

PLDT

Tech Trends in Retail 2021

Cyrus Mewawalla Head of Thematic Research GlobalData Plc

October 2021



Many APAC countries are well placed to recover from COVID-19



GlobalData's economic recovery scorecard provides a indicator of economic recovery prospects by ranking countries on ten macroeconomic measures

Economic Recover	Data. v Scorecard				001	10 2001		overy Scoreca	a. G			
(35 countries)	Weighting:	15%	15%	10%	10%	10%	10%	10%	10%	5%	5%	100%
Country	Nominal GDP (\$bn) 2020	2-year GDP growth rate (%) 2020-2021	COVID-19 cases per million population	Inflation rate (%) forecast 2021	Unemployment rate (%) forecast 2021	Stimulus as a % of GDP	Equity index YoY change (%)	Household consumption expenditure growth (%) forecast 2021	Industrial production YoY change (%)	Manufacturing PMI	Merchandise export YoY change (%)	Country
Singapore	338	0.5	13,267	1.5	2.8	24.2	8.5	6.2	30.0	50.8	39.9	1
hina	14,786	5.4	68	1.4	3.8	5.6	-1.1	9.1	8.8	50.9	27.8	2
reland	389	4.1	82,347	1.1	6.9	8.5	16.2	10.7	30.0	64.0	20.4	3
alv	1,828	-1.7	74,279	1.4	10.5	60.9	18.1	5.4	78.6	62.2	117.9	4
outh Kores	1,610	1.6	4,526	1.9	4.6	23.9	5.8	3.5	17.4	53.9	45.6	5
Malaysia	338	-0.2	45,829	2.4	3.8	35.0	-5.3	9.1	26.0	39.9	71.7	6
odia	2,571	0.6	23,907	5.0	8.3	16.3	17.2	10.2	29.3	48.1	67.7	7
Poland	587	1.1	77,997	3.8	3.4	13.6	18.7	3.8	29.7	59.4	81.7	8
Denmark	341	0.6	67,016	1.0	5.5	13.6	24.5	4.5	11.7	62.1	31.9	9
lapan	4,977	-1.1	9,587	0.0	2.8	57.8	0.6	2.3	14.6	52.4	36.3	10
lorway	359	1.6	29,275	2.7	4.3	4.6	19.5	4.1	1.3	60.8	88.7	11
ustralia	1,345	1.3	1,730	2.1	6.2	18.7	11.8	4.0	-1.6	58.6	60.2	12
ISA	20,897	1.3	113,624	4.3	6.0	37.3	18.9	4.8	16.9	62.1	52.8	13
Canada	1,607	0.3	39,671	2.5	8.1	18.7	17.5	4.9	18.3	56.5	67.9	14
Germany	3,777	-0.8	46,905	2.7	4.5	37.1	16.3	3.5	20.5	65.1	63.9	15
rance	2,593	-1.2	100,173	1.7	8.9	26.7	21.1	6.0	20.5	59.0	83.5	16
ustria	433	-1.6	83,949	2.0	5.5	13.0	30.2	4.7	35.6	67.0	46.8	17
zech Republic	240		167,682	2.6	3.3	20.0	25.4	4.6	24.8	62.7	60.7	18
Sweden	528	0.6	111,428	1.6	8.6	22.0	25.1	2.5	22.1	65.8	45.3	19
ndonesia	1,092	1.0	14,638	2.0	6.5	4.6	-1.3	5.2	2.0	53.5	52.0	20
srael	385	1.1	120,274	1.1	5.0	14.0	14.9	5.5	8.3	56.1	40.0	21
hilippines	352	-1.7	16,759	3.8	7.3	17.0	-6.7	7.8	265.1	50.8	101.6	22
Mexico	1,057	-1.2	25,018	4.9	4.3	3.7	16.3	4.7	35.8	48.8	75.6	23
JK	2,638	-1.5	96,757	2.0	5.0	29.8	9.1	4.8	20.5	63.9	32.0	24
Vetherlands	868	-0.2	114,267	1.9	3.8	14.4	22.3	3.2	8.4	68.8	48.7	25
Switzerland	718	0.3	93,425	0.4	5.2	10.8	16.8	3.8	-1.6	66.7	17.3	26
urkey	640	3.8	74,859	16.3	12.4	11.5	-3.1	4.5	65.4	51.3	66.1	27
Spain	1,246	-2.4	103,164	2.1	16.8	25.9	10.8	5.2	48.2	60.4	90.9	28
Belgium	507	-0.7	105,397	1.7	6.6	16.1	18.5	4.7	10.5	0.0	58.8	29
JAE	352	-1.4	78,343	0.9	3.0	22.4	11.0	1.8	0.0	52.2	0.0	30
audi Arabia	679	-0.8	16,337	2.8	7.5	8.4	30.9	4.4	-10.0	56.4	-23.9	31
outh Africa	290	-1.4	46,298	4.4	29.7	11.2	11.1	4.1	82.8	57.4	294.2	32
ortugal	219	-1.8	100,957	1.0	7.6	14.3	6.4	4.7	27.1	0.0	101.2	33
Russia	1,455	0.3	45,326	5.5	5.7	4.0	17.2	3.4	11.1	49.2	47.6	34
Brazil 	1,371	0.3	97,885	6.6	14.4	17.8	-1.9	3.9	32.2	56.4	49.7	35
ledian lean		0.3 0.1	74,279 64,085	2.0 2.8	5.7 7.1	16.3 19.5	16.3 13.2	4.7 5.0	20.5 29.7	56.5 54.1	52.8 61.8	



