Appendix A
Additional Related Literature

Table A.1 Literature on aspects related to product substitution

Aspect	
Stochastic inventory control with substitution	
Bassok et al. (1999)	Bitran and Dasu (1992)
Cai et al. (2004)	Chand et al. (1994)
Chen and Chen (2004)	Deniz et al. (2005)
Duenyas and Tsai (2000)	Gallego et al. (2006)
Hale et al. (2000)	Hsieh and Wu (2009)
Hsu and Bassok (1999)	Ignall and Veinott, Jr. (1969)
Liu and Lee (2007)	Pasternack and Drezner (1991)
Silver and Moon (2001a)	Silver and Moon (2001b)
Tang and Yin (2007)	Yadavalli et al. (2006)
Yao and Zheng (1999)	Yao and Zheng (2003)
Hsieh and Wu (2009)	
Inventory control with random yields	
Birge et al. (1998)	Bitran and Dasu (1992)
Duenyas and Tsai (2000)	Gerchak and Grosfeld-Nir (1999)
Hsu and Bassok (1999)	Liu and Lee (2007)
Ng and Lam (1998)	Rao et al. (2004)
Yadavalli et al. (2006)	
Inventory control for perishable products	
Karaesmen et al. (2008)	Lystad et al. (2006)
Nahmias (1982)	
Flexible bills-of-materials / material compatibility	
Ball et al. (2003)	Hohenegger et al. (2007)
Pels (2006)	Ram et al. (2006)
Ramdas (2003)	Woss (1997)

(*Continued*)

Table A.1 (Continued)

Aspect	
Customer-driven product substitution	
Agrawal and Smith (2003)	Bitran et al. (2005)
Chen and Plambeck (2008)	Chong et al. (2004)
Ernst and Kouvelis (1999)	Gaur and Honhon (2006)
Honhon et al. (2006)	Kok and Fisher (2007)
Li et al. (2006)	Mahajan and van Ryzin (2001)
Netessine and Rudi (2003)	Rajaram and Tang (2001)
Shah and Avittathur (2007)	Shah and Avittathur (2007)
Smith and Agrawal (2000)	Yang and Schrage (2009)
Zhang and Chen (2004)	Ganesh et al. (2008)
Component commonality	
Boysen and Scholl (2008)	Fixson (2007)
Jans et al. (2008)	Ma et al. (2000)
Silver and Minner (2005)	Swaminathan and Tayur (1998)
Swaminathan and Tayur (1999)	Thonemann and Brandeau (2000)
van Hoek (2001)	
Postponement	
Chen and Chen (2004)	Kerkkänen (2007)
Ma et al. (2000)	Silver and Minner (2005)
Swaminathan and Tayur (1998)	Swaminathan and Tayur (1999)
van Hoek (2001)	
Inventory rationing and multiple demand classes	
Arslan et al. (2007)	Benjaafar and ElHafsi (2006)
Duran (2007)	Kleijn and Dekker (1998)
Kocaga and Sen (2007)	Kranenburg and van Houtum (2007)
Moon and Kang (1998)	Teunter and Haneveld (2008)
Revenue management of substitutable/flexible products	
Birge et al. (1998)	Faber (2005)
Gallego et al. (2004)	Gallego and Phillips (2004)
Karaesmen and van Ryzin (2004)	Shumsky and Zhang (2007)
Assembly-to-order / build-to-order	
DeCroix and Zipkin (2005)	DeCroix et al. (2005)
Gunasekaran and Ngai (2005)	Lu and Song (2005)
Thomas and Warsing (2007)	
Remanufacturing and disassembly	
Bayindir et al. (2005)	Bayindir et al. (2007)
Inderfurth (2004)	Li et al. (2006)
Li et al. (2007)	Schultmann et al. (2002)
Supplier selection and multiple sourcing	
Aissaoui et al. (2007)	Basnet and Leung (2005)
Benjaafar et al. (2007)	Burke et al. (2007)
Degraeve et al. (2000)	Degraeve et al. (2004)
Demirtas and Üstün (2008)	Elmaghraby (2000)

(*Continued*)

Table A.1 (Continued)

Aspect	
Freling (2003)	Gupta and Krishnan (1999)
Hsu et al. (2006)	Huang and Keskar (2007)
Sonmat (2005)	Tempelmeier (2002)
Xia and Wu (2007)	Zhao and Klabjan (2005)
Emergency orders	
Axsäter (2007)	Axsäter (2006)
Gallego et al. (2007)	
Resource substitution	
Begnaud et al. (2006)	Henrich et al. (2007)
Klein and Luss (1991)	Klein et al. (1993)
Product, product family and portfolio design	
Balakrishnan and Chakravarty (2008)	Boysen and Scholl (2008)
de Weck et al. (2003)	D'Souza and Simpson (2003)
Gupta and Krishnan (1999)	Hardung and Kollert (2005)
Hölttä-Otto (2005)	Jiao et al. (2006b)
Jiao et al. (2006a)	Krishnan and Ulrich (2001)
Lang et al. (2008)	Nepal et al. (2009)
Ramdas (2003)	Simpson (2004)
Suh et al. (2004)	Suh (2005)
Thonemann and Brandeau (2000)	
Substitution, APS and ATP/CTP	
Chen et al. (2001)	Chen (2006)
Dickersbach (2006)	Ettl et al. (2006a)
Ettl et al. (2006b)	Faber (2005)
Zhao et al. (2005)	
Flexibility in production and logistics	
Naim et al. (2006)	Petkova and van Wezel (2006)
Pickup and delivery problems	
Berbeglia et al. (2007)	Desaulniers et al. (2002)
Parragh et al. (2008a)	Parragh et al. (2008b)
Coordination of pricing, production, and procurement	
Karakul and Chan (2008)	Kuyumcu and Popescu (2006)
Levis and Papageorgiou (2007)	Tang and Yin (2007)
Yano and Gilbert (2004)	
Hypergraphs	
Ausiello et al. (2001)	Gallo and Pallottino (1992)
Gallo et al. (1993)	Gallo and Scutella (1998a)
Gallo and Scutella (1998b)	Ozturan (2004)
Cutting stock problems	
Poltroniere et al. (2008)	

Bibliography

Absi, N., & Kedad-Sidhoum, S. (2007). MIP-based heuristics for multi-item capacitated lot-sizing problem with setup times and shortage costs. *RAIRO – Operations Research – Recherche Opérationnelle, 41*, 171–192.

Agrawal, N., & Smith, S. (2003). Optimal retail assortments for substitutable items purchased in sets. *Naval Research Logistics, 50*(7), 793–822.

Aissaoui, N., Haouari, M., & Hassini, E. (2007). Supplier selection and order lot sizing modeling: A review. *Computers & Operations Research, 34*(12), 3516–3540.

Akartunalı, K., & Miller, A. (2009). A heuristic approach for big bucket multi-level production planning problems. *European Journal of Operational Research, 193*(2), 396–411.

Alfieri, A., Brandimarte, P., & D'Orazio, S. (2002). LP-based heuristics for the capacitated lot-sizing problem: The interaction of model formulation and solution algorithm. *International Journal of Production Research, 40*(2), 441–458.

Almada-Lobo, B., Klabjan, D., Carravilla, M., & Oliveira, J. (2007). Single machine multi-product capacitated lot sizing with sequence-dependent setups. *International Journal of Production Research, 45*(20), 4873–4894.

Almada-Lobo, B., Oliveira, J., & Carravilla, M. A. (2008). A note on "the capacitated lot-sizing and scheduling problem with sequence-dependent setup costs and setup times". *Computers & Operations Research, 35*(4), 1374–1376.

Andradóttir, S. (1998). A review of simulation optimization techniques. In *Proceedings of the 1998 Winter Simulation Conference* (pp. 151–158).

Anily, S., Tzur, M., & Wolsey, L. (2005). *Multi-item lot-sizing with a joint set-up cost* (Working Paper 2005/70). Louvain, Belgium: Center for Operations Research and Econometrics (CORE), Université Catholique de Louvain.

April, J., Better, M., Glover, F., & Kelly, J. (2004). New advances and applications for marrying simulation and optimization. In *Proceedings of the 2004 Winter Simulation Conference* (pp. 80–86).

April, J., Better, M., Glover, F., Kelly, J., & Laguna, M. (2006). Enhancing business process management with simulation optimization. In *Proceedings of the 2006 Winter Simulation Conference* (pp. 642–649).

April, J., Glover, F., Kelly, J., & Laguna, M. (2003). Simulation-based optimization: Practical introduction to simulation optimization. In *Proceedings of the 2003 Winter Simulation Conference* (pp. 71–78).

Apte, U., & Viswanathan, S. (2007). A proactive demand management model for controlling e-retailer inventory. In U. Apte & U. S. Karmarkar (Eds.), *Annals of Information Systems. Managing in the information economy* (Chap. 15, pp. 355–384). Berlin: Springer.

Archibald, T. W. (2007). Modelling replenishment and transshipment decisions in periodic review multilocation inventory systems. *Journal of the Operational Research Society, 58*(7), 948–956.

Arslan, H., Graves, S., & Roemer, T. (2007). A single-product inventory model for multiple demand classes. *Management Science, 53*(9), 1486–1500.

