

Second Panel Study of Entrepreneurial Dynamics: Research Opportunities with PSED II

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3 August 2007

Professional Development Workshop
Academy of Management Annual Meeting
Philadelphia, PA

Where do new businesses
come from?

Why care about new firms?

- Provide half of all net new job creation
- Contribution to improved sector productivity
- Major source of economic innovation
- Associated with economic growth
- Significant work career option for many
- Mechanism for immigrant social integration
- Universal route for upward social mobility

- New firm creation is clearly a critical feature of the US economy!!
- What data sets might be available to explore the important features and causal mechanisms involved in new firm creation?

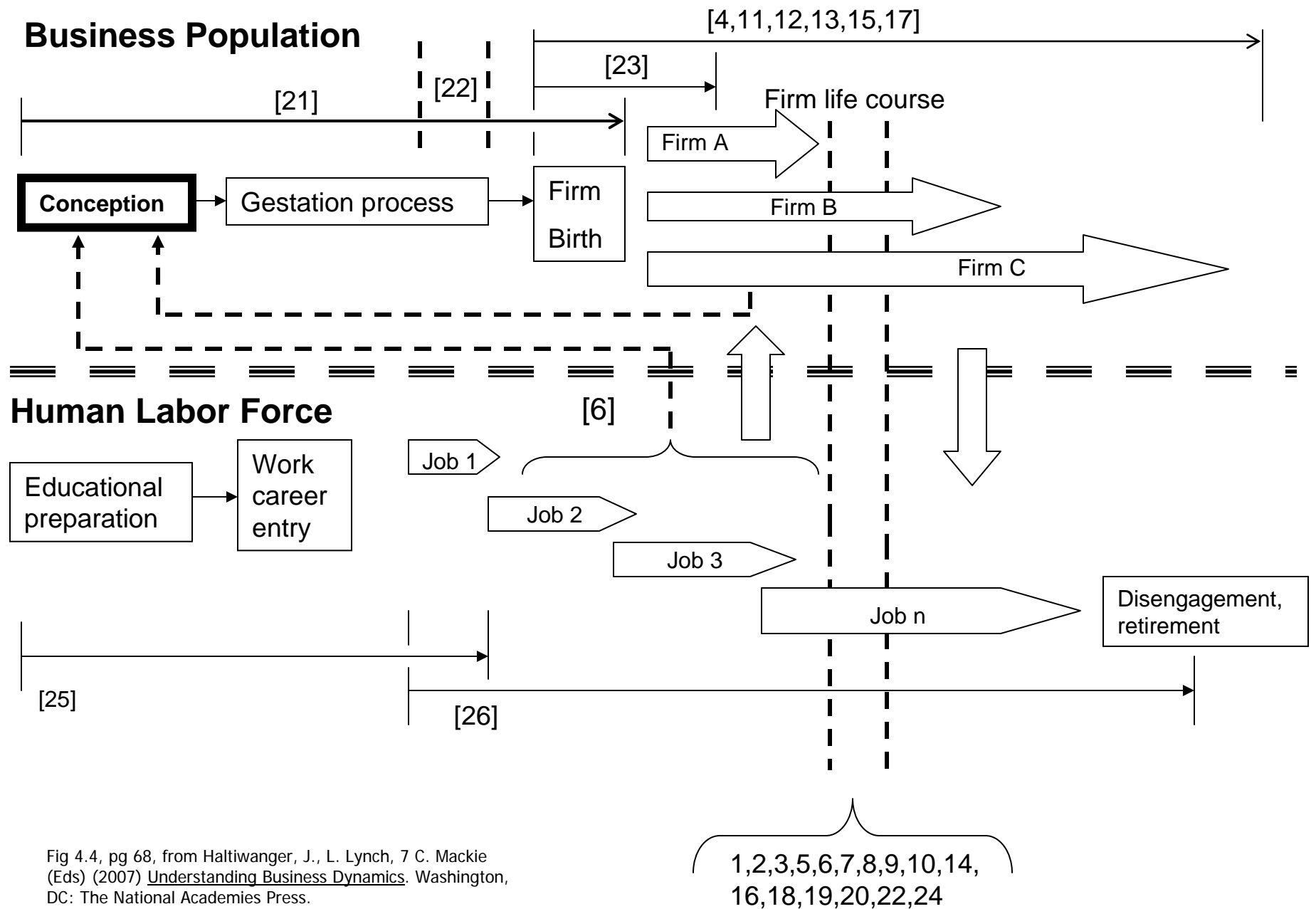


Fig 4.4, pg 68, from Haltiwanger, J., L. Lynch, & C. Mackie (Eds) (2007) *Understanding Business Dynamics*. Washington, DC: The National Academies Press.

Existing Studies Inventory

- 1) BLS, Business Establishment List
- 2) BLS, Quarterly Census of Employment and Wages
- 3) BLS, Current Employment Statistics
- 4) BLS, Business Employment Dynamics
- 5) BLS, American Time Use Survey
- 6) BLS/Census: Current Population Surveys [Fairlie assessment for Kauffman]
- 7) US Census Business Registrar
- 8) US Census Company Organization Survey
- 9) USA Census, Economic Census (5 yr intervals)
- 10) US Census Survey of Business Owners
- 11) US Census Longitudinal Business Database
- 12) US Census Integrated Longitudinal Business Database
- 13) US Census Longitudinal Employer-Household Dynamics
- 14) Dun and Bradstreet Duns Market Identifier file
- 15) NSF[US Census] Longitudinal Research Database
- 16) SBA Statistics of US Businesses
- 17) SBA Business Information Tracing Series [BITS]
- 18) FRB Survey of Small Business Finances
- 19) IRS Survey of Income
- 20) Standard and Poor's Compustat
- 21) Kauffman Foundation Panel Study of Entrepreneurial Dynamics [U Mich ISR]
- 22) Kauffman Foundation and Others: Global Entrepreneurship Monitor Cross-National Program
- 23) Kauffman Firm Survey [Mathematica]
- 24) Kauffman Financial and Business Databases
- 25) National Longitudinal Survey of Youth [Ohio State/NORC]
- 26) Panel Study of Income Dynamics [U Mich ISR]

What do these data sets provide?

- Fifteen cross-sectional comparisons of exiting firms [1,2,3,5,6,7,8, 9,10,14,16,18,19,20, 22,24]
- Seven longitudinal analysis of existing firms [4,11,12,3,15,17,23]
- Three track labor force activities of individuals and households [6,25,26]
- One, GEM, provides cross national comparisons of start-up activity [22]

Where can one find:

- Cohorts of nascent entrepreneurs and nascent enterprises
- Longitudinal data that begins with firm conception and tracks start-up efforts until a new firm has been established
- Data that is fully documented and in the public domain [<http://www.psed.isr.umich.edu>]
- Representative samples to facilitate extrapolation to the entire US population of adults and nascent enterprises

The Panel Study of Entrepreneurial Dynamics Datasets

- PSED I
 - Initial screening in 1998-2000
 - Tracked 830 nascent entrepreneurs/ enterprises over 4 years
- PSED II
 - Initial screening in 2005-2006
 - Tracking 1,214 nascent entrepreneurs/ enterprises
 - First follow-up data ready for analysis
- Unique national resource providing descriptions of the fundamental aspects of the firm creation process

