were protected by quotas. We had no issues at all. But then we had to play on a level playing field. We realized this was a difficult situation to handle… The constant pressure from buyers and the new innovative ways of doing business made me wonder if it was really worthwhile to continue.[13]

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[10] "Textiles," op. cit.

[11] Mallikarjunappa, op. cit.

[12] All quotations from Gaurav Hinduja in this case study are from interviews conducted by Nicholas Bloom and Sheila Melvin in February, June, and July 2012.

[13] All further quotations from Dinesh Hinduja are from a March 13, 2012 telephone interview with Nicholas Bloom and Sheila Melvin.

To help retain its leading position, Gokaldas decided to issue shares in the family-held company. The capital raised would be used to build four new manufacturing facilities, with 68 new production lines, and to upgrade existing facilities.[14] The initial public offering was a success, with the share issue oversubscribed by 42 times. The company began to expand and by 2010 would have sales of $250 million, with 40,000 workers capable of producing 3 million garments per month. However, the business environment remained difficult, exacerbated by an appreciating rupee and global economic problems. Dinesh Hinduja recalled:

> For the next two years, from 2005-7, business did not improve, but became even worse. And thanks to the Lehman Brothers, 2008 was a disaster…. Margins had been razor thin, they became wafer thin – we were really stuck.

NIKE'S LEAN CHALLENGE: JUST DO IT

Gokaldas depended upon a small number of critical customers for the bulk of its revenues. In the first six months of 2004-05, for example, its largest buyer accounted for 49 percent of revenues and its five largest buyers for 79 percent.[15] Nike, the global sportswear company, was among these critical customers and it, too, was feeling pinched by increased competition and rising costs. Nike decided to address these issues in part by reducing production costs in its supply chain, which was comprised of independent contract factories like Gokaldas. One of the approaches it opted to promote was Lean.

"Nike wanted to pass on new methods of efficiency," explained Gaurav Hinduja. "I was the head of the Nike account so they approached me with the concept of Lean Manufacturing."

Nike started its efficiency efforts at a footwear factory in the early 2000s in Vietnam that it believed was ripe for Lean implementation. Output, quality and on-time delivery all improved. Wages – which were performance-based – went up and employee retention rates rose. The reduction in turnover was deemed critical, since worker training is an essential aspect of Lean. The Vietnamese factory was then developed as a model to which other Nike suppliers were invited to learn about Lean, and the management philosophy was spread to other supplier factories.

In 2007, Gaurav Hinduja attended a Lean conference Nike sponsored for its top vendors in Hong Kong, where he was visiting. The conference was an immersion in the principals and practices of Lean and by its end Gaurav Hinduja was convinced that Lean would help Gokaldas. His father, Dinesh, however was not. To help persuade his father, he arranged a visit out to a Nike Lean shoe factory in Indonesia, but while Gaurav became a Lean convert Dinesh remained unconvinced. Shoes were a very different product from textiles. And Dinesh's skepticism was built on an earlier failed attempt to implement Lean practices. He explained:

> We tried it for the first time in 2006 and failed miserably and I gave up the idea of Lean. I decided it didn't work in India. Ninety-five percent of my labor was illiterate. To

[14] *Prospectus*, p. 23-4. Capital raised would also be used to repay a working capital loan.
[15] *Prospectus*, p. xi.

> educate the labor from the first to the last person working on the assembly line was very, very difficult… I said this is not for our industry, let's look at something else.

Hinduja's attitude was not unusual, according to Anand Sharma, CEO of TBM Consulting, and the company helping Nike roll out Lean across their factories. He explained:

> When I started the company in 1991, Lean was not even in the vocabulary…I remember many times I would make a lot of boardroom presentations in the late 1980s and people would say it sounds like black magic or sounds like snake oil. No one believed you could make such a dramatic change in such a short period of time.

Gaurav Hinduja asked Sharma to visit Gokaldas to convince his fellow executives of the benefits of Lean, but the effort was to little avail - Gokaldas had checked the Lean box. That might well have been the end of it, except that Gaurav Hinduja refused to give up.

