

Chapter 2

Innovation Performance Indicators

2-0 Overview

Innovation is dependent on the production of new ideas. Individual inventors are still an important source of ideas, but as progress in information technology, telecommunications, and life sciences becomes ever more dependent on sophisticated scientific methods and equipment, organized research and development (R&D) efforts conducted by businesses and universities are an increasingly important source of new ideas.

A successful innovation sector depends on much more than simply new idea production. Once ideas have been developed, they must be nurtured through a series of stages of development requiring increasing amounts of financial investment leading ultimately to commercialization. Thus, it is important to consider both the production of new ideas and the resources that a region is able to mobilize to support these ideas.

Indicators of Innovation Performance

This chapter analyzes Kansas City's innovation performance, placing it in a comparative perspective. The indicators used to assess innovative performance can be grouped into three categories.

The first category includes two extensive indicators that reflect the overall size of the innovative community. The size of the innovative community within an MSA is important because a larger community of inventors allows for greater specialization, and promotes informal networking and communication that can be an important stimulus to the production of new ideas and new ventures. The two indicators of size used here are:

- *University R&D expenditures.* The level of R&D expenditures reported by area universities is a significant component of MSA resources devoted to the production of new ideas. Spin-offs from university research provide important opportunities for local businesses and are an

important source of dynamism within the regional economy.

- *Patents.* The number of patents awarded is an indication of the number of new products and processes generated by area innovators.

Not surprisingly, both total university R&D expenditures and patenting activity are closely related to total population, as Figures 2-0a and 2-0b illustrate. In other words, bigger cities tend to do more R&D and produce more patents.

The other two categories of indicators are qualitative measures, reflecting the level of innovative activity within the MSA, controlling for its overall size. The first of these includes two measures of inventive activity, while the second includes three indicators that capture aspects of the subsequent commercialization of innovations.

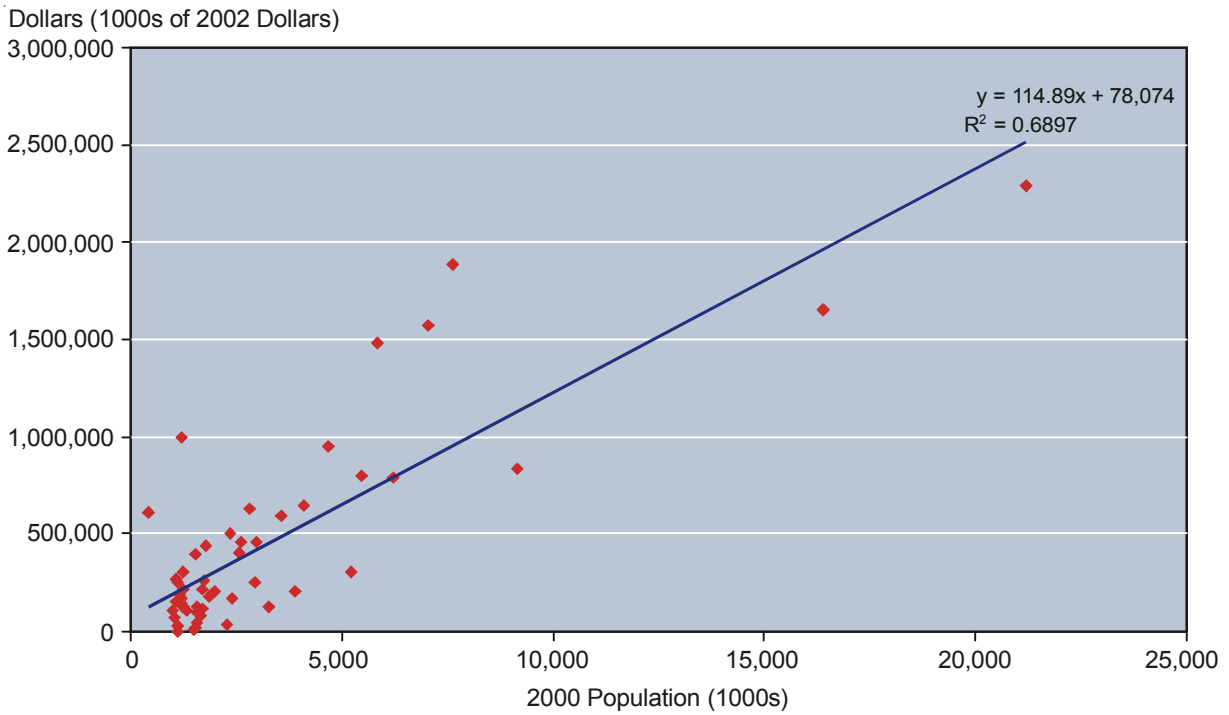
To measure the level of inventive activity in an MSA, we use the following indicators:

- *University expenditures on R&D per capita.* While larger cities are likely to have higher aggregate levels of R&D spending, the per capita level of spending provides a way of gauging the intensity of innovative effort, controlling for size.
- *Patents per capita.* Like R&D per capita, this measure provides an indicator of the quality or intensity of innovative activity, controlling for differences in MSA size.

