COE CST Fifth Annual Technical Meeting

Space Transportation Industry Viability

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Arlington, VA

Agenda

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- Schedule
- Goals
- Results
- Conclusions and Future Work

Team Members- People

Dr. Scott Benjamin

Principal Investigator- Associate Professor at Florida Institute of Technology, Director for the Center of Entrepreneurship and New Business

Taylor Smith

Student- Current Graduate Student Studying for her MBA, Expected Graduation is Fall 2015

Arion Gray

Student- Current Undergraduate Student Studying Aerospace Engineering, Expected Graduation is Spring 2017

Team Members- Partner

Greg Autry

Assistant Professor of Clinical Entrepreneurship at USC Marshall School of Business

Task Description

- To understand the industry structure, conduct and performance of firms in the suborbital space transportation industry by using Porter's Five Forces Model to help develop a general understanding of profitability given the interaction of stakeholders.

Schedule

Semester and Year	Completed Tasks
Fall 2014	Understanding the Industry Needs
Spring 2015	Literature Review and Data
Summer 2015	Interviews Conducted and Data Analyzed
Fall 2015	Interviews Conducted, Writing Conclusions and Publishing Results

Goals

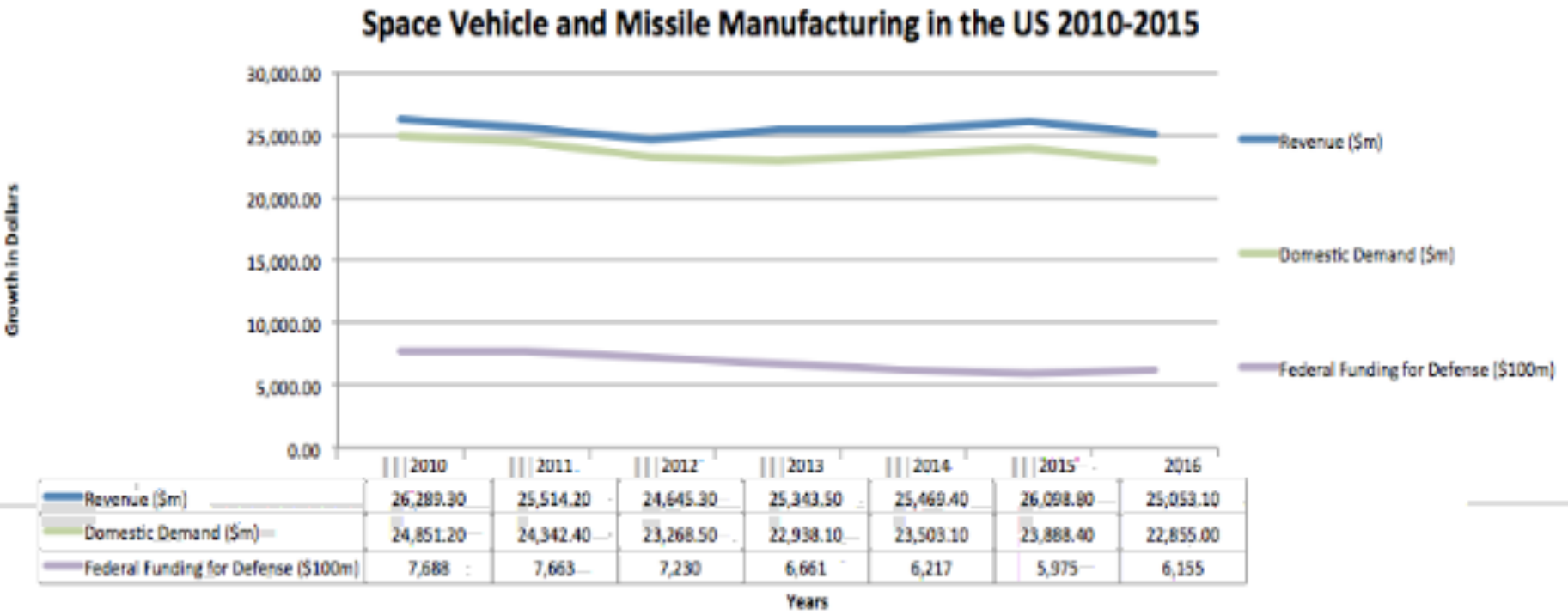
- To define the industry and its competitors
- Conduct a Porter's Five Forces analysis in order to evaluate competitive rivalry and industry profitability