Workshop Objectives

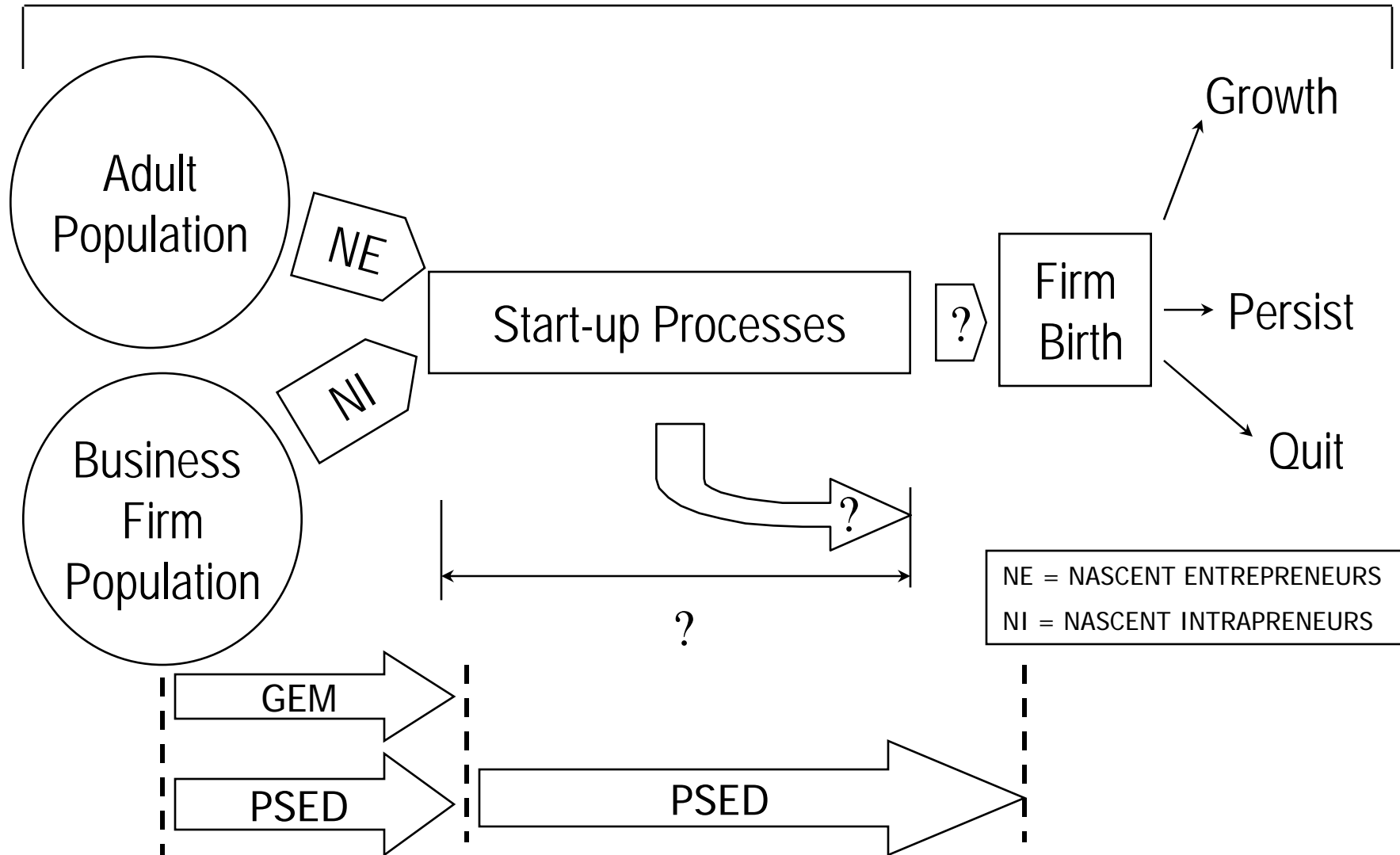
- Need a wide range of entrepreneurial researchers to assist in understanding the firm creation process
 - Provide contributions to the greater good, so to speak
- Provide an introductory overview
 - Conceptualization
 - Data collection procedures
 - Computation of weights
 - Summary of the interview schedules
 - Structure of data sets
 - Issues in analysis
 - Access to data
 - Overview of previous, concurrent work

Central Assumption:

- People start businesses, not
 - Market characteristics
 - Macro-economic conditions
 - Regional, geographic attributes
 - National R & D intensity
 - Presence of opportunities
 - Availability of financing
 - Positive entrepreneurial climate
 - Social networks
 - Speeches by politicians
- Who gets involved and what do they do?

CONCEPTUAL MODEL – The Start-up Process

Social, Political, Economic Context



Data collection procedure

- Large scale screening to locate candidate nascent entrepreneurs
 - Completed by a commercial market research firm
 - Based on a representative household sample
 - Captures nascent enterprises long before they are included in business registries
- Detailed interviews to identify active nascent entrepreneurs and gather information on what they are doing
 - Completed by U Michigan Institute for Social Research
- Follow-up interviews to determine the outcomes of their efforts
 - Completed by U Michigan Institute for Social Research

Respondent Counts

	PSED I	PSED II
Screening period	1998-00	2005-06
Total screened	62,612	31,845
1 st Detailed Interview (Q/A)	830	1,214
2 nd Detailed Interview (R/B)	501	972
3 rd Detailed Interview (S/C)	511	Fall 2007
4 th Detailed Interview (T/?)	533	?

Data Collection

	PSED I	PSED II
Screening period	1998-00	2005-06
Screening Interview: Phone	2 min	2 min
1 st Detailed Interview (Q/A)	60 min/12 pg	60 min
2 nd Detailed Interview (R/B)	60 min/8 pg	60 min
3 rd Detailed Interview (S/C)	60 min/8 pg	60 min
4 th Detailed Interview (T/?)	60 min/8 pg	?

Computation of Case Weights

- Screener Weights
 - Data weighted to represent all U.S. households
 - Sample of RDD landlines in 48 states plus DC
 - Correct for coverage errors and differential non-response
 - All weights based Current Population Survey data
- Entrepreneurs: 1st Interview – Response rate = 77%
 - Data weighted to represent all nascent entrepreneurs
 - Not all identified entrepreneurs agreed to be contacted
 - Not all those that agreed actually completed the interview
 - Weights correct for non coverage, non response, and panel attrition
- Entrepreneurs: 2nd Interview – Response rate = 80%
 - Data re-weighted to represent all nascent entrepreneurs
 - Not all those that did 1st interview were found or refused 2nd interview
 - Weights correct for non coverage, non response and panel attrition

Weights on Data Tapes

- WT_SCRN
 - Use this weight variable for all analysis of screener data
- WT_WaveA
 - Use this weight variable for all analysis of 1st interview data with nascent entrepreneurs
- WT_WaveB
 - Use this weight variable for all analysis of 2nd interview data with nascent entrepreneurs

Screening Items

- Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others?
- Are you, alone or with others, currently trying to start a new business or a new venture for your employer, an effort that is part of your normal work?
- Are you, alone or with others, currently the owner of a business you help manage, including self-employment or selling any goods or services to others?

Additional Criteria

- Yes to any one or more screening item, must meet all following criteria:
 - Admit to start-up activity in past 12 months
 - Expect to own all or part of the new firm
 - No positive monthly cash flow covering all expenses and salaries for 6 of past 12 months
- Those that pass are “candidate nascent entrepreneurs”
 - Additional questions eliminate those with positive monthly cash flow in prior years, who appear to be reactivating a business
- Identify “active nascent entrepreneurs”

Detailed Interview Modules: PSED II Wave A

- Opportunity recognition
- Idea/Action sequence
- New business sector, location
- Legal, organizational form
- Start-up activity inventory
- Funding, hiring, revenue
- Registry listings
- Competitive strategy
- Owners, founders, helpers listing
- Owner demographics
- Intra-startup team relationships
- Legal entity owners
- Non-owning founder demographics
- Helper demographics
- Entrepreneurial climate assessment
- Funding, financial support intro
- Funding support: not a legal entity
- Funding support: firm a legal entity
- Assets, net worth: legal entity firm
- Markets, competition assessment
- Future expectations for new firm
- Personal motivations, dispositional
- Personal motivations, contextual
- Current labor force activity
- Career experiences, human capital
- Personal self-assessment
- Residential tenure, migration
- Parental small business background
- Current household structure
- Household income, net worth
- Hawthorn effect item

Total items: 10 open ended, 479 fixed response.

Follow-up Interview Modules: PSED II Wave B

- Confirm same business activity
- Record change in business types
- Current status of initiative
- Confirm, update location, structure (NF,SU)
- Update start-up activities
- Update start-up finances
- Exit interview (quits only)
- Attitudes toward competition (NF)
- Changes in team structure (NF, SU)
- Owner demo update (NF,SU)
- Owner relationships update (NF,SU)
- Legal entity owners update (NF,SU)
- Non-owning founder update (NF,SU)
- Helper demo update (NF,SU)
- Community resources (NF)
- Funding support: not legal entity (NF,SU)
- Funding support: a legal entity (NF,SU)
- Assets, net worth: legal entity firm (NF,SU)
- Other owners (NF,SU)
- Markets, competition (NF)
- Future expectations (NF)
- Personal motivations, dispositional (NF)
- Personal motivations, contextual (NF)
- Employment structure (NF)
- Expense structure (NF)
- Current labor force activity (SU)
- Current household structure (NF,SU)
- Household income, net worth (NF,SU)
- Hawthorn effect item (NF,SU)

Modules provided to all unless noted; NF =new firm, SU=active start-up.