Ausiello, G., Franciosa, P., & Frigioni, D. (2001). Directed hypergraphs: Problems, algorithmic results, and a novel decremental approach. In A. Restivo, S. R. D. Rocca, & L. Roversi (Eds.), *Lecture Notes in Computer Science: Vol. 2202. 7th Italian Conference ICTCS 2001 Torino* (pp. 312–328). Berlin: Springer.

Axsäter, S. (2003a). Evaluation of unidirectional lateral transshipments and substitutions in inventory systems. *European Journal of Operational Research, 149*(2), 438–447.

Axsäter, S. (2003b). A new decision rule for lateral transshipments in inventory systems. *Management Science, 49*(9), 1168–1179.

Axsäter, S. (2006). *International Series in Operations Research & Management Science. Inventory control* (2nd edn.). Berlin: Springer.

Axsäter, S. (2007). A heuristic for triggering emergency orders in an inventory system. *European Journal of Operational Research, 176*(2), 880–891.

Balakrishnan, A., & Geunes, J. (2000). Requirements planning with substitutions: Exploiting bill-of-materials flexibility in production planning. *Manufacturing & Service Operations Management, 2*(2), 166–185.

Balakrishnan, N. R., & Chakravarty, A. K. (2008). Product design with multiple suppliers for component variants. *International Journal of Production Economics, 112*(2), 723–741.

Ball, M. O., Chen, C.-Y., & Zhao, Z.-Y. (2003). Material compatibility constraints for make-to-order production planning. *Operations Research Letters, 31*(3), 420–428.

Banerjee, A., Burton, J., & Banerjee, S. (2003). A simulation study of lateral shipments in single supplier, multiple buyers supply chain networks. *International Journal of Production Economics, 81–82*, 103–114.

Barnhart, C., Johnson, E., Nemhauser, G., Savelsbergh, M., & Vance, P. (1998). Branch-and-price: Column generation for solving huge integer programs. *Operations Research, 46*(3), 316–329.

Basnet, C., & Leung, J. (2005). Inventory lot-sizing with supplier selection. *Computers & Operations Research, 32*(1), 1–14.

Bassok, Y., Anupindi, R., & Akella, R. (1999). Single-period multiproduct inventory models with substitution. *Operations Research, 47*(4), 632–642.

Bayindir, Z., Erkip, N., & Guellue, R. (2005). Assessing the benefits of remanufacturing option under one-way substitution. *Journal of the Operational Research Society, 56*(3), 286–296.

Bayindir, Z., Erkip, N., & Guellue, R. (2007). Assessing the benefits of remanufacturing option under one-way substitution and capacity constraint. *Computers & Operations Research, 34*(2), 487–514.

Begnaud, J., Miller, L., & Benjaafar, S. (2006). *The multilevel lot sizing problem with flexible production sequences* (Working paper). Minnesota: Industrial and Systems Engineering Department of Mechanical Engineering, University of Minnesota, MN.

Belvaux, G., & Wolsey, L. A. (2000). bc-prod: A specialized branch-and-cut system for lot-sizing problems. *Management Science, 46*(5), 724–738.

Belvaux, G., & Wolsey, L. A. (2001). Modelling practical lot-sizing problems as mixed-integer programs. *Management Science, 47*(7), 993–1007.

Ben-Tal, A., & Nemirovski, A. (2002). Robust optimization – methodology and applications. *Mathematical Programming, 92*(3), 453–480.

Benjaafar, S., Elahi, E., & Donohue, K. (2007). Outsourcing via service competition. *Management Science, 53*(2), 241.

Benjaafar, S., & ElHafsi, M. (2006). Production and inventory control of a single product assemble-to-order system with multiple customer classes. *Management Science, 52*(12), 1896–1912.

Beraldi, P., Ghiani, G., Grieco, A., & Guerriero, E. (2006). Fix and relax heuristic for a stochastic lot-sizing problem. *Computational Optimization and Applications, 33*(2), 303–318.

Beraldi, P., Ghiani, G., Grieco, A., & Guerriero, E. (2008). Rolling-horizon and fix-and-relax heuristics for the parallel machine lot-sizing and scheduling problem with sequence-dependent set-up costs. *Computers & Operations Research, 35*(11), 3644–3656.

Berbeglia, G., Cordeau, J., Gribkovskaia, I., & Laporte, G. (2007). Static pickup and delivery problems: A classification scheme and survey. *TOP – An Official Journal of the Spanish Society of Statistics and Operations Research, 15*(1), 1–31.

Berbner, R., Spahn, M., Repp, N., Heckmann, O., & Steinmetz, R. (2006). Heuristics for QoS-aware web service composition. In *Proceedings of the IEEE International Conference on Web Services (ICWS'06)* (pp. 72–82).

Bertsimas, D., & de Boer, S. (2005). Simulation-based booking limits for airline revenue management. *Operations Research, 53*(1), 90–106.

Bhaumik, P., & Kataria, S. (2006). Lateral transshipment for managing excesses and shortages in a multilocation inventory system: A case study of Timex Watches Ltd. *International Journal of Services Technology and Management, 7*(5), 602–614.

Birge, J. R., Drogosz, J., & Duenyas, I. (1998). Setting single-period optimal capacity levels and prices for substitutable products. *International Journal of Flexible Manufacturing Systems, 10*(4), 407–430.

Bitran, G., Caldentey, R., & Vial, R. (2005). *Pricing policies for perishable products with demand substitution* (Working paper). Cambridge, MA: Sloan School of Management, Massachusetts Institute of Technology.

Bitran, G. R., & Dasu, S. (1992). Ordering policies in an environment of stochastic yields and substitutable demands. *Operations Research, 40*(5), 999–1017.

Bowden, R., & Hall, J. (1998). Simulation optimization research and development. In *Proceedings of the 1998 Winter Simulation Conference* (pp. 1693–1698).

Bowman, E. (1956). Production scheduling by the transportation method of linear programming. *Operations Research, 4*(1), 100–103.

Boyer, K., & Hult, G. (2005). Extending the supply chain: Integrating operations and marketing in the online grocery industry. *Journal of Operations Management, 23*(6), 642–661.

Boyer, K., Hult, G., & Frohlich, M. (2003). An exploratory analysis of extended grocery supply chain operations and home delivery. *Integrated Manufacturing Systems, 14*(8), 652–663.

Boysen, N., & Scholl, A. (2008). *A general solution framework for component commonality problems* (Working Paper 11/2008). Jena Research Papers in Business and Economics (JBE). Jena, Germany: Friedrich-Schiller-Universität Jena.

Brahimi, N., Dauzere-Peres, S., & Najid, N. (2006). Capacitated multi-item lot-sizing problems with time windows. *Operations Research, 54*(5), 951–967.

Brandimarte, P. (2006). Multi-item capacitated lot-sizing with demand uncertainty. *International Journal of Production Research, 44*(15), 2997–3022.

Bretzke, W. (2006). SCM: Sieben Thesen zur zukünftigen Entwicklung logistischer Netzwerke. *Supply Chain Management, 6*, 7–15.

BSMS. (2003). *Inventory practice survey 2003* (Working paper). Blood Stocks Management Scheme, National Health Service, UK.

Burke, G. J., Carrillo, J. E., & Vakharia, A. J. (2007). Single versus multiple supplier sourcing strategies. *European Journal of Operational Research, 182*(1), 95–112.

Buschkühl, L., Sahling, F., Helber, S., & Tempelmeier, H. (2008). Dynamic capacitated lot-sizing problems: A classification and review of solution approaches. *forthcoming in OR Spectrum*.

Cai, L., Chen, J., & Yan, H. (2004). Technical note: Single-period two-product inventory model with substitution: Solution and properties. *Journal of Systems Science and Systems Engineering, 13*, 112–123.

Campbell, A., Clarke, L., & Savelsbergh, M. (2002). Inventory routing in practice. In P. Toth & D. Vigo (Eds.), *SIAM Monographs on Discrete Mathematics and Applications. The vehicle routing problem* (Chap. 12, pp. 309–330). Philadelphia: Society for Industrial & Applied Mathematics.

Canfora, G., Penta, M. D., Esposito, R., & Villani, M. L. (2005). An approach for QoS-aware service composition based on genetic algorithms. In *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO 2005)* (pp. 1069–1075), Washington DC. ACM Press.

Caserta, M., & Rico, E. (2009). A cross entropy-lagrangean hybrid algorithm for the multi-item capacitated lot-sizing problem with setup times. *Computers & Operations Research, 36*(2), 530–548.

Chand, S., Hsu, V., & Sethi, S. (2002). Forecast, solution, and rolling horizons in operations management problems: A classified bibliography. *Manufacturing & Service Operations Management, 4*(1), 25–43.

Chand, S., Ward, J., & Weng, Z. (1994). A parts selection model with one-way substitution. *European Journal of Operational Research, 73*(1), 65–69.

Chang, H., Jula, H., Chassiakos, A., & Ioannou, P. (2008). A heuristic solution for the empty container substitution problem. *Transportation Research Part E: Logistics and Transportation Review, 44*(2), 203–216.

Chang, W., Wu, C., & Chang, C. (2005). Optimizing dynamic web service component composition by using evolutionary algorithms. In *Proceedings of the 2005 IEEE/WIC/ACM International Conference on Web Intelligence* (pp. 708–711).

Chapman, J., Milkins, C., & Voak, D. (2000). The computer crossmatch: A safe alternative to the serological crossmatch. *Transfusion Medicine, 10*(4), 251–256.

