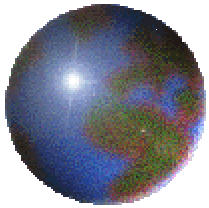


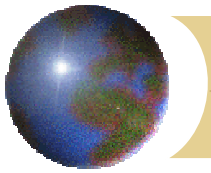
DIANA PROJECT



the
diana
project

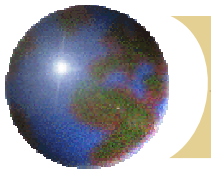
Candida Brush- Boston University
Nancy Carter- Univ. of St. Thomas
Elizabeth Gatewood-Indiana University
Patricia Greene—Babson College
Myra M. Hart Harvard University

(<http://www.esbri.se/diana.asp>)



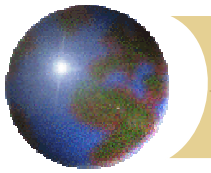
Diana's Funding Sources

- **Ewing Marion Kauffman Foundation**
- **United States Small Business Administration**
- **National Women's Business Council**
- **Entrepreneurship and Small Business Research Institute (ESBRI) - Sweden**



Overarching Question

Why do women owned businesses remain smaller than those of their male counterparts?



WOMEN ENTREPRENEURS IN THE U.S.

28% of all businesses in US are female owned (51% or more)

- 6.2 million businesses
- \$1.15 trillion in revenue
- 9 million employees

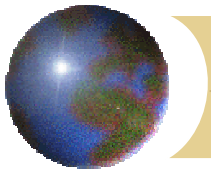
18% are owned 50/50 with spouses

46% of all businesses in US are owned by women (50% or more)

- 10.1 million businesses
- \$2.3 trillion in revenue
- 18.2 employees

424 New start ups per day 1997 → 2002

Source: Center for Women's Business Research

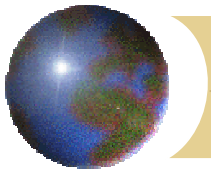


Growth Rates for Women Owned Businesses (U.S.)

1997 → 2000: Women led firms with 100+ employees increased 44%

1997 → 2000: Women led firms with revenues of \$1M+ increased 32%

Growth rates are 1.5 times the rate for all firms in these categories



The Diana Project: Projects

History

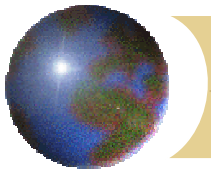
- **Mapping of Investments in US 1957-1998 (NVCA data)**
- **Literature Review (300+ articles)**
- **Background/trends**

Success Factors

- **Springboard 2000 presenters (surveys and interviews)**
- **NFWBO data**
- **Mapping of Venture Capital Industry**

Growth Trajectories

- **Study of those seeking equity**



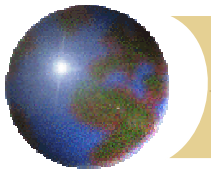
What We've Learned About... Women, Businesses, and Suppliers of Capital

Human Capital

- ⊕ **Women in U.S. generally well educated and increasingly acquiring business experience**
- ⊕ **Women's growth goals differ from men's; Women have slightly lower aspirations for business size**
- ⊕ **Women's motivations vary, as do those of men**

Social Capital

- ⊕ **Women's networks are more diverse than men's**
- ⊕ **Women focus on friendship & obligation in network relationships; men on exchange**



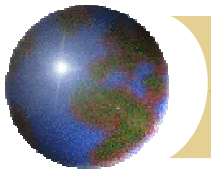
What We've Learned About... Women, Businesses, and Suppliers of Capital

Strategic Choice (Concept)

- **Almost 50% of women's business concentrated in service sector –**
- ***BUT* so are men's**
 - Women: Health, education and medical field**
 - Men: Construction, manufacturing, transportation/communication;**
 - ***Increasing numbers of women starting ventures in technology sectors**

➤ **Suppliers of Capital (Financial Resources)**

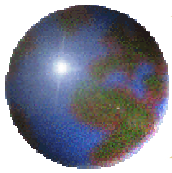
- ▣ **Only 10% of decision makers in venture capital industry are women**
 - **Industry increased 62% between 1995-2000;**
 - **Men increased 64%; Women 47%**
- ▣ **Attrition rate among women higher than for men (64% vs. 33%)**



Diana International: Launched 2003 (Stockholm/ESBRI)

Why?