Data Set Documentation: PSED II

[File names on PSED website]

	Interview schedule	Codebook	Data set
Screen	psedii_screener_qnaire.pdf	psedii_scrn_codebook.pdf	psedii_scrn_spss.exe*
1 st Detailed (A)	psedii_wavea_qnaire.pdf	psedii_wavea_codebook.pdf	psedii_wavea_spss.exe*
2 nd Detailed (B)	psedii_waveb_qnaire.pdf	TBA	TBA
3 rd Detailed (C)	TBA	TBA	TBA

*also available as SAS data files.

Issues in Data Analysis

- Use of weights
 - Re-center weights for sub-samples
- Identifying Recent Active Nascent Entrepreneurs
 - Cross sectional screen identifies individuals in all possible stages of the new firm creation process
- Identifying Transitions
 - Conception
 - Disengagement
 - New Firm Birth
- Identifying those Involved in Start-up Effort
 - Respondent versus “team”
- Financial support
 - Informal to an initiative
 - Formal support for a legal entity

Proper Use of Weights in Analysis

- Always center weights on 1.0
 - Absolute value of weights always yield correct estimate of mean but they may not yield correct standard error
 - If mean weight within each analysis not equal 1.0 then get bias estimate of standard errors because sum of cases not equal to sum of weights thus producing faulty statistical tests.
- How to center weights on 1.0
 - Define analysis subgroup
 - Calculate mean weight in subgroup, call it WTsub
 - Then define $\text{NewWT} = \text{WT} / \text{WTsub}$

Identifying Recent Active Nascent Entrepreneurs

	PSED I	PSED II
Screen period	1998-00	2005-06
Screen sample	62,612	31,845
Candidate nascent entrepreneurs (2-criteria)	3,592	
Candidate nascent entrepreneurs (3-criteria)		1,571
Active Nascent Entrepreneurs	830	1,214
Confirmed Active Nascent Entrepreneurs [No prior positive monthly cash flow]	824	1,148
Recent Confirmed Active Nascent Entre's [Initiated activity within 10 yrs of screening]	747	947

Define “conception” –the beginning

- Exclude those with positive monthly cash flow for more than 3 months prior to first interview
- Those that have completed 2 or more “start-up activities”
- Those that completed 2 within a 12 month period
- Identify the earliest of the two activities
- Defined that a “conception”

Define Outcome – The End

- New Firm
 - PSED I:
 - Is the start-up now an operating business?
 - PSED II:
 - Income in 6 of past 12 months?
 - Cover all monthly expenses?
 - Cover owners' salaries and wages?
- Active start-up
 - PSED I
 - Still in active start-up phase?
 - PSED II
 - Devoted more than 160 hours in past 12 months
 - Expect to spend more than 80 hours in next 6 months
 - A major focus of work career over the next 12 months
- Disengagement [Quit]
 - PSED I
 - No longer being worked on by anybody
 - PSED II
 - Not new firm, not active start-up
 - Consider self disengaged from the business start-up

Sample Attrition: Identifying Nascents and Outcomes

	PSED I	PSED II
Number of start-up activities in interview	26	34
Candidate nascent entrepreneurs	830	1,214
Positive mthly cash flow before 1 st interview	6	66
Less than three start-up activities	8	70
No two start-up activities in any 12 month period	53	117
Initial activity more than 10 years before 1 st intw	16	14
Recent active nascent entrepreneurs	747	947
Percent recent confirmed active nascent entre's	90.0 %	78.0 %
Number with data from first follow-up interview	447	774
Percent with first follow-up interview data	59.8 %	81.7 %

Start-up participants

- Start-up team
 - Those expecting to own part of the new firm
- Non-owning founders
 - Active participants in start-up
 - Not expecting to own part of the new firm
 - Responsible for a distinctive contribution to the founding of the new business
- Helpers
 - Not expecting to own part of the firm
 - Not responsible for distinctive contribution
 - Provided support, advice, or guidance on a regular basis

Financial Support

- Informal support
 - All financial support of any kind to the start-up initiative
 - Prior to the registration of the firm as a legal entity [sole proprietorship, partnership, corporation, etc.]
- Formal support
 - All financial support provided to the firm as a legal entity
 - The firm is party to a financial agreement

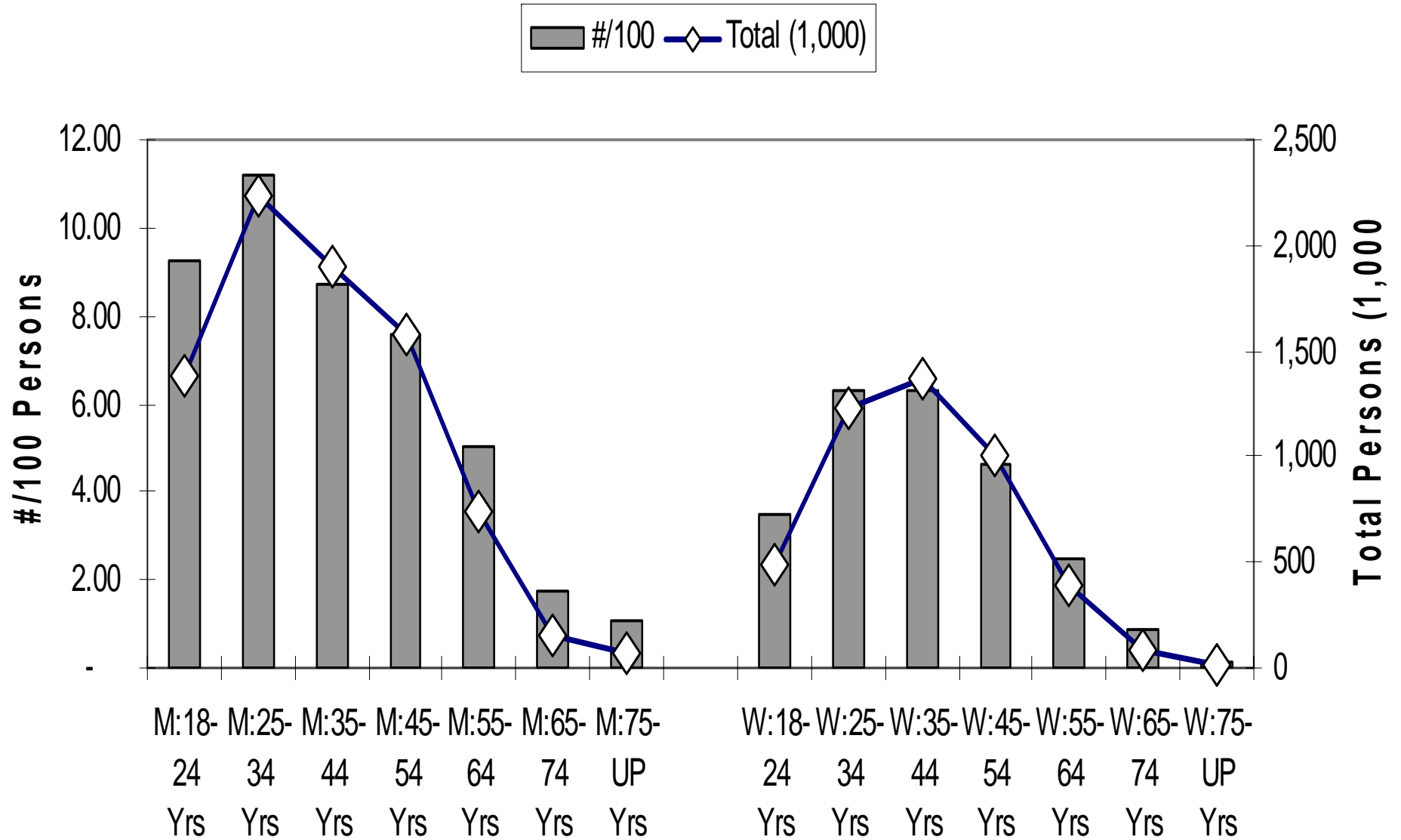
Questions? Comments?