Transforming new ideas and scientific discoveries into commercially viable products and services requires substantial additional investments. The third category of indicators was selected to measure the extent of these commercialization efforts within an MSA.

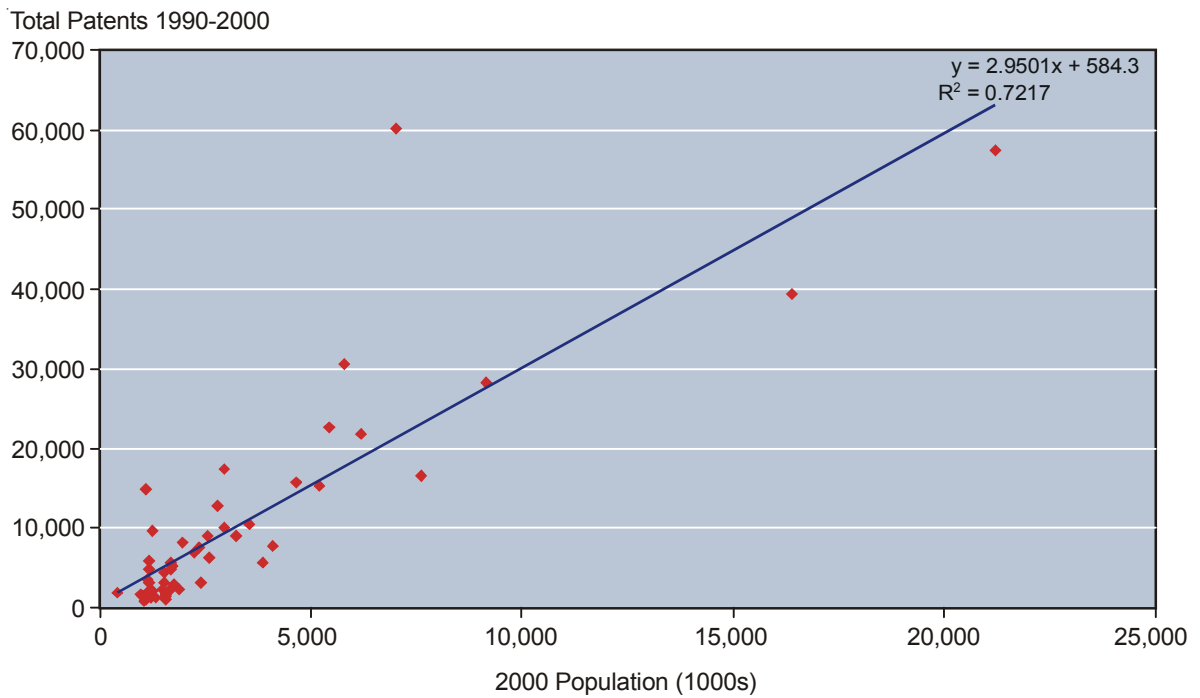
- *SBIR and STTR awards per capita.* The Small Business Administration's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) awards are competitive grants made by the federal government to entrepreneurs to support proof-of-concept research (Phase I awards) and

Figure 2-0a: R&D Expenditures, 2001, as a Function of Top 52 MSA Population



Sources: National Science Foundation, 2001 (2); Bureau of Economic Analysis, 2001, 2002 (1).

Figure 2-0b: Patenting as a Function of Top 52 MSA Population



Sources: Cluster Mapping Project, 1990-2000; Bureau of the Census, 2000 (2).

prototype development (Phase II awards). The value of these awards reflects the extent to which entrepreneurs within a metro area are actively seeking to convert new ideas into commercially viable products.

- *Venture capital investments per capita.* Funds provided by venture capitalists are a crucial source of financing in the early stages of a growing company's development. The value of these investments per capita is an important indicator of a region's future chances for new job creation and prosperity.
- *The number of initial public offerings (IPOs).* Going public raises significant new funds for companies and is a reflection of investor confidence that the new company has the ability to generate promising returns on investment. Because of the high degree of variability in the sizes and fortunes of such new businesses, the total number of IPOs (rather than total dollars raised) is the best gauge of this stage of the commercialization process.

Innovation Index

The Innovation Index aggregates the two groups of qualitative indicators of innovation. We first calculated subindexes reflecting the level of inventive activity and commercialization. We then aggregated these two subindexes to arrive at the final version of the Innovation Index.

Kansas City ranks 42nd among all MSAs in terms of our aggregate Innovation Index, and is 10th among its peer group of MSAs. The value of the Innovation Index is 10.3% of that in San Francisco, the leading MSA. As the subsequent discussion of individual indicators reveals, the low value of the Innovation Index for Kansas City reflects relatively poor performance across almost all of the dimensions of innovation that we are able to measure.