Chen, C., Zhao, Z., & Ball, M. (2001). Quantity and due date quoting available to promise. *Information Systems Frontiers, 3*(4), 477–488.

Chen, J. (2003). Component allocation in multi-echelon assembly systems with linked substitutes. *Computers & Industrial Engineering, 45*(1), 43–60.

Chen, J., & Chen, H. (2004). Coordination mechanism for postponement strategy with downward substitutable products. In *Proceedings of the 2004 IEEE International Conference on Systems, Man and Cybernetics* (pp. 6003–6008).

Chen, L., & Plambeck, E. (2008). Dynamic inventory management with learning about the demand distribution and substitution probability. *Manufacturing & Service Operations Management, 10*(2), 236.

Chen, M. (2006). *Coordinating demand fulfillment with supply across a dynamic supply chain*. PhD thesis, Decision & Information Technologies Department, University of Maryland, College Park, MD.

Cheung, K., & Lee, H. (2002). The inventory benefit of shipment coordination and stock rebalancing in a supply chain. *Management Science, 48*(2), 300–306.

Chong, J., Ho, T., & Tang, C. (2004). Demand modeling in product line trimming: Substitutability and variability. In A. K. Chakravarty & J. Eliashberg (Eds.), *Managing business interfaces – Marketing and engineering issues in the supply chain and internet domains* (Chap. 2, pp. 39–62). Berlin: Springer.

Chou, M., Sim, M., & So, K. (2006). *A robust optimization framework for analyzing distribution systems with transshipment* (Working paper). Singapore: School of Business, National University of Singapore.

Cohen, M., & Pierskalla, W. (1979). Target inventory levels for a hospital blood bank or a decentralized regional blood banking system. *Transfusion, 19*(4), 444–454.

Comez, N., Stecke, K. E., & Cakanyldrm, M. (2006). *Virtual pooling considering transshipment lead time* (Working paper). Dallas, TX: School of Management, University of Texas at Dallas.

Crama, Y., Pochet, Y., & Wera, Y. (2001). *A discussion of production planning approaches in the process industry* (Working Paper 2001/42). Louvain, Belgium: Center for Operations Research and Econometrics (CORE), Université Catholique de Louvain.

de Araujo, S., Arenales, M., & Clark, A. (2007). Joint rolling-horizon scheduling of materials processing and lot-sizing with sequence-dependent setups. *Journal of Heuristics, 13*(4), 337–358.

de Weck, O., Suh, E., & Chang, D. (2003). Product family and platform portfolio optimization. In *Proceedings of the ASME International Design Engineering Technical Conference (DETC'03)*.

DeCroix, G., Song, J., & Zipkin, P. (2005). *Managing an assemble-to-order system with returns* (Working paper). Durham, NC: The Fuqua School of Business, Duke University.

DeCroix, G., & Zipkin, P. (2005). Inventory management for an assembly system with product or component returns. *Management Science, 51*, 1250–1265.

Degraeve, Z., & Jans, R. (2007). A new Dantzig-Wolfe reformulation and branch-and-price algorithm for the capacitated lot-sizing problem with setup times. *Operations Research, 55*(5), 909–920.

Degraeve, Z., Labro, E., & Roodhooft, F. (2000). An evaluation of vendor selection models from a total cost of ownership perspective. *European Journal of Operational Research, 125*(1), 34–58.

Degraeve, Z., Labro, E., & Roodhooft, F. (2004). Total cost of ownership purchasing of a service: The case of airline selection at Alcatel Bell. *European Journal of Operational Research, 156*(1), 23–40.

Delaney-Klinger, K., Boyer, K., & Frohlich, M. (2003). The return of online grocery shopping: A comparative analysis of Webvan and Tesco's operational methods. *TQM Magazine, 15*(3), 187–196.

Demirtas, E. A., & Üstün, Ö. (2008). An integrated multiobjective decision making process for supplier selection and order allocation. *Omega, 36*(1), 76–90.

Deniz, B., Karaesmen, I., & Scheller-Wolf, A. (2005). *Managing inventories of perishable goods* (Working paper). Pittsburgh, PA: Tepper School of Business, Carnegie Mellon University.

Denizel, M., Altekin, F. T., Süral, H., & Stadtler, H. (2008). Equivalence of the LP relaxations of two strong formulations for the capacitated lot-sizing problem with setup times. *OR Spectrum, 30*(4), 773–785.

Denizel, M., & Süral, H. (2006). On alternative mixed integer programming formulations and LP-based heuristics for lot-sizing with setup times. *Journal of the Operational Research Society, 57*(4), 389–399.

Denton, B., & Gupta, D. (2004). Strategic inventory deployment in the steel industry. *IIE Transactions, 36*(11), 1083–1097.

Desaulniers, G., Desrosiers, J., Erdmann, A., Solomon, M., & Soumis, F. (2002). VRP with pickup and delivery. In P. Toth & D. Vigo (Eds.), *The vehicle routing problem* (pp. 225–242). Philadelphia: SIAM.

Desrosiers, J., & Lübbecke, M. E. (2005). A primer in column generation. In G. Desaulniers, J. Desrosiers, & M. Solomon (Eds.), *Column generation* (pp. 1–32). Berlin: Springer.

Di Penta, M., & Troiano, L. (2005). *Using fuzzy logic to relax constraints in GA-based service composition* (Working paper). Benevento, Italy: Research Centre on Software Technology, Department of Engineering, University of Sannio.

Diaby, M., Bahl, H., Karwan, M., & Zionts, S. (1992a). Capacitated lot-sizing and scheduling by lagrangean relaxation. *European Journal of Operational Research, 59*(3), 444–458.

Diaby, M., Bahl, H., Karwan, M., & Zionts, S. (1992b). A lagrangean relaxation approach for very-large-scale capacitated lot-sizing. *Management Science, 38*(9), 1329–1340.

Dickersbach, J. T. (2006). *Supply chain management with APO: Structures, modelling approaches, and implementation of MySAP SCM 4.1* (2nd edn.). Berlin: Springer.

Domschke, W. (1997). *Logistik: Rundreisen und Touren* (4th edn.). Munich: Oldenbourg Wissenschaftsverlag

Domschke, W., & Scholl, A. (2005). *Grundlagen der Betriebswirtschaftslehre* (3rd edn.). Berlin: Springer.

Domschke, W., Scholl, A., & Voß, S. (1997). *Produktionsplanung – Ablauforganisatorische Aspekte* (2nd edn.). Berlin: Springer.

Drechsel, J., & Kimms, A. (2008). *Solutions and fair cost allocations for cooperative lot sizing with transshipments and scarce capacities* (Working paper). Lehrstuhl für Logistik und Verkehrsbetriebslehre. Duisburg, Germany: Mercator School of Management, University of Duisburg-Essen.

Drexl, A., & Kimms, A. (1997). Lot sizing and scheduling – survey and extensions. *European Journal of Operational Research, 99*(2), 221–235.

Drezner, Z., Gurnani, H., & Pasternack, B. A. (1995). An EOQ model with substitutions between products. *The Journal of the Operational Research Society, 46*(7), 887–891.

D'Souza, B., & Simpson, T. (2003). A genetic algorithm based method for product family design optimization. *Engineering Optimization, 35*(1), 1–18.

Duenyas, I. P., & Tsai, C. Y. P. (2000). Control of a manufacturing system with random product yield and downward substitutability. *IIE Transactions, 32*(9), 785–795.

Duran, S. (2007). Optimal production and inventory policies of priority and price-differentiated customers. *IIE Transactions, 39*(9), 845–861.

Edwards, T. (2006). Have you ever thought about becoming a hero? *Census CounterParts, 15*(1), 6. US Census Bureau.

Elmaghraby, W. (2000). Supply contract competition and sourcing policies. *Manufacturing & Service Operations Management, 2*(4), 350–371.

Eppen, G., & Martin, R. (1987). Solving multi-item capacitated lot-sizing problems using variable redefinition. *Operations Research, 35*(6), 832–848.

Erlenkotter, D. (1978). A dual-based procedure for uncapacitated facility location. *Operations Research, 26*(6), 992–1009.

Ernst, R., & Kouvelis, P. (1999). The effects of selling packaged goods on inventory decisions. *Management Science, 45*(8), 1142–1155.

Ertogral, K., & Wu, S. (2000). Auction-theoretic coordination of production planning in the supply chain. *IIE Transactions, 32*(10), 931–940.

Ervolina, T., Ettl, M., Lee, Y., & Peters, D. (2009). Managing product availability in an assemble-to-order supply chain with multiple customer segments. *OR Spectrum, 31*(1), 257–280.

Ettl, M., Huang, P., Sourirajan, K., & Cheng, F. (2006a). *Product offering conditioning in assemble-to-order supply chains* (Working paper). Yorktown Heights, NY: IBM Research Division, Thomas J. Watson Research Center.

Ettl, M., Huang, P., Sourirajan, K., Ervolina, T. R., & Lin, G. Y. (2006b). *Supply and demand synchronization in assemble-to-order supply chains* (Working paper). Yorktown Heights, NY: IBM Research Division, Thomas J. Watson Research Center.

Evers, P. (2001). Heuristics for assessing emergency transshipments. *European Journal of Operational Research, 129*(2), 311–316.

