

# Applying Portfolio Approach to Regional Industrial Growth and Economic Stability

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## **Abstract**

Inspired by Cai and Leung (2006), this study applies portfolio analysis to examine the growth, stability, and stabilizing effects of Hawaii's three major agricultural industries and seventeen sub-industries from 1967 to 2016.

Our empirical findings reveal an inverse relationship between growth and stability across most industries, aligning with Markowitz's portfolio theory in the context of regional economic development. Additionally, we find evidence that diversification in the most recent subsample period has contributed to an improvement in the overall stability of Hawaii's agricultural portfolio.

Applying Sharpe's model, we assess idiosyncratic growth and stabilizing effects at both the industry and sub-industry levels. This analysis allows us to classify industries into four distinct categories based on their growth potential and stabilizing contributions, offering valuable policy implications for promoting a more sustainable agricultural sector. Furthermore, we contribute to the literature by exploring the dynamic relationships within the agricultural system at both aggregate and sub-industry levels. By analyzing autocorrelations and intertemporal correlations of growth rates, we examine the long-term stability of Hawaii's agricultural industries. Our findings suggest that Hawaii's agricultural system exhibits stable growth with converging trends, reinforcing its resilience over time.

**Keywords:** Portfolio analysis, growth, stability, regional economic development