Table 2-0: Innovation Index

Metropolitan Area	Index	Rank	Normalized Index
Top 5			
1 San Francisco ^a	59.1	1	100.0%
2 Boston ^a	43.5	2	73.6%
3 Madison ^b	42.8	3	72.4%
4 Raleigh ^b	33.2	4	56.1%
5 Rochester ^b	31.3	5	53.0%
Kansas City ^c	6.1	42	10.3%
Peer Group			
1 Madison ^b	42.8	3	72.4%
2 Austin ^b	31.0	6	52.4%
3 Denver ^a	26.7	8	45.3%
4 Pittsburgh ^b	13.3	18	22.6%
5 Salt Lake City ^c	13.1	19	22.2%
6 Cincinnati ^a	11.9	20	20.2%
7 Columbus ^b	11.3	23	19.1%
8 St. Louis ^b	10.1	27	17.1%
9 Indianapolis ^c	9.6	28	16.3%
10 Kansas City^c	6.1	42	10.3%
11 Tampa ^b	5.5	44	9.4%

Source: Compiled by Policy Research Institute.

a: CMSA

b: MSA

c: Expanded MSA (See p. 2)

2-1 Total Dollars of University Research and Development Expenditures, 2001

Why is it Significant?

Aggregate university Research and Development (R&D) expenditures is an “extensive” measure of MSA resources devoted to the production of new ideas – that is, it serves as an indicator that we are able to measure the innovation sector.

Research and Development is a key source of innovation, which in turn is one of the important drivers of the modern economy. A stream of new innovations is essential to maintain competitiveness and sustain rising standards of living.

Although data on R&D conducted by businesses are not available for metropolitan areas, data on R&D conducted by universities are. R&D at universities plays a major role in the innovation process. University research is focused on more fundamental areas of science and technology, creating the potential for truly revolutionary new products and processes. The fruits of these insights are often the stimulus for the creation of new companies or even new industries. The transfer of intellectual property from universities to the private sector through patent and licensing agreements is a major source of economic dynamism. Metropolitan areas with universities conducting large amounts of R&D are more likely to attract and generate innovative and rapidly growing businesses. These rapidly growing businesses are in turn more likely to generate high rates of profit and employment growth.

How does Kansas City Perform?

Kansas City ranks 32nd in total university R&D expenditures, with 7.8% of the largest MSA (New York). Kansas City’s peer MSAs range from 26.7% (Madison) of the R&D funding of New York to 7.6% (Tampa). Kansas City fares poorly when compared to its peers, with a smaller level of university R&D than all others except Tampa.

Table 2-1: Total dollars of University R&D Expenditures, 2001^d

Metropolitan Area	Total Dollars	Rank	Index
Top 5			
1 New York ^a	\$2,289,579	1	100.0%
2 Washington, DC ^a	\$1,884,116	2	82.3%
3 Los Angeles ^a	\$1,648,279	3	72.0%
4 San Francisco ^a	\$1,568,494	4	68.5%
5 Boston ^a	\$1,482,786	5	64.8%
Kansas City ^c	\$178,433	32	7.8%
Peer Group			
1 Madison ^b	\$611,008	13	26.7%
2 Pittsburgh ^b	\$501,874	15	21.9%
3 St. Louis ^b	\$455,557	17	19.9%
4 Denver ^a	\$408,129	19	17.8%
5 Columbus ^b	\$395,738	20	17.3%
6 Austin ^b	\$307,442	21	13.4%
7 Indianapolis ^c	\$262,852	24	11.5%
8 Salt Lake City ^c	\$219,231	27	9.6%
9 Cincinnati ^a	\$209,267	29	9.1%
10 Kansas City^c	\$178,433	32	7.8%
11 Tampa ^b	\$173,499	34	7.6%

Sources: National Science Foundation, 2001 (2); Bureau of Economic Analysis, 2001, 2002 (1).

a: CMSA

b: MSA

c: Expanded MSA

d: 1,000s of 2002 Dollars

This comparison would look substantially worse using a conventionally defined Kansas City MSA that excluded Douglas County Kansas (where the University of Kansas is located). Three institutions are included in the university R&D expenditures data for Kansas City: the University of Kansas (encompassing both the University of Kansas Medical Center in Kansas City, and the main campus in Lawrence), the University of Missouri Kansas City, and the Missouri

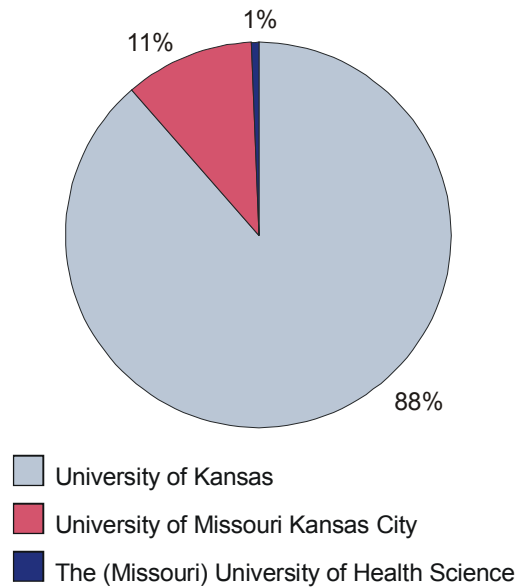
University of Health Science. As Figure 2-1a shows, the University of Kansas accounted for close to 90% of university R&D spending for the MSA.

