

Name Index

Abegglen, James 124n2

Abernathy, William J. 212

Abo, Tetsuo 98

Adler, Paul S. 48, 101, 116, 618, 619

Åhlström, Pär xix, 23, 324

Albritton, Robert 139n16

Amyx, Jennifer 7

Andersson, Roy xix, 22, 245

Ansari, Shaz 429, 430

Antonakis, John 97, 112, 118

Anttila, Timo xix, 24, 133, 423, 441

Aoki, Katsuki xix, xx, 12, 20, 35, 48–51, 54, 111, 117, 128n6

Arai, Seiyu 452–453

Babson, Steve 589

Ballé, Freddy 529, 531–532, 542

Ballé, Michael xx, xxii, 25, 529

Bamforth, Kenneth 128

Barnes, Tom 166

Beauvallet, Godefroy xx, 25, 529

Berggren, Christian 3

Besser, Terry 2, 125–126, 137n11

Bezos, Jeff (Founder and CEO, Amazon) 351n3, 356, 357, 360n9, 362n11, 364, 397

Bizberg, I. 608

Blevins, Tony (VP of Procurement, Apple) 353n3

Bonnano, Alesandro 364

Booth, Graham (Supply Chain Director, Tesco) 496

Boyer, Robert 92n2, 138, 138n12, 139, 140, 533

Bowen, David E. 47, 115, 324

Bowerman, Bill (Founder, Nike) 13–14

Brotman, Jeffrey 358

Braverman, Harry 47, 101, 151

Brenner, Robert 139n16

Byrne, Art 376, 542

Calvet, Jacques (CEO, PSA) 530

Carrillo, Jorge Viveros xx–xxi, 26, 595, 600n3, 604, 605, 608

Carter, Bob 164, 343

Chai, Jay 210

Chan, Jenny 364

Cho, Fujio (Honorary Chairman, Toyota) 179–181, 189, 206, 467n1

Chung, Ju-Young (Founder, Hyundai) 449, 455n2

Chung, Mong-Gu (Chairman, Hyundai) 455, 455n2

Chung, Se-Young (Chairman, Hyundai) 455n2

Clark, Kim B. 49, 402n2, 405, 414, 430

Clarke, Philip (CEO, Tesco) 503

Coffey, Dan 213

Cole, Robert 5, 42, 124–125, 125n3, 126–127, 131, 137n11

Cooper, William xxi, 21, 179

Coriat, Benjamin 530

Couyoumdjian, Juan Pablo 587

Courtemanche, Charles 364

Cunningham, Jean xxi 23, 375, 376, 377, 387, 388, 393

Cusumano, Michael A. 207, 211, 212, 213, 220, 410n5

Cutcher-Gerschenfeld, Joel 107n10

David, Robert 46

De la Garza, Enrique 603, 608

De Luca, Michael 388

Dean, Jeff 413

Deming, W. Edwards

Dohse, Knuth 43, 46

Dominguez, Lilia 602, 608

Dore, Ronald 124

Dubinsky, David 358

Dutrénit, Gabriela 602–603

Egan, Sir John (CDO, British Airports) 497–498

Eisenhardt, Kathleen 47

Elger, Tony 44, 155, 156, 588

Emery, Fred 127, 128

Ephlin, Don (VP, GM) 107n11

Fillingham, David (CEO, Bolton Hospital) 490n1, 499

Fishman, Charles 354, 365

Fiume, Orest (Orry) 377, 378, 387, 542

Flynn, Barbara 41

Ford, Henry (Founder, Ford Motor Company) 4, 316	Kochan, Thomas (see also KKM) 2, 93, 216n5
Freysennet, Michel 92n2, 138, 139, 140, 533	Koskela, Lauri 479, 479n23
Gibson, Garth 398	Krafciak, John xiii, 3, 40, 41, 131, 214, 377n1, 469n7
Gibson, Ian (CEO, Nissan-UK) 497–498	Krzywdzinski, Michael xxii, 25, 108, 109, 132, 150n*, 157, 165, 166, 507, 623, 626, 631
Gibson, William 416	Kuhlmann, Martin 515
Gilbreth, Frank and Lillian 65	Larcker, David F. 41
Goldratt, Eli 376, 387n8	Lee, Byoung-Hoon xxiii, 24, 448
Gomis, Redi xxi, 26, 595, 608	Lepadatu, Darina xviii, 1, 11, 12, 20–21, 23, 110n12, 124, 127, 132, 350, 350n1, 423, 430
Grady, Kenneth xxi–xxii, 22, 132, 294	Lewin, Kurt 127
Günther, Georg 520	Lichtenstein, Nelson 16, 353
Hall, Robert 69, 73, 83	Liker, Jeffrey 9, 9n4, 10t1.1, 97, 127, 127n5, 137n11, 463, 472n11, 477, 477n19, 477n20, 511, 534
Hamilton, Bruce 83	Lincoln, James 126
Harvey, David 135, 135n8, 136	Litwin, Adam Seth 93–95
Hatamiya, Lon 364	Lorenz, Edward 433–434, 441
Henderson, Jeffrey 461	MacDuffie, John Paul xxiii, 20, 41, 47, 49, 92, 100, 107, 216
Hernandez, Marcela 603	Mamadouh, Virginie 587
Hicks, Michael 364	Magnnis, Abbot xviii, xxi, xxiii, 21, 179
Hirano, Hiroyuki 69	Mao Zedong (Supreme leader, China) 553, 553n9
Hofer, Adriana R. 590	March, James 48
Hofstede, Geert 583	McCammon, David (VP, Ford) 208
Holm, Jacob Rubaek 441	McKersie, Robert (see also KKM) 93
Holmes, Oliver Wendell 301	McMillon, Doug (CEO, Walmart) 18n9, 360
Honda, Soichiro (Founder and CEO, Honda) 530	Middlebrook, Kevin 608
Hope, Jeremy 386	Monden, Yasuhiro 71–72, 469, 469n5
Huntzinger, Jim 376, 377, 378	Mulholland, Kate 362
Hyer, Nancy 69	Mulally, Alan (CEO, Ford) xxiv, 472
Imai, Masaaki 52, 531	Muratore, John 403
Ishikawa, Kaoru 531	Magnani, Florian xxiii–xxiv, 25, 529
Ittner, Christopher 41	Maher, Kris 17, 354
James, Reynold xxii, 26, 573, 577, 578	Marx, Karl 151, 151n2, 152, 158n4
Janoski, Thomas xviii, 1, 11, 12, 21, 23, 110n12, 124, 127, 150n*, 350, 350n1, 423, 430, 433	Maskell, Brian 375–378, 387, 393
Jelinek, Craig (CEO, Costco)	Mayo, Elton 426
Jones, Daniel T. xiii, xviii, xxii, xxvii, 24, 25, 92, 210, 213, 325, 376n1, 377, 402, 430, 467, 474n17, 470n8, 480n27, 490, 533, 534, 542, 576, 577, 578, 579, 581	McCann, Leo 46
Ju-yung, Chung (Founder, Hyundai) 455n2	Mehri, Darius 2, 45, 127
Juran. Joseph 2, 47, 125, 131, 132	Modig, Niklas xxiv, 23, 132, 324
Jürgens, Ulrich xxii, 43, 132, 157, 166, 509, 514, 519, 629, 631	Mogensen, Allan (“Mogy”) 20, 77–79
Kalleberg, Arne 126	Morgan, James xxiv, 22, 227, 472, 472n11
Kamata, Satoshi 42, 43, 220	Mustomäki, Armi xxiv, 5, 24, 132–133, 423
Karcher, Xavier (CEO, Citroen) 530	Nakajima, Seiichi 81
Katz, Harry (see also KKM) 93, 105n9	Neumark, David 363
Katz, Randy H. 398	Obama, Barak (President, USA) 367
Kemenade, Ron van (CIO, ING) 414n10, 415	Ohno, Taiichi 4, 4n2, 36–38, 39, 52, 54–55, 70–71, 83, 150, 154, 180, 200, 207, 289, 335, 367, 453, 467n1, 473–474, 479n22, 482, 482n31, 530, 533, 538
Kennedy, Frances 378, 393	Oinas, Tomi xxiv, 5, 24, 132–133, 423
Kim, Jaewon 107	Osono, Emi 47, 49, 158n4
KKM (Kochan, Katz, McKersie) 93, 94	Ouchi, William 40, 77
Knight, Phillip (Founder and CEO, Nike) 13–14, 15n6	Oudhuis, Margareta 157

