

FACTS & IMPACT 2016

# Harvard and the Massachusetts Economy



HARVARD  
UNIVERSITY



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Universities are an essential part of Massachusetts' innovation and economic landscape. They provide the intellectual infrastructure—the wellspring of ideas, solutions, and technologies and patents that fuel growth, attract the startups and the established companies that create new jobs and need knowledge workers to grow. Harvard is proud to be part of this region, and to contribute in a way that makes the communities we call home stronger, safer, and more vibrant as a result of the work we do together.

**DREW GILPIN FAUST**  
PRESIDENT OF HARVARD UNIVERSITY  
LINCOLN PROFESSOR OF HISTORY





# Harvard and the Massachusetts Economy

Harvard University takes pride in being part of the Massachusetts community. Through our teaching, research, and operations, we seek to contribute to the region's innovation ecosystem and to help create jobs, businesses, and economic growth.

## How does Harvard contribute?



### EDUCATION | 2

Supporting traditional and nontraditional students with generous financial aid, making education available to the most talented students, regardless of their ability to pay.



### RESEARCH | 4

Attracting more than three-quarters of a billion dollars in research funding to Massachusetts, fueling science, medical discoveries, health improvements, and spending in our local economy.



### INNOVATION | 6

Making discoveries that attract private investment and launch new ventures, sparking our region's entrepreneurial spirit.



### EMPLOYMENT | 8

Serving as one of the largest employers in the state, providing good jobs that help employees grow and advance their careers.



### IMPACT | 10

Spending nearly \$1.4 billion locally to operate the University and maintain facilities.



For more information about the facts and figures contained in this document, please visit [community.harvard.edu/sources](https://community.harvard.edu/sources)



## EDUCATION

Supporting traditional and nontraditional students with generous financial aid, making education available to the most talented students, regardless of their ability to pay.

### STUDENT POPULATION

# 34,202

TOTAL STUDENTS

### PROFESSIONAL AND GRADUATE STUDENTS

Harvard University contains 11 degree granting professional and graduate Schools: Harvard Business School, the Graduate School of Design, Harvard Graduate School of Education, the John F. Kennedy School of Government, Harvard Law School, the Harvard T.H. Chan School of Public Health, the Harvard School of Dental Medicine, the Harvard Divinity School, the Harvard John A. Paulson School of Engineering and Applied Sciences, the Graduate School of Arts and Sciences, and Harvard Medical School.

### HARVARD EXTENSION SCHOOL

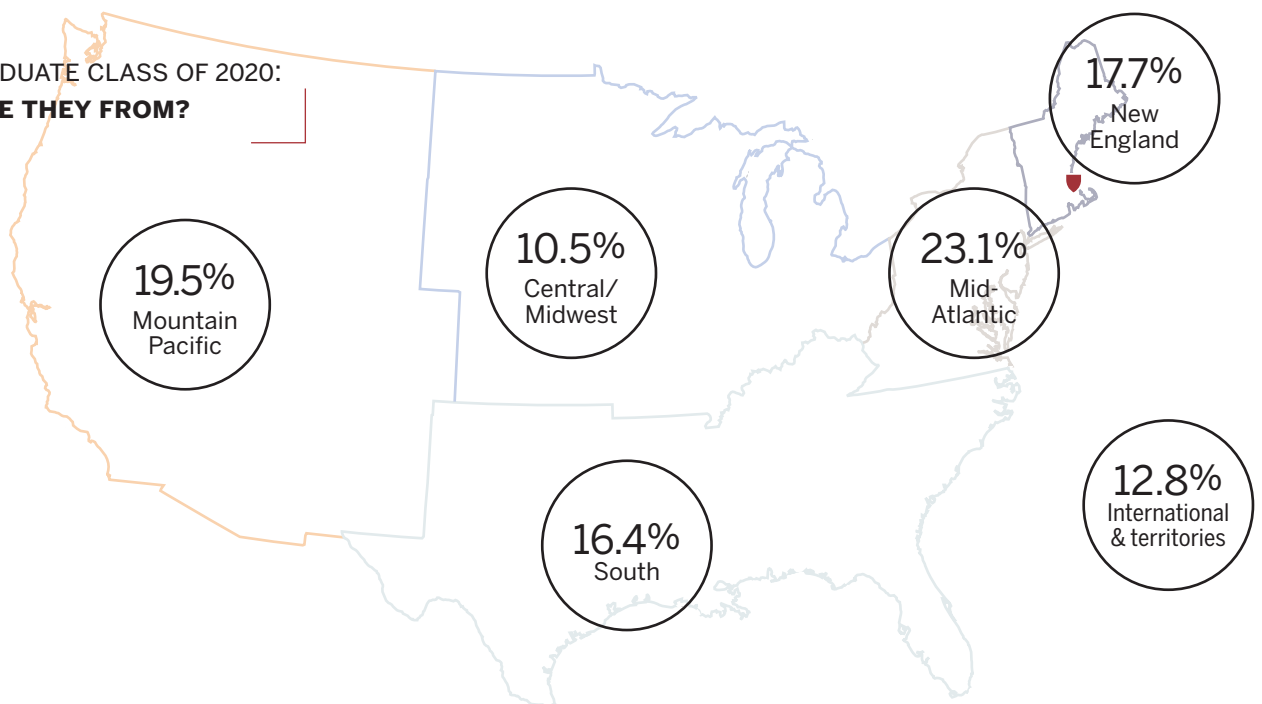
The Harvard Extension School is designed to serve the educational interests and needs of Greater Boston residents. The Extension School allows students to take classes taught by a combination of Harvard faculty, adjunct faculty, and experienced professionals in a wide variety of academic disciplines. Students may apply to master's, undergraduate, associate degree, or professional certificate programs. Online courses are also available.

