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# Digitally transforming Chicken Rice

31 May 2021

*Lao Hung Jia's dreams of selling Singapore's national dish all over the world might just happen thanks to cashless payment and a matured food delivery ecosystem. There is just one problem: sorting out the pre-packed chilli sauce*

Every morning, the 71-year-old Ng Boon Tue would wake up at 5am to prepare chicken rice, which is often referred to as Singapore's national dish. His business, Lao Hung Jia (LHJ or 老行家 in Chinese), operates out of a single stall in the western part of the island, down from 12 stalls during LHJ's heyday.

His son, **CK Ng**, had attempted digital transformation over 10 years ago but was thwarted by the then-low smartphone penetration and general unfamiliarity with ordering food online. Now in 2021, LHJ's many lessons learnt in e-retailing and e-payment could soon be brought to bear as the online food delivery ecosystem has matured.

But the younger Ng has bigger plans than just making LHJ's chicken rice available on GrabFood and foodpanda. He dreams about franchising LHJ or even serving its chicken rice in vending machines or unmanned stalls so that more people in Singapore and abroad could savour the dish.

All this depends on getting the premixed and pre-packaged chilli sauce right. Unfortunately, that appears to be a seemingly unsurmountable hurdle. Or is it?

## EARLY TRIAL AND ERROR

Early in his career, CK Ng had worked for various companies that embraced digital transformation. He attempted to leverage the internet to differentiate his father's chicken rice business from the rest by setting up a website for online ordering, and installing a computer at each of the 12 stalls LHJ it was then operating. Delivery services were also arranged.

While the effort failed, forcing the closure of all but one of its stalls, the current environment appears much more favourable for LHJ's digital transformation. While on a leisure trip to Shanghai, the elder Ng witnessed merchants providing a seamless payment service with AliPay. In response, LHJ started introducing several cashless payment options including AliPay, LiquidPay, NETS, GrabPay, DBS PayLah!, SumoPay and WeChat Pay to its customers.

LHJ also collaborated with specialised food delivery partners, starting with Foodpanda and subsequently, with Deliveroo, GrabFood, honestbee, Why Q and GOF3R. The collaborations with these food delivery partners allowed LHJ to combine online ordering with the use of mobile apps to provide an easy option for its customers to place orders, make payments and have their orders promptly delivered.

LHJ also adopted data analytics in its business operations. Previously, LHJ had struggled with accurate forecasting of its supplies. There had been occasions when customers had to be turned away due to the supplies running out. Through the digital platforms, LHJ could extract real-time market intelligence and gain up-to-date insights on the popularity of its food, ascertain the best-selling dishes, as well as do a quick competitive analysis. And it provided a way for LHJ to hone and improve the quality of its food and service operations.

## THE RECIPE FOR SUCCESS

Despite the digital innovation, CK Ng recognised that 50 percent of business time was spent on food preparation. “It dawned on us that we needed to find a research centre that we can work with on some ingredients that we can pre-pack or pre-cook,” he notes.

After many rejections Ng finally found an R&D partner in the [Food Innovation and Resource Centre](#) (FIRC). The plan was to streamline food preparation while retaining the original flavours as much as possible. R&D would be conducted on the three different sauces necessary to make Chicken Rice: chicken stock, soya sauce, and chilli sauce.

“The most challenging part of this project was the chilli sauce, which was made without any cooking process,” recalls Ho Seeh Ming, the lead researcher at the FIRC, noting that “it was just a blending of all the fresh ingredients to achieve a citrusy and nice taste”. She adds:

*“Given that LHJ had plans to export to the other countries, it was necessary to adopt the heat processing method so that the ingredients could last for 12 months. As the taste would be different for fresh versus cooked ingredients, we explored the ingredients we could replace, figured out the different proportions of the new formulation, and adjusted the heat temperature, processing time and pressure in the R&D process. If I am not mistaken, we conducted more than 20 trials for the chilli sauce.”*

After nine months of R&D, FIRC gave LHJ two options: a prohibitively expensive, high-heat preservative-free method that produced a taste very similar to the original; and the cheaper alternative that required changes to the sauce formulation but lasted longer at room temperature, and which resembled the taste, texture and colouring of the original recipe at a 90 percent performance level.

As the FIRC was not set up to do volume manufacturing, Ng persuaded Sin Hwa Dee, a sauce and paste manufacturer, to support LHJ’s endeavours. Even then, Sin Hwa Dee had a production scale constraint of a minimum order of 250 kilograms for each of three pre-mixed sauces. As cost was a factor in his considerations, Ng decided to proceed with the cheaper option that was proposed by the FIRC.

Using the food preparation formulae from the FIRC, Sin Hwa Dee took another six months to reformulate the three sauce ‘recipes’ using its own processes, equipment and supplies before embarking on the manufacturing process. The results were two pre-mixed and pre-packaged products – chicken stock and soya sauce – that resembled the original recipes.

However, Sin Hwa Dee could not produce the same results for the chilli sauce.

“We received some pretty nasty feedback for the chilli sauce,” Ng recounts. “When you cook the chilli sauce to preserve its shelf life, it will lose its distinctive taste, colour and texture. This was the biggest hurdle working with Sin Hwa Dee. Sin Hwa Dee used a different method in its food retort production,” he adds, referring to the food heating method that extends the shelf life of foods that are prone to microbial spoilage in hermetically sealed containers.

Because of the negative customer feedback, LHJ decided to stop using the manufactured chilli sauce at the stall. It was clear that a lot more work was needed to get the chilli sauce right.

With LHJ so far along on its innovation journey, Ng dreamed about expanding with LHJ franchises, or using vending machines and unmanned stalls, within Singapore and overseas. But these visions remained highly dependent on getting the chilli sauce right. What steps could he take to make his dreams for LHJ a reality?

*This is an adapted version of the SMU Case, "Innovating Singapore's Chicken Rice". To see the full case, please click on the following link: <https://cmp.smu.edu.sg/case/4806>*

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