Name Index		641
Palthe, Jennifer 586	Sugimori, Y. K. 467, 467n1, 468, 474	
Parayre, Jean-Paul (CEO, Peugeot) 530	Suzumura, Kikuo 180, 473, 474	
Pardi, Tommaso xviii, xxv–xxvi, 2, 6, 22, 117n13, 204	Svanberg, Carl-Henric (CEO, Erickson) 258	
Park, Jung-he or Park, Chung-he (President, South Korea) 449	Taylor, Frederick Winslow (see also Taylorism) 76–77, 100, 302n19	
Mark G. Parker (CEO, Nike) 15n6	Toussaint, John xxvi–xxvii, 22, 271	
Parker, Mike 43, 44, 46, 100n7, 213, 561	Toyoda, Akio (CEO, Toyota) 13, 485	
Parnaby, John 73	Toyoda, Eiji (CEO, Toyota) 37t2.1, 210, 481, 483, 485	
Parsley, David xxi, xxv, 21, 179	Toyoda, Kiichiro (Founder, Toyota Motors) 36, 37t2.1, 38, 150, 482, 534	
Patterson, David A. 398	Toyoda, Sakichi (Founder, Toyota Loom) 36, 38, 150	
Pil, Fritz 41, 107, 216n5, 471n9	Toyoda, Shoichiro (Chairman, Toyota) 530, 535	
Poppendieck, Mary xxv, 24, 396	Treville, Suzanne de 97, 112, 118	
Price, John 568	Trist, Eric 53n3, 127–128	
Price, Sol (Founder, Costco) 358		
Proctor, Stephen 164	Uminger, Glenn xviii, 378	
Reagan, Ronald (President, USA) 206, 468–469	Vallas, Steven xviii, 136, 137, 137n10, 137n11	
Radnor, Zoe 164, 342, 343, 344	Vidal, Matt xvii, xxvii, 2, 3n1, 16, 21, 150, 151n2, 153n3, 158, 160, 353, 442	
Rasche, Andreas 423–424	Vogel, Ezra 77, 124n2	
Raymond, Eric 396–397		
Reagan, Ronald (President, USA) 206, 468–469	Walton, Sam 16, 18n9, 152, 351–352, 358	
Ritzer, George 6, 8, 11	Ward, Allan 238, 238n2	
Ries, Eric 538, 481n29	Ward, Peter T. 96, 131, 532	
Rohlen, Thomas 124n2	Ward, Stephen V. 588	
Roos, Daniel xiii, xxii, xxvii 92, 208, 210, 213, 376n1, 402, 470, 470n8, 490, 533	Waring, Justin 46	
Rossmann, John 405n4, 413, 414n9	Watanabe, Katsuaki (CEO, Toyota) 4	
Rother, Mike 65, 126, 473n14	Weber, Max 143, 618	
	Weiss, S. E. 210	
Saito, Kozo xxi, 179	Weisbord, Marvin	
Saito, Shoichi 37, 37t2.1	Westney, D. Eleanor 99, 588–589	
Saka, Ayse 44	Whittaker, James A. (VP of Quality, Google) 399	
Sakakibara, Sadao 41	Williams, Karel 213	
Schonberger, Richard xxv, 20, 64, 79, 468, 468n4	Williams, R. B. 256, 257, 260	
Schroeder, Robert 41	Williamson, Oliver 40	
Schumann, Michael 509, 513, 516	Williamson, Zion 14	
Seidl, David 423, 424	Wilhelm, Miriam xx, xxvii, 49, 51	
Sellers, Peter 78	Wilson, Doyle 479	
Sewell, Graham 44	Wolfe, Scott 364	
Shah, Rachna 96, 131, 532	Woollard, Frank 139, 139n15	
Shingo, Shigeo xxi, xxiv, xxv, xxvi, 70–72, 72n2, 83, 127n5, 273, 274f11.1, 292, 377, 478, 530	Womack, James P. xiii, xxii, 5, 24, 92, 210, 212–214, 216–217, 325, 376n1, 377–378, 402, 430, 467, 468n2, 470n8, 474n17, 475n18, 480n27, 490, 490n1, 511, 533, 534	
Shook, John 65, 469n7, 473n14, 483n35		
Shulzhenko, Elena xxv–xxvi, 26, 615, 623, 628, 631, 632	Yokich, Steven (UAW, President) 107n11	
Signoretti, Andrea xv, xxvi, 20–21, 124, 134	Yokozawa, Kodo 584	
Sinegal, James (CEO, Costco) 358	Youngdahl, William 324	
Slaughter, Jane 43, 44, 46, 100n7, 213, 561		
Sloan, Alfred P. (CEO, GM and the name for the Sloanian model) 139	Zhang, Lu xviii, xxvii–xxviii, 25–26, 165, 166, 549, 549n1, 550n2, 554n7, 555n12, 562n30, 569n37	
Smith, Chris xxvi, 21, 44, 155, 156, 588		
Smith, Roger (CEO, GM) 210		
Sobek II, Durward xxvi, 22, 227, 238, 238n2		
Solomon, Jerry 376–377		
Sorge, Arndt 140, 142, 509		
Streeck, Wolfgang 140, 142, 509		

Subject Index

- 5-S's or 4S's: *Seiri, Seiton, Seiso, Seiketsu, Shitsuke* 39, 39n2, 51, 54, 109, 116, 575
- 3-Wastes: *Muda, Muri, Mura* 4, 22, 35, 38, 47, 183, 211, 351, 366
- A3 Analysis 65, 272–273, 277–278, 281, 285, 317, 391, 416, 473, 475, 478, 483–484, 486, 503
- Accounting 23, 71, 75, 76, 295, 375–394, 411, 412, 480, 542
- Budget 13, 24, 229, 282, 297, 313, 384–386, 391, 411–412, 415, 481, 498–499, 533, 539
- Cost accounting 23, 75–76, 375–377, 380–385, 390, 394, 411–412
- GAAP xxx 376, 380–384, 387, 390, 392
- Lean Accounting 23, 76, 375–394, 411–412, 542
- Plain English Financials 23, 383–384, 387, 389–390
- Rolling Forecasts 24, 385, 391, 497
- Accumulation Regime 65, 138, 167
- AFDC/TANF (Welfare payments for poor people in the US) 364
- Agility 252–256, 260, 404, 539–540
- Algoé Consultants 536
- Amazon.com xvii 16n7, 23, 248, 350–351, 353, 356–358, 359, 360, 361–367
- Amazon Prime 356, 357, 361
- Amazon Web Services (AWS) 356n8
- Fourteen Leadership Principles 357
- Just-in-Time Inventory 23, 350, 353, 359, 361, 363, 366
- Teamwork 358
- American Bar Association (ABA) 298–300, 305–306, 312n30, 301n31
- American Society of Mechanical Engineers (ASME) 65
- Andon boards or rope xvii 54, 407, 512, 530, 590, 623, 624–625t26.2, 627
- Apple Corporation 6, 11, 12, 15–16, 130, 245–246, 248, 353n3, 365n13, 567
- Application-Adaptation Model or Dilemma 98–99
- Asian Floor Wage Alliance (AFWA) 365
- Australia 16n7, 26, 70, 105f4.3, 111, 295, 468n3, 499, 573–574, 582–590
- Authoritarian Management 26, 101, 117n13, 133, 449, 450, 452, 463, 515, 563, 588, 589, 615–619, 626, 633–634
- Australia 16n7, 26, 70, 105f4.3, 105n9, 111, 133, 295, 468n3, 499, 573–574, 577, 582–586, 586–590
- Automatically Guided Vehicles (AGV) 511
- Automation 36, 38, 130, 159, 311, 318, 398–400, 404, 408, 410, 411, 453, 456, 458, 508–509, 511, 520–521, 530, 555, 560, 597, 608
- CAD/CAM 136, 232, 508
- CNC Machines 508, 597
- Auto5000 108–109, 516, 517, 518
- Automobile Industry 5, 6, 8, 21, 22, 60, 209, 204–223, 246, 426, 469, 484, 507, 508, 511, 518, 549–569, 596, 600
- Balanced Lean 3–4, 48, 97–98, 99, 100, 102, 103, 105, 107–110, 111–113, 116–118
- Strategy-function-workplace (SFW) 104–105, 105F4.3, 106–109
- Bar Association (see American Bar Association)
- Bar codes (RFID codes and QR codes) 132, 353
- Barry-Wehmiller Company 80
- Behaviors 24, 95n4, 96, 185–189, 198T7.7, 241, 273, 275–279, 281, 283, 290, 292, 385, 390, 398–399, 538
- Best Practices 35, 38, 42–44, 53–55, 69, 70n1, 83, 92, 162–163, 201, 238, 242, 362, 378, 411, 532, 533, 558, 595, 604–609, 622, 628
- Beyond Budgeting Round Table (BBRT) 386–387, 386n7
- Black Belts (in Six Sigma) 126n4, 256, 258–260, 263, 265, 266–267, 290, 542
- Booz, Allen Young 66
- Boston Consulting Group 519
- Brazil, xvii 42, 132, 166, 460t18.3, 497, 518
- Budgets (see accounting)
- Business Process Re-engineering (BPR) 262, 480n26
- Canada 24, 100n7, 100f4.3, 111, 283, 295, 460, 496, 499

Cardiff Business School, Lean Enterprise Research Centre (LERC)	241, 252, 255, 260, 262–264, 266, 274, 274f11.1, 275, 277, 280, 282, 311, 335, 338, 340, 361, 362, 383, 385, 388, 402, 428, 433, 471, 481, 482, 484, 486, 492–493, 497, 500, 512–513, 515, 534, 536, 554, 562, 564, 579, 602, 604, 605, 619t26.1, 625t26.2, 633
Catalytic Construction 66	Continuous delivery 264, 404n3, 407, 408, 411, 412, 414, 497
‘Cathedral and Bazaar’ 396–398	Continuous flow 4, 10t1.1, 11, 150–151, 159, 161, 163, 335, 338, 406, 407, 474, 544
Cellular Management 69–70, 85, 150, 161, 318, 473–474	Continuous Process Improvement, Continuous Improvement Process (CIP): 3, 77, 79–80, 515, 627–628
Work or Modular Cells 69–70, 82	Contradictions (see also Paradox) 128, 158n4, 204, 206, 215–222, 569
Flexible Legal Services Cells 278, 318	Corporations/Companies/Enterprises
CEO Yearly Pay 8, 13, 214, 351, 356, 360, 499	Alphabet Corporation (see Google)
Certification Test Results 189–193	Amazon.com xvii 16n7, 23, 248, 350–351, 353, 356–358, 356n8, 357, 359, 360, 361–36
<i>Chimuwaku</i> (exceptional teamwork) 10t1.1	Apple Inc. 6, 11, 12, 15–16, 130, 245–246, 248, 353n3, 365n3, 567
China xiv, xvii, xx, 6, 8, 11, 12, 14, 15, 16, 17, 18, 25, 26, 114, 132, 133, 137, 165, 166, 221, 247, 353, 354, 364–365, 367, 460, 460t18.3, 461, 485, 549–569, 550n2, 555n13, 557n18, 562n30, 564n32, 563n31	BMW AG 16n7, 136
Chinese auto plants (USA-1, USA-2, GER-1, GER-2, JPN-1, JPN-2, SOE-1) 550–567, 550T23.1, 565T23.2	Costco Wholesale Corporation 23, 350, 351t14.1, 352, 356, 358–361, 361–363, 365, 366–367
Chinese Government 552, 553, 554, 562, 563	Daimler-Benz AG (Mercedes-Benz) 458, 511, 513, 514
All-China Federation of Trade Unions (ACFTU) (government controlled) 562	Ericsson AB 244–267
Chinese Communist Party (CCP) 552, 553n9, 562, 568	FAW, China 552–554, 556
Enterprise Party Committee (EPC) 558	Fedco 360
China Labor Watch 364	Ford Motor Company vii 4, 11, 16n7, 71, 105f4.3, 106, 107, 110, 156, 158, 204, 208, 211, 217, 231, 448, 452n1, 470, 471, 602, 621
Codetermination 25, 141, 154, 157, 163, 167, 168, 424	Ford product development system 472
Collaboration and Integration-led 239, 263–264	Ford production system (FPS) 470, 492
Compensation 112, 117, 130, 198T7.7, 296–297, 303–304, 313, 452, 518	Foxconn (Hon Hai Precision Industries) 12, 15, 16, 365, 567
Construction industry 25, 41, 241, 448, 449, 462, 479, 480, 494, 497–498, 534	GAZPROM 620
Cost Accounting (see Accounting)	GAZ 622, 624-625t26.2, 626, 628, 630t26.3, 631, 632, 634
Costco xvii 23, 350–351, 351t14.1, 352, 356, 358–361, 361–363, 365, 366–367	General Electric Corporation 40, 67, 262, 298n11, 475n17, 494
Comparative Research 46–47, 424, 428–430, 440, 604	General Motors Corporation xvii 16n7, 467, 469, 470, 483, 511
Competition 47, 50–51, 69, 114, 133, 138, 164, 167, 204–205, 208–210, 215, 219, 247, 253, 296–299, 318, 352, 356, 358, 362, 365, 427, 440, 468n2, 485, 508, 511, 514, 521, 536, 550–551, 554, 555, 567, 616, 621, 627–628, 634	Glaxo Smith Kline Corporation 67
Computer Quality Control 308, 318, 354, 396–417, 509, 556, 568	Google Corporation 16n7, 130, 396, 398–399, 400, 405, 406–407, 409, 413, 415, 501
Define, Measure, Analyze, Improve, Control (DMAIC) 233, 253, 266	Honda Corporation xvii 8, 16n7, 25, 50, 126, 140, 150, 166, 216, 217, 218, 221, 359, 364, 469, 492, 493, 533, 562, 569, 596
Communist Party of China (CCP) 25, 552, 553n9, 562, 568	Huawei 247, 248
Communist Party of Russia 615, 616	Hyundai International Corporation 3, 24, 105f4.3, 106, 448–464, 590
Community of Practice (CoP), Community of Fate 52, 96, 118, 126, 378, 383, 393, 533	ING Group Corporation 414–416
Continuous Improvement (see also <i>kaizen</i>) 3, 4, 10, 40, 42, 43, 44, 47, 49, 50, 52, 54, 71, 74, 77, 79, 97, 98, 108, 112, 125, 127, 150–151, 156, 159, 161–163, 168, 180, 182–183, 185, 186, 196–197, 199t7.7, 200–203,	KAMAZ (Russia) 622, 623, 631

