FINNISH SOFTWARE INDUSTRY 2007

The National Software Industry Survey 2008

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National Software Industry Survey 1997-2008

- The most significant study in Finland measuring the development of software industry
  - The first study was conducted in 1997 to show that there is a software product industry in Finland, and it is nationally important or at least that it will be important
- The survey follows the development of software product business on a yearly basis
  - Data is collected on the volume, growth and other key figures of software business
- During the last two years the research has been developed to better meet the purpose of providing information on the rapidly developing software industry
  - Each year has one or two themes
    - 2008: Growth and internationalization
    - 2009: Strategy and networking (tentative)
  - Special emphasis on improving the coverage and retaining respondents

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Agenda

- Part I - Results of the survey
  - Industry level results
  - Firm level results (initial)
- Part II – Implementation of the survey
  - How we get high response rates
  - Future plans for the survey

Part 1 - The Key Results of the Survey

Finnish Software Product Industry: A Definition

- Software product industry refers to business which is based on selling software products as licenses or services, as well as other services closely related to this software.

- A Finnish company is company that is registered in Finland
  - All affiliates of a Finnish corporation (also abroad) are considered to be activities of a Finnish company.
  - An affiliate of a foreign corporation which is registered in Finland: Affiliates' own activities are considered to be activities of a Finnish company.

- Finnish software product business is software product business of a Finnish company.

- Software product business is estimated to account for a third of the total revenues[2] of IT services[1].

1 Statistics Findland industry classification code 72

2 Tyrväinen et al. 2004

Global development of software product business in 2006-2008 (EITO2007*)

2006	2008
The global market of software products was 207 billion € and it grew by 7,4% since 2005.	Forecast for the global software product market is 239 billion € and it grows on an average by 7,4 % a year.
The European software product markets accounted for 71,5 billion € (USA: 90 billion €) and it grew by 6,5% (USA: 8,4%) since 2005.	Forecast for the European software product business is 81 billion € (USA: 106 billion) and it will grow on an average 6,5% (USA: 8,4% year)

* European Information Technology Observatory

Finnish Software Product Business in 2007

- The industry revenues increased by 8,6% (13% in 2006) and reached 1,52 billion € (1,41 billion € in 2006)
  - International revenues grew by 12% (9,8%) and were 678 million €
  - Domestic revenues grew by 5% (15,3%) and were 840 million €
- The industry employed 14 400 software professionals (13 000). The number of employees increased by 9,4% (5,1%)
-
- The profitability of the responded companies was 10,4% in 2007 (5,6%)[1].

[1] Mostly explained by firms that did not respond in previous year

Demographics of the Sample

The amount of companies represents 88 % of the total revenues of the whole software industry

The average age of the companies was 9 years

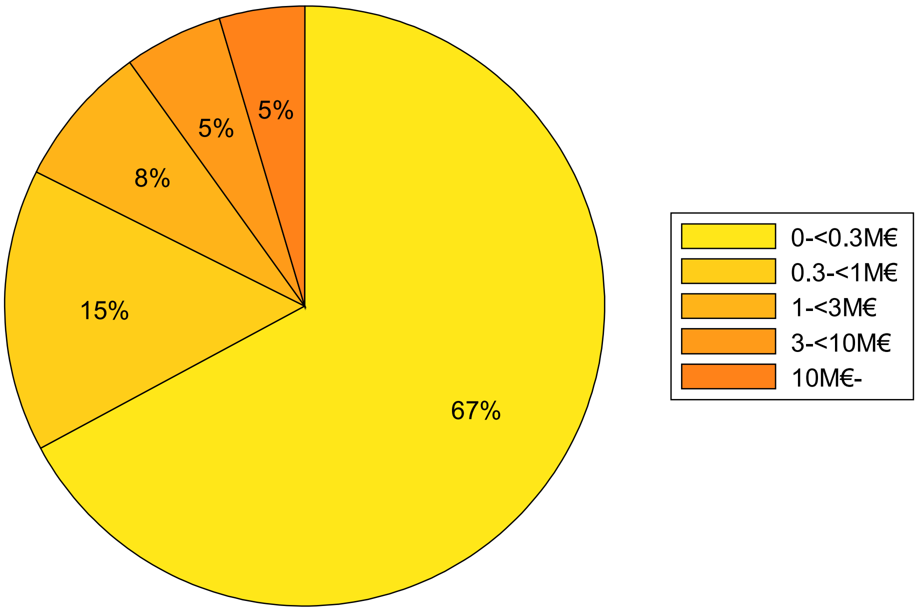
Location: the industry is very concentrated