- What aspects of new firm creation would you like to explore using the PSED data set(s)?

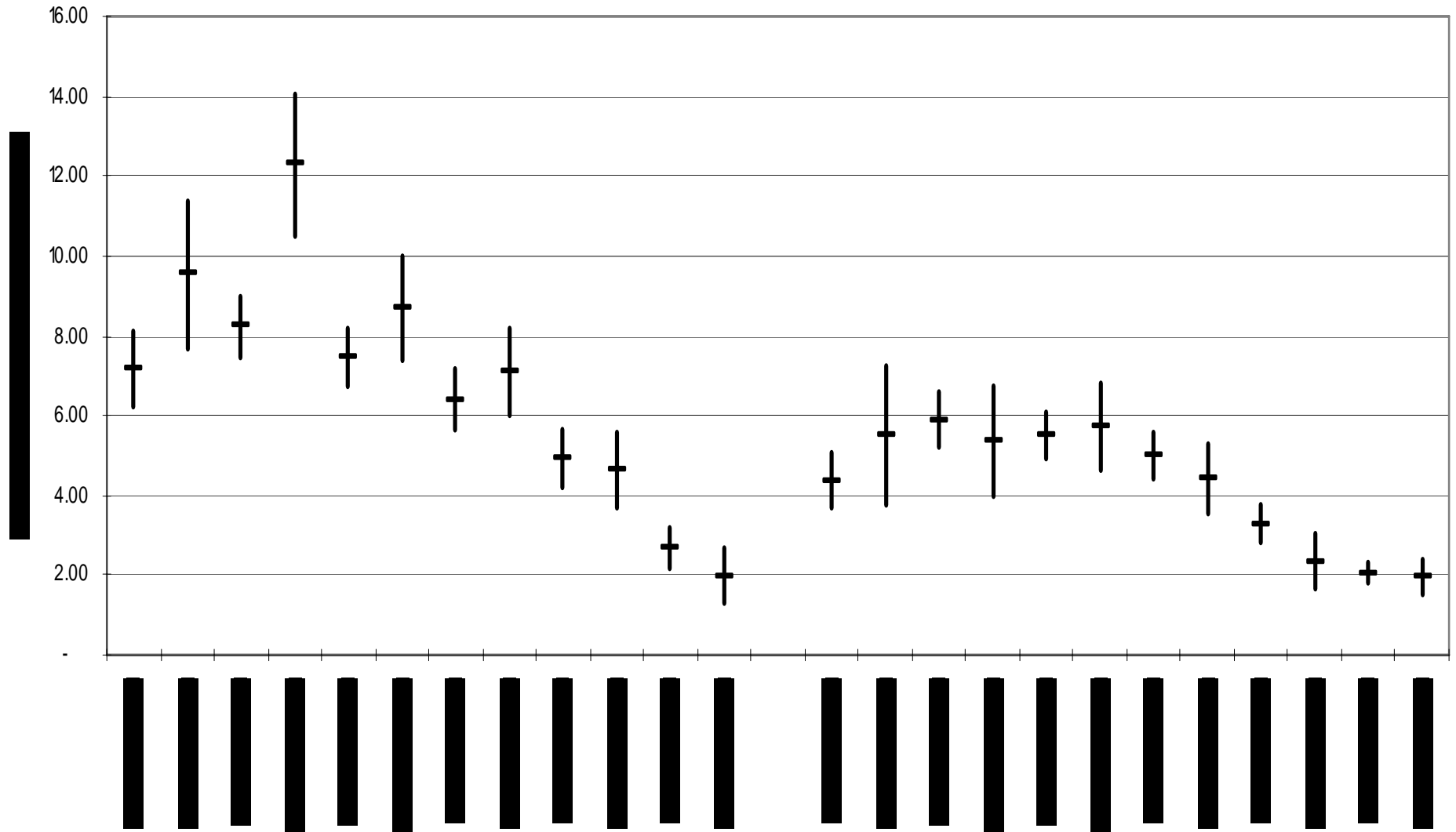
PSED II Initial Report: Selected Findings

- Scope of Activity: 2005
 - 12.6 million nascent entrepreneurs
 - 7.4 million nascent enterprises
- Scope of Activity: 1999
 - 10.7 million nascent entrepreneurs
 - 6.3 million nascent enterprises
- Increase reflects human population increase
 - Increase in prevalence not significant
 - About 6/100 of those 18-74 years old