- Corporations/Companies/Enterprises (cont.)
 Nike Corporation 6, 11, 14–16, 18, 114, 365
 Nissan Motor Company xvii 11, 16n7, 25, 50, 150, 206–207, 216–218, 221, 468, 492–493, 497
 Nokia Corporation 245, 247
 Piggly-Wiggly Supermarket Company 4
 Price Club 358–359
 PSA (Peugeot, Citroen) 218, 530, 535, 543
 Space-X 403–404, 405, 410
 Renault (Groupe Renault) 218, 543
 Rolls Royce 494
 Rubbermaid (subsidiary of Newell Brands) 17, 354
 Rusauto (Russia) 621, 624–625t26.2, 626, 627, 628, 629, 630t26.3
 Rusmet (Russia) 624–625t26.2, 626, 627, 630t26.3
 Takata Corporation (Japan) 80
 Tarzeen Fashions Ltd. (Bangladesh) 355
 Tesco, PLC (UK) 350, 495, 496–497, 503
 Toyota Corporation xvii, xviii 2, 3, 4, 7, 8, 9, 11, 12, 13, 16n7, 18, 21, 24, 25, 26, 35, 36, 37t2.1, 37–39, 41, 44–45, 47–51, 54, 70, 71, 72n2, 79, 92, 97, 98f4.2, 105f4.3, 110–111, 115, 116, 117, 125–127, 130, 136, 140, 150, 152, 155–156, 157, 158, 158n4, 163, 166, 167, 179–182, 189, 200–201, 205–208, 213, 215–222, 232–233, 236, 241, 246, 273, 292, 327, 335, 355n5, 359, 364, 366, 376–378, 429, 448, 449, 452n1, 453–455, 458, 459, 462t18.4, 467–487, 472n11, 473n12, 473n13, 477n19, 477n20, 479n22, 480n28, 481n29, 482n30, 482n31, 483n32, 484n36, 491–497, 502–504, 508, 511, 516, 519, 529–535, 540–543, 554, 564, 566, 573–577, 579–583, 585–590, 595–596, 603, 608, 618, 621–623, 623–624t26.2, 626–627, 629, 630t26.3, 631–632, 634
 Unipart Group 493, 495
 Valeo Automotive Supply 492, 531–532, 533, 541, 599, 602
 Volkswagen AG 16n7, 108, 109–111, 211, 458, 511, 516, 518–519, 566, 621–623, 624t26.2, 626, 627, 628, 630t26.3, 631–534
 Walmart Corporation xvii 16–18, 18n8, 18n9, 23, 350–356, 351t14.1, 352n2, 352n3, 356n7, 358–360, 361–365, 362n10, 365n14, 366–367
 Walmart Stores 16–17, 351, 353, 354, 355, 360, 361, 363, 364, 365n14, 366
 Sam’s Club 16, 352, 361
 Westauto 623, 624–625t26.2, 626–627, 629, 630t26.3, 631–632, 634
 Corporate Governance 27, 50, 112, 214, 222, 449, 452, 464
 Corporate Responsibility 15, 113, 157, 184, 240–241, 283, 364, 365, 403, 414, 415, 482
 Costco Corporation 23, 350, 351t14.1, 352, 356, 358–361, 361–363, 365, 366–367
 Countries (see diffusion of Lean Production and Management Ideas)
 Courts 21, 294, 296, 297, 298, 303n23, 307, 309, 313, 313n32, 314, 315, 316, 451, 500
 Appellate Courts 314, 316, 317
 Federal Courts 294, 313, 315
 Circuit courts 313, 314
 Moot courts 297
 Personalization Problem 316–317
 State Courts 294, 298, 314
 State Appellate courts 316
 Specialty Courts 299
 US Supreme Court 313
 Cravath, Swaine and Moore Law Firm 308
 Critical Path Method (CPM) 66, 188, 265, 266
 Criticisms of Big Box Stores 363–365, 367
 Culture 1, 4, 6, 10t1.1, 10, 12, 13, 24–27, 35, 40, 41, 42, 44, 77, 94–96, 99, 118, 124n2, 126, 158, 162–163, 180, 181, 182, 184, 185, 186–192, 193t7.2, 194, 195–196, 196t7.4, 197, 197t7.11, 198–199t7.7, 199, 200–202, 233, 241, 246, 251, 253–255, 256–258, 259, 260, 263, 266, 272–273, 275, 276–278, 292, 295, 312, 326, 343, 357, 362, 383, 386, 388, 396, 400, 404, 411, 415, 416–417, 426, 432, 442, 452, 469n7, 477n20, 486n38, 492, 511, 539, 540, 541–543, 561, 565, 574–575, 576, 577, 578, 579, 583–584, 586, 590, 609, 618, 619, 626, 632, 633, 634
 Confucianism 575
 Individualistic Culture xiii 77, 231
 Transplanting culture 99, 114, 574, 586–588
 Daily Management 84, 196t7.4, 199t7.7, 283, 285, 288, 388, 390, 478, 483, 484, 486, 502, 503, 557
 Data Sets 423, 432, 435, 437, 439, 440, 475, 485
 American Working Conditions Survey (AWCS) 3, 423, 432, 437, 439, 440
 European Working Conditions Survey (EWCS) 423, 435, 437, 439, 440
 Dedicated Equipment 70, 73–74, 80, 84
 Deming Prize (see also Shingo Prize) 4, 478
 Denmark 167, 428, 436
 Design and Innovation-Led 253, 254, 255, 255f10.3, 261, 263, 498
 Design for Manufacture and Assembly (DFMA) 82–83
 Design, Measure, Analyze, Improve, Control (DMAIC) 253, 266

Diffusion of Lean, Accounts 24–27, 41, 92, 97, 107, 118, 124–125, 131–134, 152–158, 164, 167–168	Russia xiv 26, 70n1, 132, 165, 166, 460t18.3, 461n5, 615–634, 624-625t26.2, 630t26.3
Open and Contingent Method 153	Sweden 45, 106n9, 131, 133, 156, 1i57, 256, 339, 426, 428, 431, 436, 437f17.2, 513, 590
Prescriptive and Universal Approach 152–153	United Kingdom (UK) 22, 25, 43, 44, 69, 73, 96n5, 100n7, 103, 105f4.3, 111, 124, 125, 139n15, 142n18, 151n1, 156, 157, 164, 217, 219, 220n8, 220n9, 220n10, 286f11.5, 295, 342, 343, 386, 431, 436, 438, 437f17.2, 439f17.3, 442, 480n27, 490–506, 509
Society, System Dominance (SSD) 153–158	United States (USA) xviii 2, 5, 7, 8, 9, 13–19, 21, 68, 92, 98, 100n1, 103, 105n9, 107, 110, 111, 117, 151n1, 153n3, 154–157, 167, 209, 210, 213, 216, 437f17.2, 467–505
Diffusion of Lean Production and Management Ideas (in countries)	Digital 54, 109, 308, 318, 398, 404–405, 406–407, 411, 415, 417, 432, 508, 519, 522, 539, 542–543
Australia 16n7, 26, 70, 105f4.3, 105n9, 111, 133, 295, 468n3, 499, 573–574, 577, 582–586, 586–590	Diversified Quality Production (DQP) 21, 124, 135, 140–142, 141n17, 508–514
Brazil, xvii 42, 132, 166, 460t18.3, 497, 518	Division of Labor 1, 3, 5, 9, 11, 12, 16, 19, 21, 24, 27, 93, 100, 135, 137, 143, 353, 552, 553
Canada 24, 100n7, 100f4.3, 111, 283, 295, 460, 496, 499	Doctors (Medical) 237, 290, 291, 297n9, 348
China xiv, xvii, xx, 6, 8, 11, 12, 14, 15, 16, 17, 18, 25, 26, 114, 132, 133, 137, 165, 166, 221, 247, 353, 354, 364–365, 367, 460, 460t18.3, 461, 485, 549–569, 550n2, 555n13, 557n18, 562n30, 564n32, 563n31	Dominance Effects 44, 153, 154–158, 521
Denmark 167, 428, 436	Duriron, Cookeville Valve Division 71sb 3.1
European Union (35 European Countries) 428, 441	
Finland 167, 428, 436, 437f17.2, 479n23	Eastern Europe 215, 218, 221, 425, 432, 436–439, 441
France 25, 92f2, 111, 208, 220, 294n3, 378, 425, 437f17.2, 105n9, 439f17.3, 499, 521, 529–544	Economic Order Quantity (EOQ) 69, 74–76, 85
Germany xvii, xviii, 12, 24–25, 94, 105n9, 108–109, 110, 111, 117, 133, 140–142, 151n1, 154, 156, 158, 160, 167, 208, 355, 357, 397, 424, 426, 431, 436, 437, 437f17.2, 439f17.3, 507–522, 560	Effectiveness 6, 20, 39, 40, 42, 53, 74, 83, 84–85, 99, 193, 228, 230, 236, 277, 549, 553n9, 563, 575
India 16, 26, 79, 111, 132, 165, 166, 221, 257, 365, 460t18.3, 573–574, 577–590, 595	Efficiency 1–2, 6, 9, 17, 19–20, 23, 25, 27, 36, 39, 43, 48–49, 65, 74, 77, 84–85, 99, 107–108, 111–112, 117, 125, 127, 132, 151, 159, 160, 168, 205, 207, 210, 213–214, 215, 217–218, 228, 248–249, 251, 253, 260, 262, 264, 294, 294n1, 299, 303, 307–309, 310, 312, 318–319, 327, 329–332, 332f13.2, 333–334, 337–348, 352, 356, 367, 398, 403, 406–407, 411–412, 425, 427–429, 442, 449, 453, 455, 456t18.1, 459, 461, 491, 511, 515, 521–522, 533, 541, 550, 554–555, 563, 565–569, 573, 575, 587, 589, 590, 595, 598, 621, 622
Italy 105n9, 106, 429, 437f17.2, 439f17.3, 409, 499, 584	Efficiency and effectiveness 84–85, 99
Japan xiii, xvii, 2–15, 19–22, 24–26, 35–36, 38–45, 49–55, 64–65, 70–72, 77, 79, 83, 92, 98, 99, 100n7, 101n8, 105f4.3, 108, 109–111, 110n12, 111–113, 118, 124–127, 131, 133, 137, 140, 150–157, 151n1, 163, 179–180, 204–213, 215–216, 218–223, 231, 246, 273, 378, 401, 426–427, 430, 451, 453–455, 467–469, 470, 471–474, 481–482, 492, 494, 496–497, 507, 511, 512, 518–521, 530, 531, 542–543, 550t23.1, 552n3, 557–558, 557, 557n17, 557n18, 559, 560, 562, 564–567, 568, 573–587, 589–590, 595–596, 601–602, 608	Efficiency and power 137n10
Korea, South 15, 24, 41, 106, 110, 117, 133, 448–464, 557n18, 563, 590	Efficiency and quality 125, 127, 463, 554, 621
Mexico xvii, 26, 82, 210, 215, 460t18.3, 595–609, 598t25.1	Financial efficiency 291
Norway 157, 167, 426, 436, 437f17.2, 439f17.3, 442, 496	Flow efficiency 329–330, 331–332, 334–348, 406, 407, 411
	Inefficiency 46, 47, 168, 223, 263, 619
	Resource Efficiency 329–331, 332, 348, 407, 411
	Superfluous work 337–338, 520
	Efficiency Matrix 332, 332f13.2, 333–334, 337–347

