AUSTIN'S ENTREPRENEURIAL GENESIS

Austin has become the entrepreneurial city in the U.S.

For two consecutive years, in 2015 and 2016, Austin was selected as the #1 entrepreneurial city in the United States by the Kauffman Foundation. What has been Austin’s entrepreneurial genesis? The Kauffman Foundation funded a 1.5 year-long project to answer this question.

This infographic begins by showing Austin’s entrepreneurial trend between 1990 and 2016 and concludes with a short written summary of the genesis of Austin’s entrepreneurial ecosystem.

It presents the five parallel stages of Austin’s entrepreneurial evolution:
1) capacity building at the University of Texas at Austin (UT),
2) continuous attraction of large high-tech companies,
3) corporate spinoffs and entrepreneurial spawning,
4) creation of an entrepreneurial community, and
5) large expansion and attraction of multinationals.

Acknowledgements:

We would like to thank the Kauffman Foundation, Capital Factory for helping us to put together two research workshops, our 50 interviewees, and Professor Maryann Feldman (UNC/NSF) for their valuable contributions to and support of the project.
Between 1950 and 1990, Austin’s entrepreneurial ecosystem was sparsely populated by spinoffs from the University of Texas at Austin (UT) including Tracor (1955), National Instruments (1976), and Dell (1984), which became large homegrown corporations. Although IBM came to the city in 1967, the location of large high-tech firms only accelerated in the 1990s after the city won MCC (1983) and Sematech (1988). As shown in the graph above, the number of startups grew in the city from 6,258 in 2000 to 11,127 in 2007 (just before the 2008 recession), a result of both corporate spawning (spinoffs from large high-tech firms) and entrepreneurial spawning (spinoffs from fast-growing startups mainly in the software sector). After 2010, the number of startups exploded in the city from 11,144 in 2010 to 35,710 in 2016. This later accelerated growth cemented Austin as the number-one entrepreneurial city in the United States. This period is characterized by the emergence of a community of entrepreneurs, symbolically represented by Capital Factory (founded in 2009), which complement incubation opportunities previously provided only by corporations and fast-growing entrepreneurial firms.
Figure 1a: UT Computer Science Department: National Rankings for Total R&D Expenditure

UT’s Computer Science Department was created as an independent department in 1966. Its competitiveness has been fundamental in attracting large high-tech companies to Austin in the hardware (computer and semiconductor manufacturing) and software industries. Figure 1a shows that the department ranked among the top eight in the nation in R&D expenditure in 1973, 1993, and 2014.

<table>
<thead>
<tr>
<th>Year</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>8th</td>
</tr>
<tr>
<td>1993</td>
<td>8th</td>
</tr>
<tr>
<td>2014</td>
<td>7th</td>
</tr>
</tbody>
</table>

Source: National Science Foundation

Figure 1b: Institutional Collaboration: Bidding for MCC (1983) and Sematech (1988)

Figure 1b represents UT’s collaboration with the Greater Austin Chamber of Commerce (GACC), the state and city governments, and the private sector to successfully bid for the location in Austin of the first two large computer and semiconductor R&D consortia: MCC (Microelectronics and Computer Technology Corporation) in 1983 and Sematech (Semiconductor Manufacturing Technology) in 1988.

Figure 1c: UT Spinoffs

Figure 1c represents examples of UT’s spinoffs. Some of UT’s early spinoffs became important multinational companies such as Tracor (1955), National Instruments (1976), and Dell (1984).

Minerbuilt 2016
Lacoste and Romberg 1939
Tracor 1955
Dell 1984
National Instruments 1976

Texas Nuclear Corporation 1956

EMIT Corporation 2009

Figure 1d: IC² Institute’s ATI (1989-present) Spinoffs

Figure 1d shows examples of spinoffs from the Austin Technology Incubator (ATI), founded in 1989 (within the IC² Institute).