Faber, F. (2005). *An extensible order promising and revenue management test-bed*. Master's thesis, Decision & Information Technologies Department, University of Maryland, College Park, MD.

Federgruen, A., Meissner, J., & Tzur, M. (2007). Progressive interval heuristics for multi-item capacitated lot sizing problems. *Operations Research, 55*(3), 490.

Fink, A., & Reiners, T. (2006). Modeling and solving the short-term car rental logistics problem. *Transportation Research Part E, 42*(4), 272–292.

Fisher, M. (1981). The lagrangian relaxation method for solving integer programming problems. *Management Science, 27*(1), 1–18.

Fixson, S. (2007). Modularity and commonality research: Past developments and future opportunities. *Concurrent Engineering, 15*(2), 85.

Fleischmann, B. (1994). The discrete lot-sizing and scheduling problem with sequence-dependent setup costs. *European Journal of Operational Research, 75*(2), 395–404.

Fleischmann, B. (2001). On the use and misuse of holding cost models. In P. Kischka, U. Leopold-Wildburger, R. Möhring, & F.-J. Radermacher (Eds.), *Models, methods and decision support for management: Essays in honor of Paul Stähly* (pp. 147–164). Heidelberg: Physica.

Fleischmann, B., & Meyr, H. (1997). The general lotsizing and scheduling problem. *OR Spectrum, 19*(1), 11–21.

Fleischmann, B., & Meyr, H. (2003). Customer orientation in Advanced Planning Systems. In H. Dyckhoff, R. Lackes, & J. Reese (Eds.), *Supply chain management and reverse logistics* (pp. 297–322). Berlin: Springer.

Fleischmann, B., Meyr, H., & Wagner, M. (2005). Advanced planning. In H. Stadtler & C. Kilger (Eds.), *Supply chain management and advanced planning: Concepts, models, software and case studies* (3rd edn., Chap. 4, pp. 81–106). Berlin: Springer.

Förster, A., Haase, K., & Tönnies, M. (2006). Ein modellgestützter Ansatz zur mittelfristigen Produktions-und Ablaufplanung für eine Brauerei. *Zeitschrift für Betriebswirtschaft, 76*(12), 1255–1274.

Freling, R. (2003). A branch and price algorithm for the multi-period single-sourcing problem. *Operations Research, 51*(6), 922–939.

Fu, M. (2001). Simulation optimization. In *Proceedings of the 2001 Winter Simulation Conference* (pp. 53–61).

Fu, M. (2002). Optimization for simulation: Theory vs. practice. *INFORMS Journal on Computing, 14*(3), 192–215.

Fu, M. C. (2006). Stochastic gradient estimation. In S. Henderson & B. Nelson (Eds.), *Handbook on operations research and management science: Simulation*. Amsterdam: Elsevier.

Gallego, G., Iyengar, G., Phillips, R., & Dubey, A. (2004). *Managing flexible products on a network* (Working paper). New York: Department of Industrial Engineering and Operations Research, Columbia University.

Gallego, G., Jin, Y., Muriel, A., Zhang, G., & Yildiz, V. T. (2007). Optimal ordering policies with convertible lead times. *European Journal of Operational Research, 176*(2), 892–910.

Gallego, G., Katircioglu, K., & Ramachandran, B. (2006). Semiconductor inventory management with multiple grade parts and downgrading. *Production Planning & Control, 17*(7), 689–700.

Gallego, G., & Phillips, R. (2004). Revenue management of flexible products. *Manufacturing & Service Operations Management, 6*(4), 321–337.

Gallo, G., Longo, G., Nguyen, S., & Pallottino, S. (1993). *Directed hypergraphs and applications* (Working paper). Pisa, Italy: Dipartimento di Informatica, Universita di Pisa.

Gallo, G., & Pallottino, S. (1992). *Hypergraph models and algorithms for the assembly problem* (Working paper). Pisa, Italy: Dipartimento di Informatica, Universita di Pisa.

Gallo, G., & Scutella, M. (1998a). Directed hypergraphs as a modelling paradigm. *Rivista AMASES, 21*, 97–123.

Gallo, G., & Scutella, M. (1998b). *Minimum makespan assembly plans* (Working paper). Pisa, Italy: Dipartimento di Informatica, Universita di Pisa.

Ganesh, M., Raghunathan, S., & Rajendran, C. (2008). The value of information sharing in a multi-product supply chain with product substitution. *IIE Transactions, 40*(12), 1124–1140.

Gaur, V., & Honhon, D. (2006). Assortment planning and inventory decisions under a locational choice model. *Management Science, 52*(10), 1528–1543.

Gebhard, M., & Kuhn, H. (2007). Robuste hierarchische Produktionsplanung mit Bedarfsszenarien. In A. Otto & R. Obermaier (Eds.), *Logistikmanagement 2007: Analyse, Bewertung und Gestaltung logistischer Systeme* (pp. 161–183). Wiesbaden, Germany: Gabler / Deutscher Universitäts-Verlag.

Georgsen, J., & Kristensen, T. (1998). From serological to computer cross-matching in nine hospitals. *Vox Sanguinis, 74*(2), 419–25.

Gerchak, Y., & Grosfeld-Nir, A. (1999). Lot-sizing for substitutable, production-to-order parts with random functionality yields. *International Journal of Flexible Manufacturing Systems, 11*(4), 371–377.

Geunes, J. (2003). Solving large-scale requirements planning problems with component substitution options. *Computers & Industrial Engineering, 44*(3), 475–491.

Gosavi, A. (2003). *Simulation-based optimization: Parametric optimization techniques and reinforcement learning*. Boston: Kluwer.

Guan, Y., Ahmed, S., Nemhauser, G., & Miller, A. (2006). A branch-and-cut algorithm for the stochastic uncapacitated lot-sizing problem. *Mathematical Programming, 105*(1), 55–84.

Gunasekaran, A., & Ngai, E. (2005). Build-to-order supply chain management: A literature review and framework for development. *Journal of Operations Management, 23*(5), 423–451.

Gupta, D., & Magnusson, T. (2005). The capacitated lot-sizing and scheduling problem with sequence-dependent setup costs and setup times. *Computers & Operations Research, 32*(4), 727–747.

Gupta, S., & Krishnan, V. (1999). Integrated component and supplier selection for a product family. *Production and Operations Management, 8*(2), 163–181.

Gürkan, G., Özge, A., & Robinson, S. (1994). Sample-path optimization in simulation. In *Proceedings of the 1994 Winter Simulation Conference* (pp. 247–254).

Gurnani, H., & Drezner, Z. (2000). Deterministic hierarchical substitution inventory models. *Journal of the Operational Research Society, 51*(1), 129–133.

Gutin, G., & Punnen, A. (2002). *The Traveling Salesman Problem and its variations*. Boston: Kluwer.

Haase, K. (1996). Capacitated lot-sizing with sequence dependent setup costs. *OR Spectrum, 18*(1), 51–59.

Haase, K. (2001). Beschaffungs-Controlling – Kapitalwertorientierte Bestellmengenplanung bei Mengenrabatten und dynamischer Nachfrage. *Zeitschrift für Betriebswirtschaft, 71*, 19–31.

Haase, K., & Kimms, A. (2000). Lot sizing and scheduling with sequence-dependent setup costs and times and efficient rescheduling opportunities. *International Journal of Production Economics, 66*(2), 159–169.

Hale, W., Pyke, D. F. P., & Rudi, N. (2000). *An assemble-to-order system with component substitution* (Working paper). Hanover, NH / Rochester, NY: Amos Tuck School, Dartmouth College / The Simon School, University of Rochester.

Hansen, P., Mladenović, N., & Moreno Pérez, J. (2008). Variable neighbourhood search: Methods and applications. *4OR: A Quarterly Journal of Operations Research, 6*(4), 319–360.

Hardung, B., & Kollert, T. (2005). Optimisation of the variant combination of control units considering the order history. In H.-D. Haasis, H. Kopfer, & J. Schönberger (Eds.), *Operations research proceedings 2005*. Berlin: Springer.

Hax, A., & Meal, H. (1975). Hierarchical integration of production planning and scheduling. In M. Geisler (Ed.), *TIMS studies in the management sciences* (Vol. 1, pp. 53–69). Amsterdam: North-Holland.

Helber, S. (1994). *Kapazitätsorientierte Losgrößenplanung in PPS-Systemen*. Metzler & Poeschel Verlag für Wissenschaft und Forschung, Stuttgart, Germany.

Helber, S., & Sahling, F. (2008). *A Fix-and-Optimize Approach for the multi-level capacitated lot sizing problem* (Working paper). Hannover, Germany: Institut für Produktionswirtschaft. Leibniz Universität Hannover.

Helsgaun, K. (2000). An effective implementation of the Lin–Kernighan traveling salesman heuristic. *European Journal of Operational Research, 126*(1), 106–130.

Helsgaun, K. (2007). *An effective implementation of K-opt moves for the Lin-Kernighan TSP heuristic* (Working paper). Roskilde, Denmark: Roskilde University.

Hemmelmayr, V., Doerner, K., Hartl, R., & Savelsbergh, M. (2007). *Delivery strategies for blood products supplies* (Working paper). Vienna: Department of Business Administration, University of Vienna.

Henrich, P., Land, M., & Gaalman, G. (2007). Semi-interchangeable machines: Implications for workload control. *Production Planning & Control, 18*(2), 91–104.

