# How Data-Driven Entrepreneur Analyzes Imperfect Information For Business Opportunity Evaluation

**Abstract:**

High market uncertainty impedes an entrepreneur’s ability to evaluate the state of the market for a business opportunity. For many entrepreneurial ventures, data collection and analysis techniques and technologies are becoming an important source to manage uncertainty. This trend is often referred to as “datadriven entrepreneurship.” We consider a dynamic approach using data to overcome market uncertainty for business opportunityrelated evaluations. In particular, we examine the entrepreneur’s investment portfolio in which each investment generates expected returns and some information about a specific aspect of the market for a single business opportunity. We develop a model that analyzes imperfect market data (e.g., financial, social, regulatory), while factoring in the entrepreneur’s risk preference and operational shortages of resources, routines, reputation, and regulations. Our numerical findings show that, rather than pursuing the highest expected returns, an entrepreneur may choose perfect information, risk hedging, or market-controlling investments based on his/her cash level and risk preference. Hence, the entrepreneur, fueled by the availability of data analysis, could overcome uncertainties and obtain better insights for business opportunity decisions.

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