

THEORY BASED ANALYSIS OF THE COMMERCIAL CREW TO ORBIT TRANSPORTATION INDUSTRY STRUCTURE AND EVOLUTION

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Overview



- Background information
- Key definitions and considerations
- Summary of industry forces/results
- Conclusions
- Questions

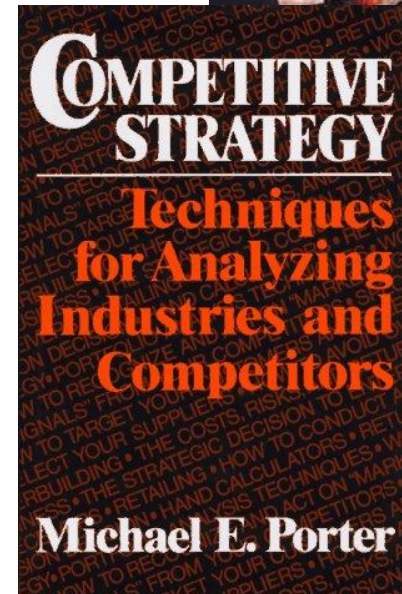
Objectives of work

- Starting point
 - Third iteration
 - Requires continuous improvement
 - Future work will be required as industry landscape changes dynamically
- Enable utilization of business and economic theories
 - Use by industry participants
 - Use to guide and assist government policy decisions
 - Use to encourage, facilitate, and promote industry

Introduction

- Michael Porter
 - 1980
 - Harvard Business School

- Competitive Strategy
 - **Industry Structural Analysis**
 - Competitor Analysis
 - Competitive Strategy



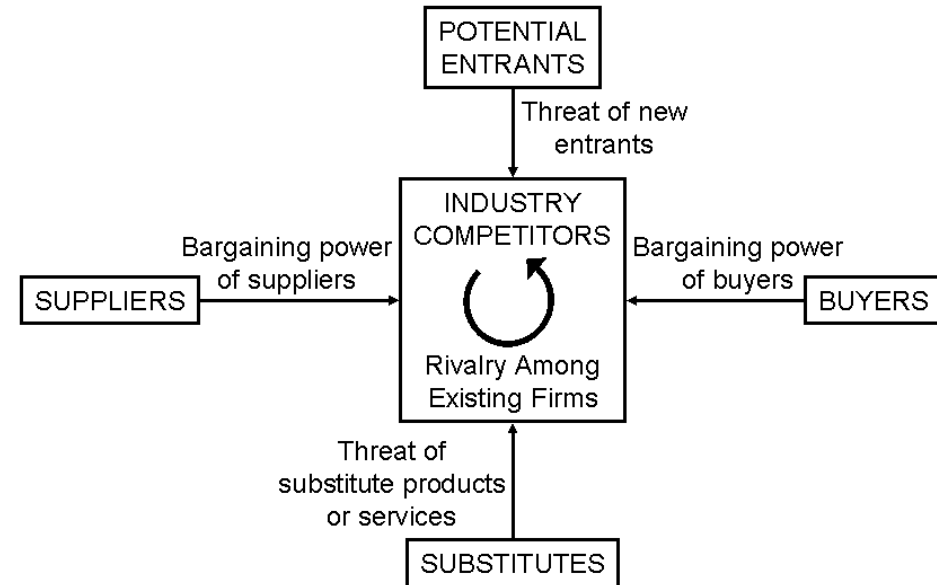
Theory based, what about the data?

“The only way to look into the future is to use these sorts of theories, because conclusive data is only available about the past.”

Christensen, Clayton M., Roth, Erik A., and Anthony, Scott D., Seeing What's Next: Using The Theories of Innovation to Predict Industry Change, Harvard Business Review Press; 1st Edition, September 21, 2004