- Capital area: 54% of the companies, 79% of big companies (revenue of SW product business > 3 M €)

Profitability: average 10,4% (5,6%)

- In 27% of the companies over 15% (22%)
- 12% of the responded companies were unprofitable (17 %)

Responding companies distribution of the software product business

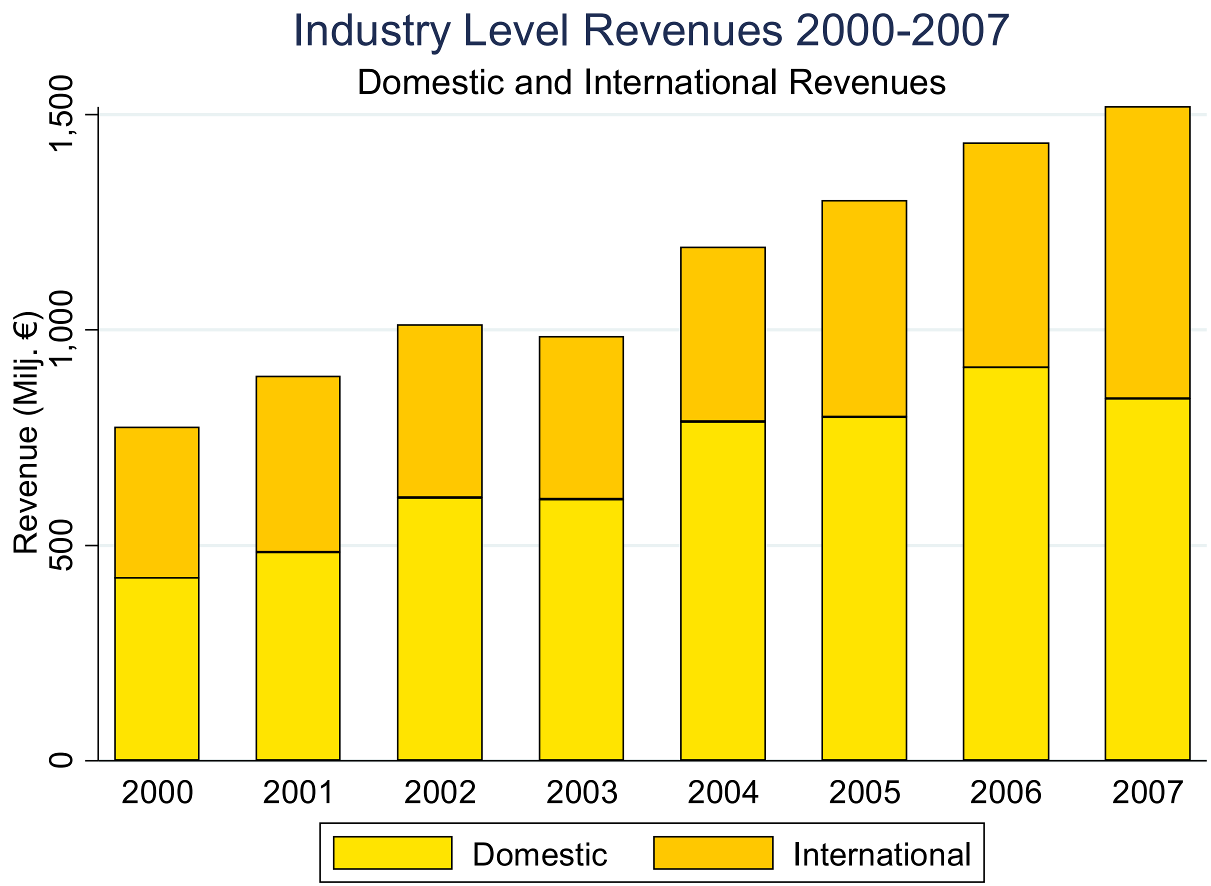


Size: most companies are small or medium-sized

- 71 % of the companies: revenue of own SW product business less than 300 000 €
- Total revenue/total personnel 110 000 € (110 000 €)
- 45% had less than 5 employees (41%)

