INDEX

A Accell Group, 41 Alcyon, 95 ANCMA (Associazione Nazionale del Ciclo Motociclo e Accessori), 29, 42, 44, 48, 69 Apparel Footwear Group, 108 Association of the European Bicycle Industry (COLIBI), 42 Association of the European Two- Wheeler Parts' and Accessories' Industry (COLIPED), 42	bicycle firm, 22, 26, 28, 33, 40, 41, 43, 44, 55, 71, 77, 78, 81, 84–86, 93–95, 97, 98, 103, 104, 116, 118, 122, 127 bicycle history, 2, 12, 76 bicycle industry, v-vii, 5, 12, 15, 17–19, 22, 24–27, 29, 30, 32–34, 41–44, 48, 52, 55, 63, 64, 69, 75–79, 81–84, 89–95, 97, 98, 103, 108, 109, 114, 118, 127 bicycle ownership, 43, 64–66, 69,
Atala, 29, 95 Australia, 105	bicycle producer, vi bicycle registration tax, 66, 68
B Bianchi, 17, 19, 21, 24, 79, 86, 87, 93, 95 Bianchi, Edoardo, 28–30 Bicycle All-Terrain Bicycle (ATB), 12 bicycle category, 30, 85, 95, 111, 113 bicycle component, 8, 9, 29, 33, 34	bicycle usage, 79, 82, 84, 86, 87, 110, 116 bicycle user, 6 halo bicycle, 122, 124, 127 mountain bicycle, 82, 105, 110, 111, 114, 116, 118, 120, 122, 124, 127 MounTain bike (MTB), 12, 118, 120

© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Switzerland AG 2021 C. Mari, *A Business History of the Bicycle Industry*, https://doi.org/10.1007/978-3-030-50563-9

off-road bicycle, 12	output statistics, 52
road and multisport bicycle, 110,	Bicycle systems
124	Brake system, 12, 34
Safety bicycle, 2, 4, 5, 8, 12, 19,	frame system, 9, 11
24, 78, 90, 93	handlebar system, 11
urban and leisure bicycle, 110, 124,	seat system, 11
127	transmission system, 11, 34
Bicycle dimension	wheel system, 12, 13, 34
economic dimension, 6	British Cycle & Motor Cycle Manu-
functional dimension, 6	facturers and Traders Union Ltd,
physical dimension, 6	42
psychological dimension, 6	BSA, 77
temporal dimension, 6	Business system stages
Bicycle evolution	distribution, 23, 30
cranked Velocipede/Boneshaker, 3	filières de production/filières
early velocipede/Draisine/Hobby-	industrielles, 23
horse, 3	global value chain, 23
high-wheeler/Ordinary/Penny-	market opportunity analysis, 23
farthing, 4	post-sales service, 23, 30
safety bicycle, 4	production, 2, 6, 13, 14, 16-19,
Bicycle frame	23, 25, 26, 29, 32, 33, 42–44,
bicycle frame geometry, 116, 118	48, 52, 55, 60, 63, 64, 76, 90,
bicycle frame size, 116, 127	94, 105, 108, 118
carbon fibres bicycle frame, 120	sales, 23, 29, 30, 63, 91, 94, 106,
full carbon bicycle frame, 120	122
hand-welded aluminium bicycle	value chain, 23
frame, 105	vertical chain, 22, 23, 34
Bicycle industry	
bicycle assembler, 34	
bicycle maker, 13, 19, 24, 25	C
component manufacturer, 25, 30,	Campagnolo, 34
33, 34	Canada, 41, 43, 48, 55, 60, 65
industry fragmentation, 78	Cannondale Corporation, vii, 104–106
mega-suppliers, 34	Cannondale Pro Cycling Team, 109
seasonal pattern/annual cycle, 25,	Cannondale Sports Group, 108
26, 90, 128	China, 32, 33
suppliers, 23–25, 32, 121	Confederation of the European Bicycle
vertically integrated companies, 25	Industry (CONEBI), 42
Bicycle production statistics	Consumer
apparent consumption, 43, 63, 64	consumer experience, 6, 76
export statistics, 41, 42, 52, 55, 60	consumer need, 14
import statistics, 41, 42, 55, 60, 63	consumer want, 23