Active Nascent Entrepreneurs by Gender and Age: 2005

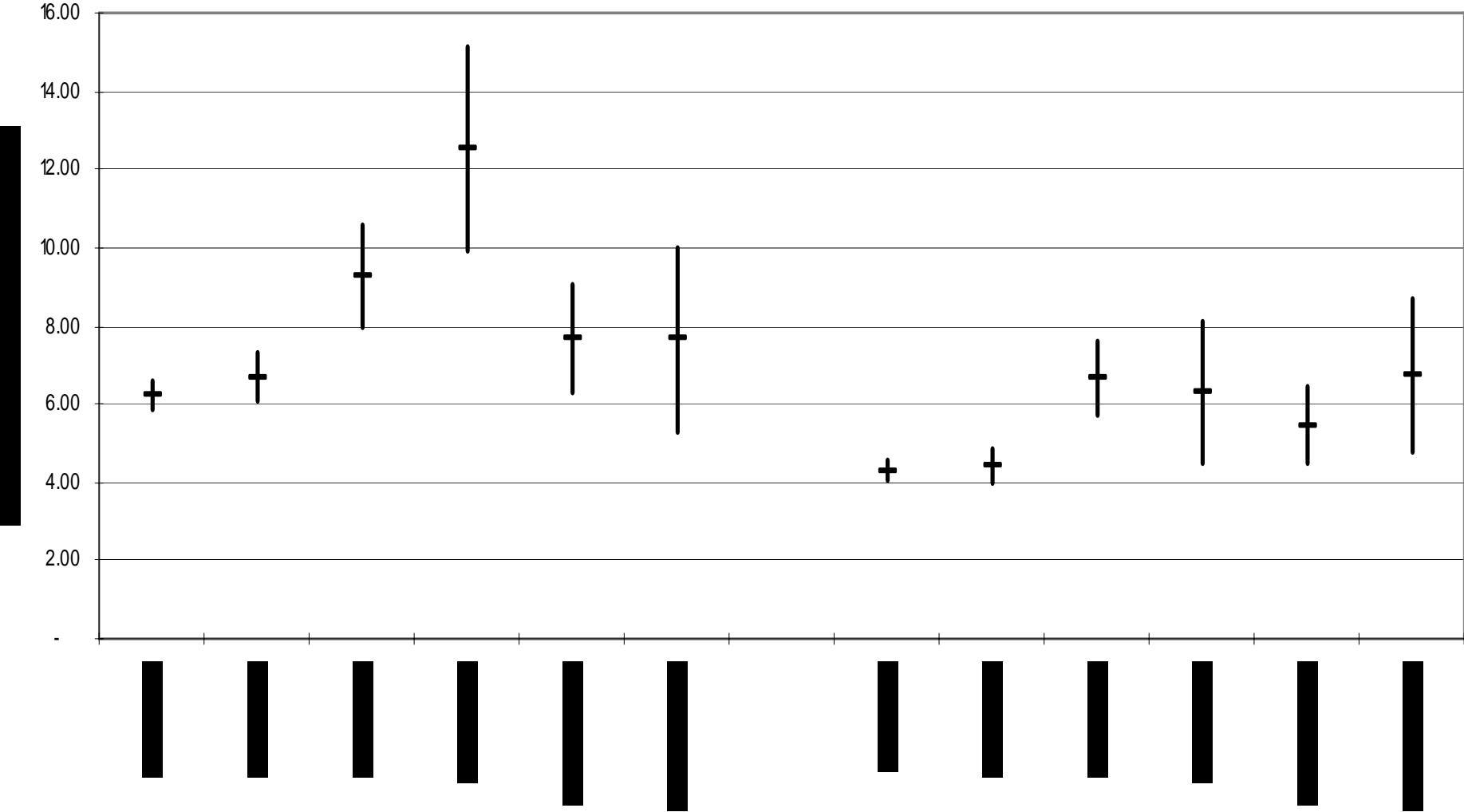


Active Nascent Entrepreneurs by Age and Gender: PSED I and II



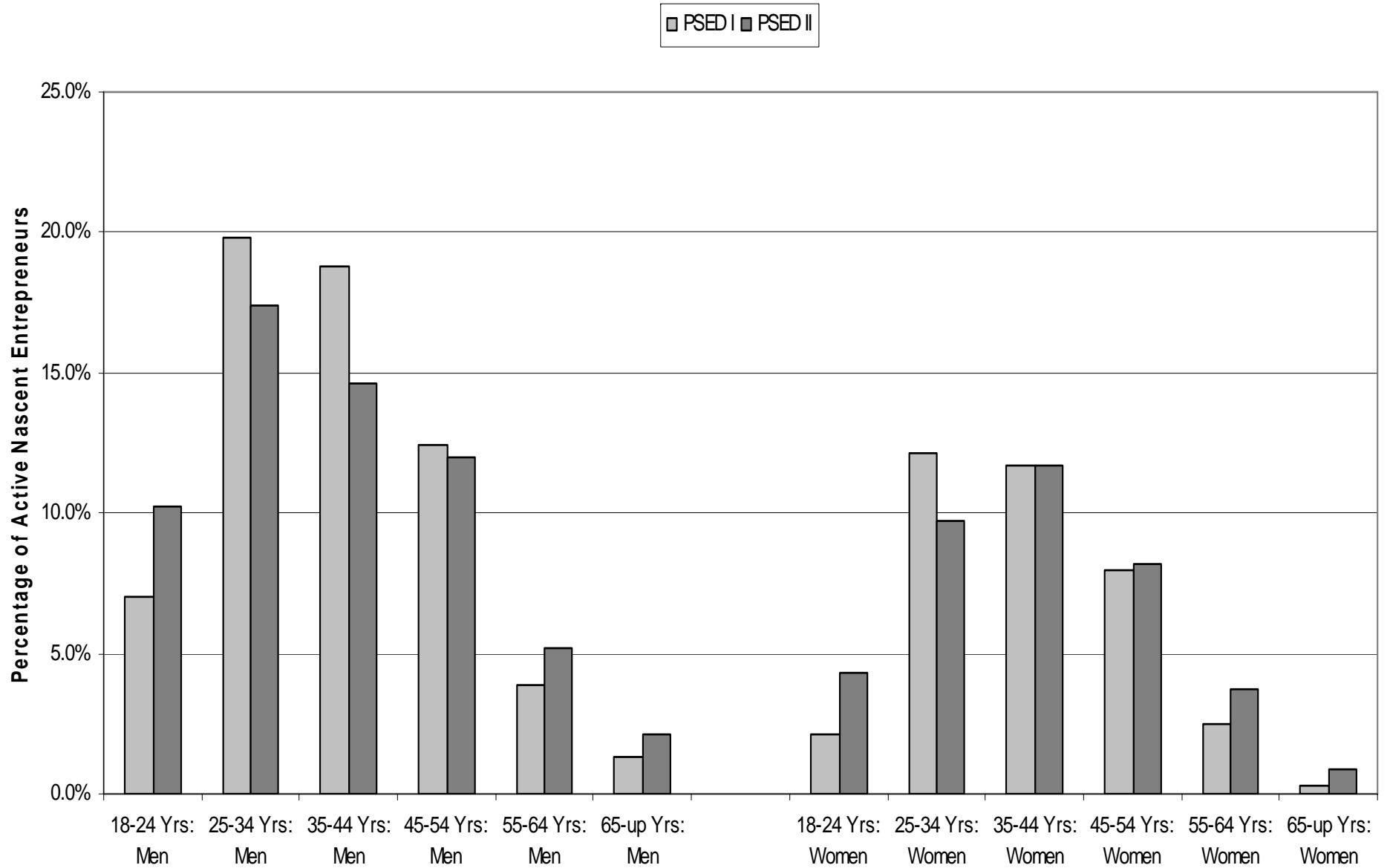
Note: PSED I estimates adjusted for screening item wording effects.

Active Nascent Entrepreneurs by Ethnicity and Gender: PSED I and II

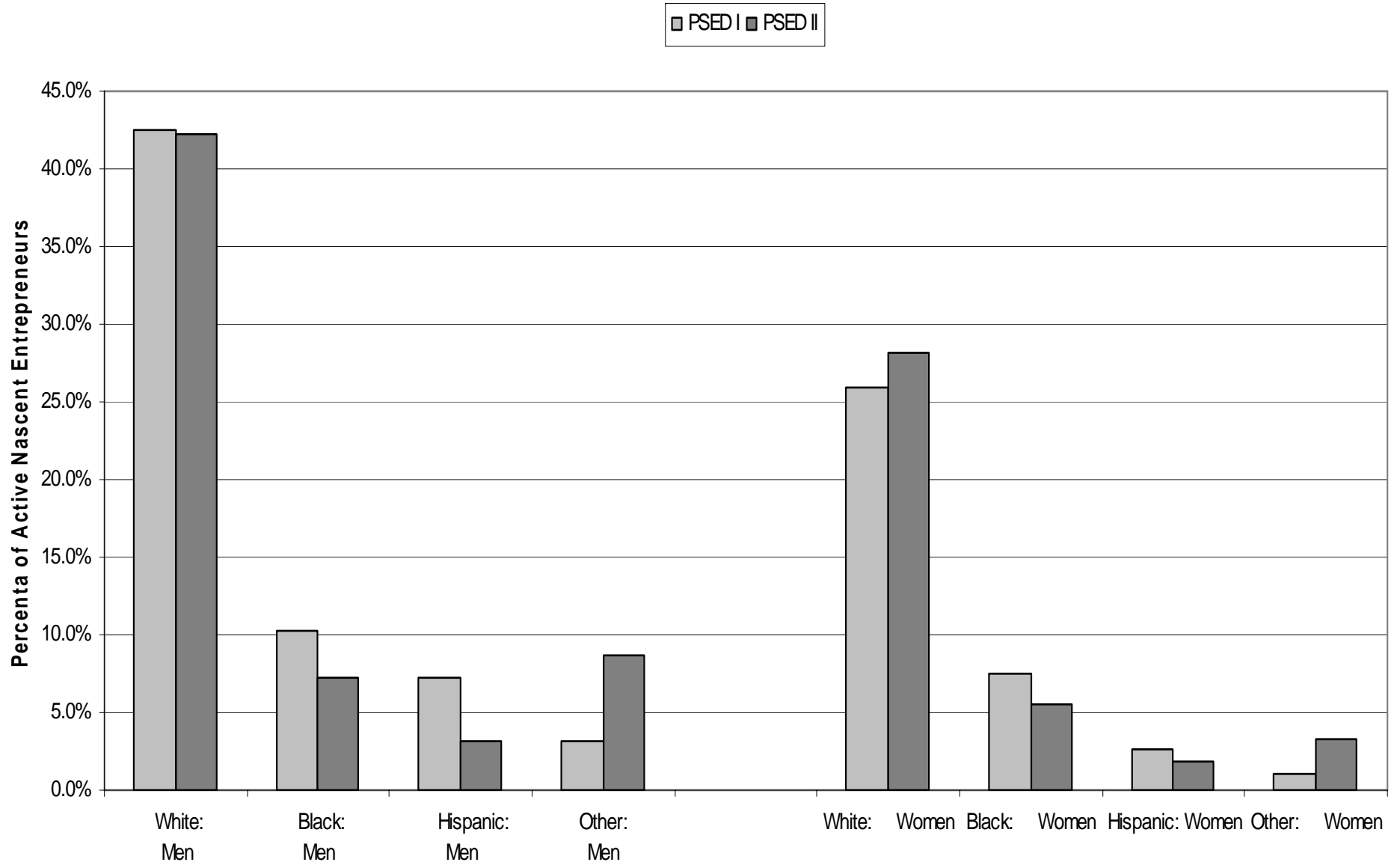


Note: PSED I estimates adjusted for screening item wording effects.