What does this Trend Mean for Kansas City?

Despite the inclusion of the University of Kansas' Lawrence campus research activities in the Kansas City area data, these results suggest that the Kansas City metropolitan area is lagging in its ability to attract R&D funding. Limited resources available for university R&D are likely to be reflected in a smaller flow of patents and licenses that may stimulate new business opportunities in the area.

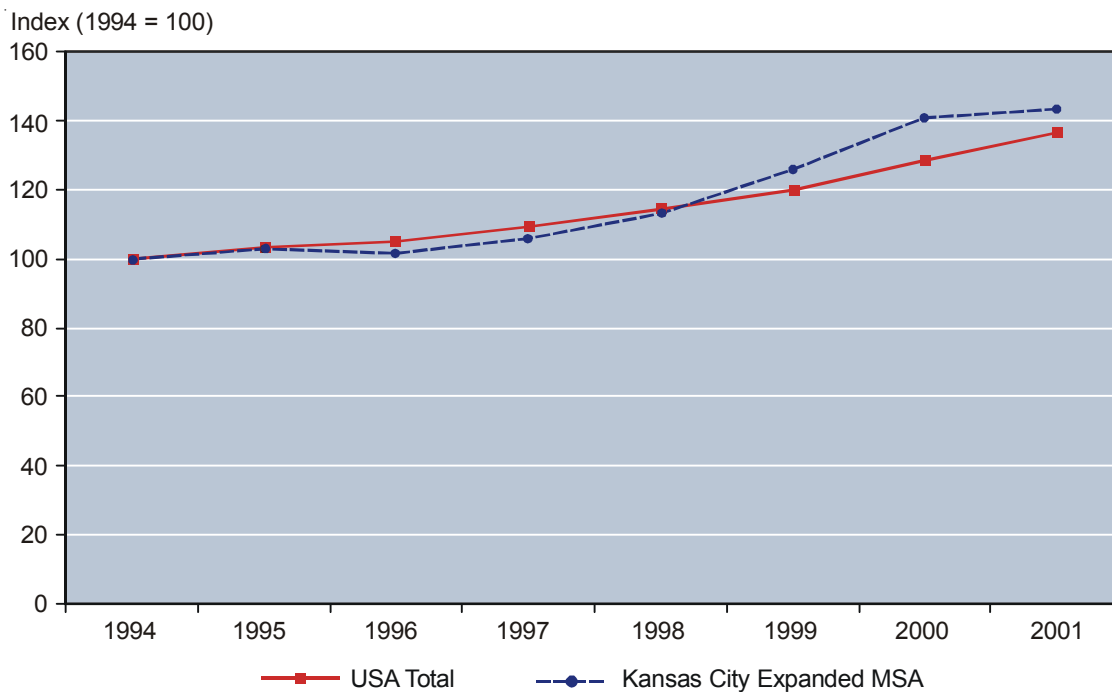
The recent trend in R&D expenditures is, however, more encouraging. Since 1998, growth in university R&D expenditures in the Kansas City area has outpaced growth nationally. The difference was especially large in the period from 1999 to 2000, but the gap has narrowed somewhat in 2001. However, it is too early to tell if this signals a new and less positive trend.

Table 2-1a: Breakdown of University R&D Expenditures in the Kansas City Area 2001



Sources: National Science Foundation, 2001 (2); Bureau of Economic Analysis, 2001, 2001 (1).

Figure 2-1b: Growth of University R&D Expenditures in Kansas City and the U.S., 1994 - 2001 (in 2002 Dollars)



Sources: National Science Foundation, 2001 (2); Bureau of Economic Analysis, 2001, 2002 (1).
 Note: Expanded MSA (See p. 2)

2-2 Total Patents, 1990-2000

Why is it Significant?

The total number of patents issued to inventors is a key “extensive” indicator of the quantity of inventive activity within a metropolitan area. Not all innovations are patented, and not all patents lead to commercially viable products. Still, the number of patents issued is one of the best measures available of the output of inventions in an MSA. Metropolitan areas with high levels of patenting are likely to be home to firms with the capacity to introduce new products and maintain their competitive edge. Total patent numbers reflect the magnitude of innovative activity within the metropolitan area.

How does Kansas City Perform?

Kansas City ranks 36th in total patents, with 2,383 patents issued to area inventors between 1990 and 2000. This is well below its population rank and is just 4% of the number of patents issued to inventors in the San Francisco CMSA (the leader), whose leadership clearly reflects the impact of Internet and IT related patents issued to companies and inventors in Silicon Valley.

Including St. Joseph MSA in Kansas City would increase the total number of patents by 66 (a 3% change), but would not affect the rankings.

Among its peers, Kansas City ranks second to last in total patents, just as it does in total university R&D expenditures. Across all 52 MSAs, total patenting is highly correlated with university R&D expenditures. Nonetheless, for the other cities in Kansas City’s peer group, the rankings in patenting do not closely resemble those in university R&D.