Circle Media 2013
PSW Technologies 1989
Evolutionary Technologies 1991

Bractlet 2011
Applied Science Fiction 1995

Spreadfast 2008
Isochron Data Corp. 1998
Austin's successful attraction of large high-tech companies (1960-Today)

Few large plants moved to Austin in the 1960s and 1970s including IBM, Texas Instruments, Motorola, and Advanced Micro Devices. The tendency to attract branch plants of large high-tech firms, many from Silicon Valley, accelerated exponentially in the 1990s after the arrival of MCC and Sematech and after 2000 in response to city incentives for expansion and the high-tech clusters reaching critical mass. These large high-tech firms have been an important training ground for future entrepreneurs.

1960s

- IBM
- Texas Instruments

1970s

- Motorola
- AMD

1980s

- AT&T
- LSI Logic
- Lockheed Martin
- 3M
- Cypress
- Cirrus Logic

1990s

- HP
- Cisco
- Applied Materials
- Tokyo Electron
- Compaq
- Intel
- LSI Logic
- Solectron
- Samsung
- Lam Research
- IXI

2000 - 2016

- Freescale
- Qualcomm
- Spansion
- Xplore Technologies
- Nokia
- Bioware Corp
- NXP
- Ebay
- PayPal
- Google
- Oracle
- Apple
Phase 3 Corporate spinoffs & entrepreneurial spawning in Austin [1990-Today]

The semiconductor, computer, and software clusters of large corporations became a training ground for future technology-oriented entrepreneurs who in some instances got frustrated with the decision process to approve new innovations at these corporations and decided to start their own business. Many early local entrepreneurs, such as three IBM engineers who founded the software company Tivoli, had previous experience working in large companies.

Tivoli, the big bang of the local software industry, operated as an independent startup for just seven years, but the company legacy remains a significant part of the city's entrepreneurial landscape. As shown below, the company produced a group of entrepreneurs who have been able to launch or operate at least 29 startups in Austin between 1990 and 2013. Austin's entrepreneurial ecosystem has benefited from both corporate spinoffs and entrepreneurial spawning (spinoffs from fast-growing startups).

Entrepreneurial Spawning of people who worked at Tivoli startup between 1989 and 1996

25 Tivoli past employees have founded 30 companies between 1990 and 2013

12 Tivoli past employees have worked as top managers for 19 startups between 1990 and 2013

No *: Founded years from SOS
*: founded year from NETS
**: founded year from the internet

Total: 49 companies
Black: 30 Companies Tivoli employees founded
Red: 19 Companies where Tivoli employees works as managers
Phase 4

Entrepreneurial community activity (2010-Today)

Austin now has a community of entrepreneurs, making it possible for founders with little previous experience working with large corporations or fast-growing startups but strong linkages with the entrepreneurial community to create successful startups such as BuildASign (founded in 2005) and Mutual Mobile (founded in 2010).

Capital Factory (founded in 2009) is a tangible example of this community and has an impressive accumulation of entrepreneurial talent. 129 Capital Factory partners and mentors have founded 157 startups between 1970 and 2016 of which 121 were founded in Austin, as shown below. More importantly, almost all of the startups founded in Austin have been successful as indicated by the fact that 62 are still active companies and 36 were acquired.

Local Startups founded by Capital Factory’s Partners and Mentors

Phase 5

Large expansion and attraction of multinationals (2010-Today)

Many large corporations continue to expand in the city and some have taken advantage of economic incentives from the city and the state. These expansions consist of increases in both the physical size of large high-tech firms’ campuses and in their workforce. Oracle and Apple, shown below, have the largest recent expansions.

Oracle

In 2015, Oracle acquired 27 acres of land for its new 560,000 sq. ft. campus south of Lady Bird Lake.

Oracle plans to increase its Austin workforce by 50% over the next few years.

Apple

In 2016, Apple moved thousands of its employees into its new 1.1 million sq. ft. campus in north Austin and into a smaller 216,000 sq. ft. campus in southwest Austin.

Apple has pledged to create 3,600 new jobs while retaining at least 3,100 existing jobs.