Instead, he continued to badger his father, urging him to attend a Lean "boot camp" run by TBM in the United States. He then enlisted his mothers' help, working with her to persuade her husband to the Lean cause. Finally, after even this failed he played his ultimate gambit – offering to pay for the entire US trip from his own pocket. Eventually this paid off as Dinesh agreed to the visit.

"I was literally pushed by Gaurav to go and attend the boot camp and he said he'd pay for it if I didn't like it," Dinesh Hinduja explained with a laugh. "That's what motivated me that this youngster could make that challenge and say, 'All right I'll pay for it.'"[16]

The TBM "CEO Boot Camp" is an annual event personally facilitated by Sharma. Participating executives visit factories that are successfully implementing Lean practices and engage in direct discussions with their executive counterparts.[17] Hinduja remained unconvinced by tours of the first few factories but, finally, at a Sealy mattress factory, he began to realize that Lean might indeed work for Gokaldas. A $1.5 billion company with 25 North American factories, Sealy had already been implementing Lean for several years.[18] It had seen significant improvement in labor productivity by focusing on the elimination of unnecessary part movement, waste, and excess handling. Of course, Hinduja had seen similar improvements in other factories on the boot camp itinerary, but still believed that what worked for an industry like window frames would not apply to his own. Sealy, however, was different.

"He was on fire," recalled Sharma. "Making mattresses was similar – it is all fabric. You aren't creating a garment, but you are creating something very similar. He became a zealot after that."

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[16] According to Gaurav Hinduja, the cost of the boot camp was $12,000.

[17] For more on TBM CEO Boot Camp, see http://www.tbmcg.com/training-services/ceo-boot-camp.html#agenda.

[18] "Lean Initiatives Help Sealy Prepare for Market Rebound"

http://www.industryweek.com/articles/lean_initiatives_help_sealy_prepare_for_market_rebound_19073.aspx

Hinduja was also struck by the fact that Sealy factory employees had relatively low levels of education, but were nonetheless willing and able to implement Lean - and highly cognizant of its benefits. As he put it, "They [Sealy workers] found themselves in a better position, their work was much easier, and processes were easier to follow. And their motivation levels were very high – and you know when motivation levels are high, you can do any damn thing under the sun."

GOING LEAN

The visit to Sealy made Hinduja a convert – he completed the TBM Boot Camp and, like his son Gaurav, became determined to implement Lean at Gokaldas.

Persuasion

Upon returning to Bangalore, Dinesh Hinduja's first task was to persuade his brothers of the efficacy of Lean just as his son had persuaded him. (Exhibit 4) To do this, he enlisted the help of TBM, inviting Sharma to conduct an assessment of Gokaldas factories. Sharma said his initial welcome by the extended Hinduja family was like "cold air blowing towards me." However, accustomed to such receptions, Sharma toured a factory and observed the work in progress.

> First time I was at Gokaldas - not unlike many other companies in this industry – I saw manufacturing practices that were following the principles that worked one hundred years ago… Those are batch and queue, trying to do lots of things at the same time. The focus was mostly on trying to minimize the needle time, the time when actual value was being added, but also in the name of trying to hire people who are not as skilled so they do the same thing over and over – the result of that was lots of inefficiencies due to handling, double handling, triple handling, rework, all kinds of things that you couldn't see because everyone looked really busy but were not really producing to their maximum potential. And at the same time the lead-time for producing jackets or shirts or whatever was enormous because everybody is doing small pieces and then bringing them together and hoping that everything works.

Sharma decided the best way to explain the benefits of Lean was to skip the philosophical and technical details and cut straight to the numbers. With Lean, he told the Hinduja family, this particular factory could produce twice as many garments with exactly the same number of workers. This pronouncement got the immediate attention of Gokaldas executives responsible for finance. However, Sharma knew from experience that such a dramatic supposition would require proof of some sort – when it comes to Lean, he said, "everyone is from Missouri - they are going to say, 'Show me.'" Sharma therefore suggested that he send in a consultant to demonstrate how Lean works. Gokaldas consented.

Pilot and More Persuasion

Gokaldas and TBM agreed to demonstrate Lean on a single line in the Euro Clothing Company, a glass and concrete factory ringed by palm trees. The line they selected was operated by about 70 people and produced roughly 250 Nike jackets per day. To keep consulting costs down,

Gaurav Hinduja hired four people internally to serve as "Lean Champions." The TBM consultant started the one-week pilot by conducting training and analysis with a cross-section of Gokaldas employees that included management, middle management, and supervisors. (Exhibit 5)

"They form the team," said Sharma. "They make it happen. It's a facilitation of learning by doing process. It's not like we came in and waved a magic wand and all of a sudden things happen."