Development of Software Product Industry in 2000 – 2007*

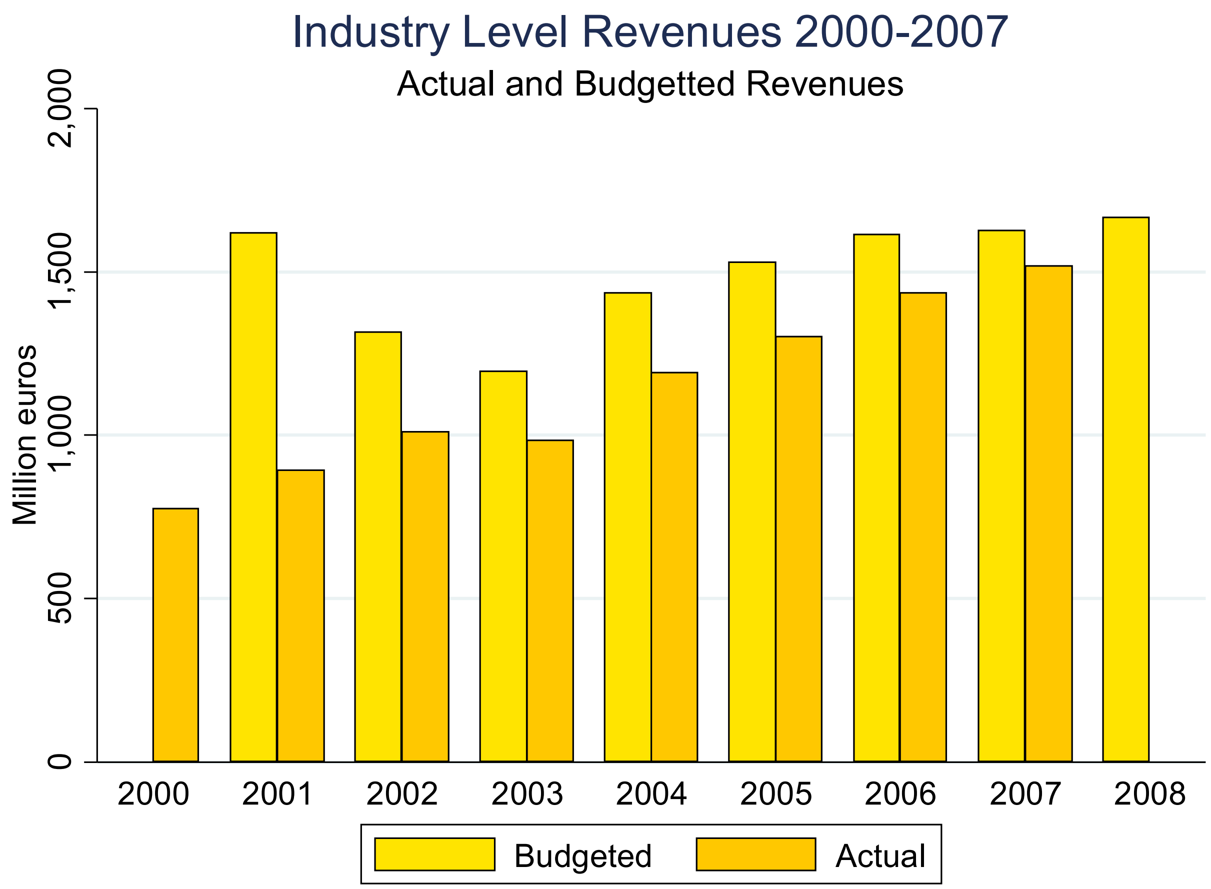
- Revenue of SW product business grew by 8,6% and was 1,52 billion
- International revenue grew by 12%* and was 45% of total revenues of the industry
- The value of domestic business increased by 5%*



