The Financing Role of Inventory: Evidence from China’s Metal Industries

by

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Abstract: Classical inventory theory examines various factors on the matching of demand and supply. In this paper, we find the model and empirical evidence for the financing role as an essential complementary factor. Theoretically, we analyze a model to show that inventory can be leveraged to obtain financial gains thus the optimal inventory level is associated with the investment opportunities. Empirically, we first show at the country-level, China’s inventory of copper, aluminum, and zinc are driven by the investment returns after controlling for other explanations, including price trajectory, currency risk, industrial demand, and economic uncertainty. Then we confirm the result at the firm-level using data from China’s manufacturing sector, and further establish the financing mechanism especially for the metal industries. The economic impact of the financing role is significant compared to the demand- or supply-side factors, suggesting that classical inventory theory should incorporate the financing role in making the optimal policy decision.

Bio: Jing WU is an assistant professor at City University of Hong Kong College of Business. He received his PhD (major in operations, minor in economics & finance) and MBA from the University of Chicago Booth School of Business, and his bachelor degree in electronic engineering from Tsinghua University. Professor WU's primary research fields are operations and finance, economic networks, quantitative investment, and machine learning applications. His work appears in several INFORMS and IEEE conferences and journals. He teaches PhD course "Machine Learning for Business Research" at College of Business, and serves as the Deputy Programme Leader of BSc Computational Finance. Prior to joining CityU, he worked at Deutsche Bank New York as a quantitative strategist.