

CASE 2-8 Ultrasound Machines, India, China, and a Skewed Sex Ratio

General Electric Co. and other companies have sold so many ultrasound machines in India that tests are now available in small towns like Indergarh, where there is no drinking water, electricity is infrequent, and roads turn to mud after a March rain shower. A scan typically costs \$8, or a week's wages.

GE has waded into India's market as the country grapples with a difficult social issue: the abortion of female fetuses by families who want boys. Campaigners against the practice and some government officials are linking the country's widely reported skewed sex ratio with the spread of ultrasound machines. That's putting GE, the market leader in India, under the spotlight. It faces legal hurdles, government scrutiny, and thorny business problems in one of the world's fastest-growing economies.

"Ultrasound is the main reason the sex ratio is coming down," says Kalpana Bhavre, who is in charge of women and child welfare for the Datia district government, which includes Indergarh. Having a daughter is often viewed as incurring a lifetime of debt for parents because of the dowry payment at marriage. Compared with that, the cost of an ultrasound "is nothing," she says.

For more than a decade, the Indian government has tried to stop ultrasound technology from being used as a tool to determine gender. The devices use sound waves to produce images of fetuses or internal organs for a range of diagnostic purposes. India has passed laws forbidding doctors from disclosing the sex of fetuses, required official registrations of clinics, and stiffened punishments for offenders. Nevertheless, some estimate that hundreds of thousands of girl fetuses are aborted each year.

GE, by far the largest seller of ultrasound machines in India through a joint venture with the Indian outsourcing giant Wipro Ltd., introduced its own safeguards, even though that means forsaking sales. "We stress emphatically that the machines aren't to be used for sex determination," says V. Raja, chief executive of GE Healthcare South Asia. "This is not the root cause of female feticide in India."

But the efforts have failed to stop the problem, as a growing economy has made the scans affordable to more people. The skewed sex ratio is an example of how India's strong economy has, in unpredictable ways, exacerbated some nagging social problems, such as the traditional preference for boys. Some activists are accusing GE of not doing enough to prevent unlawful use of its machines to boost sales.

"There is a demand for a boy that's been completely exploited by multinationals," says Puneet Bedi, a New Delhi obstetrician. He says GE and others market the machines as an essential pregnancy tool, though the scans often aren't necessary for mothers in low-risk groups.

Prosecutors in the city of Hyderabad brought a criminal case against the GE venture with Wipro, as well as Erbis Engineering Co., the medical-equipment distributor in India for Japan's Toshiba Corp. In the suits, the district government alleged that the companies knowingly supplied ultrasound machines to clinics that were not registered with the government and were illegally performing

sex-selection tests. The penalty is up to three months in prison and a fine of 1,000 rupees.

Both companies deny wrongdoing and say they comply with Indian laws. A GE spokesman said its legal team would be looking into the charges.

Vivek Paul, who helped build the early ultrasound business in India, first as a senior executive at GE and then at Wipro, says blame should be pinned on unethical doctors, not the machine's suppliers. "If someone drives a car through a crowded market and kills people, do you blame the car maker?" says Paul, who was Wipro's chief executive before he left the company in 2005. Paul is now a managing director at private equity specialists TPG Inc., formerly known as Texas Pacific Group.

India has been a critical market to GE. Its outsourcing operations have helped the Fairfield, Connecticut, giant cut costs. The country also is a growing market for GE's heavy equipment and other products. The company won't disclose its ultrasound sales, but Wipro GE's overall sales in India, which includes ultrasounds and other diagnostic equipment, reached about \$250 million in 2006, up from \$30 million in 1995.

Annual ultrasound sales in India from all vendors also reached \$77 million last year, up about 10 percent from the year before, according to an estimate from consulting firm Frost & Sullivan, which describes GE as the clear market leader. Other vendors include Siemens AG, Philips Electronics NV, and Mindray International Medical Ltd., a new Chinese entrant for India's price-sensitive customers.