Asian economies are rebounding in 2021



After experiencing negative GDP growth in 2020, Asian economies bounced back to growth

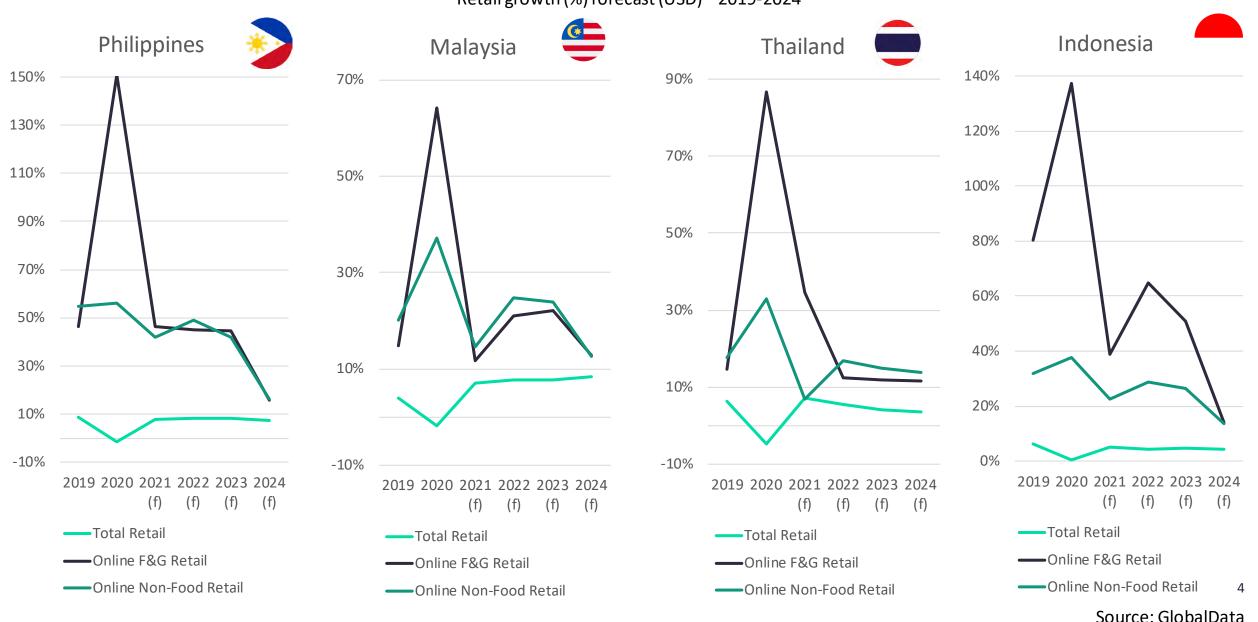
	District	6.0%	-9.5%	5.9%	5.9%	5.9%	5.9%
**	Philippines	2019	2020	2021	2022	2023	2024
C C	Malaysia	4.3%	-5.6%	4.7%	5.9%	5.6%	5.2%
		2019	2020	2021	2022	2023	2024
	Thailand	2.4%	-6.8%	1.8%	4.8%	3.2%	3.0%
		2019	2020	2021	2022	2023	2024
	Indonesia	5.0%	-2.0%	4.0%	5.7%	5.5%	5.2%
		2019	2020	2021	2022	2023	2024