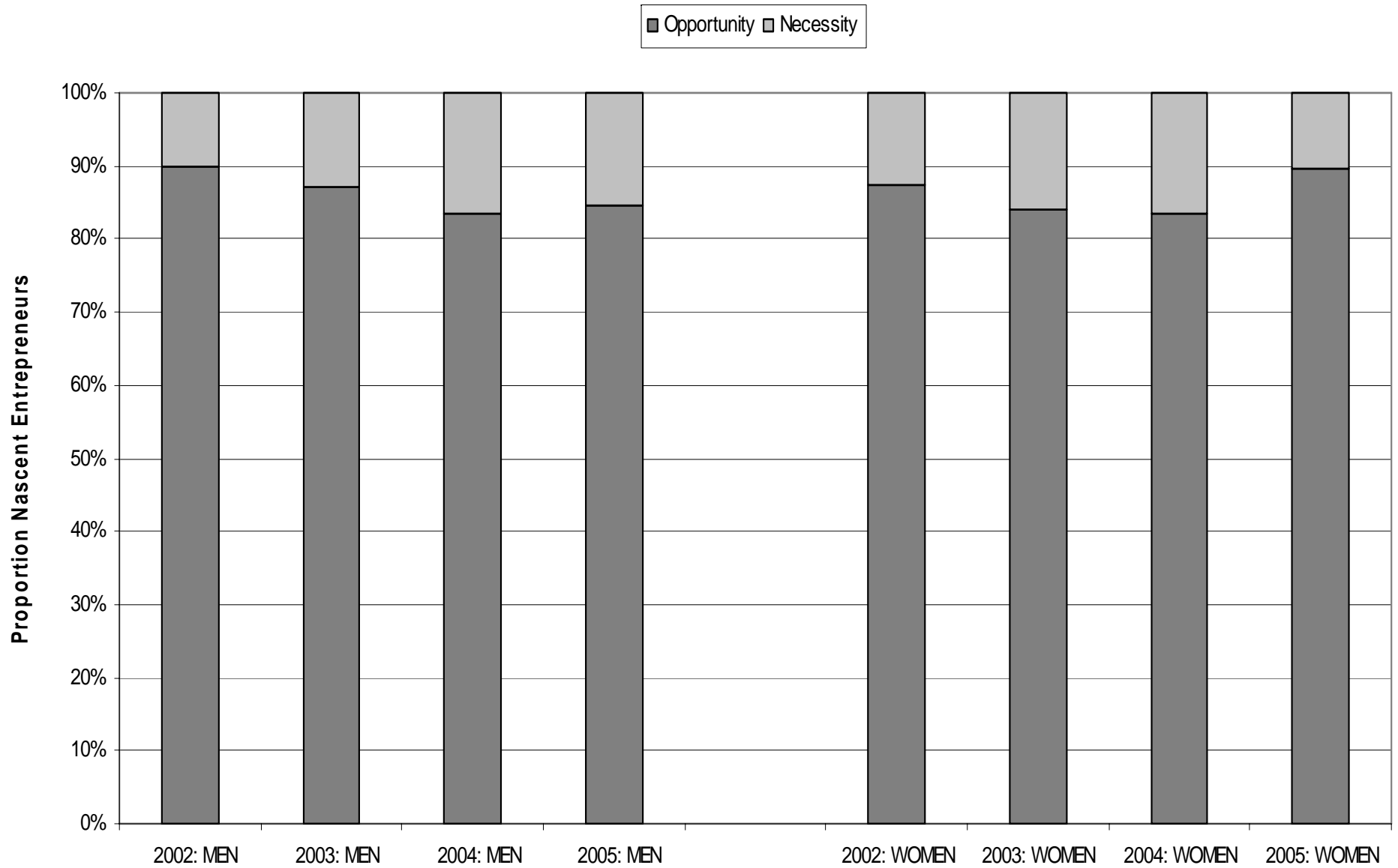
Active Nascents by Age and Gender: PSED I, PSED II



Active Nascent Entrepreneurs by Gender and Ethnicity: PSED I, PSED II



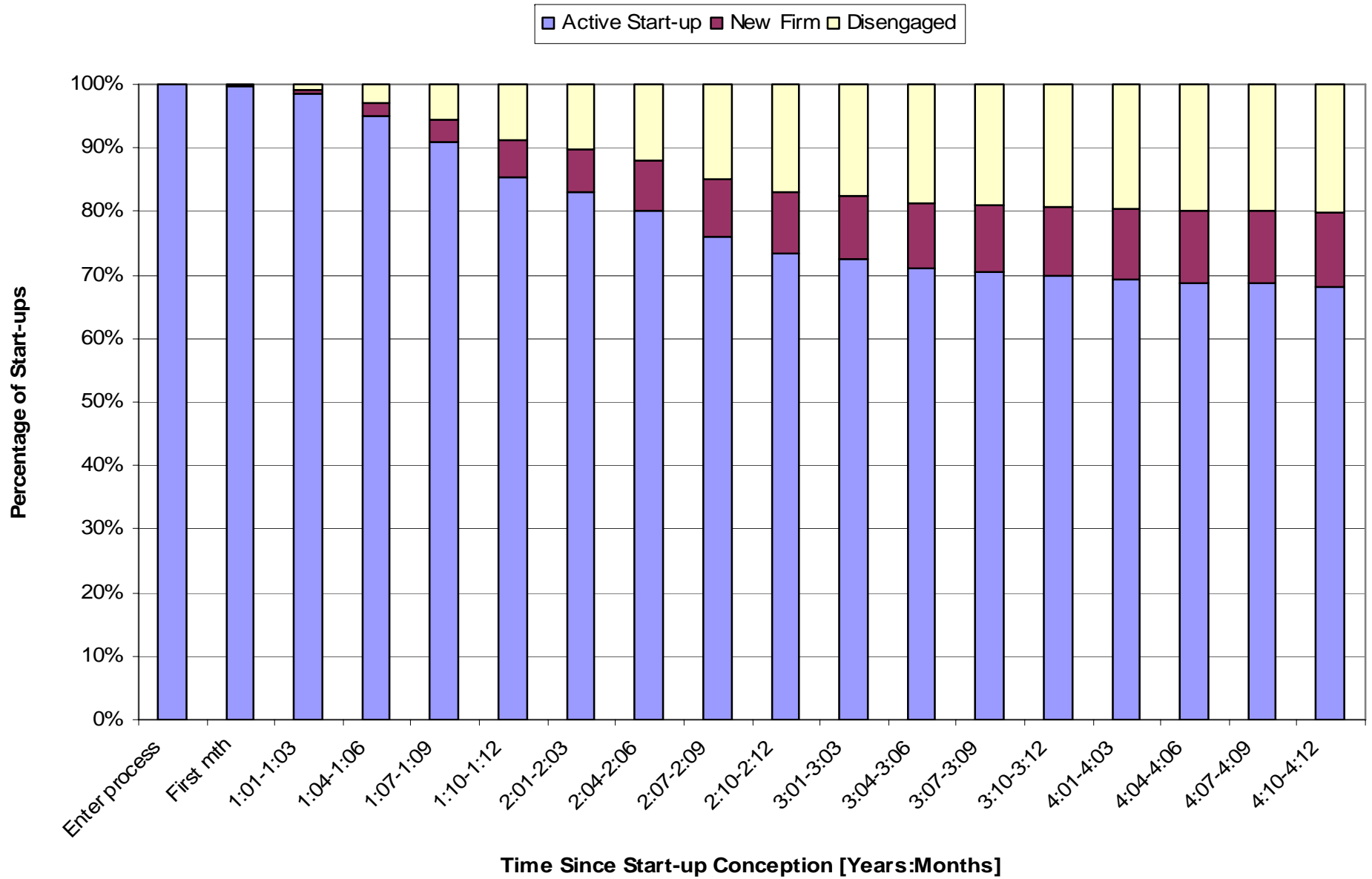
Active Nascent Entrepreneurs by Motivation by Gender: 2002-2005