- Efficiency Paradox 111, 117, 205, 215, 218, 335–336, 348
- Employee Involvement 71, 101, 112, 150, 168, 252f10.2, 428, 431, 451, 452, 596, 601, 615, 619, 622, 627, 628, 633, 634
- Employee Pay (see wages)
- Employment Relationship 93, 94, 95f4.1, 106, 208, 212, 222, 521
 - Interactions of Levels (S-W, F-W, S-F) 95, 95n4, 106, 112
 - Strategic Level (S) 95
 - Workplace Level (W) 95
- Enterprise Excellence (EE) or Centers of Excellence 102, 239, 241, 272–274, 276, 278, 279f11.4, 290, 327, 378, 393, 477n20, 478, 481, 484, 533, 534, 536, 537, 541
- Ericsson AB 244–267
- Employee Relations (see industrial relations)
- European Union (35 European Countries) 428, 441
- Excessive Lean 82, 98, 105f4.3, 109, 110n12, 112, 114, 133, 134, 247, 310, 312, 482n31, 561, 579
- Fads/Fashions 159, 205n1, 542
- Fair Labor Association (FLA) 16, 355, 356, 364
- Finance 76, 97, 138, 139, 210, 214, 239, 263, 280, 282–283, 288, 292, 375–394, 426, 432, 476, 484, 536
- Financial Accounting Standards Board (FASB) 382
- Financialization 214–215, 218, 222
- Finland 167, 428, 436, 437f17.2, 479n23
- First Automobile Works (FAW, China) 552–554, 566
- Fishbone Diagram (Ishakawa Diagram)
- Flexibility 4–5, 10, 14–15, 20, 39, 84, 112, 129, 135–137, 139, 149, 156, 159, 180, 207, 211–212, 215, 218, 220–221, 249–250, 253–254, 256, 260, 299–300, 307, 311, 327, 347 347f13.4, 348, 362, 402, 452, 455, 471, 508–510, 512–514, 530, 555, 559, 564, 568, 573, 578, 596, 599–603, 607, 609, 626, 633
- Flexible Accumulation 11, 21, 124, 134–138
- Flow (see continuous flow)
- Flow Charting 20, 65, 66–67, 78, 190, 264, 406
- Fordism 3, 5–6, 8–9, 12, 19–21, 27, 43, 92, 135, 139, 152, 153, 155–156, 159, 205, 352, 423, 425, 549–552, 567, 568, 595
- Ford Motor Company vii 4, 11, 16n7, 71, 105f4.3, 106, 107, 110, 156, 158, 204, 208, 211, 217, 231, 448, 452n1, 470, 471, 602, 621
 - Ford product development system 472
 - Ford production system (FPS) 470, 492
 - Ford-Mazda plant in Flat Rock, MI 105
 - Mustang 231
 - Thunderbird 211
- Ford-UAW Relationship 107, 107n10, 107n11
- Foreign Direct Investment (FDI) 428, 551, 595, 615, 617
- Foxconn (Hon Hai Precision Industry Co. Ltd.) 12, 15, 16, 365, 567
- France 25, 92f2, 111, 208, 220, 294n3, 378, 425, 437f17.2, 105n9, 439f17.3, 499, 521, 529–544
- French Association for Quality Control (AFCERQ) 531
- French Government 22, 531, 533–34
 - General Directorate of Industrial Strategies (DGSI) 22, 531–535
 - Institut Lean France*
 - Institute for the Prevents of Occupational Accidents and Diseases (INRS) 536, 536n2
 - Ministry of Enterprises and Movement in France (MEDEF)
 - Ministry of Economy, Finance and Industry 537
 - National Pension Fund for Retirement and Occupational Hazards (CARSAT)
 - Quality and Performance 2010 Plan (Ministry of Industry)
 - Regional Directorate for Enterprises, Competition Policy, Consumer Affairs, Labour and Employment (DIRECCTE) 536
 - Regional Directorates for Industry, Research and Environment (DRIRE) 537
- French Regulation School (see Productive Models Theory)
- Friction 400, 401, 405, 406–417, 587–588
 - Flow friction 406–408
 - Friction dependencies 409–410
 - Friction in cost centers 411–412
 - Proxies of friction 413
 - Reducing Friction 413–417
- Frustration (as an impetus for improvement) 20, 79–80, 197, 201, 229, 305, 379, 388, 413, 416, 514, 531
- Full Stack Teams 413–414, 417
- GAZPROM 620
- Genchi Genbutsu (managing by walking around) 10t1.1, 98f4.2
- General Motors Corporation (GM) xvii, 16n7, 467, 469, 470, 483, 511
- General Motors Assembly Division (GMAD) xxx
- General Motors Global Manufacturing System (GMGMS) 156, 470
- General Motors Plants
 - NUMMI joint venture with Toyota 48, 110, 111, 209, 210, 213, 469, 470, 476, 511, 577, 618
 - GM Framingham, MA 213
 - GM Lordstown, OH

- General Electric Corporation 40, 67, 262, 298n11, 475n17, 494
- Generally Accepted Accounting Principles (GAAP) 14n2, 376, 376n2, 380, 381, 382–384, 387, 390, 392
- Germany xvii, xviii, 12, 24–25, 94, 105n9, 108–109, 110, 111, 117, 133, 140–142, 151n1, 154, 156, 158, 160, 167, 208, 355, 357, 397, 424, 426, 431, 436, 437, 437f17.2, 439f17.3, 507–522, 560
- Diversified Quality Production (DQP) 21, 140, 141n17, 142
- Codetermination 25, 141, 154, 157, 163, 167–168, 424, 510, 518
- Hartz I-IV 142
- Social Democratic-Green Coalition
Government led by Schroeder 142
- Works Councils 25, 108–109, 141, 152, 160, 168, 507, 509–510, 512, 515–516, 518, 520–522
- GERPISA 92n2, 218, 533, 538, 596, 596n1
- Global Quality Management System (GQMS) 457–458, 461
- Globalization xiv, 38, 50, 92, 136, 167, 214–215, 218, 222, 364, 440
- Good enough (see Management Satisficing)
- Google 16n7, 130, 396, 398–399, 400, 405, 406–407, 409, 413, 415, 501.
- Governance 27, 50, 107n11, 112, 134, 139, 140, 166, 214, 222, 290–291, 449, 452, 463–464, 511, 616
- Hansei* (self reflection) 486
- Heijunka* (production leveling) 10t1.1, 45, 116, 511
- High-Involvement work practices 41, 42
- Honda Motor Corporation xvii, 8, 16n7, 25, 50, 126, 140, 150, 166, 216, 217, 218, 221, 359, 364, 469, 492, 493, 533, 562, 569, 596
- Honda Marysville Plant xvii
- Health Care Industry 25, 72, 132, 241, 217–292
- Doctors 237, 290, 291, 297n9, 348
- Hospitals 12, 13, 22, 65, 72, 81, 132, 237, 271–274, 279, 283, 284, 289, 291, 292, 304, 327, 328–333, 336, 346, 348, 498, 499–500, 502, 534, 543
- Hoshin Kanri* (Policy Planning or Management) 51, 53, 483–484, 486–487, 503, 573
- Human Pillar of Lean 97, 106, 109, 110, 110n12, 111, 114, 117, 118
- Human Resources (HR) Department 6, 123, 142, 166, 189, 221, 281, 288, 473, 476, 484, 599, 609, 621, 622, 629–632
- Human Resource Management (HRM) xv, 20, 39, 41–42, 49, 94n3, 112, 158, 280, 330, 426, 428, 452, 552n3, 567, 568, 630t26.3, 634
- Humanization of Work 108, 157, 426, 533
- Hybrid Factory 601, 608
- Hyundai International Corporation 3, 24, 105f4.3, 106, 448–464, 590
- Hyundai Motor Corporation (HMC) 448, 449–464, 452n1, 455n2, 456t18.1, 457t18.2, 460t18.3, 460n4
- Kia Motor Corporation (KMC) 448, 455n2, 461
- Hyundai Plants 3, 24, 105f4.3, 106, 448–464, 590
- Hyundai Production System (HPS) 448–464
- Advanced Planning and Scheduling (APS) 456t18.1
- Automotive Performance and Execution Study (APEAL) 458
- E-BOM (Enterprise bill of material) 455, 456t18.1
- Global Quality Management System (GQMS) 457, 458, 461
- Order to Delivery (OTD) 455, 456t18.1
- Workplace Innovation Campaign 459, 459f18.2, 629
- Incentives 19, 96, 101, 102, 301, 307, 313, 408, 411, 458, 459, 515, 521, 537, 565, 619, 619t26.1, 630, 630t26.3
- Industrial Engineering 1–3, 19–20, 64–86, 106–109, 124, 127, 143, 157, 184
- Industrial Relations (labor relations) xv 2, 3, 19, 92–118, 142, 157, 209, 221, 430, 431, 449, 450, 464, 518, 520, 552, 576, 577–578, 586, 588, 597, 608, 618
- India 16, 26, 79, 111, 132, 165, 166, 221, 257, 365, 460t18.3, 573–574, 577–590, 595
- Industries
- Automobile 177–203, 204–226 (see also corporations in automotive industry)
- Clothing/Shoes 6, 11, 14–15, 18, 114, 365
- Computer programming 396–420
- Construction Industry 25, 41, 45, 51, 66
- Finance/Accounting 375–395 (see also finance)
- Government 324–349
- Hospitals/Health Care 271–293 (see also hospitals and doctors)
- Legal/Courts 294–323
- Merchandising (retail) 350–374 (see also clothing/shoes)
- Telecommunications 245–271 (see also Apple and Google)
- Industrie 4.0* 26, 109, 508, 519–520, 522
- Innovation, product and process 49, 222, 227–244
- Institute of Industrial and Systems Engineers (IISE) 69
- Integrative ERP System 455, 456
- International Car Distribution Program (ICDP) 495
- International Diffusion of Lean Management Practices (see Diffusion of Lean Production)