Table 2-2: Total Patents, 1990-2000

Metropolitan Area	Total Number	Rank	Index
Top 5			
1 San Francisco ^a	60,149	1	100.0%
2 New York ^a	57,331	2	95.3%
3 Los Angeles ^a	39,430	3	65.6%
4 Boston ^a	30,539	4	50.8%
5 Chicago ^a	28,320	5	47.1%
Kansas City ^c	2,383	36	4.0%
Peer Group			
1 Austin ^b	9,604	16	16.0%
2 Denver ^a	8,951	18	14.9%
3 Cincinnati ^a	8,092	19	13.5%
4 Pittsburgh ^b	7,455	21	12.4%
5 St. Louis ^b	6,347	23	10.6%
6 Indianapolis ^c	5,168	27	8.6%
7 Salt Lake City ^c	4,732	29	7.9%
8 Tampa ^b	3,245	32	5.4%
9 Columbus ^b	3,186	33	5.3%
10 Kansas City^c	2,383	36	4.0%
11 Madison ^b	1,989	41	3.3%

Source: Cluster Mapping Project, 1990-2000.

a: CMSA

b: MSA

c: Expanded MSA

Table 2-2a lists the organizations with the greatest number of patents issued between 1997 and 2001 in the Kansas City area. Telecommunications, IT, and life science industry activities clearly dominate.

What does this Trend Mean for Kansas City?

Kansas City has both a low level of resources invested in university R&D (generally related to basic research) and a low level of patenting (generally related to applied development). Both indicators suggest that the size of the innovation community in Kansas City is disproportionately smaller than its population rank. To the extent that future innovation is important to the area's growth, these are not encouraging findings and suggest that additional resources need to be invested in encouraging the expansion of the innovation community.

Table 2-2a: Major Patenters in Kansas City, 1997-2001^a

Company	Number of Patents	Rank
Sprint Communications Company, L.P.	48	1
Bayer Corporation	44	2
Bayer Aktiengesellschaft	32	3
Garmin Corporation	32	3
Nellcor Puritan Bennett, Inc.	22	5
University of Kansas	16	6
Allied-Signal, Inc.	14	7
Be Intellectual Property, Inc.	11	8
Scriptpro, L.L.C.	11	8
WCM Industries, Inc.	11	8
BHA Group Holdings, Inc.	10	11
Fike Corporation	8	12
Tomkins Industries, Inc.	8	12
West Agro, Inc.	8	12
Calmar, Inc.	7	15
Preco Industries, Ltd.	7	16
Hallmark Cards, Inc.	7	17
Camco International, Inc.	6	18

Source: Harvard Business School, Cluster Mapping Project, 2003.

a: Expanded MSA

2-3 University Research and Development Expenditures per Capita, 2001

Why is it Significant?

University R&D expenditures are a major component in an MSA’s investment in innovation. Per capita values provide an indication of research effort adjusted for the overall size of the MSA.

How does Kansas City Perform?

In 2001, university R&D expenditures in the Kansas City MSA (including Douglas County), were equivalent to \$95 per 1000 persons or 6.6% of the figure for the leading MSA (Madison). Kansas City ranks 33rd overall and behind all of its peers except Tampa.

What does this Trend Mean for Kansas City?

Relative to its size, Kansas City devotes relatively few resources to university R&D. It would be necessary to approximately double current R&D expenditures to move into the upper half of its peers. To achieve a level comparable with leading MSAs, it would be necessary to triple expenditures.

“Relative to its size, Kansas City devotes relatively few resources to university R&D. It would be necessary to approximately double current R&D expenditures to move into the upper half of its peers.”

Table 2-3: University R&D Expenditures per Capita, 2001^d

Metropolitan Area	Dollars per Capita	Rank	Index
Top 5			
1 Madison ^b	\$1,433	1	100.0%
2 Raleigh ^b	\$836	2	58.4%
3 Columbus ^b	\$257	3	17.9%
4 Boston ^a	\$255	4	17.8%
5 Washington, DC ^a	\$248	5	17.3%
Kansas City ^c	\$95	33	6.6%
Peer Group			
1 Madison ^b	\$1,433	1	100.0%
2 Columbus ^b	\$257	3	17.9%
3 Austin ^b	\$246	7	17.2%
4 Pittsburgh ^b	\$213	12	14.9%
5 St. Louis ^b	\$175	15	12.2%
6 Denver ^a	\$158	18	11.0%
7 Indianapolis ^c	\$152	21	10.6%
8 Salt Lake City ^c	\$129	25	9.0%
9 Cincinnati ^a	\$106	30	7.4%
10 Kansas City^c	\$95	33	6.6%
11 Tampa ^b	\$72	39	5.1%

Sources: National Science Foundation, 2001 (2); Bureau of Economic Analysis, 2001, 2002 (1); Bureau of the Census, 2000 (2).

a: CMSA

b: MSA

c: Expanded MSA

d: 2002 Dollars per 1,000 Population

2-4 Average Annual Total Patents per Capita, 1990-2000

Why is it Significant?