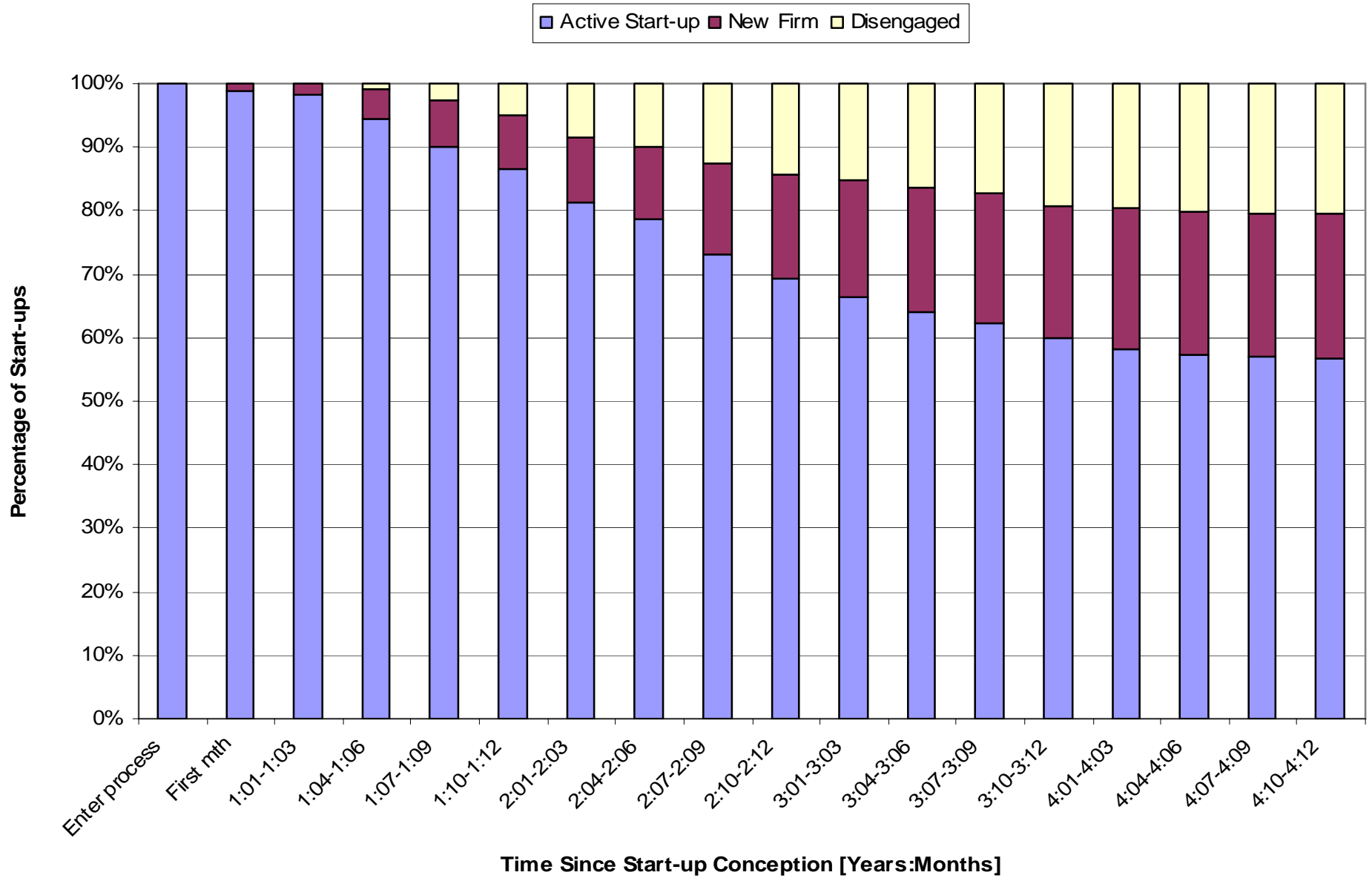
First Follow-up Outcomes

	PSED I	PSED II
Disengagement	20.6 %	20.1 %
New firm	22.8 %	11.8 %
Active Start-up	56.6 %	68.1 %
	100.0 %	100.0 %

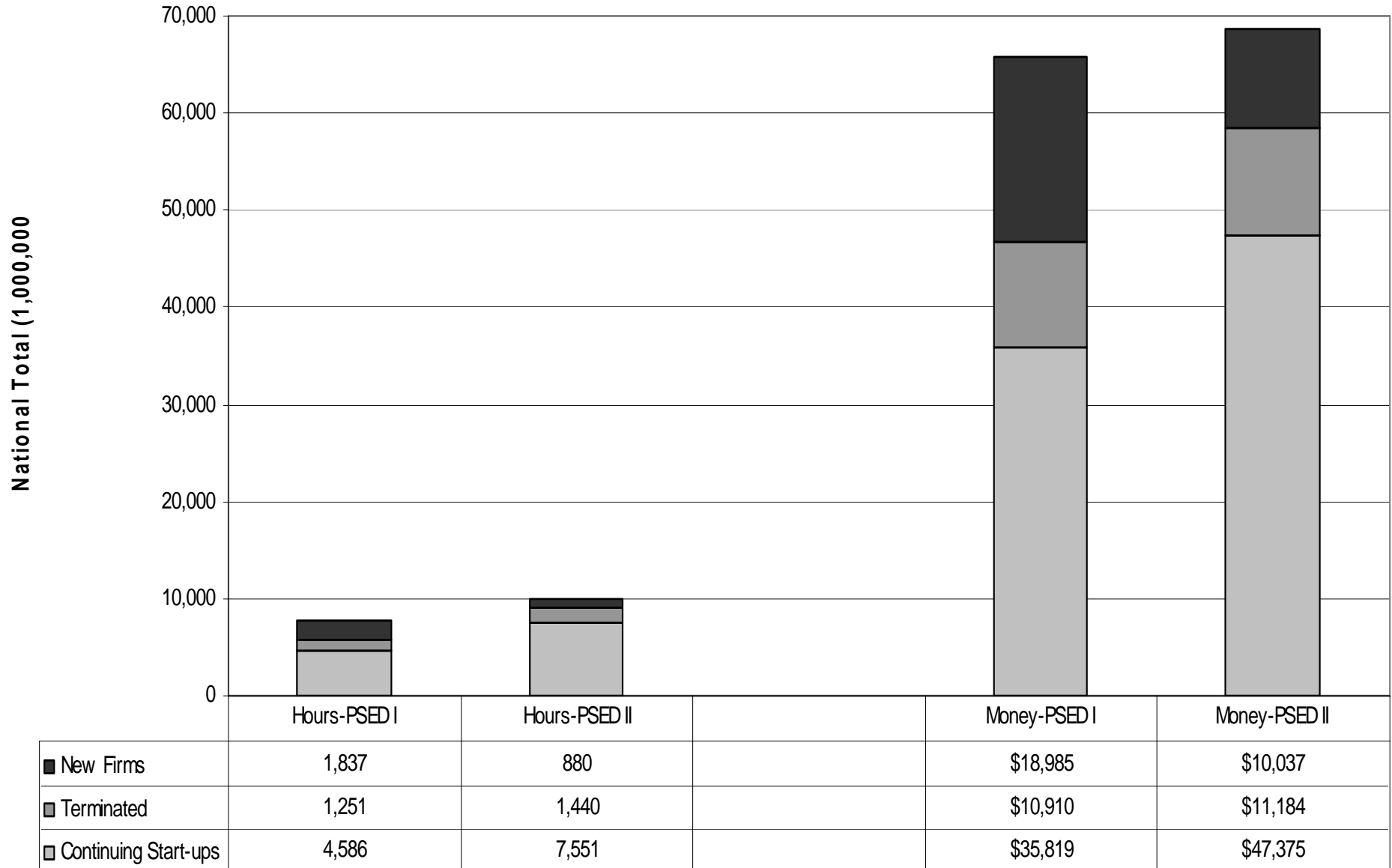
Start-up Outcomes, by Time Since Conception: PSED II Cohort