Herer, Y., Tzur, M., & Yücesan, E. (2006). The multilocation transshipment problem. *IIE Transactions, 38*(3), 185–200.

Hohenegger, J., Bufardi, A., & Xirouchakis, P. (2007). A new concept of compatibility structure in new product development. *Advanced Engineering Informatics, 21*, 101–116.

Hölttä-Otto, K. (2005). *Modular product platform design*. PhD thesis, Helsinki University of Technology, Finland.

Honhon, D., Gaur, V., & Seshadri, S. (2006). *Assortment planning and inventory management under dynamic stockout-based substitution* (Working paper). New York: Department of Information, Operations and Management Science, Leonard N. Stern School of Business, New York University.

Hood, S., & Welch, P. (1993). Response Surface Methodology and its application in simulation. In *Proceedings of the 1993 Winter Simulation Conference* (pp. 115–122).

Hoos, H., & Stützle, T. (2005). *Stochastic local search: Foundations and applications*. San Francisco, CA: Morgan Kaufmann.

Hsieh, C.-C., & Wu, C.-H. (2009). Coordinated decisions for substitutable products in a common retailer supply chain. *European Journal of Operational Research, 196*(1), 273–288.

Hsu, A., & Bassok, Y. (1999). Random yield and random demand in a production system with downward substitution. *Operations Research, 47*(2), 277–290.

Hsu, C., Kannan, V., Leong, G., & Tan, K. (2006). Supplier selection construct: Instrument development and validation. *The International Journal of Logistics Management, 17*(2), 213–239.

Hsu, V. N., Li, C. L., & Xiao, W. Q. (2005). Dynamic lot size problems with one-way product substitution. *IIE Transactions, 37*, 201–215.

Huang, K. (2005). *Multi-stage stochastic programming models in production planning*. PhD thesis, Georgia Institute of Technology, Atlanta, GA.

Huang, S. H., & Keskar, H. (2007). Comprehensive and configurable metrics for supplier selection. *Int. J. Production Economics, 105*, 510–523.

Huisman, D., Jans, R., Peeters, M., & Wagelmans, A. (2005). Combining column generation and lagrangian relaxation. In D. Guy, S. Jacques, & M. Marius (Eds.), *Column generation* (pp. 247–270). Berlin: Springer.

Ignall, E., & Veinott, Jr., A. F. (1969). Optimality of myopic inventory policies for several substitute products. *Management Science, 15*(5), 284–304.

Inderfurth, K. (2004). Optimal policies in hybrid manufacturing/remanufacturing systems with product substitution. *International Journal of Production Economics, 90*(3), 325–343.

Iravani, S., Lien, R., Smilowitz, K., & Tzur, M. (2005). *Design principles for effective transshipment networks* (Working paper). Evanston, IL: IE/MS department, Northwestern University, IL.

Jans, R., & Degraeve, Z. (2006). Modeling industrial lot sizing problems: A review. *International Journal of Production Research, 46*(6), 1619–1643.

Jans, R., & Degraeve, Z. (2007). Meta-heuristics for dynamic lot sizing: A review and comparison of solution approaches. *European Journal of Operational Research, 177*(3), 1855–1875.

Jans, R., Degraeve, Z., & Schepens, L. (2008). Analysis of an industrial component commonality problem. *European Journal of Operational Research, 186*(2), 801–811.

Jennings, J. (1973). Blood bank inventory control. *Management Science, 19*(6), 637–645.

Jiao, J., Simpson, T., & Siddique, Z. (2006a). Product family design and platform-based product development: A state-of-the-art review. *Journal of Intelligent Manufacturing, 18*(1), 5–29.

Jiao, J., Zhang, Y., & Wang, Y. (2006b). A generic genetic algorithm for product family design. *Journal of Intelligent Manufacturing*.

Jones, P. C., Lowe, T. J., Muller, G., Xu, N., Ye, Y., & Zydiak, J. L. (1995). Specially structured uncapacitated facility location problems. *Operations Research, 43*(4), 661–669.

Kallrath, J. (2005). Solving planning and design problems in the process industry using mixed integer and global optimization. *Annals of Operations Research, 140*(1), 339–373.

Kallrath, J., & Maindl, T. (2006). *Real optimization with SAP APO*. Berlin: Springer.

Karaesmen, I., Scheller-Wolf, A., & Deniz, B. (2008). Managing perishable and aging invetories: Review and future research direction. In K. Kempf, P. Keskinocak, & P. Uzsoy (Eds.), *Handbook of production planning. International Series in Operations Research and Management Science, Advancing the state-of-the-art subseries.* Boston: Kluwer.

Karaesmen, I., & van Ryzin, G. (2004). Overbooking with substitutable inventory classes. *Operations Research, 52*(1), 83–104.

Karakul, M., & Chan, L. (2008). Analytical and managerial implications of integrating product substitutability in the joint pricing and procurement problem. *European Journal of Operational Research, 190*, 179–204.

Karimi, B., Fatemi Ghomi, S., & Wilson, J. (2003). The capacitated lot sizing problem: A review of models and algorithms. *Omega, 31*(5), 365–378.

Katsaliaki, K., & Brailsford, S. (2007). Using simulation to improve the blood supply chain. *Journal of the Operational Research Society, 58*, 219–227.

Kennedy, W. J., Patterson, J. W., & Fredendall, L. D. (2002). An overview of recent literature on spare parts inventories. *International Journal of Production Economics, 76*(2), 201–215.

Kerkkänen, A. (2007). Determining semi-finished products to be stocked when changing the MTS-MTO policy: Case of a steel mill. *International Journal of Production Economics, 108*(1–2), 111–118.

Kilger, C., & Schneeweiß, L. (2005). Demand Fulfilment and ATP. In H. Stadtler & C. Kilger (Eds.), *Supply chain management and advanced planning: Concepts, models, software and case studies* (3rd edn., Chap. 9, pp. 179–195). Berlin: Springer.

Kleber, R., & Inderfurth, K. (2007). A heuristic approach for inventory control of spare parts after end-of-production. In A. Otto & R. Obermaier (Eds.), *Logistikmanagement 2007:*

Analyse, Bewertung und Gestaltung logistischer Systeme (pp. 185–200). Wiesbaden, Germany: Gabler / Deutscher Universitäts-Verlag.

Kleijn, M., & Dekker, R. (1998). *An overview of inventory systems with several demand classes* (Working paper). Rotterdam, Netherlands: Erasmus Research Institute of Management (ERIM), Rotterdam School of Management / Rotterdam School of Economics, Erasmus Universiteit Rotterdam.

Klein, R., & Luss, H. (1991). Minimax resource allocation with tree structured substitutable resources. *Operations Research, 39*(2), 285–295.

Klein, R., Luss, H., & Rothblum, U. (1993). Minimax resource allocation problems with resource-substitutions represented by graphs. *Operations Research, 41*(5), 959–971.

Kocaga, Y., & Sen, A. (2007). Spare parts inventory management with demand lead times and rationing. *IIE Transactions, 39*(9), 879–898.

Kok, A., & Fisher, M. (2007). Demand estimation and assortment optimization under substitution: Methodology and application. *Operations Research, 55*(6), 1001–1021.

Kolda, T., Lewis, R., & Torczon, V. (2004). Optimization by direct search: New perspectives on some classical and modern methods. *SIAM Review, 45*, 385–482.

Kondili, E., Pantelides, C., & Sargent, R. (1993). General algorithm for short-term scheduling of batch operations – I. MILP formulation. *Computers & Chemical Engineering, 17*(2), 211–227.

Kopach, R., Frances, D., & Sadat, S. (2003). Models for predicting critical blood product shortages. In *Proceedings of the 29th Meeting of the European Working Group on Operational Research Applied to Health Services, ORAHS* (pp. 77–90), Prague, Czech Republic.

Kouvelis, P., & Yu, G. (1997). *Robust discrete optimization and its applications*. Boston: Kluwer.

Kranenburg, A., & van Houtum, G. (2007). Cost optimization in the (s–1, s) lost sales inventory model with multiple demand classes. *Operations Research Letters, 35*(4), 493–502.

Krarup, J., & Bilde, O. (1977). Plant location, set covering and economic lot size: An O(mn)-algorithm for structured problems. In L. Collatz, G. Meinardus, & W. Wetterling (Eds.), *Numerische Methoden bei Optimierungsaufgaben, Band 3: Optimierung bei graphentheoretischen und ganzzahligen Problemen* (pp. 155–180). Birkhäuser: Stuttgart.

Krishnan, V., & Ulrich, K. (2001). Product development decisions: A review of the literature. *Management Science, 47*(1), 1–21.

Kuyumcu, A., & Popescu, I. (2006). Deterministic price-inventory management for substitutable products. *Journal of Revenue and Pricing Management, 4*(4), 354–366.

Lang, J. C. (2005). *Methoden der Simulationsbasierten Optimierung*. Semester thesis, Department of Law, Business Administration and Economics, Technische Universität Darmstadt, Germany.

Lang, J. C. (2008). *Multi-location transshipment and substitution problems: An application to blood banks* (Working paper). Schriften zur Quantitativen Betriebswirtschaftslehre. Darmstadt, Germany: Department of Law, Business Administration and Economics, Technische Universität Darmstadt.