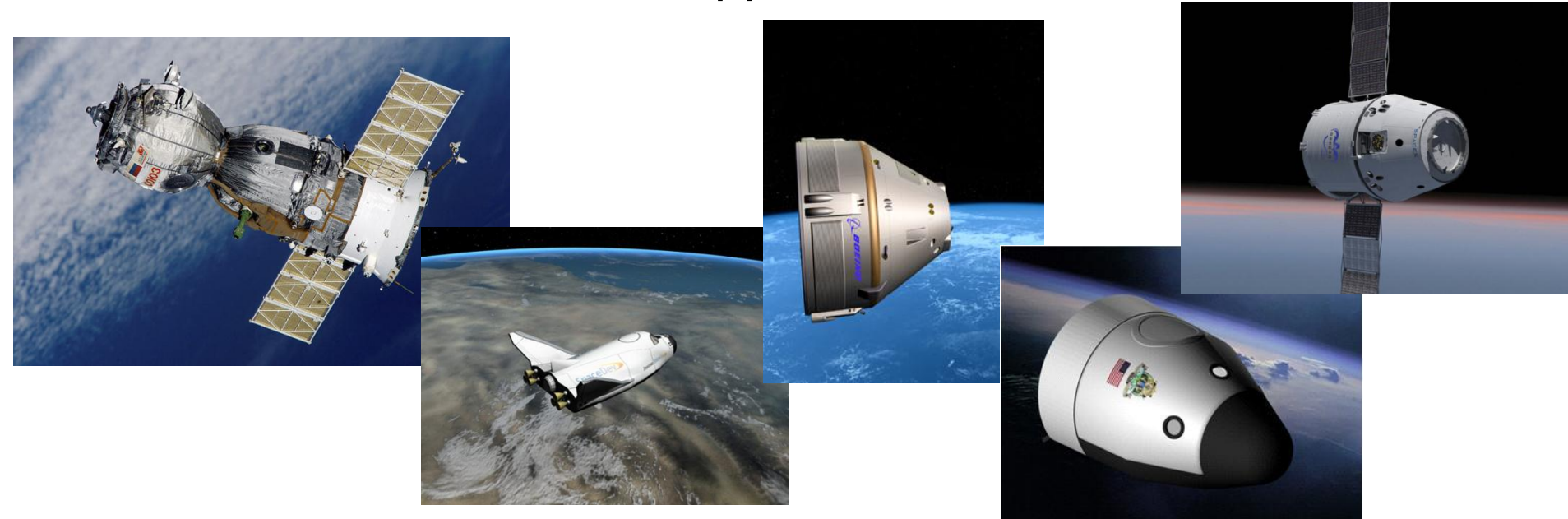
The 5 Competitive Forces

- Threat of New Entrants
 - Barriers to entry
- Intensity of Rivalry Among Existing Competitors
 - Industry growth rate
 - Exit barriers
- Pressure from Substitute Products
- Bargaining Power of Buyers
- Bargaining Power of Suppliers



Industry Definition

- Scope: Commercial delivery of humans to Earth orbit
 - Considering the transport vehicle only
 - Launch vehicle is a supplier



Threat of New Entrants

<u>Barriers to Entry</u>	2010	2011	2012
Scale	H	H	H
Differentiation	L	L	M
Capital Reqs	H	H	H
Switching Costs	H	L-H	L-H
Distribution	L	M	M-H
Cost Disadvantages	L-H	M	M-H
Gov. Policy	M	L	L
Exp. Retaliation	-	L	M


<u>Rivalry</u>	2010	2011	2012
Size & Strength	-	L-M	M
Rate of Growth	H	M-H	M-H
Fixed Costs	H	M	M
Diversity	M	M-H	M
Strategic Stakes	M-H	M-H	M
Exit Barriers	H	H	M

Exit Barriers

- Source of exit barriers
 - Specialized assets
 - Fixed costs of exit
 - Strategic interrelationships
 - Emotional Barriers
 - Government or social restrictions
- Results of exit barriers
 - Unstable industry
 - Poor profitability
 - Increased industry risk

Barriers

Exit Barriers

		Low	High
Entry Barriers	Low	Low, stable returns	Low, risky returns
	High	High, stable returns 	High, risky returns

Summary of Forces



<u>Forces</u>	2010	2011	2012
Threat of Entry	L	L	L
Rivalry	H	M	M-H
Substitute	L	L	M
Buyers – NASA	H	M-H	H
Buyers - Other	H	M-H	L
Suppliers	H	M	L

Balance



<http://www.centertao.org/blog/tags/balance/>

- Uncertainty
- Infrastructure
- Regulation
 - Safety
 - Traffic Management
- Innovation, Information, and Safety
 - NASA Support (Technical Interchange Meetings)
 - NASA Partners (Funded Space Act Agreements)
- Distribution Channels

- Non-NASA customers are critical
- Acquisition approach is defined reducing uncertainty
- Focus must be on performance and safety

Questions?



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