Continental, 95	F
Customer	Far East, 30, 108
lifestyle customer, 82	Fordism, 91
performance customer, 82	Fox Factory Holding Corp., 41
potential customer, 18, 78, 81, 82,	France, 2–5, 17, 28, 32
84, 87, 89–92, 98, 110, 111,	
116, 121, 122, 124, 127	C
sport customer, 82	G
Cycle Manufacturers Trade Protection	General Motors, 90, 91
Association, 42	Germany, 17, 28, 32, 33
Cycle & Motor Cycle Manufacturers	Giant, 55, 82–84, 87, 89 Giant Manufacturing Co. Ltd. 82
and Traders Union, 42	Graham David 104
Cycle & Motor Trades Association, 42	Graham, David, 104 GT Bicycle, 108
Cycling Sports Group (CSG), 108	GT Bicycle, 108
	**
D	H
Data	Humber, 17, 77
bicycle ownership, 65	Hutchinson, 95
Combined nomenclature (CN), 42,	
58	I
data accessibility, 66	Industry
data gathering, 70	automobile industry, vi, 15, 76-79,
export data, 52, 60, 63	90
Harmonized Commodity Descrip-	firearms industry, 15
tion and Coding System (HS),	sewing machine industry, 16
42	Istituto Nazionale di Statistica
import data, 55, 63	(ISTAT), 55
International Standard Bicycle	Italy, vii, 5, 17, 24, 26, 28–30, 42–44,
Number (ISBIN), 70	48, 55, 65, 69, 79, 90, 94, 97,
Standard International Trade	111, 127
Classification (SITC), 42 Unavailability, 41	
Dorel, 41, 108, 109	J
Dorel Industries, 108, 111	Japan, 12, 32, 33, 41, 43, 52, 61, 65,
Dunlop, 97	69, 105
Dunlop, John Boyd, 5	
	L
_	Legnano, 29, 97
E 5 22 55 02 05 105	
Europe, v, vii, 5, 32, 77, 93, 97, 105,	3.6
109, 111	M
European Union, 42, 71	Manufacturing process

American system of manufac- tures/American system of manufacturing, 16 assemble-to-stock, 18 assembly line, 18 batch, 18 forming process, 18 frame construction, 17 interchangeable parts, vi, 16, 17 manufacturing technology, 5, 13, 19, 32, 121 mass production, 17	O Offering annual model change, 91, 110 fit variety, 127 product catalogue, 110, 114 product line, 84–87, 109–111, 121, 124 product/model, 89 product variant, 84, 86, 87, 111 quality variety, 127 taste variety, 127 Oldenzaal, 109
material conversion technology, 18 rolling process, 18 Marketing marketing concept, 76–78, 92, 127 marketing strategy, 78, 103, 114 marketing tool, vii, 77, 92, 97, 98, 106, 109, 122 phases of history of marketing, 27 Market Segmentation age, 82, 86 anthropometric measures, 79, 82, 85, 86 bicycle usage, 79, 82, 84, 87 gender, 86 market segment, 78, 80–84, 87 market segmentation approach, vii, 82, 87, 121 price sensitivity, 79, 82, 86, 87	P Pacific Cycle, 108 Pegasus Partners II, L.P., 106 Pierce, George N., 77 Pirelli, 97 Pope, Albert A., 12, 77 Price price list(s), 79, 81, 82, 103, 104, 109, 110, 114, 116, 121, 122 price tier, 121, 122, 124, 127 Product architecture functional element, 7 integral product, 8 modular product, 8 physical component, 7, 8 product component, 8
segmentation phase, 78, 83 segmentation variable, 82, 84 Merida, 55 MFAC (Manufacture Française des armes et cycles), 32 Mongoose, 108 Montgomery, Joseph, 104 N the Netherlands, 32, 41, 105, 108	R Racing/race bicycle race, 93 Corriere della Sera, 95 Gazzetta dello Sport, 95 Giro della Lombardia, 95 Giro d'Italia, 92, 94, 95, 124 L'Auto-Vélo, 94 Le Vélo, 94 Liège-Bastogne-Liège, 92 Milan-Sanremo, 95

off-road racing, 97 Paris-Roubaix, 92 racing team, 95, 97, 106, 109 road racing, v, 86, 97, 106, 109, 120, 124 Tour de France, 92, 94, 124 track racing, 86, 87 The Raleigh Cycle Co. Ltd., 79 Rover Cycle Company Limited, 79 S Schwinn, 108 Shimano, 34 Shimano Inc., 41 Singer, 77 Sloanism, 90 Sloan Jr, Alfred P., 90 SRAM, 34 Starley, John Kemp, 4 Sugoi Performance Apparel, 106 Sutton, William, 4 Swift, 77	Touring Club Ciclistico Italiano (TCCI), 65, 66 Triumph, 77 Tyre(s), 3, 5, 12, 17, 19, 25, 95 tyre manufacture, 97 U United Kingdom (UK), 24, 32, 33, 43, 44, 55, 65, 77, 89 United Nations, 42 United States (US), 2, 4, 5, 17, 24, 28, 32–34, 48, 65, 77, 89, 90, 105, 118, 127 V Variety colour, 113, 120, 127 fit variety, 116, 118, 121 quality variety, 114, 121 taste variety, 120, 121 variety dimension, 84, 113, 120, 127
T Taiwan, 25, 32, 33, 43, 55, 63, 65, 108 Technology social construction of technology, 3 technological convergence, 14	W Wheel wheel size, 116, 118, 120, 121, 127 wheel war, 118, 121 Winton, Alexander, 77