Lang, J. C., & Domschke, W. (2008). Efficient reformulations for dynamic lot-sizing problems with product substitution. *OR Spectrum.* doi:10.1007/s00291-008-0148-1.

Lang, J. C., Widjaja, T., Buxmann, P., Domschke, W., & Hess, T. (2008). Optimizing the supplier selection and service portfolio of a SOA service integrator. In *Proceedings of the 41st Annual Hawaii International Conference on System Sciences* (pp. 89–98).

Law, A. (2006). *Simulation modeling and analysis* (4th edn.). New York: McGraw-Hill.

Law, A., & McComas, M. (2002). Simulation optimization: Simulation-based optimization. In *Proceedings of the 2002 Winter Simulation Conference* (pp. 41–44).

Lawler, E., Lenstra, J. K., Kan, A. H. G. R., & Shmoys, D. B. (1985). *The Traveling Salesman Problem: A guided tour of combinatorial optimization*. Wiley Series in Discrete Mathematics & Optimization. New York: Wiley.

Lübbecke, M. E., & Desrosiers, J. (2005). Selected topics in column generation. *Operations Research, 53*(6), 1007–1023.

Lee, C., Cetinkaya, S., & Wagelmans, A. (2001). A dynamic lot-sizing model with demand time windows. *Management Science, 47*(10), 1384–1395.

Lee, Y. H., Jung, J. W., & Jeon, Y. S. (2007). An effective lateral transshipment policy to improve service level in the supply chain. *International Journal of Production Economics, 106*(1), 115–126.

Leung, S. C., Lai, K. K., Ng, W., & Wu, Y. (2007a). A robust optimization model for production planning of perishable products. *Journal of the Operational Research Society, 58*, 413–422.

Leung, S. C., Tsang, S. O., Ng, W., & Wu, Y. (2007b). A robust optimization model for multi-site production planning problem in an uncertain environment. *European Journal of Operational Research, 182*, 224–238.

Levis, A., & Papageorgiou, L. (2007). Active demand management for substitute products through price optimisation. *OR Spectrum, 29*(4), 551–577.

Lewis, R., & Torczon, V. (1999). Pattern search algorithms for bound constrained minimization. *SIAM Journal on Optimization, 9*(4), 1082–1099.

Lewis, R., & Torczon, V. (2000). Pattern search methods for linearly constrained minimization. *SIAM Journal on Optimization, 10*, 917–941.

Lewis, R., Torczon, V., & Trosset, M. (1998). *Why pattern search works* (Working paper). Hampton, VA: Institute for Computer Applications in Science and Engineering (ICASE), NASA Langley Research Center.

Lewis, R., Torczon, V., & Trosset, M. (2000). Direct search methods: Then and now. *Journal of Computational and Applied Mathematics, 124*(1–2), 191–207.

Li, Y., Chen, J., & Cai, X. (2006). Uncapacitated production planning with multiple product types, returned product remanufacturing, and demand substitution. *OR Spectrum, 28*(1), 101–125.

Li, Y., Chen, J., & Cai, X. (2007). Heuristic genetic algorithm for capacitated production planning problems with batch processing and remanufacturing. *International Journal of Production Economics, 105*(2), 301–317.

Liao, Z., & Rittscher, J. (2007a). Integration of supplier selection, procurement lot sizing and carrier selection under dynamic demand conditions. *International Journal of Production Economics, 107*(2), 502–510.

Liao, Z., & Rittscher, J. (2007b). A multi-objective supplier selection model under stochastic demand conditions. *International Journal of Production Economics, 105*(1), 150–159.

Liu, J., & Lee, C. G. (2007). Evaluation of inventory policies with unidirectional substitutions. *European Journal of Operational Research, 182*, 145–163.

Lu, Y., & Song, J. (2005). Order-based cost optimization in assemble-to-order systems. *Operations Research, 53*(1), 151–169.

Lystad, E., Ferguson, M., & Alexopoulos, C. (2006). *Single stage heuristic for perishable inventory control in two-echelon supply chains* (Working paper). Atlanta, GA: The College of Management, Georgia Institute of Technology.

Ma, S., Wanga, W., & Liu, L. (2000). Commonality and postponement in multistage assembly systems. *European Journal of Operational Research, 142*(3), 523–538.

Maes, J., McClain, J., & Van Wassenhove, L. (1991). Multilevel capacitated lotsizing complexity and LP-based heuristics. *European Journal of Operational Research, 53*(2), 131–148.

Mahajan, S., & van Ryzin, G. (2001). Stocking retail assortments under dynamic consumer substitution. *Operations Research, 49*(3), 334–351.

Marchand, H., Martin, A., Weismantel, R., & Wolsey, L. (2002). Cutting planes in integer and mixed integer programming. *Discrete Applied Mathematics, 123*(1–3), 397–446.

Meixell, M., & Norbis, M. (2008). A review of the transportation mode choice and carrier selection literature. *The International Journal of Logistics Management, 19*(2), 183–211.

Meyr, H. (1999). *Simultane Losgrössen-und Reihenfolgeplanung für kontinuierliche Produktionslinien: Modelle und Methoden im Rahmen des Supply Chain Management*. Wiesbaden, Germany: Gabler / Deutscher Universitäts-Verlag,

Meyr, H. (2000). Simultaneous lotsizing and scheduling by combining local search with dual reoptimization. *European Journal of Operational Research, 120*(2), 311–326.

Meyr, H. (2002). Simultaneous lotsizing and scheduling on parallel machines. *European Journal of Operational Research, 139*(2), 277–292.

Meyr, H. (2004a). Simultane Losgrößen-und Reihenfolgeplanung bei mehrstufiger kontinuierlicher Fertigung. *Zeitschrift für Betriebswirtschaft, 74*, 585–610.

Meyr, H. (2004b). Supply chain planning in the German automotive industry. *OR Spectrum, 26*(4), 447–470.

Meyr, H., Rohde, J., & Wagner, M. (2005a). Architecture of selected APS. In H. Stadtler & C. Kilger (Eds.), *Supply chain management and advanced planning: Concepts, models, software and case studies* (3rd edn., Chap. 18, pp. 341–353). Berlin: Springer.

Meyr, H., Wagner, M., & Rohde, J. (2005b). Structure of Advanced Planning Systems. In H. Stadtler & C. Kilger (Eds.), *Supply chain management and advanced planning: Concepts, models, software and case studies* (3rd edn., Chap. 5, pp. 109–115). Berlin: Springer.

Minner, S. (2003). Multiple-supplier inventory models in supply chain management: A review. *International Journal of Production Economics, 81*(82), 265–279.

Minner, S., Silver, E. A., & Robb, D. J. (2003). An improved heuristic for deciding on emergency transshipments. *European Journal of Operational Research, 148*(2), 384–400.

Moon, I., & Kang, S. (1998). Rationing policies for some inventory systems. *Journal of the Operational Research Society, 49*(5), 509–518.

Mulvey, J., Vanderbei, R., & Zenios, S. (1995). Robust optimization of large-scale systems. *Operations Research, 43*(2), 264–281.

Nahmias, S. (1982). Perishable inventory theory: A review. *Operations Research, 30*(4), 680–708.

Naim, M., Potter, A., Mason, R., & Bateman, N. (2006). The role of transport flexibility in logistics provision. *The International Journal of Logistics Management, 17*(3), 297–311.

Nepal, B., Lassan, G., Drow, B., & Chelst, K. (2009). A set-covering model for optimizing selection of portfolio of microcontrollers in an automotive supplier company. *European Journal of Operational Research, 193*(1), 272–281.

Netessine, S., & Rudi, N. (2003). Centralized and competitive inventory models with demand substitution. *Operations Research, 51*(2), 329–335.

Ng, K. Y. K., & Lam, M. N. (1998). Standardisation of substitutable electrical items. *The Journal of the Operational Research Society, 49*(9), 992–997.

Nonås, L., & Jörnsten, K. (2005). Heuristics in the multi-location inventory system with transshipments. In H. Kotzab & M. Westhaus (Eds.), *Research methodologies in supply chain management* (pp. 509–524). Berlin: Springer.

Nonås, L., & Jörnsten, K. (2007). Optimal solutions in the multi-location inventory system with transshipments. *Journal of Mathematical Modelling and Algorithms, 6*(1), 47–75.

Oliveira, R., & Lourenco, J. (2002). A multicriteria model for assigning new orders to service suppliers. *European Journal of Operational Research, 139*(2), 390–399.

Ozturan, C. (2004). Network flow models for electronic barter exchanges. *Journal of Organizational Computing and Electronic Commerce, 14*(3), 175–194.

Page, B., & Kreutzer, W. (2005). *The Java simulation handbook – Simulating discrete event systems with UML and Java*. Aachen, Germany: Shaker.

Pantelides, C. (1994). Unified frameworks for optimal process planning and scheduling. In *Proceedings on the Second Conference on Foundations of Computer Aided Operations* (pp. 253–274).

Parragh, S., Doerner, K., & Hartl, R. (2008a). A survey on pickup and delivery problems – part I: Transportation between customers and depot. *Journal für Betriebswirtschaft, 58*(1), 21–51.

Parragh, S., Doerner, K., & Hartl, R. (2008b). A survey on pickup and delivery problems – part II: Transportation between pickup and delivery locations. *Journal für Betriebswirtschaft, 58*(2), 81–117.

