

BAB V

KESIMPULAN

5.1 Kesimpulan

Setelah dilakukan studi literatur pada tiga artikel ilmiah yang berkategori studi kasus (*case study*) tentang penerapan *Value Stream Mapping* (VSM) pada sektor industri manufaktur, industri jasa dan industri pengolahan makanan. Kesimpulan yang dapat diberikan adalah sebagai berikut:

1. Penerapan *Value Stream Mapping* (VSM) berhasil mengidentifikasi pemborosan dalam bentuk VA, NVA, NNVA, ataupun pemborosan dalam bentuk lini produksi yang tidak seimbang
2. Penerapan *Value Stream Mapping* (VSM) pada masing-masing sektor industri berhasil meningkatkan kinerja proses produksi/layanan dan mendapatkan penurunan waktu produksi/layanan
3. Pada sektor industri manufaktur menghasilkan perbaikan berupa penurunan jumlah aktivitas, pengurangan waktu akibat aktivitas non-nilai tambah, pengurangan waktu total produksi, dan pengurangan *taxt time*
4. Pada sektor industri jasa menghasilkan perbaikan berupa penghilangan seluruh aktivitas yang tidak memiliki nilai tambah, penurunan *lead time* proses layanan, mempercepat proses layanan dan meningkatnya proses layanan
5. Pada sektor industri pengolahan makanan, penerapan VSM berhasil mengidentifikasi ketidakseimbangan pada lini produksi sehingga diperlukan adanya beberapa perbaikan diantaranya penerapan FIFO dan penambahan alat

5.2 Saran

Penelitian ini memiliki keterbatasan informasi dan hanya membahas mengenai penerapan VSM dalam tiga sektor industri yang berbeda yaitu industri manufaktur, industri jasa dan industri pengolahan makanan. Dengan ini, peneliti menyarankan untuk penelitian masa depan agar lebih memperluas lagi penerapan

VSM pada berbagai sektor industri yang lain serta dengan menggunakan data-data dari sumber yang lebih banyak dan valid, sehingga dapat memberikan pandangan yang lebih luas mengenai dampak positif dan peningkatan kinerja yang dihasilkan dari penerapan VSM.

DAFTAR PUSTAKA

Referensi Utama

- Liu, Q., Yang, H., & Xin, Y. (2020). Applying value stream mapping in an unbalanced production line: A case study of a Chinese food processing enterprise. *Quality Engineering*, 32(1), 111–123. <https://doi.org/10.1080/08982112.2019.1637526>
- Sharma, N. V. K. J. and A. (2014). *Article information :Lean manufacturing implementation using value stream mapping as a tool A case study from auto components industry.*
- Stadnicka, D. (2016). ScienceDirect Minimization of service disturbance : VSM industry Minimization Minimization of of service service disturbance : disturbance: VSM VSM based based case case study study in in telecommunication telecommunication industry industry. *IFAC-PapersOnLine*, 49(12), 255–260. <https://doi.org/10.1016/j.ifacol.2016.07.609>

Referensi Pendukung

- Agustiningsih, A., 2011. Desain Perbaikan Proses Pelayanan Unit Rawat Jalan Dengan Konsep Lean Hospital Di Rumah Sakit Karya Bhakti. Depok: Fakultas Kesehatan Masyarakat Universitas Indonesia.
- Bhamu, J., Kumar, J. V. S., & Sangwan, K. S. (2012). Productivity and quality improvement through value stream mapping: A case study of Indian automotive industry. *International Journal of Productivity and Quality Management*, 10(3), 288–306. <https://doi.org/10.1504/IJPM.2012.048751>
- Downe-Wamboldt, B. (1992). Content analysis: Method, applications, and issues. *Health Care for Women International*, 13(3), 313–321. <https://doi.org/10.1080/07399339209516006>
- Drisko, J. W., dan Maschi, T. (2015). *Content Analysis Pocket Guides to Social Work R. New York: Oxford University Press.*
- Gaspersz, Vincent. 2007. *Lean Six Sigma for Manufacturing and Service Industries.* Jakarta: Gramedia Pustaka Utama
- Goriwondo, W. M., Mhlanga, S., & Marecha, A. (2011). Use of the Value Stream Mapping Tool for Waste Reduction in Manufacturing. Case Study for Bread Manufacturing in Zimbabwe. *International Conference on Industrial Engineering and Operations Management Kuala Lumpur, Malaysia*, 236–241.

