

LOOK AHEAD

● U.K. Chancellor of the Exchequer Philip Hammond appears before the House of Commons on March 12

● A higher-than-expected U.S. inflation reading could spook markets bracing for more Fed hikes

● The Organization of the Petroleum Exporting Countries publishes its monthly report on March 14



Automation's Bleeding Edge

Japan's convenience stores are experimenting with labor-saving technologies. Will consumers buy in?

Takanori Sakai works the graveyard shift four nights a week at the FamilyMart he owns in Himeji, a city in central Japan. He hasn't hired someone for the slot, he says, because he can't afford the higher pay employees demand these days. With competitors just down the street, Sakai is wary of raising prices to cover higher wages. "More and more stores can't secure a profit," he says.

Convenience stores are ubiquitous in Japan, numbering 55,310 as of January, according to the Japan Franchise Association. In total, they account for almost 17 percent of retail food and beverage sales. Holding the line on prices is increasingly difficult for franchisees and owners such as Sakai. The national unemployment rate has dipped to a 25-year low of

2.4 percent; to staff their stores in this tight labor market, franchisees in Tokyo, Osaka, and other cities have resorted to hiring foreigners, housewives, and the elderly—three categories of workers that many Japanese employers ignore. Meanwhile, minimum wages in the prefectures, which serve as something of a benchmark for retailers, rose by about 11 percent on average between 2013 and 2017.

To offset rising labor costs, the big convenience store chains are pouring money into automation and other labor-saving equipment. FamilyMart UNY Holdings, Seven and i Holdings, Lawson, and other major operators are working with the Ministry of Economy, Trade, and Industry to implement radio-frequency identification technology by

March 12, 2018

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Businessweek.com

2025. RFID uses wireless communications to read information embedded on small tags affixed to merchandise. The format automates tasks such as inventory management and checkout.

In February, reporters were invited to browse the aisles of a FamilyMart in the ministry's basement, where banners advertised the presence of self-checkout registers. Products from ham-and-egg sandwiches to tiramisu tarts carried white-and-blue stickers embedded with the RFID tags. A little red triangle warns customers to remove the stickers before using a microwave—they contain metal, which could spark an explosion.

RFID, which has been around for decades, has been adapted to a wide variety of uses, from tracking car parts along the production line to cataloging movie titles in a DVD rental kiosk. Franchise businesses have been slow to embrace the technology because of its costs, but demographics could drive its adoption in Japan. The country's working-age population is shrinking: It fell to 76 million in January, from a peak of 87 million in January 1997. "With demographic decline becoming a major problem, this is something we have to address with speed," says Yotetsu Hayashi, a senior ministry official overseeing the RFID initiative.

Convenience store chains are also experimenting on their own. Lawson Inc., which opened an innovation center in Tokyo in October, is working with Panasonic Corp. on a range of initiatives, including automated payment and bagging of goods. The company also began equipping stores with tablets and more efficient cash registers in the fiscal year that ended in February.

Not all of the fixes are high-tech. Seven & i, which owns the rights to the 7-Eleven trademark in Japan, invested an estimated 27 billion yen (\$253 million) in the just-ended fiscal year to outfit franchisee stores for greater efficiency, for instance, adding shelves that pull out for easy restocking. The company spent another 15 billion yen to install dishwashers in stores selling prepared food.

FamilyMart completed the rollout of a point-of-sale system designed to simplify and speed checkout last month, at a cost of about 11 billion yen. The company says it's looking into an array of technologies, including artificial intelligence, to help it eventually cut workloads by half.

The short-term benefits of all of this gear may be limited for some store owners, analysts say. "The problem with technology is that if you install something that doesn't demand labor, like a cash register, you still have to teach the customer how to use it," says Jefferies LLC analyst Michael Allen. "It takes years for the impact to be seen."

In the meantime, Sakai, the FamilyMart operator in Himeji, has formed an association of store owners to lobby legislators for a franchise law that would allow them, among other things, to pay a lower share of profits to their corporate partners. Until then, he says, he's gotten used to working nights. "I haven't had a real day off from the store in 13 years—not one day," he says.

—Lisa Du and Yuko Takeo

THE BOTTOM LINE Japan's Ministry of Economy, Trade, and Industry is helping convenience store operators roll out labor-saving radio-frequency technology by 2025.

● Japan's working-age population, January readings