Pasternack, B., & Drezner, Z. (1991). Optimal inventory policies for substitutable commodities with stochastic demand. *Naval Research Logistics, 38*, 221–240.

Pels, H. (2006). Classification hierarchies for product data modelling. *Production Planning & Control, 17*(4), 367–377.

Pentico, D. W. (1988). The discrete two-dimensional assortment problem. *Operations Research, 36*(2), 324–332.

Pentico, D. W. (2008). The assortment problem: A survey. *European Journal of Operational Research, 190*(2), 295–309.

Pereira, A. (2005). Blood inventory management in the type and screen era. *Vox Sanguinis, 89*(4), 245–250.

Petkova, B., & van Wezel, W. (2006). Disentangling manufacturing flexibility. In *Proceedings of the 14th International Working Seminar on Production Economics*, Vol. 1, pp. 287–295, Innsbruck, Austria.

Pierskalla, W. (2005). Supply chain management of blood banks. In M. Brandeau, F. Sainfort, & W. Pierskalla (Eds.), *Operations research and health care: A handbook of methods and applications* (pp. 103–145). Boston: Kluwer.

Pochet, Y. (2001). Mathematical programming models and formulations for deterministic production planning problems. In M. Jünger & D. Naddef (Eds.), *Lecture Notes in Computer Science: Vol. 2241. Computational combinatorial optimization* (pp. 57–111). Berlin: Springer.

Pochet, Y., & Van Vyve, M. (2004). A general heuristic for production planning problems. *INFORMS Journal on Computing, 16*(3), 316–327.

Pochet, Y., Van Vyve, M., & Wolsey, L. A. (2005). *LS-LIB: A library of reformulations, cut separation algorithms and primal heuristics in a high-level modeling language for solving MIP production planning problems* (Working Paper 2005/47). Louvain, Belgium: Center for Operations Research and Econometrics (CORE), Université Catholique de Louvain.

Pochet, Y., & Wolsey, L. (1991). Solving multi-item lot-sizing problems using strong cutting planes. *Management Science, 37*(1), 53–67.

Pochet, Y., & Wolsey, L. (2006). *Production planning by mixed integer programming*. Berlin: Springer.

Poltroniere, S., Poldi, K., Toledo, F., & Arenales, M. (2008). A coupling cutting stock-lot sizing problem in the paper industry. *Annals of Operations Research, 157*(1), 91–104.

Prastacos, G. (1984). Blood inventory management: An overview of theory and practice. *Management Science, 30*(7), 777–800.

Puchinger, J., & Raidl, G. (2005). Combining metaheuristics and exact algorithms in combinatorial optimization: A survey and classification. In J. Mira & J. R. Alvarez (Eds.), *Lecture Notes in Computer Science: Vol. 3562. Artificial intelligence and knowledge engineering applications: A bioinspired approach* (pp. 41–53). Berlin: Springer.

Quadt, D., & Kuhn, H. (2008). Capacitated lot-sizing with extensions: A review. *4OR: A Quarterly Journal of Operations Research, 6*(1), 61–83.

Quante, R., Meyr, H., & Fleischmann, M. (2009). Revenue management and demand fulfillment: Matching applications, models, and software. *OR Spectrum, 31*(1), 31–62.

Raa, B., & Aghezzaf, E. (2005). A robust dynamic planning strategy for lot-sizing problems with stochastic demands. *Journal of Intelligent Manufacturing, 16*(2), 207–213.

Rajaram, K., & Tang, C. (2001). The impact of product substitution on retail merchandising. *European Journal of Operational Research, 135*(3), 582–601.

Ralphs, T., Ladányi, L., & Saltzman, M. (2003). Parallel branch, cut, and price for large-scale discrete optimization. *Mathematical Programming, 98*(1), 253–280.

Ralphs, T., Ladanyi, L., & Trotter, L. (2001). Branch, cut, and price: Sequential and parallel. In M. Jünger & D. Naddef (Eds.), Lecture Notes in Computer Science: Vol. 2241. Computational combinatorial optimization (pp 223–260). Berlin: Springer

Ram, B., Naghshineh-Pour, M., & Yu, X. (2006). Material requirements planning with flexible bills-of-material. *International Journal of Production Research, 44*(2), 399–415.

Ramdas, K. (2003). Managing product variety: An integrative review and research directions. *Production and Operations Management, 12*(1), 79–101.

Rao, U. N., Swaminathan, J. N., & Zhang, J. (2004). Multi-product inventory planning with downward substitution, stochastic demand and setup costs. *IIE Transactions, 36*(1), 59–71.

Reinelt, G. (1994). *Lecture Notes in Computer Science: Vol. 840. The Traveling Salesman: Computational solutions for TSP applications*. Berlin: Springer.

Richter, M., & Stockrahm, V. (2005). Scheduling of synthetic granulate. In H. Stadtler & C. Kilger (Eds.), *Supply chain management and advanced planning: Concepts, models, software and case studies* (3rd edn., Chap. 24, pp. 435–451). Berlin: Springer.

Röder, A., & Tibken, B. (2006). A methodology for modeling inter-company supply chains and for evaluating a method of integrated product and process documentation. *European Journal of Operational Research, 169*(3), 1010–1029.

Rohde, J., & Wagner, M. (2005). Master planning. In H. Stadtler & C. Kilger (Eds.), *Supply chain management and advanced planning: Concepts, models, software and case studies* (3rd edn., Chap. 8, pp. 159–177). Berlin: Springer.

Sadowski, W. (1959). A few remarks on the assortment problem. *Management Science, 6*(1), 13–24.

Sahling, F., Buschkühl, L., Tempelmeier, H., & Helber, S. (2009). Solving a multi-level capacitated lot sizing problem with multi-period setup carry-over via a Fix-and-Optimize heuristic. *Computers & Operations Research, 36*(9), 2546–2553.

SAP (2008). SAP Advanced Planner and Optimizer (SAP APO) online documentation. Retrieved from http://help.sap.com/saphelp_apo/helpdata/en/7e/63fc37004d0a1ee10000009b38f8cf/frameset.htm.

Scholl, A. (2001). *Robuste Planung und Optimierung. Grundlagen – Konzepte und Methoden – Experimentelle Untersuchungen*. Berlin: Springer.

Schultmann, F., Fröhling, M., & Rentz, O. (2002). Demontageplanung und -steuerung mit Enterprise-Resource- und Advanced-Planning-Systemen. *Wirtschaftsinformatik, 44*(6), 557–565.

Scott, C., & Scott, J. (2006). Efficient allocation of online grocery orders. *International Journal of Productivity and Quality Management, 1*(1), 88–102.

Shah, J., & Avittathur, B. (2007). The retailer multi-item inventory problem with demand cannibalization and substitution. *International Journal of Production Economics, 106*, 104–114.

Shumsky, R. A., & Zhang, F. (2007). *Dynamic capacity management with substitution* (Working paper). Hanover, NH: Tuck School of Business, Dartmouth College.

Silver, E. (2004). An overview of heuristic solution methods. *Journal of the Operational Research Society, 55*(9), 936–956.

Silver, E., & Minner, S. (2005). A replenishment decision involving partial postponement. *OR Spectrum, 27*(1), 1–19.

Silver, E., & Moon, I. (2001a). Multi-item economic order quantity model with an initial stock of convertible units. *The Engineering Economist, 46*(2), 129–138.

Silver, E., & Moon, I. (2001b). The multi-item single period problem with an initial stock of convertible units. *European Journal of Operational Research, 132*, 466–477.

Simpson, T. (2004). Product platform design and customization: Status and promise. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing, 18*, 3–20.

Sleight, P. (2001). Tesco.com. *Interactive Marketing, 2*(4), 373–383.

Smith, S., & Agrawal, N. (2000). Management of multi-item retail inventory systems with demand substitution. *Operations Research, 48*(1), 50–64.

Snyder, L. (2006). Facility location under uncertainty: A review. *IIE Transactions, 38*(7), 547–564.

Sonmat, M. (2005). *A review and critique of supplier selection process and practices* (Working paper). Leicestershire, UK: The Business School, Loughborough University.

Spall, J. (1998). An overview of the simultaneous perturbation method for efficient optimization. *Johns Hopkins APL Technical Digest, 19*(4), 482–492.

Spall, J. (2003). *Introduction to stochastic search and optimization*. New York: Wiley.

Sridharan, R. (1995). The capacitated plant location problem. *European Journal of Operational Research, 87*(2), 203–213.

Sriver, T., & Chrissis, J. (2004). Combined pattern search and ranking and selection for simulation optimization. In *Proceedings of the 2004 Winter Simulation Conference* (pp. 645–653).

Stadtler, H. (1996). Mixed integer programming model formulations for dynamic multi-item multi-level capacitated lotsizing. *European Journal of Operational Research, 94*(3), 561–581.

Stadtler, H. (1997). Reformulations of the shortest route model for dynamic multi-item multi-level capacitated lotsizing. *OR Spectrum, 19*(2), 87–96.

Stadtler, H. (2000). Improved rolling schedules for the dynamic single-level lot-sizing problem. *Management Science, 46*(2), 318–326.

Stadtler, H. (2003). Multilevel lot sizing with setup times and multiple constrained resources: Internally rolling schedules with lot-sizing windows. *Operations Research, 51*(3), 487–502.