- International Motor Vehicle Program at MIT (IMVP) 25, 35, 92, 105, 208, 213, 402, 470, 490, 511
- World Assembly Plant Survey 25, 213
- International Labor Office (ILO) xxv, 16
- International Organization for Standardization (ISO) 423, 517, 599n2, 605, 620
- Internet 246, 248, 329, 353, 356–358, 356n8, 363, 364, 396, 399, 404, 409, 411, 485, 519, 522
- Internet of things 519, 522
- Italy 105n9, 106, 429, 437f17.2, 439f17.3, 409, 499, 584
- Japan xiii, xvii, 2–15, 19–22, 24–26, 35–36, 38–45, 49–55, 64–65, 70–72, 77, 79, 83, 92, 98, 99, 100n7, 101n8, 105f4.3, 108, 109–111, 110n12, 111–113, 118, 124–127, 131, 133, 137, 140, 150–157, 151n1, 163, 179–180, 204–213, 215–216, 218–223, 231, 246, 273, 378, 401, 426–427, 430, 451, 453–455, 467–469, 470, 471–474, 481–482, 492, 494, 496–497, 507, 511, 512, 518–521, 530, 531, 542–543, 550t23.1, 552n3, 557–558, 557, 557n17, 557n18, 559, 560, 562, 564–567, 568, 573–587, 589–590, 595–596, 601–602, 608
- JPM-1 8, 124
- JPM-2 8, 124
- Japanese Management 3, 12, 36, 39, 40, 42, 77, 79, 552n3, 575, 579, 580, 581, 584
- Japanese Production System (see Toyotism and Lean Production)_
- Jidoka* 36, 37t2.1, 116, 530
- Jishsuken* 37t2.1, 38
- Job Control 20, 103–105, 105f4.3, 106, 109–111, 118
- Job Security 5, 8, 11, 13, 103, 450, 451, 555, 564, 565, 566, 568, 578
- Joint Ventures (JV) 26, 110, 204, 365n14, 511, 551, 567
- Judges 298, 302, 303n23, 314, 314n34, 315, 315n35, 316, 316n38, 317
- Just-in-time Inventory (JIT) 2, 4, 6, 10, 11, 17, 18, 23, 26, 35, 37t2.1, 45, 64, 65, 71, 76, 77, 85, 96, 103, 106, 116, 117, 225n3, 132, 134, 139, 139n15, 142, 150, 151, 159, 167, 190, 209, 212, 214, 222, 248, 280, 310–311, 350, 352, 353, 354, 359, 361, 363, 365, 366, 367, 411, 433, 453, 455, 467n1, 469n5, 493, 498, 508, 530, 534, 535, 555, 571, 574, 585, 590, 598, 602
- Kaizen* (continuous improvement) 6, 10, 10t1.1, 36, 37, 37t2.3, 38–40, 42–55, 79–80, 97, 98, 98f4.2, 100, 104, 112, 117, 127, 130, 151, 151n1, 156, 162, 180–182, 185, 207, 212, 222, 227, 241, 266, 284, 292, 294n2, 311, 362, 388, 391, 454, 459, 463, 474, 475n17, 475, 480–481, 483, 483n34, 484, 499, 507, 511, 533, 533n1, 539, 541, 558, 579, 584, 601, 605–606, 608, 625t26.2, 626–629, 633
- Kakushin* (frame-breaking innovation) 49, 54
- Kanban* (see also Just-in-time Inventory or JIT) 37t2.1, 38, 54, 64, 69, 70, 71, 72, 73, 80, 83, 116, 132, 150, 151n1, 156, 159, 161, 162, 163, 199, 199t7.7, 207, 210, 212, 222, 235, 309, 3109n27, 318, 390, 391, 406, 454, 462t18.4, 467n1, 512, 538, 556, 556n15, 620
- Kata* 126, 126n4
- Key measures 23, 184, 187, 190, 193t7.7, 202, 275, 276, 385–386, 470, 471
- Key Performance Indicators (KPI) 23, 184, 187, 190, 193t7.7, 202, 275, 276, 284, 385–386, 470, 471 483
- Key Behavioral Indicators (KBI) 275
- Knowledge Work 22, 114, 115, 116, 228, 229, 232, 234–235, 441
- Korea, South 15, 24, 41, 106, 110, 117, 133, 448–464, 557n18, 563, 590
- Korean Managers (team leader-Chojang; foreman-Banjang, deparment manager-Kawjang) 451–452
- Labor Process Theory 19, 21, 124n1, 135, 137, 150–168, 161n5
- Labor Relations (see Industrial Relations)
- Labor Unions (see Trade Unions)
- Lawyers 294, 294n1, 295, 295n5, 296, 296n7, 297, 297n9, 298, 298n11, 298n12, 299, 299n13, 300, 300n18, 302–303, 302n19, 303n23, 304–305, 306–309, 309n28, 310–312, 312n30, 313, 314, 314n35, 317, 318
- Compensation 302–303
- Corporate 306
- Chief Legal Officer (CLO) 312
- Personality types (ISTJ, INTJ, ESTJ and ENTP) 297–298, 297n9
- Leadership 9n4, 22, 127, 128, 129, 160, 180, 184–187, 187t7.1, 188, 189, 193t7.2, 194–196, 196t7.4, 197, 198t7.7, 199, 200–202, 210, 228, 229, 237, 238–239, 276, 276f11.2, 277–278, 283–284, 289, 290, 357, 383, 397, 415–416, 455, 469, 474–475, 477n20, 484–486, 486n38, 487, 503, 515, 540, 543, 552, 552n4, 553, 553n9, 562–563, 579, 585, 622
- Center of Excellence Leader (CoE) 240–241
- Chief Engineer (CE) 239–240
- Leadership room 186, 186f7.4, 187, 187t7.1, 194, 195
- Leading with humility 276–277
- Lean Accounting (see accounting)
- Lean-and-Dual 564, 566, 568–569
- Lean-as-a-‘slow idea’ 25, 484, 484n37

- Lean-as-System 161, 162, 162f6.1, 163, 168
- Lean-as-Toolbox 161, 162, 162f6.1, 272, 413
- Lean Assessment 196–200, 196t7.4, 197t7.5
- Lean, Balanced 100, 103, 107, 108, 109, 110, 111–113, 117, 118
- Lean Business System 44, 490, 491, 534
- Lean Culture (see also culture) 187, 191, 193t7.2, 194–195, 196, 196t7.4, 198t7.7, 199, 200, 202
- Lean Distribution 495–497
- Lean Education Advancement Foundation (LEAF) 393
- Lean Enterprise Research Centre (LERC) 490, 493–497, 499, 503
- Lean-Flexible Work Regime 551, 554–555
- Lean Human Resources 41–42
- Lean Implementation 41, 46, 83, 97, 100, 102, 103, 106, 107, 109, 110, 111, 114, 117, 179–203, 186f78.4, 271, 343, 388, 438, 532, 590
- Lean Intensification 163–165
- Lean-Loyal-Long-term view (LLL) 4, 430
- Lean Management (system) 64, 85, 375, 378, 379, 380, 381, 382, 383, 388, 394, 423, 424, 442, 471, 472, 475n18, 481–484, 487, 535, 537, 541
- Lean Merchandising 16–18, 23, 350–367
- Lean Models/Regimes:
 - Productive Model Theory of Robert Boyer and Michel Freyssenet 3n1, 21, 92n2, 124, 134, 138–140, 139n14, 139n15, 205, 206, 596, 603
 - Taylorism 139, 140
 - Fordism 139, 139n14
 - Woollardism 139, 139n15
 - Toyotist Model 139, 140
- Hondian Model 139, 140
- Lean Model Theory of Thomas Janoski and Darina Lepadatu 6, 9, 13, 16–19, 351–356
 - Toyotism 6, 9–13, 19 (see also the more general discussion of Toyotism)
 - Nikeification 6, 9, 13–16, 19
 - Waltonism 6, 9, 13, 16–19, 351–356
- Lean Production Regime of Chris Smith and Matt Vidal: 21, 42, 165–168
 - High Involvement Lean 21, 42, 165, 168
 - Autonomous Lean 21, 165
 - Lean Standardization 21, 165
 - Lean Enough 21, 165
 - Informalized Lean 165–166
- Lean Product and Process Development (LPPD) / Lean Product Development
- Lean Production (see also Toyotism and TPS)
 - A-3 Diagrams 65, 272–273, 277–278, 281, 285, 317, 391, 416, 475, 478, 483–484, 486, 503
 - Andon Boards/Cords xviii, 54, 407, 512, 530, 590, 623, 624–625t26.2, 627
 - Definition 4, 10
 - Continuous flow 11, 150, 151, 151n1, 159, 161, 163, 338, 474
 - Kaizen* 3, 6, 10, 10t1.1, 36, 37, 37t2.3, 38–40, 42–55, 79–80, 97, 98, 98f4.2, 100, 104, 112, 117, 127, 130, 151, 151n1, 156, 162, 180–182, 185, 207, 212, 222, 227, 241, 266, 284, 292, 294n2, 311, 362, 388, 391, 454, 459, 463, 474, 475n17, 475, 480–481, 483, 483n34, 484, 499, 507, 511, 533, 533n1, 539, 541, 558, 579, 584, 601, 605–606, 608, 625t26.2, 626–629, 633
 - Kanban* 37t2.1, 38, 54, 64, 69, 70, 71, 72, 73, 80, 83, 116, 132, 150, 151n1, 156, 159, 161, 162, 163, 199, 199t7.7, 207, 210, 212, 222, 235, 309, 3i09n27, 318, 390, 391, 406, 454, 462t18.4, 467n1, 512, 538, 556, 556n15, 620
 - Just-in-time Inventory (JIT) 2, 4, 6, 10–11, 17–18, 23, 26, 35, 37t2.1, 45, 64–65, 71, 76–77, 85, 96, 103, 106, 116, 117, 125n3, 132, 134, 139, 139n15, 142, 150–151, 159, 167, 190, 209, 212, 214, 222, 248, 280, 310–311, 350, 352–354, 359, 361, 363, 365–367, 411, 433, 453, 455, 467n1, 469n5, 493, 498, 508, 530, 534, 535, 555, 571, 574, 585, 590, 598, 602
 - Long-term focus xxxi, 4–5, 7, 9, 10, 10t1.1, 13, 18, 25, 36, 37t2.1, 38–40, 43, 48–49, 105, 138, 160, 180, 249, 260, 272, 274, 282, 356–358, 361, 379, 391, 392, 400, 416–417, 430–431, 457, 471, 486, 507, 544–555, 567–568, 575, 578, 619, 619t26.1, 634
 - Loyalty 104, 163, 361–362, 496, 568, 575, 579, 618
 - Overtime 1, 2, 6, 10, 12, 112–113, 117, 124, 207, 211, 213, 219, 220, 364–365, 386, 559, 561–562, 564, 580, 627
 - PDCA (Plan-Do-Check-Act) 38, 182, 186, 233, 473, 483, 483n35, 486, 503
 - Pull System 10, 10t1.1, 70, 150, 280, 366, 402, 408, 433, 511, 541
 - Quality Control Circles 4, 11, 77, 79, 126
 - Standardization xxv, 11, 21, 23, 50, 82, 98, 116, 133, 135, 139, 151, 151n1, 154, 156, 158, 163–166, 181, 183, 186, 190, 190f7.7, 193t7.2, 194, 194t7.3, 196t7.4, 200–202, 300n18, 318, 428, 431, 433–434, 442, 461, 530, 536–537, 549, 555, 560, 573–574, 590, 599n2
 - Teamwork xvn1, 4–6, 10t1.1, 11–13
 - Value Stream Mapping
 - Waste (reduction or *Muda*) 4, 22, 35, 38, 47, 183, 211, 351, 366
- Lean Principles 1–3, 22–23, 27, 196t7.4, 198t7.7, 342–343, 366–367, 379, 380–381, 383–384, 393, 402, 416, 480, 492, 507, 620, 623

