

Study Analysis of Productivity Improvement Micro, Small And Medium Enterprises (MSMEs) Hand Craft With Line Balancing Method To Improve and Enhance Sustainable Economic In Depok, Indonesia

Muhammad

Industrial Engineering (IE) Department

Faculty of Engineering

University of Indonesia

Depok, West Java, Indonesia

muhammad42@ui.ac.id ; muhammad.dasilva@gmail.com

Rahmat Nurcahyo

Industrial Engineering (IE) Department

Faculty of Engineering

University of Indonesia

Depok, West Java, Indonesia

rahmat@eng.ui.ac.id

Abstract

Micro, Small and Medium Enterprises or commonly known as the MSMEs is one of the supporting pillars of economic Pharmaceutics among the middle class. MSMEs are high productivity levels in the villages which have massive labor absorption. Currently, Indonesia has faced the AEC (Asean Economic Community) and the effects will be felt at the beginning of the year 2016 (Directorate General of Trade and Industry, Small and Medium Industry, Ministry of Industry of Indonesia, Euis Saedah, 2015). Therefore, SMEs as the key to the economy of the community should be good developed and structured in order to be ready to face global competition. Handkerchief Our team consists of students of Industrial Engineering, Mechanical Engineering, and Accounting University of Indonesia interested in conducting research on the use of methods of Line Balancing in the production process carried out by SMEs Crafts in the city of Depok. Line Balancing methods have been tested and applied in large corporations that system of division of labor is balanced so the level of productivity increased the production. Therefore, we want to implement this method Line Balancing-Six Sigma on SMEs usually have the classic problem that is Out of Stock & Order every order in large numbers, in other words SMEs we have not been able to meet the global demand that the number would not be very much. We chose Crafts for SMEs is one of the largest home-based commodity production is quite a lot in the city of Depok, Indonesia. but less well-known, wellstructured and not very productive. Depok city itself is a nearby town in which all of our team members live and learning in the lecture. Thus the distance to carry out research on SMEs in the city of Depok is not an issue. The economic condition of the people in Depok is also not so good because it is a suburb of the capital Jakarta city. Therefore, the Micro, Small and Medium Enterprises Crafts Industry in Depok city should be developed in order to improve the economy of their communities well. The solutions we offer are using Line Balancing in the production process that previously we would do some research first about the application of methods, systems, mechanisms, and management. Expected future, the results of this study can be used as a model to be applied to applicable and tested that can be applied to SMEs which are run directly by the people in all regions of Indonesia. With the development of SMEs is expected the economy of small communities can grow and be strong to face the world economic turmoil.

Keywords

Implementation of Line Balancing, Six Sigma, Enterprise, Craft

Acknowledgements

Department of Industrial Engineering (IE), Faculty of Engineering, University of Indonesia
www.ie.ui.ac.id

Biography

Muhammad is an Undergraduate Student in Industrial Engineering in Department of Industrial Engineering (IE), Faculty of Engineering at University of Indonesia, Depok, Indonesia. He earned Diploma of Engineering in Physics and Instrumentation Engineering, Faculty of Industrial Technology from Institut Teknologi Bandung (ITB), Bandung, Indonesia. He is a leader in AUAV (Autonomous Unmanned Aerial Vehicle), University of Indonesia Robotics Research Team. Member of TREC Engineering Center Research Group, Faculty of Engineering University of Indonesia about Sustainable and Renewable Energy with Mr. Farizal Ph.D. He has an oral Presentation about Cryogenic Technology in Denmark Technical University (DTU), Copenhagen, Denmark. Muhammad has completed research projects with PT. Astra Internaional Tbk. in Astra 1st Program, Nutrifood, Aeroterascan, UI Robotic. His research projects interests include manufacturing, simulation, optimization, design, reliability, scheduling, manufacturing, and lean. He is member of IEOM University of Indonesia Chapter, YLI (Young Leader Indonesia), Astra 1st, PERHIMAK UI, Shafa Community.

Dr. Rahmat Nurcahyo S.T, MSc. is currently a fulltime senior lecturer and Director of Industrial Engineering (IE) Department, Faculty of Engineering University of Indonesia. Mr. Rahmat holds a Bachelor of Engineering degree in Industrial Management from University of Indonesia and a Master of Science degree in Economic and Management Science from Faculty of Economic and Business University of Indoneisa. He is a Certified Management Consultant with over 35 years of experience in working with closely-held businesses. He is Director of Management System of Faculty of Engineering University of Indonesia.