India has long struggled with an inordinate number of male births, and female infanticide—the killing of newborn baby girls—remains a problem. The abortion of female fetuses is a more recent trend, but unless "urgent action is taken," it's poised to escalate as the use of ultrasound services expands, the United Nations Children's Fund said in a report. India's "alarming decline in the child sex ratio" is likely to exacerbate child marriage, trafficking of women for prostitution, and other problems, the report said.

The latest official Indian census, in 2001, showed a steep decline in the relative number of girls aged 0 to 6 years compared with the decade earlier: 927 girls for every 1,000 boys compared with 945 in 1991. In much of northwest India, the number of girls has fallen below 900 for every 1,000 boys. In the northern state of Punjab, the figure is below 800.

Only China today has a wider gender gap, with 832 girls born for every 1,000 boys among infants aged 0 to 4 years, according to UNICEF. GE sells about three times as many ultrasound machines in China as in India. In January, the Chinese government pledged to improve the gender balance, including tighter monitoring of ultrasounds. Some experts predict China will be more effective than India in enforcing its rules, given its success at other population-control measures.

Boys in India are viewed as wealth earners during life and lighters of one's funeral pyre at death. India's National Family Health Survey, released in February, showed that 90 percent of parents with two sons didn't want any more children. Of those

with two daughters, 38 percent wanted to try again. Although there are restrictions on abortions in this Hindu-majority nation, the rules offer enough leeway for most women to get around them.

GE took the lead in selling ultrasounds in the early 1990s soon after it began manufacturing the devices in India. It tapped Wipro's extensive distribution and service network to deliver its products to about 80 percent of its customers. For more remote locations and lower-end machines, it used sales agents.

The company also teamed with banks to help doctors finance the purchase of their machines. GE now sells about 15 different models, ranging from machines costing \$100,000 that offer sophisticated color images to basic black-and-white scanners that retail for about \$7,500.

To boost sales, GE has targeted small-town doctors. The company has kept prices down by refurbishing old equipment and marketing laptop machines to doctors who travel frequently, including to rural areas. GE also offered discounts to buyers inclined to boast about their new gadgets, according to a former GE employee. "Strategically, we focused on those customers who had big mouths," said Manish Vora, who then sold ultrasounds in the western Indian state of Gujarat for the Wipro-GE joint venture.

Without discussing specific sales tactics, Raja, of GE Healthcare South Asia, acknowledges the company is "aggressive" in pursuing its goals. But he points out that ultrasound machines have broad benefits and make childbirth safer. As the machines become more available, women can avoid making long trips into cities where healthcare typically is more expensive, he says.

Indian authorities have tried to regulate sales. In 1994, the government outlawed sex selection and empowered Indian authorities to search clinics and seize anything that aided sex selection. Today any clinic that has an ultrasound machine must register with the local government and provide an affidavit that it will not conduct sex selection. To date, more than 30,000 ultrasound clinics have been registered in India.

GE has taken a number of steps to ensure customers comply with the law. It has educated its sales force about the regulatory regime, demanded its own affidavits from customers that they will not use the machines for sex selection, and followed up with periodic audits, say executives. They note that in 2004, the first full year it began implementing these new measures, GE's sales in India shrank by about 10 percent from the year before. The sales decline in the low-end segment, for black-and-white ultrasound machines, was especially sharp, executives say. Only in 2006 did GE return to the sales level it had reached before the regulations were implemented, according to Raja.

Complying with Indian law is often tricky. GE cannot tell if doctors sell machines to others who fail to register them. Different states interpret registration rules differently. GE also is under close scrutiny by activists battling the illegal abortion of female fetuses. Sabu George, a 48-year-old activist who holds degrees from Johns Hopkins and Cornell universities, criss-crosses the country to spot illegal clinics.

The criminal case in Hyderabad against Wipro-GE, a company representative, three doctors, and an ultrasound technician followed an inspection that found one clinic could not produce proper registration and had not kept complete records for two years. A team of inspectors seized an ultrasound supplied by Wipro-GE. The inspection team's report said it suspected the clinic was using the machines for illegal sex determination.