The team quickly determined the main problem on the jacket line to be uncontrollable work-in-progress. To address this, it began timing different operations and rebalancing workloads, with the goal of getting each line operator to accomplish his task in the same "Takt" time – if one worker took 30 seconds to complete a task and another 90, they were both moved toward 60.

"What this meant," recalled Gaurav Hinduja, "was that at the end of every 60 seconds, you would have a finished product at the end of the table. Once we did that, we could really see which operators were overloaded and which operators were under-loaded. We would rebalance work accordingly."

Movement of pieces was reduced from quantities of ten to a one-piece flow, enabling the team to immediately identify the source of any problems and therefore improve quality.

"Because the minute a garment did not come out right," continued Gaurav Hinduja, "we again knew which operator was responsible and we could stop it before further damage of more bad quality garments were manufactured." By the end of the week, the number of jackets produced each day had increased from 250 to 400 and the defect rate had decreased from 7-10 percent to 3-4 percent.

Gokaldas executives had seen firsthand the benefits of Lean. Nonetheless, they remained worried about the sustained implementation cost, which Dinesh Hinduja estimated at $400,000 per year for TBM consultants.

"Oh, it was a challenge to get my family to go with me," he recalled. "But, they all agreed because we were in a situation where we needed a change, to see the company grow again. So, they had no option but to go with me."

Having convinced his father of the need for Lean, Gaurav Hinduja now focused on mid-level managers and operators whose buy-in was critical to success, but who harbored their own concerns. Middle managers, he explained, thought "that if there were productivity improvements, their jobs would become redundant and they would be fired." There was no tradition of Japanese-style lifelong employment. He therefore worked to convince them that the opposite was true: if Lean succeeded, they would find new opportunities to rise within Gokaldas. In the case of operators, straight financial incentives were offered, starting with workers on the demonstration line who were given 50 rupees (about $1) extra per day. Gaurav Hinduja explained the impact:

> Do keep in mind these are people who get paid two to three dollars per day. So giving them fifty cents to a dollar extra a day is a huge motivation. What it does, it really helps them go outside the factory and buy fruits and vegetables that they need for their families to make three meals so that they can make ends meet. And that is when the operator saw the power of Lean - when they could take that extra money home, because earlier when we were inefficient, we couldn't afford to pay productivity incentives. But now, with this, after paying them that, the company will still make a profit. And that really pushed them to accept Lean at all levels.

Gokaldas inked a six-month contract with TBM, followed by a three-year agreement.

Rollout

As he prepared to roll out Lean at Gokaldas, Dinesh Hinduja considered why it hadn't worked the first time around. The main problem, he decided, was that he himself had not been committed – a mistake he would not repeat.

> I made it a point to take over the responsibility of implementing Lean myself into the whole organization. I pushed it down everybody's throat, and finally things started happening. Basically, Lean has to be top-driven – people have to get really motivated on the shop floor, to see top management be involved in the work together. And this was a big change in our factory, when we started doing this.

The Lean rollout began in the Euro Clothing Company – where the pilot had been held - in January 2008. The Lean team worked to address recurring problems with quality and equipment, monitoring output on an hourly basis.[19] Work-in-progress levels were adjusted at critical points, eventually dropping by 60 percent, and packing was incorporated at the end of the production line. Renewed emphasis was placed on quality assurance. Productivity improved by 42 percent, increasing from 2.1 to 3 units per-person per-day, and first-pass yield (the share of products with no rework) rose from 85 to 92 percent. After six months, the number of Nike pants produced by the factory each month increased from roughly 120,000 to 200,000. This, explained Gaurav Hindjua, was "[with] almost everything else remaining the same. No extra laborers, no extra machines, resources the same. We were 30 to 40 percent more productive, quality was much better, on-time delivery actually became better." (Exhibits 6 to 8)

Lean was expanded to three other plants by March 2009 with highly encouraging results: on-time delivery improved 80-90 percent, first-pass yield improved 75-85 percent, productivity rose 35 percent, and sales grew two percent during a global recession, without any added resources. Dinesh Hinduja explained that these successes spurred a broader roll out.