* Extrapolated to match industry total amount

Trend for the Development of Revenues in Software Product Industry in 2000-2007*

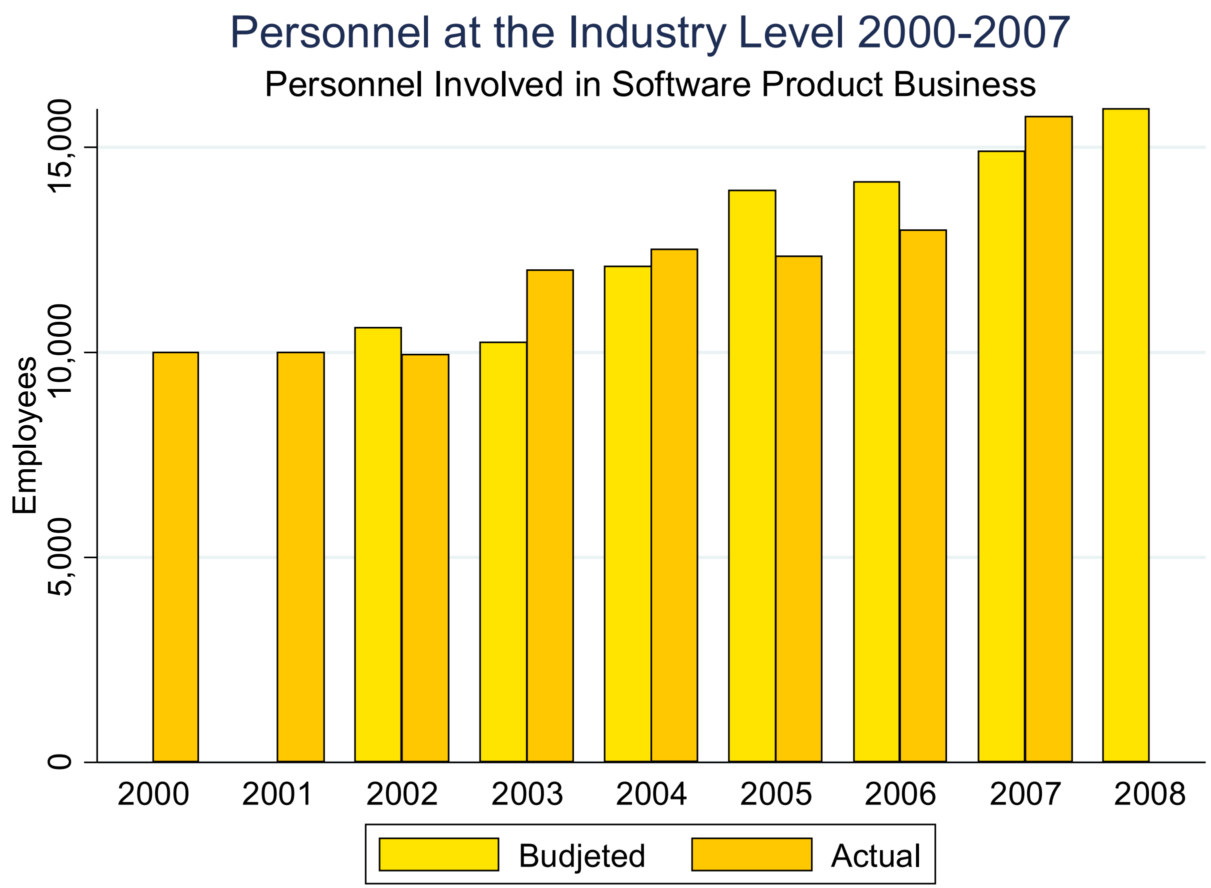
- Firms are expecting growth in revenues, but at a more moderate level than during the previous years
- The budgeted revenues increase for 2008 predicts moderate growth in the future



* Extrapolated to match industry total amount

Personnel in Software Product Industry *

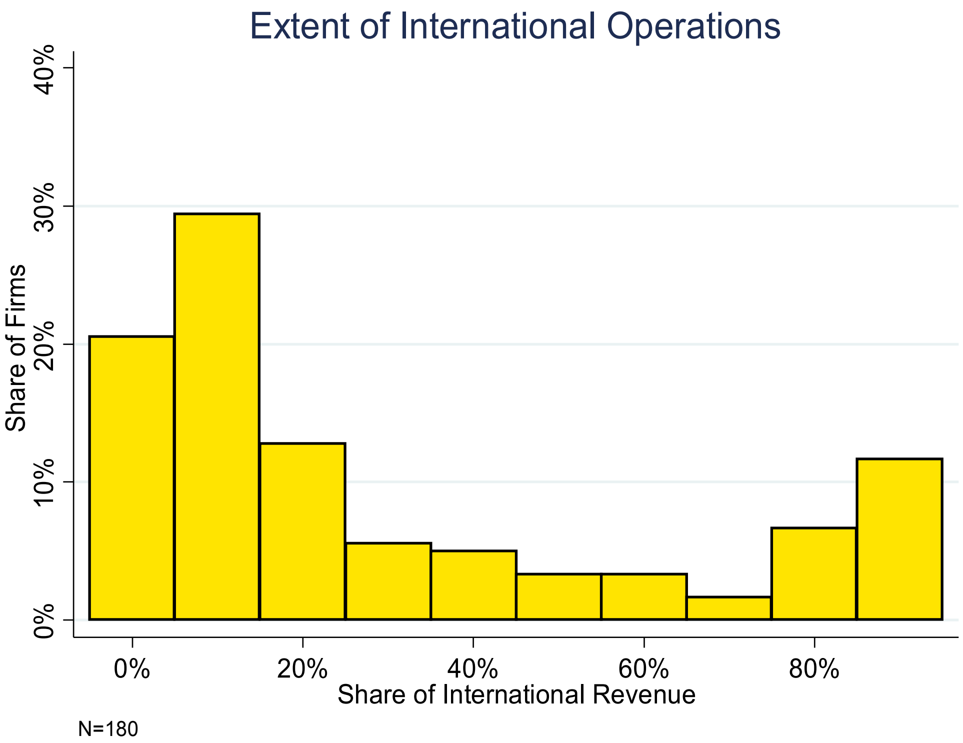
- Personnel in SW product business grew by 9,4%
- The industry is employing approx.14 400 (13 000) persons
- 69% of the personnel is working in SW product companies having revenues over 3 million€