The number of patents issued to innovators is an important measure of the output of inventions within an MSA. Other things equal, larger MSAs will produce more patentable ideas than smaller ones. Adjusting for population provides a measure of relative inventive activity.

How does Kansas City Perform?

Kansas City ranks 42nd among all 52 MSAs in per capita patenting, with an annual average rate of just 0.12 patents per 1,000 residents. In comparison, Rochester, the leading MSA, produced ten times as many patents per person (1.2 patents per 1,000 residents), and 2nd ranked San Francisco produced more than six times as many (0.78 patents per 1,000 residents). Among its peer MSAs, Kansas City ranks last.³

What does this Trend Mean for Kansas City?

Not only does Kansas City’s total patenting rank relatively low, its production of patents is low relative to its population. This indicates that the level of research productivity is lower than would be predicted based solely on the size of the Kansas City MSA. It would be necessary to more than double the production of patents to move into the top half of Kansas City’s peer group.

Table 2-4: Average Annual Total Patents per Capita, 1990-2000^d

Metropolitan Area	Total Number per Capita	Rank	Index
Top 5			
1 Rochester ^b	1.23	1	100.0%
2 San Francisco ^a	0.78	2	63.4%
3 Austin ^b	0.70	3	57.0%
4 Minneapolis ^b	0.53	4	43.5%
5 Boston ^a	0.48	5	38.9%
Kansas City ^c	0.12	42	9.4%
Peer Group			
1 Austin ^b	0.70	3	57.0%
2 Madison ^b	0.42	7	34.6%
3 Cincinnati ^a	0.37	11	30.3%
4 Denver ^a	0.32	13	25.7%
5 Pittsburgh ^b	0.29	17	23.4%
6 Indianapolis ^c	0.27	21	22.2%
7 Salt Lake City ^c	0.25	25	20.6%
8 St. Louis ^b	0.22	29	18.1%
9 Columbus ^b	0.19	32	15.3%
10 Tampa ^b	0.12	40	10.0%
11 Kansas City^c	0.12	42	9.4%

Sources: Cluster Mapping Project, 1990-2000; Bureau of the Census, 2000 (2).

a: CMSA

b: MSA

c: Expanded MSA

d: Patents per 1,000 Population

2-5 Value of SBIR and STTR Awards per Capita, 1996-2000

Why is it Significant?

The level of Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants is an indicator of the level of entrepreneurial activity and forecasts likely future business growth rates. The SBIR program provides competitive grants to entrepreneurs seeking to conduct “Phase I” proof-of-concept research on the technical merit and feasibility of their ideas and “Phase II” prototype development to build on these findings. It is reputed to be the world’s largest seed capital fund for development of new products and processes and often provides the initial revenue stream for start-up companies. The STTR program makes awards to small businesses and public sector partners to promote technology transfer activities.

Companies that receive funding from Phase II of the SBIR program significantly outperform similar companies that do not receive such support.⁴ Participants in the SBIR program are often able to use the credibility and experimental data developed through their research to attract strategic partners and outside capital investment.

How does Kansas City Perform?

Kansas City ranks 39th in the value of SBIR and STTR awards to area businesses over the period from 1996 through 2000. In dollar terms, the value of awards per 1,000 persons in the metropolitan area is just 3.7% of that in Boston, the MSA with the greatest value of awards per 1,000 people. Among its peers, Kansas City is 9th, with only Tampa and Indianapolis ranked lower.⁵

What does this Trend Mean for Kansas City?

The value of SBIR and STTR grants is an indicator of the extent of innovative activity among small businesses within the Kansas City metropolitan area. The relatively low level of funding under this program indicates a low level of innovative activity within this sector. To reach a level of investment comparable to Austin on a per capita basis, Kansas City would have to increase SBIR and STTR awards nearly nine-fold, and to be comparable with Denver it would have to achieve a 17-fold increase.

Table 2-5: Average Annual Value of SBIR and STTR Awards per Capita, 1990-2000^d

Metropolitan Area	Dollars per Capita	Rank	Index
Top 5			
1 Boston ^a	\$16,655	1	100.0%
2 Denver ^a	\$10,329	2	62.0%
3 San Diego ^b	\$9,434	3	56.6%
4 Madison ^b	\$7,731	4	46.4%
5 Washington, DC ^a	\$7,371	5	44.3%
Kansas City ^c	\$624	39	3.7%
Peer Group			
1 Denver ^a	\$10,329	2	62.0%
2 Madison ^b	\$7,731	4	46.4%
3 Austin ^b	\$5,722	7	34.4%
4 Salt Lake City ^c	\$3,663	10	22.0%
5 Columbus ^b	\$2,036	18	12.2%
6 Pittsburgh ^b	\$2,009	19	12.1%
7 Cincinnati ^a	\$1,850	21	11.1%
8 St. Louis ^b	\$911	33	5.5%
9 Kansas City^c	\$624	39	3.7%
10 Tampa ^b	\$442	43	2.7%
11 Indianapolis ^c	\$367	45	2.2%

Sources: Small Business Administration, 1996-2000 (1); Bureau of Economic Analysis, 1996-2000, 2002 (1); Bureau of the Census, 2000 (2).

a: CMSA

b: MSA

c: Expanded MSA

d: 2002 Dollars per 1,000 Population

2-6 Value of Venture Capital Investments per Capita, 1996-2002

Why is it Significant?

