

LP And LDR Model of Aggregate Production Planning (APP): Inclusion of Aggregate Shortage

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Abstract

In this paper we give a procedure to allow aggregate shortages in the context of LP approach to APP. We give two approaches to handle this. It will be worthwhile to explore which approach is better (equation (12) for handling shortages or equation (15)?). An experimental investigation is underway to establish the same. In the next part of the paper we give how to handle shortages in the LDR (Linear Decision Rule) model of APP. The concept of aggregate shortage also; and give two ways to handle the same in the context of LP approach to APP. On similar lines we give a procedure that enables introduction of aggregate shortages in the LDR model of APP also. This is a useful contribution we make.

Keywords

Aggregate Production, LP Based Approach, LDR Based Approach to APP, Aggregate Shortage

Biographies

Prof. RRK Sharma is a B.E. (mechanical engineering) from VNIT Nagpur India, and PhD in management from I.I.M., Ahmedabad, INDIA. He has nearly three years of experience in automotive companies in India (Tata Motors and TVS-Suzuki). He has 32 years of teaching and research experience at the Department of Industrial and Management Engineering, I.I.T., Kanpur, 208016 INDIA. To date he has written 1195 papers (peer-reviewed (395) /under review (18) / working papers 782 (not referred)). He has developed over ten software products. To date, he has guided 64 M TECH and 21 Ph D theses at I.I.T. Kanpur. He has been Sanjay Mittal Chair Professor at IIT KANPUR (15.09.2015 to 14.09.2018) and is currently a H.A.G. scale professor at I.I.T. Kanpur. In 2015, he received “Membership Award” given by IABE USA (International Academy of Business and Economics). In 2016 he received the “Distinguished Educator Award” from IEOM (Industrial Engineering and Operations Management) Society, U.S.A. In 2021, he received IEOM Distinguished Service Award. In 2019 and 2020, he was invited by the Ministry of Human Resources Department, India, to participate in the NIRF rankings survey for management schools in India. In 2019, he was invited to participate in the Q.S. ranking exercise for ranking management schools in South Asia.

Prof. KK Lai: He is currently President of CYUT Taiwan. He has numerous publications to his credit.