Results

The Current Competitors Within The Industry

Results

Industry Current and Future Growth



	2010	2011	2012	2013	2014	2015	2016
Revenue ($m)	26,289.30	25,514.20	24,645.30	25,343.50	25,469.40	26,098.80	25,053.10
Domestic Demand ($m)	24,851.20	24,342.40	23,268.50	22,938.10	23,503.10	23,888.40	22,855.00
Federal Funding for Defense ($100m)	7,688	7,663	7,230	6,661	6,217	5,975	6,155

Results

THREAT OF NEW ENTRANTS

FINANCIAL, REGULATORY AND PERCEIVED TECHNICAL AND MARKET RISKS PRESENT HIGH BARRIERS TO ENTRY. THE UNKNOWN NATURE OF INDUSTRY PROFITABILITY ALSO PRESENTS A HIGH BARRIER THUS REDUCING THE THREAT OF ENTRY BY NEW FIRMS.

MAIN BARRIERS
- LARGE FINANCIAL CAPITAL REQUIREMENTS
- PERCEIVED TECHNICALS AND MARKET RISKS
- GOVERNMENT POLICIES & REGULATIONS
- ENVIRONMENTAL POLICIES

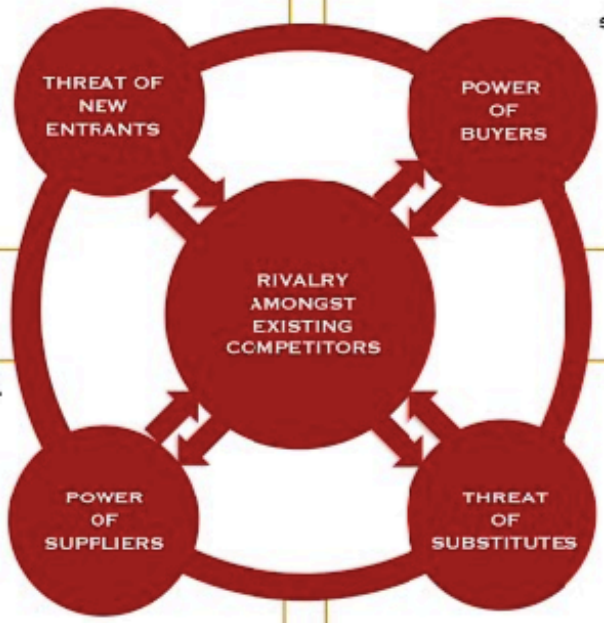
THREAT OF ENTRY: ***LOW***

POWER OF BUYERS

WITH FEW PROVIDERS OF SUBORBITAL TRANSPORTATION SERVICES AND HIGHLY DIFFERENTIATED OFFERINGS, BUYERS HAVE LITTLE POWER TO NEGOTIATE PRICE OR TERMS.

BUYER CHARACTERISTICS:
SPACE ENTHUSIASTS DESIRE FOR THRILL AND EXCITEMENT IN SPACE
- SHORT FLIGHT DURATION LIMITING BIOLOGICAL RESEARCH
- COMMUNICATION AND SATELLITE COMPANIES LOOKING FOR EXPANSION

BUYER POWER: ***LOW***



POWER OF SUPPLIERS

FEW SUPPLIERS SERVICE THIS NICHE MARKET. TECHNOLOGY IS CHANGING AT A RAPID PACE WHICH MAKES IT HARD FOR SUPPLIERS TO KEEP UP WITH THE LATEST DEMANDS. COMPETITIVE FIRMS EXHIBIT BACKWARDS VERTICAL INTEGRATION BY BRINGING COMPONENT PRODUCTION IN-HOUSE.

SUPPLIER CHARACTERISTICS:
- FEW SUPPLIERS
- INTERNAL PROCESSING FOR EACH SUPPLIER
- EXCESSIVE IP RIGHTS

SUPPLIER POWER: ***MODERATE***

THREAT OF SUBSTITUTES

THERE ARE CURRENTLY NO ALTERNATIVE SUBSTITUTES THAT CAN MEET THE NEEDS PROVIDED BY SUBORBITAL SPACE TRANSPORTATION FOR EITHER THE TOURISM SEGMENT OR THE PAYLOAD SEGMENT

SUBSTITUTE CHARACTERISTICS:
- FEW TRUE SUBSTITUTES
- SUBSTITUTES ARE MUCH LOWER IN COST

THREAT OF SUBSTITUTES: ***LOW***

Conclusions

- Oligopolistic industry in nature
- Growth has remained flat within the industry, though the progression of commercial space flights could bring growth to the industry
- Rivalry among competitors will not be price competitive, instead they will compete on differentiation factors, such as flight path

Conclusions and Future Work

- Future work
  - Industry Adoption: A Comparative Analysis Between Commercial Aviation and Commercial Space Transportation