- ❑ Provide a platform from which to develop, conduct and share a global research agenda**
- ❑ Create an international community of scholars dedicated to answering the questions about women entrepreneurs and growth oriented businesses**



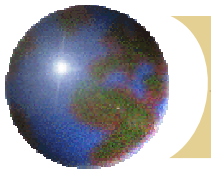
Diana International

30 Researchers from 19 Countries

(14 here this weekend)

- **Australia**
- **Canada**
- **Bulgaria**
- **Chile**
- **China**
- **Denmark**
- **Finland**
- **Germany**
- **Hungary**
- **Ireland**
- **Korea**

- **Netherlands**
- **New Zealand**
- **Norway**
- **Slovenia**
- **Spain**
- **Sweden**
- **United Kingdom**
 - **England**
 - **Scotland**
 - **Northern Ireland**
- **United States**



Implications

🌐 **Education**

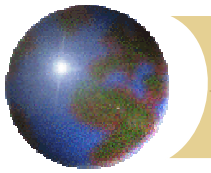
- 📊 **Programs and courses**

🌐 **Research**

- 📊 **< 15% all studies include or focus on women**
- 📊 **Theories untested on this population**

🌐 **Public Policy**

- 📊 **Women's participation in the wealth creation and innovation process**



Women's Entrepreneurship is Important to Economies

- **Wealth Creation** – women to grow businesses that create wealth (assets)
- **Competitiveness** – women create ventures that grow and diffuse innovations making industries and countries more competitive
- **Social Contributions** – women develop businesses that resolve economic and social problems, create jobs, and contribute to communities

Positioning for Growth- Women's Use of Bootstrapping to Finance their Ventures



**Dr. Candida Brush
Dr. Nancy Carter
Dr. Elizabeth Gatewood
Dr. Patricia Greene
Dr. Myra Hart**



Agenda

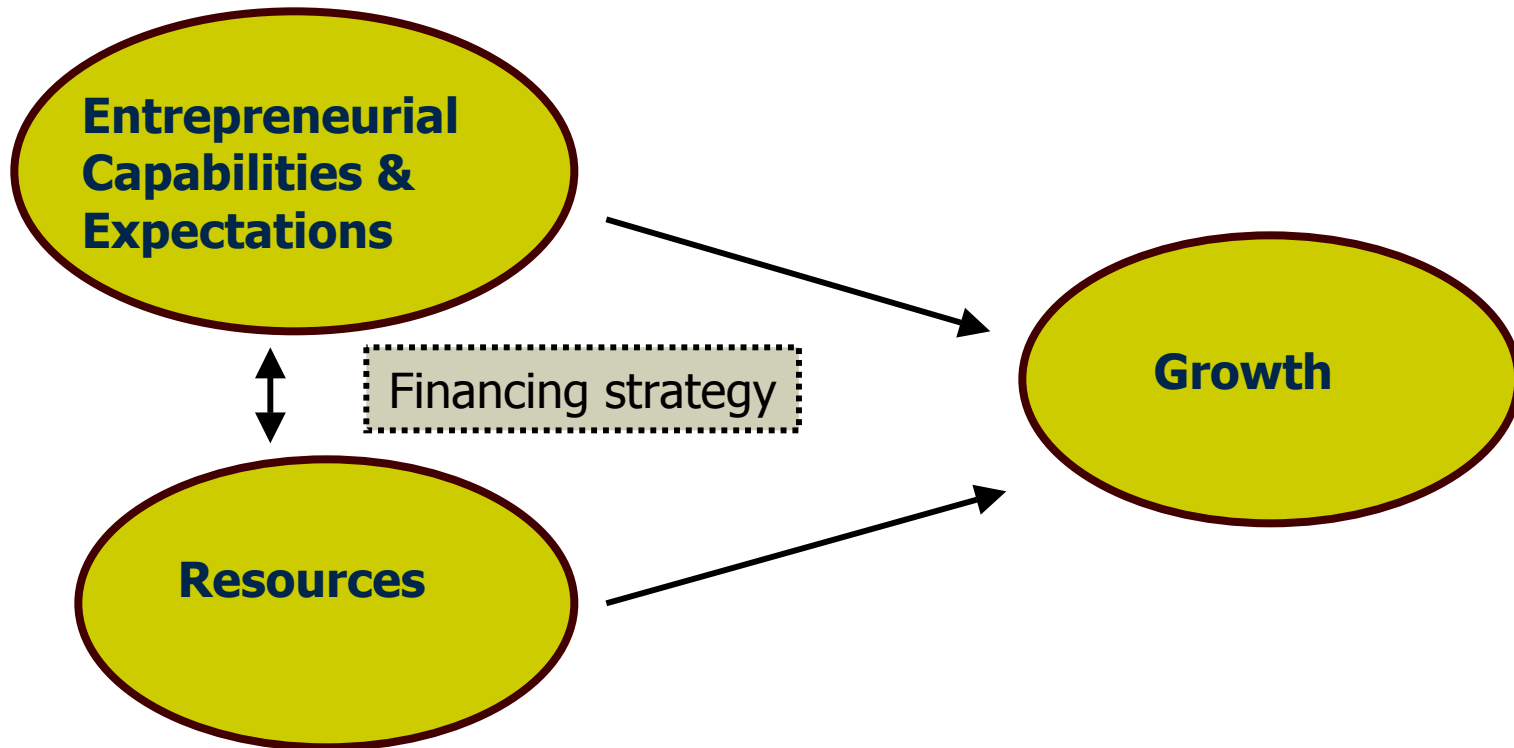
- Positioning for Growth-Financing Strategies
- Methodology
- Findings & Implications
- Questions