* Extrapolated to match industry total amount

International Operations

- 33% of the companies have international revenues (48% in 2006)
- The share of international business in those companies has been almost the same: 32% (33% in 2006)
- Most of the companies had only few activities abroad, but part of the companies were extremely international
- International activities in 8 countries on an average (8,8)
- The most common target countries: Sweden, USA and Germany (the same as in 2002 – 2006)



Ownership of the Firms

N=624

- In 91% of the companies the owners include founders and family members
- 10,9% have a private investor (VC)
- More than 93% are completely Finnish-owned

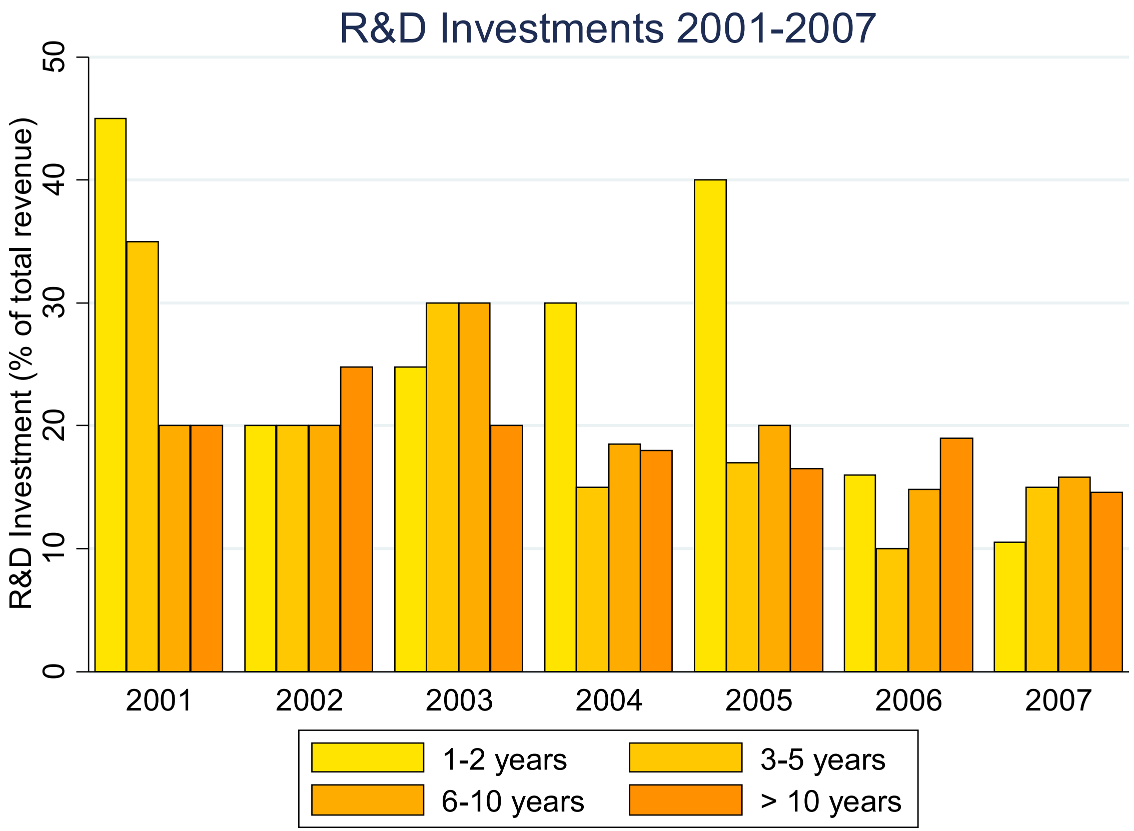
- 35% of the companies reported that they will apply for outside finance during the next two years (36%)
- The most popular funding sources according to the applicants for finance are:

* Public funding	73 %
* Venture Capital	63 %
* Private investors	52 %

Strengths, Challenges and Development Areas

- The most important development areas and challenges (Telephone interviews, N=71)
  1. Product development
     - The companies did not considered product development as a challenge
     - Technological know-how was mentioned as the most important type of knowledge
  2. Marketing and sales
     - The 3rd important challenge, was not seen as a strength
     - If these were mentioned as a challenge, they were generally a mentioned development as a development area
  3. Personnel
     - The 2nd biggest challenge (attracting personnel and keeping the skilled employees in the company)
     - Personnel was considered to be the 4th important strength (the quantity of professionals in relation to the need)
  4. Know-how and productization
     - Know-how was the most important strength, especially technological know-how and knowledge of business were experienced as strong areas
     - Investment in productization would hopefully create a development path from ”projects to products” and lead on to knowledge and products, which can be replicated at low cost.
  5. Internationalization
     - This was not considered to be a top-level challenge (5th important), nor strength (7th important) nor a target for development (5th important)
     - This could also be explained by an early stage of internationalization of the companies

Product Development



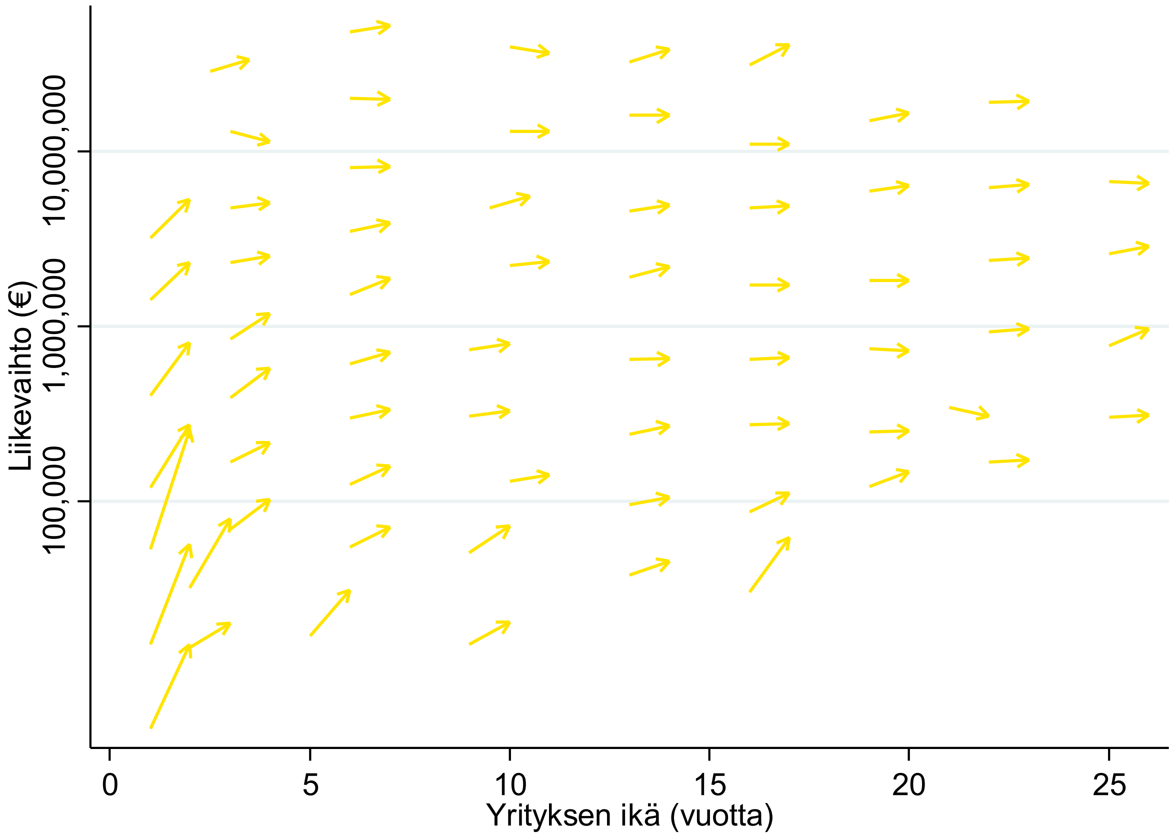
- R&D investments have slightly decreased in relation to revenues since 2001
- The median of the investments is 14% (16%) of total revenues of the industry
- The decreasing trend is statistically significant, and needs more attention

* The results can be explained mainly by better scope of small and already established companies