Stadtler, H. (2005). Production planning and scheduling. In H. Stadtler & C. Kilger (Eds.), *Supply chain management and advanced planning: Concepts, models, software and case studies* (3rd edn., Chap. 10, pp. 197–214). Berlin: Springer.

Stammen-Hegener, C. (2002). *Simultane Losgrößen-und Reihenfolgeplanung bei ein-und mehrstufiger Fertigung*. Wiesbaden, Germany: Gabler / Deutscher Universitäts-Verlag.

Suerie, C., & Stadtler, H. (2003). The capacitated lot-sizing problem with linked lot sizes. *Management Science, 49*(8), 1039–1054.

Suh, E. (2005). *Flexible product platforms*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA.

Suh, E., Kim, I., de Weck, O., & Chang, D. (2004). Design for flexibility: Performance and economic optimization of product platform components. In *Proceedings of the 10th AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference*.

Swaminathan, J., & Tayur, S. (1998). Managing broader product lines through delayed differentiation using vanilla boxes. *Management Science, 44*(12), 161–172.

Swaminathan, J., & Tayur, S. (1999). Managing design of assembly sequences for product lines that delay product differentiation. *IIE Transactions, 31*(11), 1015–1026.

Swisher, J., Hyden, P., Jacobson, S., Schruben, L., Hosp, M., & Fredericksburg, V. (2000). A survey of simulation optimization techniques and procedures. In *Proceedings of the 2000 Winter Simulation Conference* (pp. 119–128).

Tang, C., & Yin, R. (2007). Joint ordering and pricing strategies for managing substitutable products. *Production and Operations Management, 16*(1), 138–153.

Tekin, E., & Sabuncuoglu, I. (2004). Simulation optimization: A comprehensive review on theory and applications. *IIE Transactions, 36*(11), 1067–1081.

Tempelmeier, H. (2002). A simple heuristic for dynamic order sizing and supplier selection with time-varying data. *Production and Operations Management, 11*(4), 499–515.

Tempelmeier, H. (2006). *Inventory management in supply networks – Problems, models, solutions*. Norderstedt, Germany: Books on Demand.

Tempelmeier, H. (2007). On the stochastic uncapacitated dynamic single-item lotsizing problem with service level constraints. *European Journal of Operational Research, 181*, 184–194.

Tempelmeier, H., & Buschkühl, L. (2008). Dynamic multi-machine lotsizing and sequencing with simultaneous scheduling of a common setup resource. *International Journal of Production Economics, 113*(1), 401–412.

Tempelmeier, H., & Derstroff, M. (1996). A lagrangean-based heuristic for dynamic multilevel multiitem constrained lotsizing with setup times. *Management Science, 42*(5), 738–757.

Tempelmeier, H., & Helber, S. (1994). A heuristic for dynamic multi-item multi-level capacitated lotsizing for general product structures. *European Journal of Operational Research, 75*(2), 296–311.

Teunter, R. H., & Haneveld, W. K. K. (2008). Dynamic inventory rationing strategies for inventory systems with two demand classes, Poisson demand and backordering. *European Journal of Operational Research, 190*, 156–178.

Thizy, J., & van Wassenhove, L. (1985). Lagrangean relaxation for the multi-item capacitated lot-sizing problem: A heuristic implementation. *IIE Transactions, 17*(4), 308–313.

Thomas, D. J., & Warsing, D. P. (2007). A periodic inventory model for stocking modular components. *Production and Operations Management, 16*(3), 343–359.

Thonemann, U., & Brandeau, M. (2000). Optimal commonality in component design. *Operations Research, 48*(1), 1–19.

Toledo, F., & Armentano, V. (2006). A lagrangian-based heuristic for the capacitated lot-sizing problem in parallel machines. *European Journal of Operational Research, 175*(2), 1070–1083.

van Hoek, R. (2001). The rediscovery of postponement: A literature review and directions for research. *Journal of Operations Management, 19*(2), 161–184.

Vanderbeck, F. (2003). *Automated Dantzig-Wolfe re-formulation or how to exploit simultaneously original formulation and column generation re-formulation* (Working paper). Bordeaux, France: Department of Applied Mathematics, University Bordeaux.

Vanderbeck, F. (2005). *Implementing mixed integer column generation* (Working paper). Bordeaux, France: Department of Applied Mathematics, University Bordeaux.

Varian, H. (2007). *Intermediate microeconomics: A modern approach* (7th edn.). New York: WW Norton.

Vyve, M. V., & Wolsey, L. A. (2006). Approximate extended formulations. *Mathematical Programming, 105*(2), 501–522.

Wagner, H., & Whitin, T. (1958). Dynamic version of the economic lot sizing model. *Management Science, 5*(1), 89–96.

Wagner, M., & Meyr, H. (2005). Food and beverages. In H. Stadtler & C. Kilger (Eds.), *Supply chain management and advanced planning: Concepts, models, software and case studies* (3rd edn., Chap. 20, pp. 371–388). Berlin: Springer.

Wedekind, H., & Müller, T. (1981). Stücklistenorganisation bei einer großen Variantenzahl. *Angewandte Informatik, 23*(9), 377–383.

Wee, K., & Dada, M. (2005). Optimal policies for transshipping inventory in a retail network. *Management Science, 51*(10), 1519–1533.

Wilhelm, W. (2001). A technical review of column generation in integer programming. *Optimization and Engineering, 2*(2), 159–200.

Wolpert, D., & Macready, W. (1997). No free lunch theorems for optimization. *IEEE Transactions on Evolutionary Computation, 1*(1), 67–82.

Wolsey, L. (1997). MIP modelling of changeovers in production planning and scheduling problems. *European Journal of Operational Research, 99*(1), 154–165.

Wolsey, L. (1998). *Integer programming*. New York: Wiley.

Wolsey, L. A. (2003a). Solving multi-item lot-sizing problems with an MIP solver using classification and reformulation. *Management Science, 48*(12), 1587–1602.

Wolsey, L. A. (2003b). Strong formulations for mixed integer programs: Valid inequalities and extended formulations. *Mathematical Programming, 97*(1), 423–447.

Wolsey, L. A. (2006). Lot-sizing with production and delivery time windows. *Mathematical Programming: Series A, 107*, 471–489.

Woss, W. (1997). A rule-driven generator for variant parts and variant bills of material. In *Proceedings of the 8th International Workshop on Database and Expert Systems Applications (DEXA '97)* (p. 556), Los Alamitos, CA. IEEE Computer Society.

Woudhuysen, J. (2001). E-fulfilment: The opportunities for the future: Part one. *Interactive Marketing, 2*(3), 219–229.

Xia, W., & Wu, Z. (2007). Supplier selection with multiple criteria in volume discount environments. *Omega, 35*, 494–504.

Yadavalli, V. S. S., de W. Van Schoor, C., & Udayabaskaran, S. (2006). A substitutable two-product inventory system with joint-ordering policy and common demand. *Applied Mathematics and Computation, 172*(2), 1257–1271.

Yang, H., & Schrage, L. (2009). Conditions that cause risk pooling to increase inventory. *European Journal of Operational Research, 192*(3), 837–851.

Yano, C., & Gilbert, S. (2004). Coordinated pricing and production/procurement decisions: A review. In A. K. Chakravarty & J. Eliashberg (Eds.), *Managing business interfaces – Marketing and engineering issues in the supply chain and internet domains* (pp. 65–103). Berlin: Springer.

Yao, D., & Zheng, S. (1999). Optimal control of a multi-product inventory system with substitution. In *Proceedings of IEEE 38th Conference on Decision and Control* (pp. 468–473), Phoenix, AZ.

Yao, D. D., & Zheng, S. (2003). Inventory with substitution: Single- and multi-period models. In J. G. Shanthikumar, W. H. M. Zijm, & D. D. Yao (Eds.), *Stochastic modeling and optimization of manufacturing systems and supply chains* (Chap. 8, pp. 177–202). Boston: Kluwer.

Özdemir, D., Yücesan, E., & Herer, Y. (2006a). Multi-location transshipment problem with capacitated transportation. *European Journal of Operational Research, 175*(1), 602–621.

Özdemir, D., Yücesan, E., & Herer, Y. (2006b). Multi-location transshipment problem with capacitated production and lost sales. In *Proceedings of the 2006 Winter Simulation Conference* (pp. 1470–1476).

Zhang, J. (2005). Transshipment and its impact on supply chain members performance. *Management Science, 51*(10), 1534–1539.

Zhang, X., & Chen, J. (2004). Joint replenishment policy for inventory system with demand substitution. In *Proceedings of the Fifth World Congress on Intelligent Control and Automation (WCICA 2004)* (Vol. 4, pp. 2918–2922).

Zhao, L., & Sen, S. (2006). A comparison of sample-path-based simulation-optimization and stochastic decomposition for multi-location transshipment problems. In *Proceedings of the 2006 Winter Simulation Conference* (pp. 238–245).

Zhao, Y., & Klabjan, D. (2005). *Lot-sizing with supplier selection* (Working paper). Urbana, IL: Department of Mathematics, University of Illinois at Urbana-Champaign.

Zhao, Z., Ball, M., & Kotake, M. (2005). Optimization-based available-to-promise with multi-stage resource availability. *Annals of Operations Research, 135*(1), 65–85.

Zhu, X., & Wilhelm, W. (2006). Scheduling and lot sizing with sequence-dependent setup: A literature review. *IIE Transactions, 38*(11), 987–1007.

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