The owner, Sarawathi Devi, acknowledged in an interview that her clinic, Rite Diagnostics, was not officially registered at the time of the inspection. She said the ultrasound machine was owned by a "freelance" radiologist who had obtained proper documentation for the Wipro-GE machine but was not there when the inspectors had arrived. She denied the clinic has conducted sex determination tests. Later, Dr. Devi's records show, she registered the clinic with the government and bought a Wipro-GE machine, a sale the company confirms.

The court case was part of a wider dragnet spearheaded by Hyderabad's top civil servant, District Magistrate Arvind Kumar. During an audit last year, Kumar demanded paperwork for 389 local scan centers. Only 16 percent could furnish complete address information for its patients, making it almost impossible to track women to check if they had abortions following their scans. Kumar ordered the seizure of almost one-third of the ultrasound machines in the district due to registration and paperwork problems. A suit also was lodged against Erbis, the Toshiba dealer.

GE's Raja says that, in general, if there's any doubt about the customer's intent to comply with India's laws, it doesn't make the sale. "There is no winking or blinking," he says.

A Wipro-GE representative is scheduled to appear at the Hyderabad court hearing. An Erbis spokesman said he was unaware of the case in Hyderabad. A court date for Erbis had not been set.

A visit to the clinic in Indergarh, a town surrounded by fields of tawny wheat, shows the challenges GE faces keeping tabs on its machines. Inside the clinic, a dozen women wrapped in saris awaited tests on GE's Logiq 100 ultrasound machine. The line snaked along wooden benches and down into a darkened basement. On the wall, scrawled in white paint, was the message: "We don't do sex selection."

Manish Gupta, a 34-year-old doctor, said he drives two hours each way every week to Indergarh from much larger Jhansi City, where there are dozens of competing ultrasound clinics. He said even when offered bribes, he refuses to disclose the sex of the fetus. "I'm just against that," Dr. Gupta said.

But he is not complying with Indian law. Although the law requires that clinics display their registration certificate in a conspicuous place, Dr. Gupta's was nowhere to be seen. When Dr. George, the social activist, asked for the registration, he was shown a different document, an application. But the application was for a different clinic: the Sakshi X-ray center. Dr. Gupta said the proper document wasn't with him, adding: "I must have forgotten it at home."

Asked by *The Wall Street Journal* about the clinic, the local chief magistrate of Datia district called for Dr. Gupta's dossier later in the day. When a local official arrived, "Sakshi X-Ray center" had been crossed out on the application. In blue pen was written the correct name, "Sheetal Nagar," the part of Indergarh where the clinic is located.

It's not clear how Dr. Gupta procured the GE machine. Dr. Gupta said he bought it from a GE company representative, but he declined to show documents of ownership. GE says it does not comment on individual customers.

Like the rest of India, the Datia district government has taken a number of steps to try to boost the number of girls in the district. For girls of poor families, the local government provides a place to live, free school uniforms, and books. When they enter ninth grade, the government buys bicycles for them. Yet the low ratio of girls born had not budged much over

the past decade, according to Bhavre, the district government official.

Ultimately, says Raja, head of GE Healthcare in South Asia, it's the job of the government, not companies, to change the prevailing preference for boys. "What's really needed is a change in mind-sets. A lot of education has to happen and the government has to do it," he says.

India's Ministry of Health, which is now pursuing 422 different cases against doctors accused of using ultrasounds for sex selection, agrees. "Mere legislation is not enough to deal with this problem," the ministry said in a statement. "The situation could change only when the daughters are not treated as a burden and the sons as assets."

Most recently, both Siemens and GE have introduced handheld ultrasound machines, only slightly larger than an iPhone. Initially they will sell for under \$10,000.

QUESTION

What should GE management do in India about this problem, if anything? In China?

Sources: Peter Wonacott, "Medical Quandry: India's Skewed Sex Ratio Puts GE Sales in Spotlight," *The Wall Street Journal*, April 18, 2007, pp. A1, A8. Licensed from Dow Jones Reprint Services, Document J000000020070418e34i00032; Paul Glader, "GE Is Latest to Make Handheld Ultrasound," *The Wall Street Journal*, February 12, 2010, online.