[19] Information about the Lean rollout is drawn in part from "Gokaldas Builds a Lean Culture and Increases Profitability, Case Study," August 2009; http://www.tbmcg.com/cases/GokaldasExportsCaseStudy.pdf (accessed October 19, 2012).

"I started one line in every factory where all the Lean processes were put in place to show people that we could do it right. After the success of the one trial line, the spillover effect was enormous. People started competing among themselves to do it better."

Lean training centers were established and a "Lean Fund" was created to address the problem of absenteeism; when a production line exceeded the 70 percent efficiency target, its operators received a bonus.

TBM consultants traveled from the United States to Bangalore for one week each month to facilitate the continuing rollout. Gokaldas also sought an additional cadre of approximately 60 people who had been trained in Lean in India, including about 15 who were poached from the local automotive industry. At the same time, a corps of Lean certified managers was created internally. Dinesh Hinduja explained, "We got the entire top management of every factory Lean certified so they understood what Lean meant. We had training sessions to help people and motivate them so they could see what cultural change could do to a company."

Most Gokaldas managers were willing to adapt to the new Lean regime; they understood the need to be aligned toward the same objectives and empowered to meet them. But, Dinesh Hinduja explained, approximately three to five percent either would or could not accept the new ways of doing things. "All those people who were against Lean or didn't want to change with times, I had to get rid of them from the company…that was very difficult and it was also heart-breaking."

Results

Gokaldas implemented Lean at the rate of six or seven factories a year between 2008 and 2011. Looking back, Gaurav and Dinesh Hinduja deemed the considerable persuasion, effort, expense, and "heart-break" required to have been worthwhile.

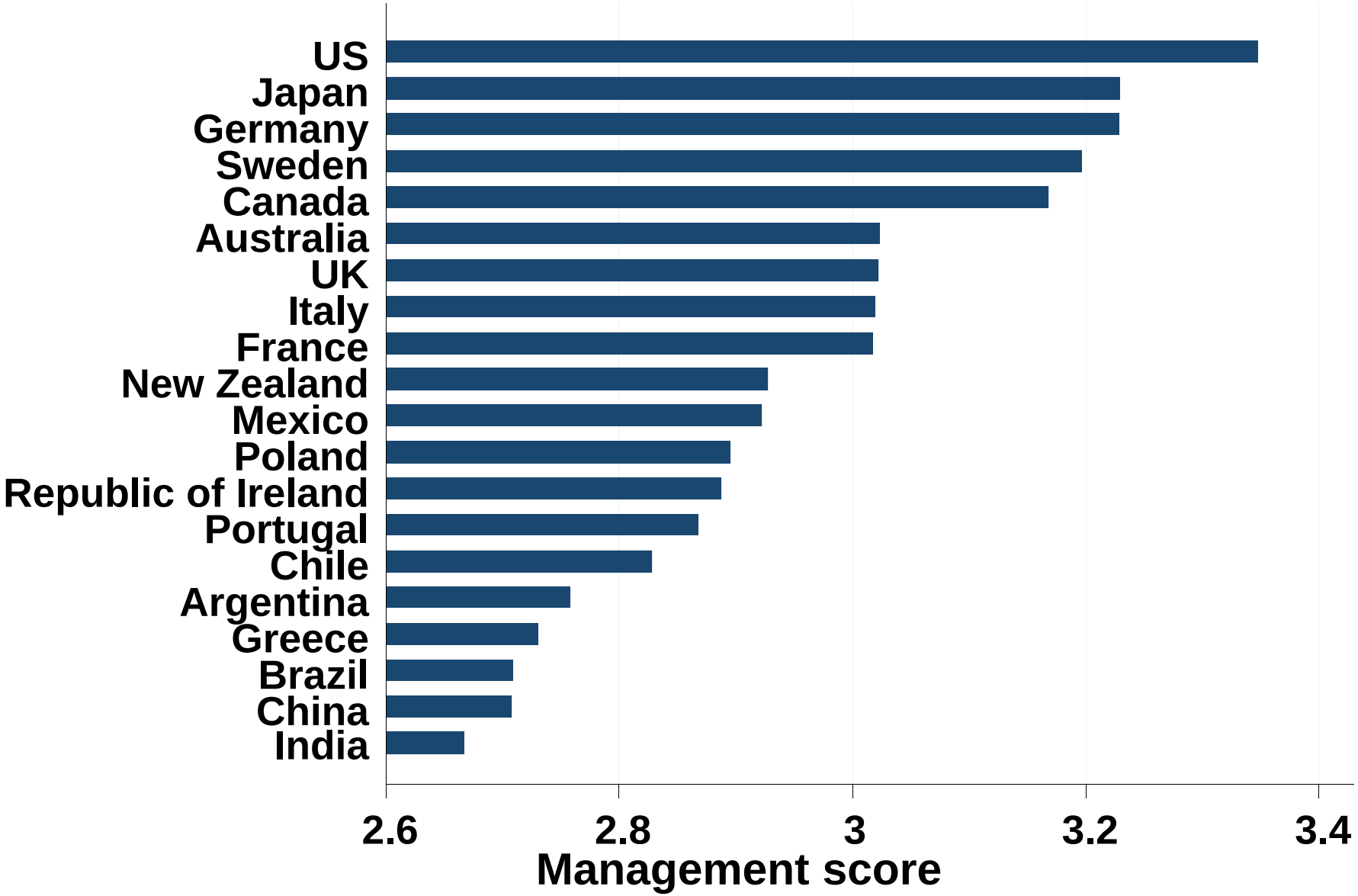
"It paid off," said Dinesh Hinduja. "We could see the low-hanging fruits immediately; [with] the increase in productivity… higher productivity was the only way to survive."