Venture capital is a significant source of funding for new businesses. Although it is a small part of the financial market, venture capital funding is crucial in the early stages of business development. Venture capital investments are especially revealing because venture capitalists don't just throw their money at start-up companies hoping to get lucky and pick a winner. They carefully evaluate potential applicants; once they have made their selections, they become involved as board members and management advisers, suggesting strategic partnerships and helping to refine business plans. Moreover, venture-based companies are a key source of job growth – employment in venture-backed companies increased 34% annually between 1991 and 1995, while employment in Fortune 500 companies declined 3.6 percent.⁶

How does Kansas City Perform?

Between 1996 and 2002, the average annual value of venture capital investments in Kansas City businesses has been \$116 million. Adjusting for population, Kansas City ranks 33rd overall, with an annual average of \$62 per person in venture capital investments. Consistent with the concentration of venture capital funds and start-ups around Silicon Valley and Route 128, San Francisco and Boston are the two leading locations for venture capital investments, while Austin, Denver, and San Diego round out the group.

Compared to its peer group, Kansas City ranks 8th. Moving into the top-third of the peer group would require slightly more than doubling the value of venture capital investments in the area. This would put Kansas City on a par with Salt Lake City and Madison in terms of per capita investments.

Venture capital investments rose during the Internet bubble that began in 1998, and fell even more sharply after 2000. The time pattern in Kansas City is quite similar to that for all metro areas combined, though investments in Kansas City appear to have fallen off somewhat more since 2000 than is true nationally.

Table 2-6: Value of Venture Capital Investments per Capita, 1996-2002^d

Metropolitan Area	Dollars per Capita	Rank	Index
Top 5			
1 San Francisco ^a	\$1,862	1	100.0%
2 Boston ^a	\$733	2	39.3%
3 Austin ^b	\$645	3	34.7%
4 Denver ^a	\$533	4	28.6%
5 San Diego ^b	\$422	5	22.7%
Kansas City ^c	\$62	33	3.3%
Peer Group			
1 Austin ^b	\$645	3	34.7%
2 Denver ^a	\$533	4	28.6%
3 Salt Lake City ^c	\$139	15	7.5%
4 Madison ^b	\$130	19	7.0%
5 St. Louis ^b	\$111	21	6.0%
6 Pittsburgh ^b	\$108	22	5.8%
7 Columbus ^b	\$78	30	4.2%
8 Kansas City^c	\$62	33	3.3%
9 Tampa ^b	\$49	35	2.7%
10 Cincinnati ^a	\$40	40	2.1%
11 Indianapolis ^c	\$37	41	2.0%

Sources: Thompson Investment Analytics Report, 1996-2002; Bureau of Economic Analysis, 1996-2002 (1); Bureau of the Census, 2000 (2).

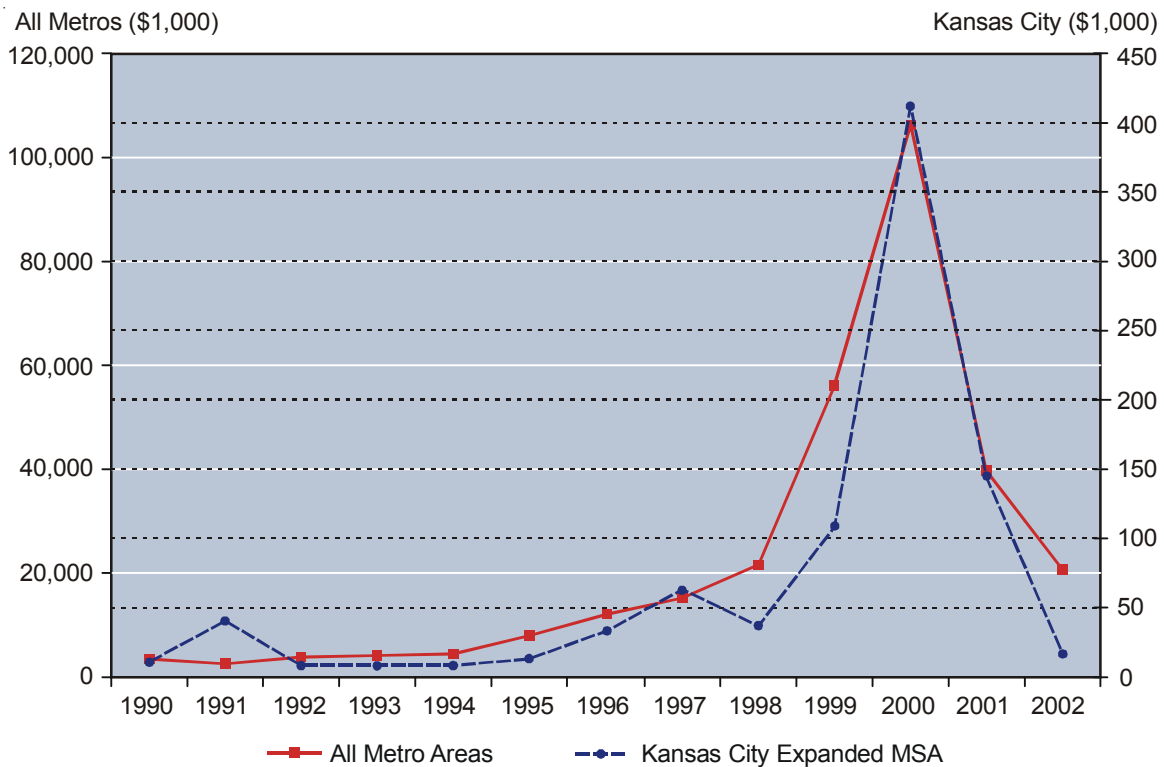
- a: CMSA
- b: MSA
- c: Expanded MSA
- d: 2002 Dollars