COVID has driven a decade of digital adoption in a year with a big impact in retail









Retail faces many other challenges beyond COVID-19



SECTOR	STRATEGIC CHALLENGES	TECHNOLOGY SOLUTIONS		OUTCOMES		
Retail	 Margin erosion Overcapacity Optimising customer journey Fragility of retail model Shift from product to experience 	Artificial Intelligence Augmented and virtual reality Internet of Things - Automation Big data		 E-commerce growth Omnichannel marketing Warehouse automation In-store analytics Supply chain management Reimaging store space 		



What does a post-pandemic world look like for consumers?



Enforced changes to consumer lifestyles has led to both positive and negative effects which will inform the shape of the consumer landscape in the decade to come



New needs have been created ...



... as have new challenges



We will be online more



We will stay at home more



Staying healthy will be a priority



The way we treat ourselves will change



We will be money-conscious



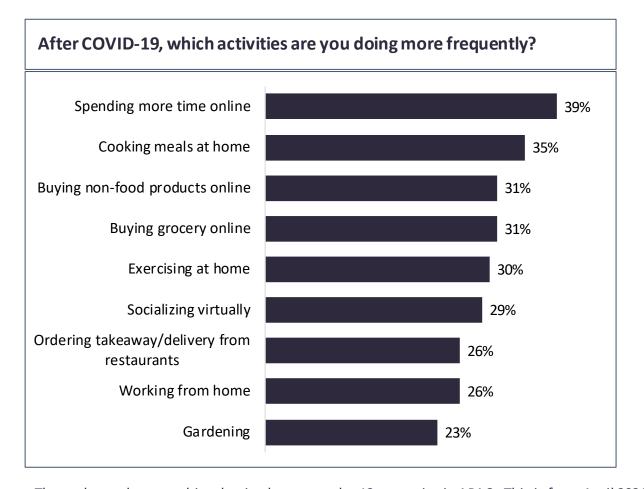
We will be preoccupied with hygiene



We will be more focussed on sustainability

Post-pandemic changes in consumer behaviour







These charts show combined attitudes across the 12 countries in APAC. This is from April 2021 and you can see that there continues to be high engagement online and the home remains a key focal point. Convenience, price and range are major factors in buying online – which highlights that the physical store can provide an experience and a social hub for consumers in contrast.

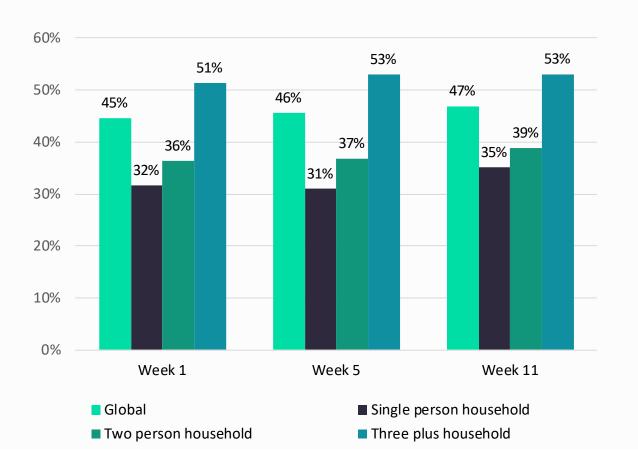
Online channels will continue to grow, but mind your carbon footprint





Brands will continue to invest in D2C channels, but must ensure orders are packaged & delivered in a more sustainable way

Global: Consumers who will continue or start to buy more products online rather than visiting a store after the pandemic period:





Olive

Consolidated home deliveries



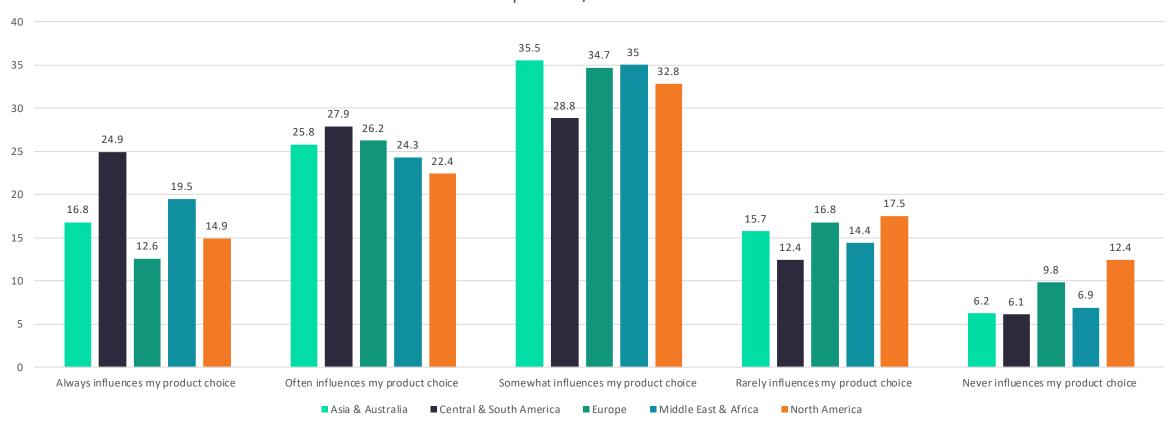
Sustainable packaging services

Consumer Attitudes Survey Q1 2021: 21,000 respondents in 42 countries



Consumers increasingly want to make ethical and environmental friendly choices

My purchasing choices are driven by how ethical/environmentally friendly/socially-responsible the product/service is



Microsoft and Danone are using AI to change the F&B sector



Retailers

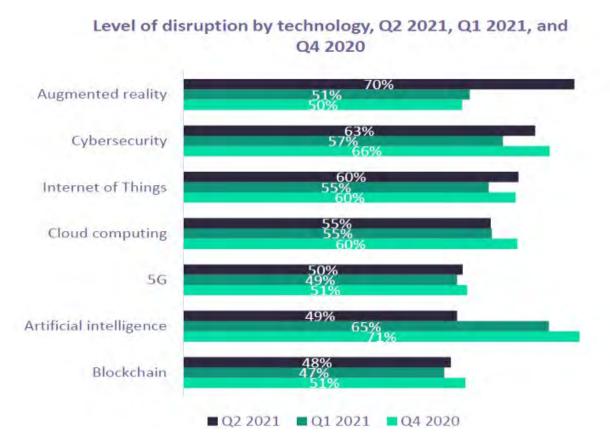
- Microsoft and Danone are helping agri-food start ups implement AI and cloud computing
- Projects concerning sustainable food, waste minimization, and supply chain management are prioritized
- Collaboration between technology and FMCG demonstrates how the future of supply chain management is linked to waste management and sustainable production



What emerging technologies best serve retailers and their customers?



Most emerging technologies were perceived to be disruptive by at least half of executives



Q1: How much will the following technologies disrupt your industry? The options were: significant disruption, slight disruption, no disruption, and don't know. The chart shows the percentage of significant disruption and slight disruption responses.

Q2 2021 N=403 Q1 2021 N=355 Q4 2020 N=355

- Despite a fall in Q2 2021, 49% believe that AI will provide significant or slight disruption to their industries.
- AR is on an ascending trend. It was perceived as the most disruptive technology in Q2 2021. This was a sharp increase from the previous quarter.

Source: Emerging Technology Sentiment Analysis Q2 2021, GlobalData

Al will continue to impact retail



Retailers need to invest in data science and smart robots. Machine learning is an area to explore.



- Data science and predictive analytics can greatly improve the speed of insights
- Machine learning can improve voice interfaces and facial recognition
- Smart robots and conversational platforms will grow in importance

Chanel's Lipscanner app combines AI and AR tech



The app is designed to facilitate upselling and improve customer experience



- February 2021 launch
- Developed in-house using patented AI and AR technologies
- Upselling: the app allows users to find the Chanel lipstick that matches other items (e.g. a handbag)
- Experience: It also allows users to preview the lipstick on their lips using AR technology and a virtual try-on app

Zara combines AI, robotics, and a strong omnichannel strategy



Retailers will need robust BOPIS models



- Zara uses robots to help deliver online orders to customers in store
- The initiative is part of Zara's "buy online, pick up in-store" (BOPIS) model
- The robots working in the back of stores to search for the orders have AI capabilities
- The technology has increased efficiency