Productivity improvements ranged from 30-40 percent in the first plants where Lean was implemented, according to Gaurav Hindjua. Workers who had produced between two and two-and -half garments per day pre-Lean produced four garments per day post-Lean. "What Lean did," Gaurav Hinduja recalled,

> was it really showed people that there was another way out there, a way to be more productive, to be more cost efficient and a way to have happier employees, because even though they would work the same eight hours a day… it became much easier for them and they were able to see what they were doing, they were able to be more relaxed. And that actually affected our labor turnover and absenteeism to a great extent.

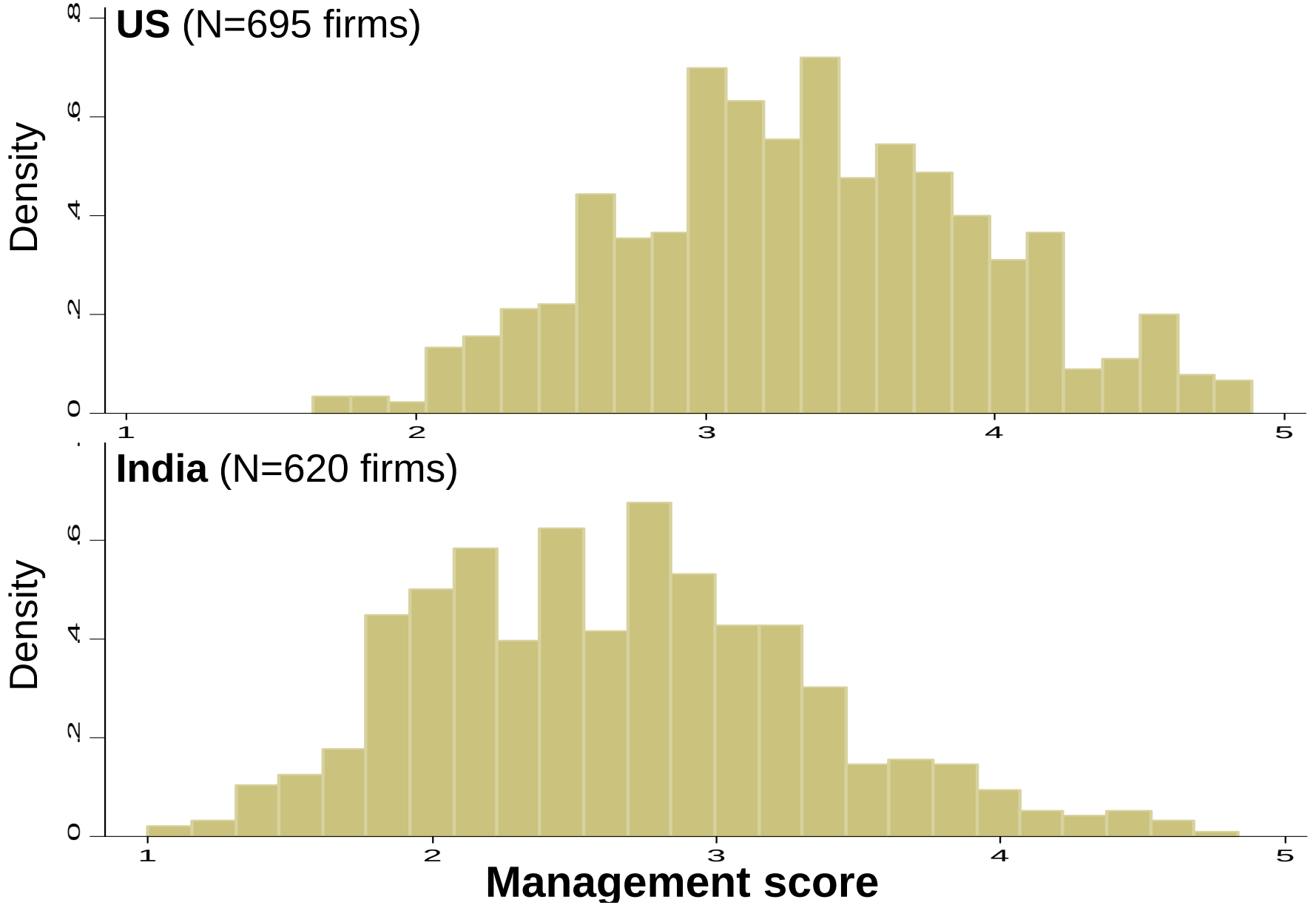
"Lean is not really a process," concluded Dinesh Hindjua. "It's really a change of mindset."

Exhibit 1: Management practices are often poor in developing countries



Source: Bloom, Genakos, Sadun and Van Reenen, (2012), "*Management practices across countries"*, Academy of Management Perspective. Data available on **www.worldmanagementsurvey.com**

Exhibit 2: India has a wide spread of management practices