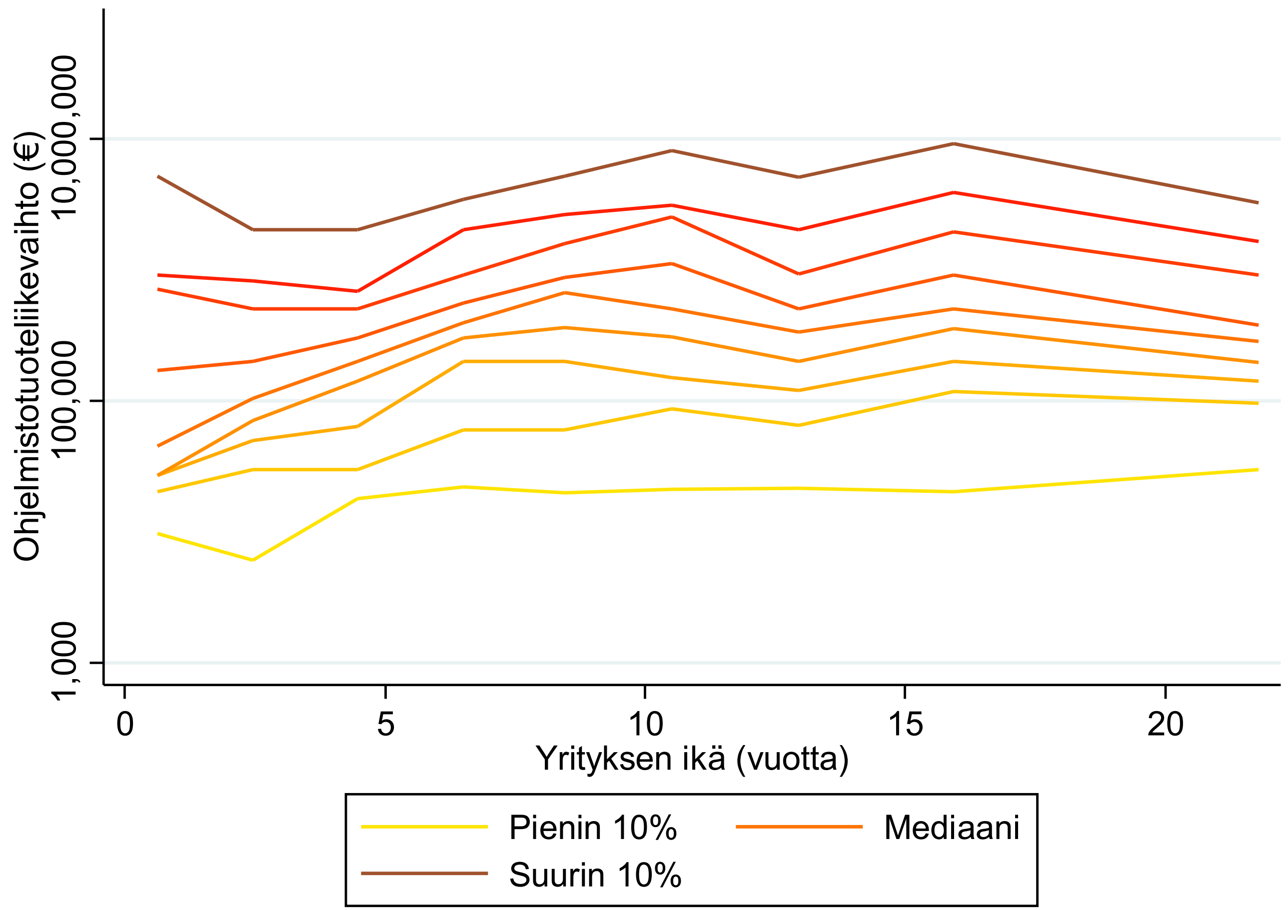
Summary of Industry Level Findings

- The growth of Finnish SW product industry continued more moderately than in previous years (8,6%, 13,1% in 2006)
- The industry's impact on employment has clearly increased (growth 9,4%, 5% in 2006)
- R&D, marketing and sales as well as personnel and know-how were considered the most important areas for development of the companies in 2007
- The most significant single challenge, after personnel, sales and marketing, was growth
- It can be possible to increase volume of revenues by increasing the amount of rapidly growing companies (so-called gazelle enterprises) in the industry