Ambient commerce will be the key trend in retail in the near future



Computer vision and machine learning will play a role in the store of the future. Retailers have struggled to scale ambient commerce projects



- New form of shopping which makes use of sensors coupled with AI to help customers select and pay for their goods without the need for keyboards or cash registers
- Ambient commerce is setting out to challenge ecommerce by combining the physical space associated with traditional retail with technology
- Technologies used: cybersecurity, computer vision, sensors, machine learning, and edge computing
- Retailers who pioneered the concept have had difficulties scaling it up

Key takeaways





COVID-19 has changed consumers

- Minimal social contact
- Online retail is here to stay



Environmental, Social, Governance (ESG)

- Post-COVID-19, consumers want to make ethical choices
- Retailers need strong online strategies but need to mind their carbon footprint



Omnichannel

- Omnichannel strategies have become more sophisticated
- Successful "buy online pick-up in store" (BOPIS) models can benefit from investment in AI and robotics



Artificial intelligence

- Key emerging technology in retail
- Powerful when combined with augmented reality and robotics



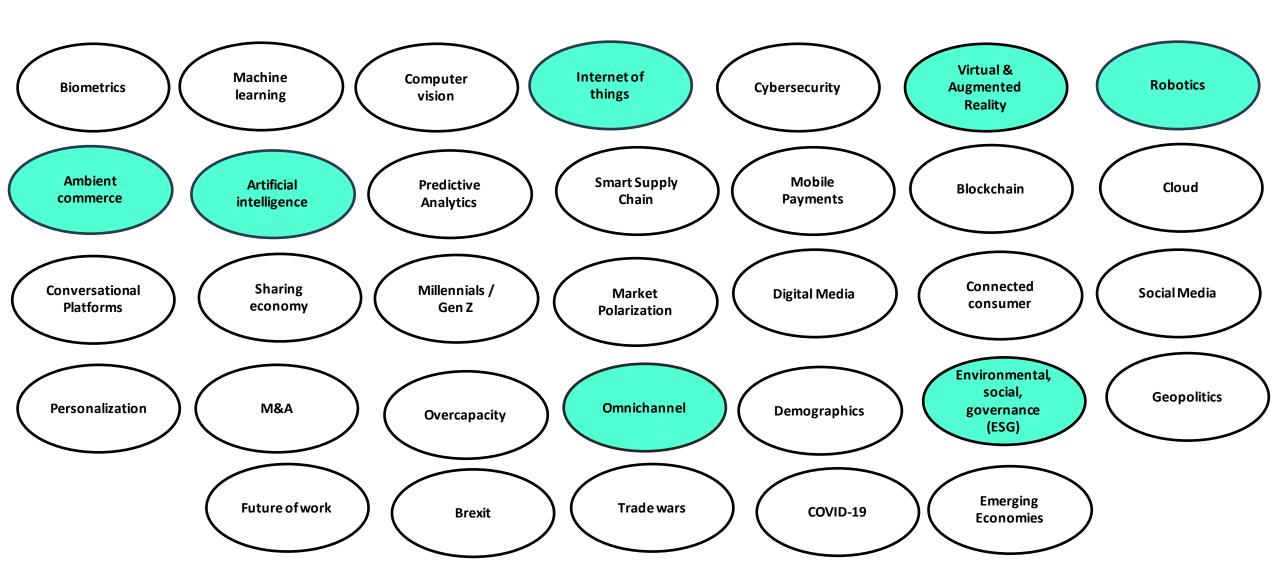
Ambient commerce

- Ultimate frictionless retail experience
- Few retailers have succeeded in this field which makes investment riskier but potentially more rewarding for the early starters



2022 GlobalData Retail Theme Map







Cyrus Mewawalla Head of Thematic Research GlobalData Plc

October 2021

Disclaimer

All Rights Reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher, Global Data.

The facts of this report are believed to be correct at the time of publication but cannot be guaranteed. Please note that the findings, conclusions and recommendations that GlobalData delivers will be based on information gathered in good faith from both primary and secondary sources, whose accuracy we are not always in a position to guarantee. As such, GlobalData can accept no liability whatsoever for actions taken based on any information that may subsequently prove to be incorrect.