- Lean Production Models of Janoski and Lepadatu 3, 3n1, 6, 9–19, 351–356
 Toyotism 6, 9–13, 19 (see also ‘Toyotism’ for the another discussion of this concept)
 Nikeification 6, 9, 13–16, 19
 Waltonism 6, 9, 13, 16–19, 351–356
Lean Production Regime of Chris Smith and Matt Vidal: 21, 42, 165–168
 High Involvement Lean 21, 42, 165, 168
 Autonomous Lean 21, 165
 Lean Standardization 21, 165
 Lean Enough 21, 165
 Informalized Lean 165–166
Lean Results (see also Lean Effectiveness) 83
Lean Roles, Worker 99–102, 376n4
Lean Services 324–326, 328–344, 345–348
Lean Supply Chains (set Just-in-time inventory) xiv, 18, 132, 136, 143, 250f1w10.1, 255f10.3, 265f10.9, 353, 356, 367
Lean Thinking xxii, 23, 41, 46, 70, 189, 201, 271, 272, 294, 294n1, 295, 297, 297n9, 298–304, 306, 308, 310–313, 314–319, 377, 381, 385–386, 427, 472, 474n17, 476, 479, 480, 480n27, 481, 483n35, 484, 487, 490, 494, 495, 497, 498, 534–535, 538, 541, 573
Lean Tools 22, 55, 163, 187, 192, 271, 272, 282, 379, 388, 394, 401, 424, 441, 481–484, 493, 531–532, 538, 540–542
Lean Transformation 23, 72, 185, 192, 193, 193t7.2, 194t7.3, 195, 200, 202, 271, 380, 384, 486, 487
 Barriers to or struggles toward 9n4, 23, 115, 118, 192, 193, 193t7.2, 195, 200, 255, 276–278, 292, 299, 380, 381, 391–392, 424, 469, 583
Learning Systems 10t1.1, 15n6, 21, 22, 24, 42, 400, 491, 540, 544
 Discretionary learning 132, 428, 433, 434, 435, 436, 440
 Tacit Knowledge 97, 115, 154, 159, 307
Legacy costs (retirement pensions and health benefits) 219, 219n7
Legal Systems 294–295, 296, 311–312, 314–316, 342, 586
 Corporate Law Departments 296, 311–312
 Courts 314–316, 316n38
 Disruptions 318
 Government Law Offices (Justice Department, Prosecutors, etc.) 296, 315–316
 Regulation 300
 Private Law Firms 303–304, 305–311, 312–313
 Software or e-discovery 318
Life-time Employment System 5, 124
Line Balancing 83–85
Local Content Law 209
 Voluntary Export Limitation on Japanese Automobiles 209
Logistics Management (see also JIT) 265
Machine that Changed the World (MCW) xiii, 2, 5, 35, 64, 92, 158, 205, 208, 210, 376n1, 402, 426, 430, 470, 470n8, 471, 490, 491, 511, 533
‘makeITfair’ 364
Maquiladora Industry xx, 26, 596, 597–598, 598t25.1, 599–601, 602–609
Management by walking around (MBWA or *genchi genbutsu*) 10, 10t1.1, 52, 98, 98f4.2
Management Satisficing 158, 159, 160, 168, 631
Management Theory (MT) 19, 20, 35–55, 39n2, 40, 47–48, 53–54, 77, 98–99, 151, 254, 387n8, 428, 430, 475, 492, 539
Managerial Fashions/Fads (see Fads/Fashions)
Marugakae 126
Mass Production (see Fordism)
Material Requirements Planning (MRP) 68–69, 454
McKinsey Consulting 308n26, 474, 534, 536, 537, 537n3
Medicare 13, 271
Merchandising (see also Walmart, Costco, Target and Amazon) 16–17, 23, 350–374
 Big Box Stores (see also Walmart, Costco, and Target) 16–17, 350, 353, 363–364, 367
 Overstock Merchandising 350, 351, 366–367
 Web merchandising (Amazon)
Mexico xvii, 26, 82, 210, 215, 460t18.3, 595–609, 598, 598t25.1
 Tijuana (Television Valley) 598, 604, 606
 Juarez (Wire Harness Valley) 598, 600, 603, 604, 606
Michigan Medicine (Clinical Design and Innovation Team) 237
Model Area 186, 186f7.4, 187, 193t7.2, 194t7.3
Modern Management 467, 470–472, 475, 475n18, 483–484, 485
Modular Assembly 455–457, 461
Muda (Waste) 4, 22, 35, 38, 47, 183, 211, 351, 366
NAFTA 139, 599, 600, 602
New Production Concepts 108, 507–510, 513, 515, 521
New Public Management (NPM) 164, 427, 441, 536
Nike 6, 11, 14, 15, 18, 114, 365
Nikeification 6, 9, 13–16, 19
Nissan Motor Corporation Company xvii, 11, 16n7, 25, 50, 150, 206–207, 216–218, 221, 468, 492–493, 497
 Nissan Motors Smyrna, TN (NMST) xvii
 Nissan Motors UK (NMUK) 219–222
Norway 157, 167, 426, 436, 437f17.2, 439f17.3, 442, 496
NUMMI (GM-Toyota Plant) 48, 110, 111, 209, 210, 213, 469, 470, 476, 511, 577, 618
Obeya 228, 236, 237
Offshoring 2, 7, 8, 13–16, 18, 136, 137, 356, 367
Open and contingent method 21, 153

- Operations Management (OM) 20, 35, 37t2.1, 38, 69, 93, 96–97, 107, 324, 393, 467n1, 473
- Operations strategy 107, 116, 333–334, 334f13.3, 335, 339, 341, 343–344, 346, 347–348
- Organizational Control 43, 44–46
- Organizational Development (OD) 280, 281
- Original Equipment Manufacturer (OEM) 361, 247, 361
- Outsourcing 1, 2, 7, 136, 137, 312, 381, 456, 501, 514
- Overstock 350, 351, 366, 479n25
- Paradox (see also contradictions) 20, 35–36, 38–39, 47–49, 51, 54, 100, 111, 117, 128, 158n4, 204–206, 215–216, 218, 221, 222, 335, 338–339, 342, 348, 380, 569n37, 616
- Participation 26
- Consultative Participation 162, 163, 166
- Labor force participation rate 7
- Nominal Participation 162f6.1
- Substantive Participation 154, 157, 159–163, 162f6.1, 168
- Survey Participation 433, 439, 566n35
- Worker/employee Participation xiii 26, 37t2.1, 38, 77, 79, 93, 96–97, 98, 104, 105n9, 125, 130, 131, 133–134, 141, 152, 154, 157, 159, 160–162, 162f6.1, 163–166, 167–168, 198t7.7, 311, 433, 439, 459, 501, 515, 517, 521, 552–553, 553n9, 557, 559–560, 566n35, 568, 578, 599, 616, 618, 619t26.1, 626
- People Development 198t7.7, 261, 292, 493, 530, 540, 543–544
- Personality 297–298, 297n9
- Physicians (see Doctors)
- Piggly Wiggly Corporation 4
- Plain English Financials 23, 383–384, 387, 389–390
- Plan-Do-Check-Act (PDCA) 38, 182, 186, 233, 473, 483n35, 486, 503
- Plaza Agreements 208–210, 216, 222
- Poka-yoke* 45, 116, 257, 261, 401, 556
- Polaris Motorcycles (Indian brands) 84, 85
- Post-Fordism Theory (see also flexible accumulation) 35, 134–138
- Post-Modern Theory 135
- Practice theory 20
- Prescriptive and Universalist 21, 154
- Problematic Lean Practices 48, 81, 83–84, 94n3, 104, 117n13, 272, 325, 367, 400, 574, 585, 586, 590, 622, 624t26.2
- Productive Models Theory (see also Lean Production Models of Janoski and Lepadatu) 3n1, 21, 92n2, 124, 134, 138–140, 139n14, 139n15, 205, 206, 596, 603
- Taylorism 139, 140 (see Taylorism for discussions other than this theory)
- Fordism 139, 139n14, (see Fordism for discussions other than this theory)
- Woollardism 139, 139n15
- Toyotist Model 139, 140 (see Toyotism for discussions other than this theory)
- Hondian Model 139, 140
- Production Regimes 153, 160–167, 162f6.1
- Autonomous lean 162–163, 162f6.1
- High involvement lean, 161, 162 162f6.1
- Lean enough 161, 162, 162f6.1
- Lean standardization 161, 162f6.1, 163
- Lean intensification 164–165
- Informalized lean 165–167
- Profit Model 387, 387n8, 388
- Program Evaluation and Review Technique (PERT) 66
- Public Services (see Government) 23, 324–348, 534
- Quality Control Circles 4, 11, 77, 79, 126
- Quality Management 36, 76, 81, 96n5, 205, 246, 248, 251, 252, 252f10.2, 253–257, 260, 261–264, 264f10.8, 265–267, 423, 435, 455, 457, 459, 461, 464, 492, 530, 537, 573, 599n2, 605, 606, 620, 622
- Queues 70, 71–72, 74, 76, 80, 82, 85, 230, 235, 328, 337–339, 346, 491
- Batch-and-Queue 74, 76, 80, 82
- Queue limitation (*Kanban*) 70, 71–72, 85
- Quick Response Codes (QR) (see Bar Codes)
- Radio frequency identification (RFID) 353, 519, 519n2
- Redundant Arrays of Inexpensive Disks (RAID) 398
- Regulation (see Productive Models for Regulation School) 16, 19, 26, 129, 134, 142, 300, 305, 312n30, 363n12, 365, 425, 431, 480, 512–515, 517, 521, 553, 586, 605, 616–618, 621, 633
- Deregulation 514
- Self-regulation 516
- Resilient 206, 245, 249–251, 253, 254, 255f10.3, 257–258, 260, 263, 265–266, 400, 417, 543, 585
- Rhetoric 43, 45–46, 51, 168, 352, 519
- Ringi* (group decision-making) 10t1.1, 130
- Risk Management 249, 252–254, 255f10.3, 256–257, 259, 263, 266
- Rolling Forecasts 23, 385–386, 391
- Russia (former Soviet Union or FSU) xiv 26, 70n1, 132, 165, 166, 460t18.3, 461n5, 615–634, 624–625t26.2, 630t26.3
- Satisficing (see Management Satisficing)
- Scientific management 3, 5–6, 8–9, 9n4, 11–12, 19–21, 27, 43–44, 47, 92, 100–101, 135, 139, 152–153, 155–156, 159, 167, 205,