Growth Patterns of Firms



Growth Patterns of Firms



Determinants of Growth

	All firms Growth	Size 1-10 Growth	Size 10-30 Growth	Size 30-100 Growth
Human capital	.017	.000	.049	.413***
Management delegation skills	.015	.025	.030	-.279*
International experience of management	-.054	-.019	-.239*	.126
Experience of management	-.016	-.036	.175	.211+
Number of veterans in board	.107+	.135	.077	.065
Growth target	.172**	.166*	.273+	.220+
Willigness to grow	.234**	.239**	.538**	.177
Amount of revenue from abroad	.048	.044	.139	-.107
Has angel investor	-.036	-.066	.076	.187
Has venture capital	-.002	.088	-.197*	-.263***
Goodness of strategy	.129*	.169*	-.181	-.051
Entrepreneurial orientation	.037	.039	.161	.045
Product development investment	-.083	-.071	-.302*	-.503*
Profitability	-.010	.012	-.084	.172
Controls omitted due to space constraints				
Model statistis				
N	435	448	495	499
N sub		287	86	43
model df	29	19	19	19
F	5.222	2.914	4.742	12.434
p	.000	.000	.000	.000
R2	.236	.189	.426	.707
Adj. R2	.181	.132	.260	.465
max VIF	3.615	2.841	3.029	4.943

*** = p<.001
** = p<.01
*= p<.05
+=p<.1

Part II – Implementation of the survey

Implementation of the Survey 2008

- The 11th software business survey was conducted by Helsinki University of Technology in cooperation with University of Turku and Tampere University of Technology and commissioned by The Federation of Finnish Technology Industries.

- The research goal is to produce key figures on the state of Finnish software business in 2007, and to produce theme sections about firm growth and internationalization
  - Cooperation with the Growth Forum project in growth and internationalization research

- The survey was conducted during June and July with postal and web-based questionnaire sent to all Finnish software companies
  - Invitation to participate in the survey was sent by mail and e-mail to 3 639[1] companies
  - The number of responses was 660 (342 in 2007), of which 344 had own software product business in 2007 (287 in 2006)
  - Relatively high response rate was achieved largely due to active promotion by partners

- According to estimates there were approx. 1 050 software product business companies in the end of 2007

- The key figures of software industry were published on and the Final Report will come out by 1.11.2008.

[1] This figure contains over sampling

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Sponsors and partners in 2008

Teknologiateollisuus

Tekes

Microsoft

COSS

OHJELMISTOYRITTÄJÄT RY

TTL Tietotekniikan liitto ry

culminatum YHDESSÄ HUIPULLE

OSKE

Salon Seudun Kehittämiskeskus

Turku Science Park

TURUN SEUTU

Varsinais-Suomen liitto
Egentliga Finlands förbund
Regional Council of Southwest Finland

In addition to financing partners above, the following parties provided their expertise:

ETLA

TYÖ- JA ELINKEINOMINISTERIÖ
ARBETS- OCH NÄRINGSMINISTERIET
MINISTRY OF EMPLOYMENT AND THE ECONOMY

Tilastokeskus

Maximizing Response Rate

- General methods
  - Heavy personalization in most communications
  - Firm level analyses of responses
    - “See how your firm is positioned when compared all other respondents”
  - Press releases at the start of the survey
  - Communicating the research through partners and emphasizing endorsement
  - Providing 3 different response options
    - Web, paper questionnaire, and word-document
  - Explain that the results are important to the partners (of which the respondents are members of)

Maximizing Response Rate

- Communications
  - Contacting 1-4 people from each firm instead of just one
  - 4-6 contacts per firm
    - Prenotice letter (paper)
    - Main survey package (paper and email)
    - 2 reminder emails
    - 0-2 reminder phone calls
  - Personal contacts to friends in companies
    - "I will offer you a beer if you reply to our survey"

Maximizing Response Rate

- Retaining old respondents
  - In all communications, emphasize that this is a study to which the firm participated
  - Try to contact the same person
- Attracting new respondents
  - We contacted all firms with the industry code 72100 and 72200 founded in last 3 years
  - Several public and private databases
    - Swbusiness.fi list, Ohjelmistoyrittäjät ry members, Teknologiateollisuus members, Microsoft certified partners, COSS members, Asiakastieto database

Overview of Results

- 660 respondents in the main survey
  - 200 respondents who responded also last year
  - Good chance to collect panel data
- 3 linked surveys being conducted
  - Telephone interviews about networking
  - Mail survey about open source
  - Mail survey to non-software firms related to use of software
- Smaller analyses for the main partners

Future plans

- Reports
  - Final report by November
  - Firm reports by end of this month
- Papers from this years data
  - One paper presented at NEXT
  - One paper to be presented at EBRF and one at HICSS
  - 4 more papers planned
- Future years
  - 3 year project
    - TEKES and industrial funding
  - Each year new theme
    - We are looking for themes and partners, so if you are interested, please contact us
  - Expanding the survey internationally
    - If interested in cooperation, please contact us.

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