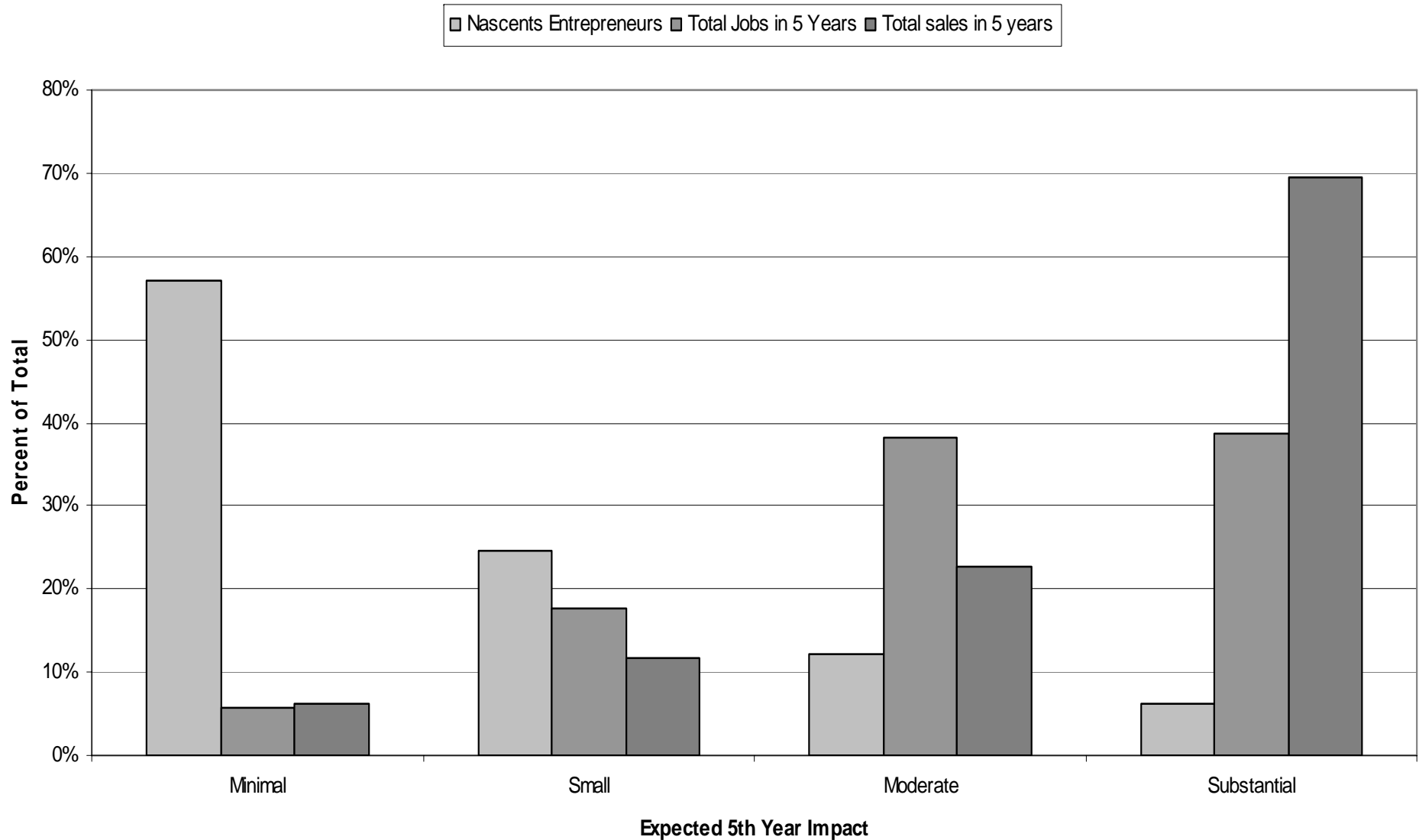
Start-up Outcomes, by Time Since Conception: PSED I Cohort



Aggregate Sweat Investments, by Initial Outcomes: PSED I, PSED II



Expected Growth after Firm Birth and Proportion of Cohort

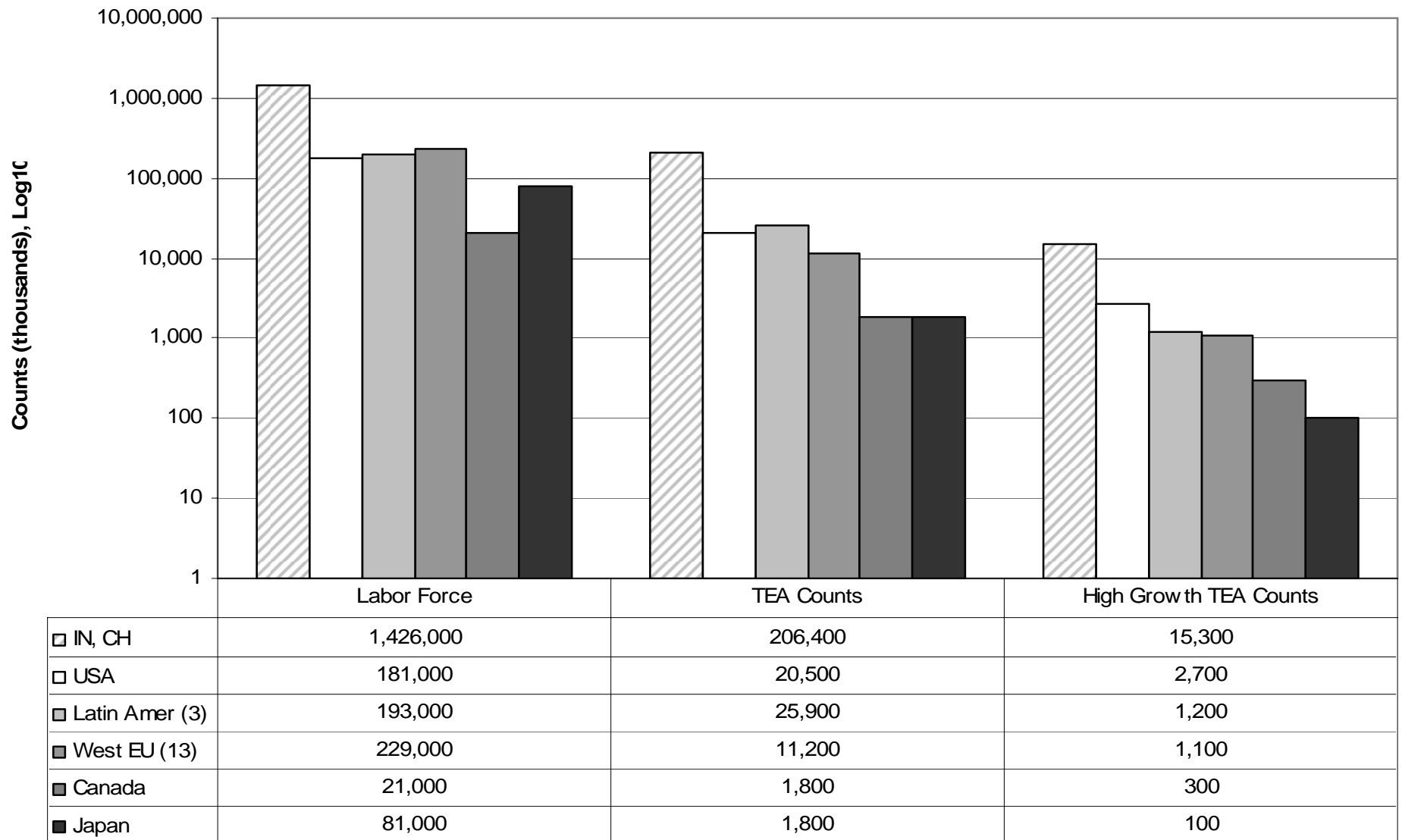


PSED I and PSED II cohorts combined, sales adjusted to 2005 values. Total jobs expected in five years after firm birth are 21,000, total sales expected \$1.2 billion.

The big picture

US Nascents in Global Perspective

Entrepreneurial Activity: Selected Global Regions



Based on Table 6, Reynolds, P, et al. (2004) Global Entrepreneurship Monitor: 2003 Summary Report. Babson Park, MA: Babson College and Table 3 from Autio, E (2007) Global Entrepreneurship Monitor: 2007 Report on High-Growth Entrepreneurship. Babson Park, MA and London, UK: Babson College and London Business School.

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