- 246, 423–425, 433, 434, 438, 514, 533,
549, 552–554, 567, 568, 595–597, 616–
617
Secondary Needs 337–338
Shingijutsu Consultants 376 376n4, 474, 474n16,
480
Shitsuke (discipline see also 5's) 39n2, 51, 575
Single-minute exchange of die (SMED) 72, 261,
531, 533n1
Skills 5, 21, 39, 52, 71, 96, 97, 103, 104, 129, 139,
141, 151–152, 157, 159, 164–165, 167–
168, 222, 237, 240, 260, 275, 277, 282,
283, 343, 389, 391, 424–426, 433, 443,
452, 477, 479, 516, 521, 553, 559, 560,
581, 604, 609, 632
Cognitive skills 97
Communication skills or People Skills 240,
581
Critical skills 237
De-skilling 21, 139, 151–152, 159, 164,
167–168, 222, 343, 425, 560
Multiple skills 5, 104, 129, 533
Skills matrix 283
Tacit skills 159
Small to Medium Enterprises (SME) xx 248, 533,
603, 606–609
Small Work Groups
SOAP Note (Subjective, Objective, Assessment,
Plan)
Society of Motor Manufacturers and Traders
(SMMT in UK)
Sociomateriality 36, 51, 53–55
Space X 403–404, 405, 410
Spaghetti Diagram 66–67
Semi-autonomous Teams (Self-managing Teams)
Shareholder value theory 214–215, 258–259, 514
Single Minute Exchange of Die (SMED)
Six-Sigma xv 106, 117, 131, 233, 265, 251,
252f10.2, 253, 255, 256f10.4, 258, 259,
259f10.6, 260, 260f10.7, 261–267,
264f10.8
Small Work Group
Social Science Theory (see also socio-technical
theory) 124, 135, 138–140, 139n14,
139n15, 140–142, 141n17, 431–432, 509–
510, 617
Societal effects of lean production 44, 150
Sociomateriality 20, 36, 51, 53–54, 53n3
Socio-technical Theory (STT) 11, 14, 22, 53n3,
97, 116, 124, 127–131, 132, 133, 426, 436,
441, 442, 479n25, 416, 529, 603
Sociological Theory 11, 21, 24, 43–44, 96, 112,
124–127, 128, 134, 137b 13, 138n13, 161,
167, 168, 377, 430, 431, 443, 586–590
Software Engineering 396, 400, 404–405,
407–408, 413
Software Systems, Quality 309, 399, 407–409,
411, 415
Cost Centers 411–412
Devops 404, 404n3, 407–409, 411, 415, 501
Federated Architecture 409–410
Frictions 406–417
Proxies 413
Specialization 129, 135, 137n11, 298–299,
306–307, 335, 348, 426, 433, 498–499,
598
Flexible specialization 426–427
Standardized Work 37, 109–112, 150, 161,
182–183, 479, 579
State-owned Enterprises (SOE, China) 25–26,
550t23.1, 551, 554, 560, 622, 633
Statistical Process Control (SPC) 6, 11, 96, 125,
257, 261, 289
Strategic Management 20, 139–140, 394, 493–494
Strategic Planning 187t7.1, 391
Strikes/labor unrest 6, 43, 141, 221, 355, 357, 562–
563, 563n31, 569, 577–578, 585
Students and Scholars Against Corporate
Misbehavior (SACOM) 364–365
Stryker Osteonics 71s3.1
Supply Chain Management (SCM) (see also JIT)
6, 14, 35, 41, 68, 248–249, 352, 353, 359,
366, 455, 456t18.1, 508, 600, 605
Surveys 5, 24, 41, 96, 124–127, 132, 204, 213–214,
216, 218, 220, 256, 294, 297, 423, 424, 433,
440, 471, 475n18, 510, 602–606, 621
American Working Conditions Survey
(AWCS) 5, 132, 432
European Working Conditions surveys
(EWCS) 5, 24, 132, 220, 220n9, 423,
432–433, 440
Fraunhofer Institute Survey 510
IMVP World Assembly Plant Survey
213–214, 216, 471
National Survey of Employment, Wages,
Technology and Training (ENESTYC,
Mexico) 602–606
RAND American Life Panel (ALP) 432
TMUK Opinion Survey 221n9
World Management Survey 475n18
Survey Methods
Multiple Classification Analysis (MCA)
434
Principal Component Analysis (PCA) 434
Sweden 45, 106n9, 131, 133, 156, 1i57, 256, 339,
426, 428, 431, 436, 437f17.2, 513, 590
Swedin I, Sweden II 148n18
System, Society and Dominance Effects 44,
154–158
Takata Seat-belt Company 82
Takt Time 37t2.1, 83, 130, 150, 582, 590, 623
Taylorism 3, 5–6, 9n4, 11–12, 44, 47, 92, 100–101,
135, 152–153, 156, 159, 167, 423–425,
433–434, 438, 514, 533, 549, 553, 595–
597, 616–617

- Teamwork xvn 1, 4–6, 10t1.1, 11–14, 22, 25, 124, 127, 130–132, 137, 143, 150, 151, 157, 163–165, 212, 215, 222, 240, 246, 259, 261, 297, 306–307, 355, 356, 358, 361–362, 362n10, 367, 424, 434–435, 435f17.1, 441, 507, 511–512, 515–517, 540, 543, 557n18, 599, 619, 619t26.1, 624t26.2, 626–627, 633–634
- Employee Involvement 71, 101, 112, 150, 168, 252f10.2, 428, 431, 451, 452, 596, 601, 615, 619, 622, 627, 628, 633, 634
- Environmental Scan or Future Search 130
- Executive Team (Medical) 22, 276, 283–285, 304
- Full Stack Teams 402, 413, 414, 417
- Improvement Team (Medical) 22, 237, 283–284, 486
- Managerial Teams 11
- Quality Control Circles 4, 11, 77, 126
- Redesign Team 22
- Self-managed teams (semi-autonomous teams) 129, 130–131, 151, 157, 183, 236, 516, 604
- Small Work Group System (SWG, China) 550, 553, 557, 557n18, 558
- Steering Committee xxii 130
- Support Services Team (Medical) 280–281
- Team Leaders xiii, 12, 23, 110, 471, 557–558, 557n19, 561–562, 623, 624–625t26.2, 626–628, 633
- Team Members 4, 101, 113–114, 129, 180, 182–183, 186–187, 189, 197, 201, 219, 230–231, 237–239, 276, 281, 288, 307, 309, 383, 388–389, 390, 413, 434, 517, 557, 624–625t26.2, 627
- Work Design Team or Committee 130
- Worker Participation 26, 104, 133, 141, 152, 154, 157, 159, 161, 167–168, 552, 553, 553n9, 559
- Telecommunications Sector 245–270
- Temporary Employees/Workers (Temps) 2, 4, 5, 8, 10–13, 16, 50, 124, 134, 136, 137, 155, 166, 221, 222, 312, 351t14.1, 352, 355n4, 355n5, 359, 514, 555, 555n12, 564, 565t23.2, 566, 568, 569, 578
- Theories of Lean
- Industrial Engineering Theory 1–3, 19–20, 64–86, 106–109, 124, 127, 143, 157, 184
- Industrial Relations Theory (labor relations theory) xv, 2, 3, w19, 92–118, 142, 157, 209, 221, 430, 431, 449, 450, 464, 518, 520, 552, 576, 577–578, 586, 588, 597, 608, 618
- KKM Model (Kochan, Katz and McKersie) 93–94
- Labor Process Theory 19, 21, 124n1, 135, 137, 150–168, 161n5
- Lean Production Models 3, 3n1, 6, 9–19, 351–356
- Management Theory 19, 20, 35–55, 39n2, 40, 47–48, 53–54, 77, 98–99, 151, 254, 387n8, 428, 430, 475, 492, 539
- International Management 98–99
- Paradoxes approach 47–48
- Risk management 254
- Scientific management 3, 5–6, 8–9, 9n4, 11–12, 19–21, 27, 43–44, 47, 92, 100–101, 135, 139, 152–153, 155–156, 159, 167, 205, 246, 423–425, 433, 434, 438, 514, 533, 549, 552–554, 567, 568, 595–597, 616–617
- Fordism 3, 5–6, 8–9, 12, 19–21, 27, 43, 92, 135, 139, 152, 153, 155–156, 159, 205, 352, 423, 425, 549–552, 567, 568, 595
- Taylorism 3, 5–6, 9n4, 11–12, 44, 47, 92, 100–101, 135, 152–153, 156, 159, 167, 423–425, 433–434, 438, 514, 533, 549, 553, 595–597, 616–617
- Sociomateriality 53–54
- Shareholder value theory 214–215, 258–259, 514
- Theory of Constraints 387n8, 492, 539
- Theory Z 40, 77
- McDonaldization Theory (see George Ritzer)
- Post-Fordism Theory (see also flexible accumulation) 35, 134–138
- Post-Modern Theory 135
- Productive Models Theory 3n1, 21, 92n2, 124, 134, 138–140, 139n14, 139n15, 205, 206, 596, 603
- Relational Coordination Theory (RCT) 96
- Regulation Theory (see Productive Models Theory)
- Socio-technical Theory (STT) 11, 14, 22, 53n3, 97, 116, 124, 127–131, 132, 133, 426, 436, 441, 442, 479n25, 416, 529, 603
- Social Science Theory (see also socio-technical theory) 124, 135, 138–140, 139n14, 139n15, 140–142, 141n17, 431–432, 509–510, 617
- Diversified Quality Production Theory 135, 140–142, 141n17, 509–510
- Productive Models Theory 138–140, 139n14, 139n15
- Varieties of Capitalism theory (VoC) 431–432, 617
- Sociological Theory 11, 21, 24, 43–44, 96, 112, 124–127, 128, 134, 137b13, 138n13, 161, 167, 168, 377, 430, 431, 443, 586–590
- Communities of fate 96, 112, 126, 377
- Flexible Accumulation theory 11, 21, 124, 134–138, 151
- Institutional Theory (organizational theory) 24, 43–44, 134, 138n13, 161, 167, 168, 430, 431, 443, 586–590