Source: Bloom, Genakos, Sadun and Van Reenen, (2012), "*Management practices across countries"*, Academy of Management Perspective. Data available on **www.worldmanagementsurvey.com**

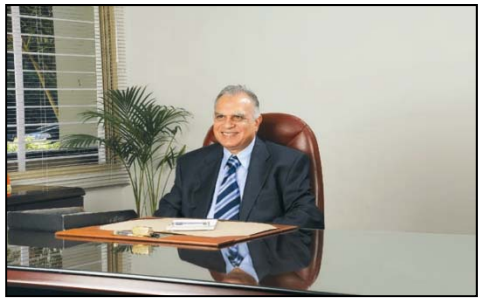
Exhibit 3: Gokaldas products

Casual Wear

Sports Wear

Source: “Riding out the recession with Lean Business Strategies”, Gokaldas exports presentation, 2010

Exhibit 4: Gokaldas organizational chart



Madanlal Hinduja
Chairman

Rajendra Hinduja
Managing Director

Dinesh Hinduja
Executive Director

Ashwin Hinduja
Chief Operating Officer

Vivek Hinduja
Chief Operating Officer

Gaurav Hinduja
Chief Operating Officer

Exhibit 5: Gokaldas Lean Training

Supervisors

Shop Floor

Source: “Riding out the recession with Lean Business Strategies”, Gokaldas exports presentation, 2010

Exhibit 6: Lean Improvements

Before Lean

After Lean

Source: “Riding out the recession with Lean Business Strategies”, Gokaldas exports presentation, 2010

Exhibit 7: Lean Improvements

Before Lean

After Lean

Source: “Riding out the recession with Lean Business Strategies”, Gokaldas exports presentation, 2010

Exhibit 8: One piece flow finishing

Happy Finisher

Very Happy Finisher

Source: “Riding out the recession with Lean Business Strategies”, Gokaldas exports presentation, 2010