



Assessing Early Stage Ventures for Investment

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Questions

- **What is the ability of VC's to determine project success at screening stage?**
- **What is the comparable ability of a statistical model?**
- **What are the salient project characteristics that determine market success?**

VC Decision Making

- **Mostly judgmental reviews**
- **Predictive Accuracy about 40% for early stage investments**
- **Reduced to 31% when information about the track record of the team and competition was included**
- **Declined to 17% when additional information about the team and product was introduced**

Data

- **561 R&D projects undertaken by Canadian entrepreneurs between 1989 and 1993**
- **Evaluated at an early stage by Canadian Innovation Centre scoring 37 project characteristics on linguistic scales (A, B, C)**
- **Overall prediction by CIC (A through E)**
- **Observed whether project reached market**

Table 1. New Ventures' Commercialization Rate.

Rating	Sample Total	Percent of all	Percent Commercial
A - recommended for development.	28	5%	71%
B - may go forward, but need to collect more data.	39	7%	26%
C - recommended to go forward, returns likely modest.	83	15%	20%
D - doubtful, further development not recommended	341	61%	4%
E - strongly recommend to stop further development	70	12%	1%
Weighted Average			11%
Total*	561	100%	

Statistical Analysis

- **Statistically compared outcome [0,1] with scores on the 37 criteria**
- **Included those characteristics that with 95% certainty were statistically significant predictors of the probability of reaching the market**
- **Dropped all other (less relevant) characteristics from model**

Most Important

In order of importance

1. Expected profitability
2. Development risk
3. Legal or other IP protection
4. New function provided

Table 2. Predictive Accuracy.

	IAP Overall Rating*		Statistical Model+		IAP Overall Rating and Statistical Model+	
	Number	Percent	Number	Percent	Number	Percent
Overall Predictive Accuracy	443	79.0%	446	79.5%	457	81.5%
Correctly Predicts Success	47	75.8%	45	72.6%	47	75.8%
Correctly Predicts Failure	396	79.4%	401	80.4%	410	82.2%
False Positive's	103	68.7%	98	68.5%	89	65.4%
False Negative's	15	3.6%	17	4.1%	15	3.5%