- Theories of Lean (cont.)
 Weber's theory of bureaucracy 143, 618
Sociomateriality 36, 51, 53–55
Six Sigma xv, 106, 117, 131, 233, 265, 251, 252f10.2, 253, 255, 256f10.4, 258, 259, 259f10.6, 260, 260f10.7, 261–267, 264f10.8
Toyotism Theory 3, 4, 6–11, 13, 17–19, 21, 26, 43, 127, 137, 139, 355–356, 366, 533, 564, 566, 603, 608
Total Productive Maintenance (TPM) 20, 73, 81, 85, 11, 107n10, 454, 520, 531, 532
Total Quality Control (TQC) / Total Quality Management (TQM) 35, 41, 45, 46, 156, 251, 252, 252f10.2, 255, 265, 232, 257–258, 620
Tools (lean) (see Lean Tools) xxi, 55
Toyota Motor Corporation xvii, xviii, 2, 3, 4, 7, 8, 9, 11, 12, 13, 16n7, 18, 21, 24, 25, 26, 35, 36, 37t2.1, 37–39, 41, 44–45, 47–51, 54, 70, 71, 72n2, 79, 92, 97, 98f4.2, 105f4.3, 110–111, 115, 116, 117, 125–127, 130, 136, 140, 150, 152, 155–156, 157, 158, 158n4, 163, 166, 167, 179–182, 189, 200–201, 205–208, 213, 215–222, 232–233, 236, 241, 246, 273, 292, 327, 335, 355n5, 359, 364, 366, 376–378, 429, 448, 449, 452n1, 453–455, 458, 459, 462t18.4, 467–487, 472n11, 473n12, 473n13, 477n19, 477n20, 479n22, 480n28, 481n29, 482n30, 482n31, 483n32, 484n36, 491–497, 502–504, 508, 511, 516, 519, 529–535, 540–543, 554, 564, 566, 573–577, 579–583, 585–590, 595–596, 603, 608, 618, 621–623, 623–624t26.2, 626–627, 629, 630t26.3, 631–632, 634
Camry, Toyota 125, 468
Corolla, Toyota 211, 213, 473
Operations Management Consulting Division (OMCD) 37t2.1, 38, 473, 474, 476
Toyota Motor Corporation Plants
 NUMMI 48, 110, 111, 209, 210, 213, 469, 470, 476, 511, 577, 618
 Toyota Honsha Plant in Japan 43
 Toyota Europe Design and Development Center in France 535
 Toyota Takaoka Plant in Japan 213
TMMBC-Toyota Motor Manufacturing de Baja California
TMMK-Toyota Motor Manufacturing, Georgetown, Kentucky 2, 125, 127, 179, 180, 185
TMUK-Toyota Motor Corporation United Kingdom 219, 220n9
TMCA-Toyota Motor Corporation Australia 577, 583, 584–586, 589, 590
TPCA-Toyota Peugeot Citroen Automobile Plant (joint venture) 535
TKM-Toyota Kirloskar Motors (India) 221, 577, 581
Toyota Production System (TPS) or Toyota Way 3, 8, 12, 13, 24, 35, 36, 38, 49, 70, 71, 72n2, 92, 97, 98, 116, 117, 137, 140, 150, 152, 155, 158, 163, 179–202, 205, 206, 211–212, 222, 335, 376, 448, 462t18.4, 467n1, 469, 474, 477, 479n22, 491, 529, 530, 535, 542, 554, 573, 579, 632
Toyota Indian Production System (TIPS) 577–582
Toyota Production System (TPS, Australia) 582–592
Toyota Way (figure 4.3) 97, 98f4.2, 105, 106, 108, 109, 110, 111, 114, 117, 118, 367
Continuous Improvement or technical Pillar 97, 98, 105f4.3, 108
Respect for People or Social Pillar 97, 98, 105f4.3, 106, 108, 109, 110, 111, 114, 117, 118
Toyotism Theory 3, 4, 6–11, 13, 17–19, 21, 26, 43, 127, 137, 139, 355–356, 366, 533, 564, 566, 603, 608
Trade unions (includes Unions and Labor Unions) 19, 20, 107, 131, 134, 136, 141, 204, 207, 214–215, 220, 431, 492, 500, 507, 509, 510, 517, 520–522, 550, 558, 562, 576, 578, 581–582, 583, 585–586, 589, 597, 607–608, 622, 632
Amalgamated Engineering and Electrical Union in the UK (AMICUS) 220, 220n10
Central de Trabajadores Mexicanos (CTM, Mexico) 607–608
IG Metall (Germany) 25, 109, 509, 516, 518
Korean Metal Workers Union (KMWU) 451
United Automobile Workers (UAW) 103, 106f4.3, 107, 110, 213, 576
Transport and General Workers Union (UK) 220n10
Unite UK 220n10
Traditionalist World View 539–540
Transplants (Japanese) xiii, xvii, 2, 6, 11–13, 19, 21, 43, 44, 92, 98, 99, 100n7, 105n9, 110, 111, 114, 117, 127, 131n7, 155, 209, 213, 215, 217–220, 222, 460–462, 463, 470, 531, 535, 573–574, 583, 586–587, 589
True Lean xviii, 12, 21, 179, 180, 181, 183, 184–189, 193, 195, 196–200, 201–202
True North 284–292
Type Z Organization (Ouchi) 40, 77
United Automobile Workers (UAW) 103, 106f4.3, 107, 110, 213, 576
United Kingdom (UK) 22, 25, 43, 44, 69, 73, 96n5, 100n7, 103, 105f4.3, 111, 124, 125, 139n15, 142n18, 151n1, 156, 157, 164, 217, 219, 220n8, 220n9, 220n10, 286f11.5, 295, 342, 343, 386, 431, 436, 438,

437f17.2, 439f17.3, 442, 480n27, 490–506, 509	358–360, 361–365, 362n10, 365n14, 366–367
Calderdale and Huddersfield NHS Foundation 499	Walmart Stores 16–17, 351, 353, 354, 355, 360, 361, 363, 364, 365n14, 366
Department of Trade and Industry (DTI) 493–494	Sam’s Club 16, 352, 361
Monopolies and Mergers Commission 217	Waltonism 6, 9, 13, 16–19, 351–356
National Audit Office 500	Waste 3–5, 22, 35, 38, 46–47, 65, 94, 112, 115–116, 134, 151n1, 154, 163, 165, 180, 182–183, 186, 190, 190f7.7, 196t7.4, 200, 211, 227–230, 232, 236, 241, 251–252, 252f10.2, 295, 299n13, 303, 306, 309–311, 317–318, 325–316, 332f13.2, 334f13.3, 336, 338, 342–344, 351, 365–366, 375–376, 380–381, 383, 385, 388–391, 405, 413, 478, 503, 531, 541, 559–560, 567, 576, 578, 584–585, 615, 621, 627
National Health Service (NHS) 46, 498, 502	<i>Muda</i> 4, 22, 35, 38, 47, 183, 211, 351, 366
United States (USA) xviii, 2, 5, 7, 8, 9, 13–19, 21, 68, 92, 98, 100n1, 103, 105n9, 107, 110, 111, 117, 151n1, 153n3, 154–157, 167, 209, 210, 213, 216, 437f17.2, 467–505	Work Intensification 2, 6, 43, 106, 124, 151, 157, 159–161, 163, 164–168, 357, 442
Unions (see trade unions)	Work Organization xxii, 5, 44, 94, 95, 100, 100n7, 103, 105n9, 112, 117n13, 132, 153, 161, 215, 220, 423–425, 427–435, 435f17.1, 436–437, 437f17.2, 438–439, 439f17.3, 441–443, 451–453, 482, 530, 551, 601
University of Kentucky (UK), Lean Systems Program 21, 179–180	Worker Empowerment 2, 157, 159–160
Valeo Production System (VPS) 492, 531–532, 533, 541, 599, 602	Worker/employee Participation (see also Teamwork) xiii, 26, 37t2.1, 38, 77, 79, 93, 96–97, 98, 104, 105n9, 125, 130, 131, 133–134, 141, 152, 154, 157, 159, 160–162, 162f6.1, 163–166, 167–168, 198t7.7, 311, 433, 439, 459, 501, 515, 517, 521, 552–553, 553n9, 557, 559–560, 566n35, 568, 578, 599, 616, 618, 619t26.1, 626
Value Stream Mapping (VSM) 23, 54, 65, 67, 68, 151, 161–163, 236, 282, 292, 304, 473n14, 478, 541	Worker Pay (see wages)
Varieties of Capitalism (VoC) 431–432, 617	Works Councils 25, 108–109, 141, 152, 160, 168, 507, 509–510, 512, 515–516, 518, 520–522
Virginia Mason Medical Center in Seattle 271, 480, 500	Work Simplification Program (WSP) 20, 77–79
Vlasic Kosher Dills 354	World Trade Organization (WTO) 139, 554
Volkswagen AG (VW) 16n7, 108, 109–111, 211, 458, 511, 516, 518–519, 566, 621–623, 624t26.2, 626, 627, 628, 630t26.3, 631–534	X Matrix 285, 287f11.6
Voluntary Restraint Agreement (VRA) 468	
Wages (pay) 2, 6, 14–18, 18n8, 23, 103, 109–110, 133, 138, 142, 156, 207, 212, 214–215, 218–219, 221–222, 350–351, 351t14.1, 352–353, 355, 358–359, 362–364, 366–367, 425, 431, 458–459, 485, 516, 558–559, 562, 565–567, 597, 598t25.1, 600, 602, 607, 609, 630t26.3, 631	
Walmart Corporation xvii, 16–18, 18n8, 18n9, 23, 350–356, 351t14.1, 352n2, 352n3, 356n7,	