“Compared to its peer group, Kansas City ranks 8th. Moving into the top-third of the peer group would require slightly more than doubling the value of venture capital investments in the area.”

What does this Trend Mean for Kansas City?

Kansas City’s relatively poor performance in venture capital investments is consistent with its relatively low levels of university R&D expenditures and patenting and provides further confirmation that levels of innovation in the region are not competitive with national leaders or with its peers. At the same time, limited access to venture capital may serve to discourage potential innovators from choosing to locate in Kansas City.

Figure 2-6a: Venture Capital Investments in Kansas City and All MSAs, 1990-2002



Sources: Thompson Investment Analytics Report, 1996-2002; Bureau of Economic Analysis, 1996-2002 (1); Bureau of the Census 2000, (2).
 Note: Expanded MSA (See p. 2)

2-7 Number of Initial Public Offerings per Capita, 1996-2003

Why is it Significant?

Initial Public Offerings (IPOs) – the first round of stock sold by companies when they are first publicly listed on a stock exchange – are an important means of raising capital to invest and stimulate expansion beyond the venture capital phase. “Going public” raises significant capital to invest and stimulate next-stage growth in a company. A successful IPO reflects confidence by investors that a company can generate increases in value, sustain growth, and produce satisfactory returns on investment. The pace of IPOs increased dramatically during the Internet bubble and has fallen off since 2001, but IPOs continue to hit the market. The value of the stock sold and, hence, the amount of capital raised by these issues, is an important indicator of the level of entrepreneurial activity within a metropolitan area. Numbers of IPOs may be more meaningful than dollars raised in initial offerings because the fortunes of startups are highly variable. Larger numbers of new companies mean greater chances for future growth.

How does Kansas City Perform?

Between 1996 and 2003, there were 11 IPOs in Kansas City, or 5.9 per million residents. These 11 start-ups raised an aggregate value of \$1.45 billion through their IPOs. Compared to the San Francisco CMSA, the area with the greatest number of IPOs per capita, Kansas City has about one-fifth the level of IPOs per capita. Overall, it ranked 17th among the 52 MSAs, and it is 5th in its peer group, only slightly behind 3rd and 4th ranked Madison and Salt Lake City.

Because of the relatively small numbers of IPOs involved, these rankings would be expected to fluctuate randomly over time and should be viewed with caution. It seems clear, however, that Kansas City is competitive in IPOs with a majority of the 52 MSAs.

What does this Trend Mean for Kansas City?

In contrast to the other innovation process indicators, the number of IPOs located in the Kansas City area is relatively high. This suggests that despite the relatively weak performance in high-tech related idea generation, the area is still a reasonably attractive location for new businesses.

Table 2-7: Total Number of Initial Public Offerings per Capita, 1996-2003^d

Metropolitan Area	Total per Capita	Rank	Index
Top 5			
1 San Francisco ^a	29.97	1	100.0%
2 Boston ^a	13.23	2	44.1%
3 Denver ^a	12.01	3	40.1%
4 West Palm Beach ^b	11.49	4	38.3%
5 San Diego ^b	11.37	5	37.9%
Kansas City ^c	5.86	17	19.6%
Peer Group			
1 Denver ^a	12.01	3	40.1%
2 Austin ^b	9.60	6	32.0%
3 Madison ^b	7.03	12	23.5%
4 Salt Lake City ^c	5.87	16	19.6%
5 Kansas City^c	5.86	17	19.6%
6 Indianapolis ^c	5.21	22	17.4%
7 Tampa ^b	4.59	24	15.3%
8 Pittsburgh ^b	4.24	26	14.1%
9 St. Louis ^b	3.07	33	10.3%
10 Cincinnati ^a	2.02	39	6.7%
11 Columbus ^b	1.95	40	6.5%

Source: Hoover's Online, 1996-2003; Bureau of the Census, 2000 (2).

a: CMSA

b: MSA

c: Expanded MSA

d: Initial Public Offerings per 1,000,000 Population