The QUESTION:

“How do women develop financing strategies that allow them to prove the business concept, meet early stage milestones, and demonstrate to external investors the value and potential of their businesses?”

Theory of Firm Growth



Penrose, 1959



Ways to Bootstrap

- ❑ Personal credit cards
- ❑ Business credit cards
- ❑ Personal savings
- ❑ Leasing equipment
- ❑ Credit from supplier
- ❑ Temporary personnel
- ❑ Customer funded R & D
- ❑ Advances from customers or licenses
- ❑ Loans from partners, family & friends
- ❑ Loans from family & friends
- ❑ Pay employees with stock
- ❑ Deals with service providers
- ❑ Delayed team compensation
- ❑ Personal bank loan
- ❑ Using interest on overdue payments from customers
- ❑ Selling or pledging accounts receivables
- ❑ Loans from previous employees
- ❑ Retained earnings



Hypotheses

- Variation in bootstrapping by stage of business development
- Early start-up ventures will emphasize bootstrapping product development
- Early growth stage ventures will exhibit greater intensity of bootstrapping
- Ventures reaching adolescent stage take on equity and reduce bootstrapping activities

Sample & Measures

- 92 applicants from Springboard 2000 Forums
(Silicon Valley & Mid-Atlantic)
- Phone interviews (36-62 minutes)
- Dependent Variable:
 - Stage of business development
- Independent Variables:
 - 18 bootstrap financing options (1-5 scale)
 - Intensity of bootstrapping
 - Outside funding (source and amount)
- Control Variable:
 - Firm Age



Descriptive Statistics

- All technology businesses (51% business services)
- 54% national/global growth goals
- 75% founders had > 1 start-up
- 18% had MBA's, 31% Masters, 5% PhD

Factors Linked to Bootstrapping

- **Number of bootstrapping options** $\mu = 5.57$

- **Bootstrap Product Development**
 - Using customers & suppliers (temp employees) to finance R&D and operations

- **Bootstrap Business Development**
 - Owners cash resources that they can quickly access

- **Bootstrap to Minimize Need for Capital**
 - Reducing outflows for inventory & equipment
 - – reduce operations cost
 - Using employees to finance operations (including service providers)

- **Bootstrap to Meet Need for Capital**
 - Loans secured from close ties
 - Owners' personal bank loan

- **Equity Received**

Classification Function Coefficients: Stage of Business Development

	V. Early	Early	Adolescent
	None	\$1-249,999	Over \$250,000
□ Product Development	.020	.587	.428
□ Business Development Through Own Money	.906	1.127	.925
□ Minimize Capital by Reducing Operations Cost	-.327	-.458	.570
□ Minimize Capital by Reducing Labor Costs	.746	.141	.195
□ Meet Capital Through Close Tie Loans	.053	.103	.035
□ Meet Capital Through Personal Bank Loans	.095	.129	-.048
□ Received Equity Funding	1.838	3.242	3.253
□ Firm Age	1.441	1.727	1.703



Results

- Bootstrapping varied by stages
 - Product development & minimizing capital through personal loans more common with very young businesses
 - Variation in bootstrapping by stage of business development
- Intensity of bootstrapping varied with adolescent firms using more options.

Post Hoc

- Adolescent firms used more bootstrapping options than other two groups & these were more important to their strategies
- Outside venture funding did not discriminate between adolescent and early growth firms; did discriminate early development firms
- Adolescent firms (>\$ 250,000) more likely to have institutional and angel funding than other groups



Conclusions

- Growth oriented women entrepreneurs effectively position their firms for financing using multiple sources
- No single type of bootstrapping dominates
- Bootstrapping behaviors may be necessary – but not sufficient... correlated with but do not predict outside financing
- Firm Age is not significant in differentiating bootstrapping activities among stages.



Implications & Next Steps

- What is the relationship between human capital and financing strategies in growth oriented women-led firms?
- How do bootstrapping activities influence the patterns resource development and growth in women-led ventures?

Comments??





The *Diana* Project

To understand the variety of resource and financing strategies that have enabled women entrepreneurs to achieve high growth