- Hines dan Taylor. (2000). *Going Lean*, Lean Enterprise Research Center. Cardiff Business School.
- Hines, P., & Rich, N. (1997). The seven value stream mapping tools. *International Journal of Operations and Production Management*, 17(1), 46–64. <https://doi.org/10.1108/01443579710157989>
- Ikatrinasari, Z. F., & Haryanto, E. I. (2014). Implementation of Lean Service with Value Stream Mapping at Directorate Airworthiness and Aircraft Operation, Ministry of Transportation Republic of Indonesia. *Journal of Service Science and Management*, 07(04), 291–301. <https://doi.org/10.4236/jssm.2014.74026>
- Irani, S. a., & Zhou, J. (2011). Value Stream Mapping of a Complete Product. *White Paper of Lean Manufacturing Japan*, 1, 1–24. http://www.lean-manufacturing-japan.com/white_paper/value_stream_mapping_of_a_comp.html
- Krippendorff, Klaus. (2006). *Content Analysis: An Introduction to Its Methodology*. Edisi ke-2. Thousand Oaks: Sage Publications.
- Liker, J.K. (2006). *The Toyota Way*. Jakarta: Penerbit Erlangga.
- Pramono, F. (2016). Analisa Waste pada Perusahaan Pelayaran : Studi Kasus. *Jurnal Titra*, 4(2), 95–102.
- Prayogo, T., & Octavia, T. (2013). *Identifikasi Waste dengan Menggunakan Value Stream Mapping di Gudang PT . XYZ*. 1(2), 119–126.
- Radnor, P. Z., & Bucci, G. (n.d.). *Analisis Implementasi Lean di Sekolah Bisnis dan Universitas Inggris*.
- Rewers, P., & Trojanowska, J. (2016). Tools and methods of Lean Manufacturing - a literature review Tools and methods of Lean Manufacturing - a literature review. *7th International Technical Conference Technological Forum, June*, 135–139.
- Saleh, C., Astuti, F. H., Purnomo, M. R. A., & Deros, B. M. (2012). Fuzzy identification of value stream analysis tools in lean manufacturing. *Proceeding of 2012 International Conference on Uncertainty Reasoning and Knowledge Engineering, URKE 2012*, 74–77. <https://doi.org/10.1109/URKE.2012.6319588>
- Saraswat, P., Kumar, D., & Kumar Sain, M. (2015). Reduction of Work in Process Inventory and Production Lead Time in a Bearing Industry Using Value Stream Mapping Tool. *International Journal of Managing Value and Supply Chains*, 6(2), 27–35. <https://doi.org/10.5121/ijmvsc.2015.6203>
- Seth, D., Seth, N., & Goel, D. (2008). Application of value stream mapping (VSM) for minimization of wastes in the processing side of supply chain of

cottonseed oil industry in Indian context. *Journal of Manufacturing Technology Management*, 19(4), 529–550.
<https://doi.org/10.1108/17410380810869950>

Tilak, M., Aken, E. Van, McDonald, T., & Ravi, K. (2002). Value stream mapping: A review and comparative analysis of recent applications. *IIE Annual Conference Proceedings*, 0118, 1–6.

Tortorella, G. L., Fogliatto, F. S., Anzanello, M., Marodin, G. A., Garcia, M., & Reis Esteves, R. (2017). Making the value flow: application of value stream mapping in a Brazilian public healthcare organisation. *Total Quality Management and Business Excellence*, 28(13–14), 1544–1558.
<https://doi.org/10.1080/14783363.2016.1150778>

Wilson, Lonnie (2010). *How to Implement Lean Manufacturing*. Mc Graw hill, New York

Womack, James P., dan Daniel T. Jones. 1996. *Lean Thinking: Banish Waste and Create Wealth in Your Corporation*. New York: Simon & Scuster.

Wu, S., & Wee, H. M. (2009). How lean supply chain effects product cost and quality - A case study of the ford motor company. *Proceedings of the 2009 6th International Conference on Service Systems and Service Management, ICSSSM '09*, 236–241. <https://doi.org/10.1109/ICSSSM.2009.5174890>

Yildiz, E. Z., & Güner, M. (2013). Applying value stream mapping technique in apparel industry. *Tekstil ve Konfeksiyon*, 23(4), 393–400.