6,962  
undergraduates

13,638  
professional and  
graduate students

13,602  
Extension School students

UNDERGRADUATE CLASS OF 2020:  
WHERE ARE THEY FROM?



There was absolutely no chance I could have come here [to Harvard] without financial aid. It made the most fundamental difference.

**SOPHIE CARROLL**  
HARVARD COLLEGE CLASS OF 2017



## FINANCIAL AID

**One in five** Harvard undergraduates is from a family with an annual income of **\$65,000 or less**. In fact, nearly **60 percent** of undergraduates receive need-based Harvard scholarship aid, and **100 percent** of Harvard College students can graduate debt-free.

**\$172m**

in institutional need-based scholarship support was budgeted for use by Harvard College students (2015–2016)

**\$47,022**

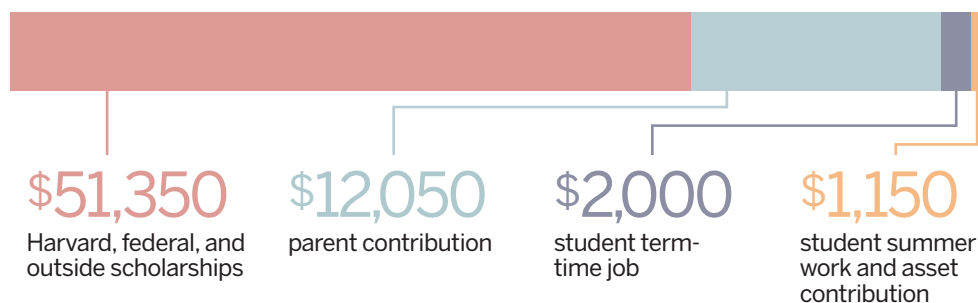
average award to Massachusetts students receiving aid in the 2015–2016 academic year

**943** >>> **525**

Massachusetts students enrolled in Harvard College (2015–2016)

Massachusetts students enrolled received need-based scholarship assistance

### TYPICAL FRESHMAN UNDERGRADUATE AID PACKAGE



## EDX AND HARVARDX

In May 2012, Harvard joined forces with MIT to form edX, a not-for-profit, open-source online learning platform that features interactive and innovative tools for teaching and studying via the Web. Backed by a shared **\$60 million commitment**, edX allows **95+ educational partners** to distribute course content and other academic materials through **80+ open courses**. The goals of edX are to expand access to education worldwide, improve teaching and learning on campuses and beyond and advance teaching and learning through educational research.

### HarvardX

Founded in tandem with edX, HarvardX enables faculty to build and create open online learning experiences for residential and online use, and advances research in the learning sciences.

**4.31m+**

global course registrations\*

*of which*

**110,000+**

were in MA\*

**1.47m+**

global unique course participants\*

*of which*

**37,000+**

were in MA\*

\* AS OF SUMMER 2016



## RESEARCH

Attracting more than three-quarters of a billion dollars in research funding to Massachusetts, fueling science, medical discoveries, health improvements, and spending in our local economy.

## FUNDING

# \$795.7m

### RESEARCH FUNDING: EXPANDING KNOWLEDGE, BENEFITING MASSACHUSETTS (FY15)

## \$577.5m

CONTRIBUTED BY FEDERAL SOURCES

## \$218.2m

CONTRIBUTED BY NONFEDERAL SOURCES

Nearly **75 percent** of Harvard's research activities were funded by federal research dollars.

## \$402.5m

from **NIH GRANTS**

The single largest source of research dollars is the National Institutes of Health (NIH).

## \$175m

from **NSF, DOD, HHS, DOE, NASA,** and others

More than **25 percent** of Harvard's research funding came from non-federal sources including industry and foundations such as the Gates Foundation.

Between FY14 and FY15, research funding from non-federal sources increased by more than **7 percent**.

FY14

FY15

+7.2%

My lab works on proteins that get information and materials across the membrane barriers of the cells. And, by nature of transporting things, these systems are dynamic. And we're developing biophysical tools to reveal the architecture and motional aspect for understanding how they work.

**DR. JAMES CHOU**

PROFESSOR OF BIOLOGICAL CHEMISTRY & MOLECULAR PHARMACOLOGY,  
HARVARD MEDICAL SCHOOL



## LOCAL SUPPORT, LOCAL HIRES, LOCAL PURCHASES

**\$317.6m**

of the research dollars received  
were spent on purchases and  
salaries in Massachusetts (FY15)

**\$282.3m**

supports researchers  
and staff

**\$35.3m**

of the research dollars received  
were used to purchase goods  
and services from companies  
located in Massachusetts



**\$4.3m**

supported companies  
in Cambridge



**\$10.6m**

supported companies  
in Boston

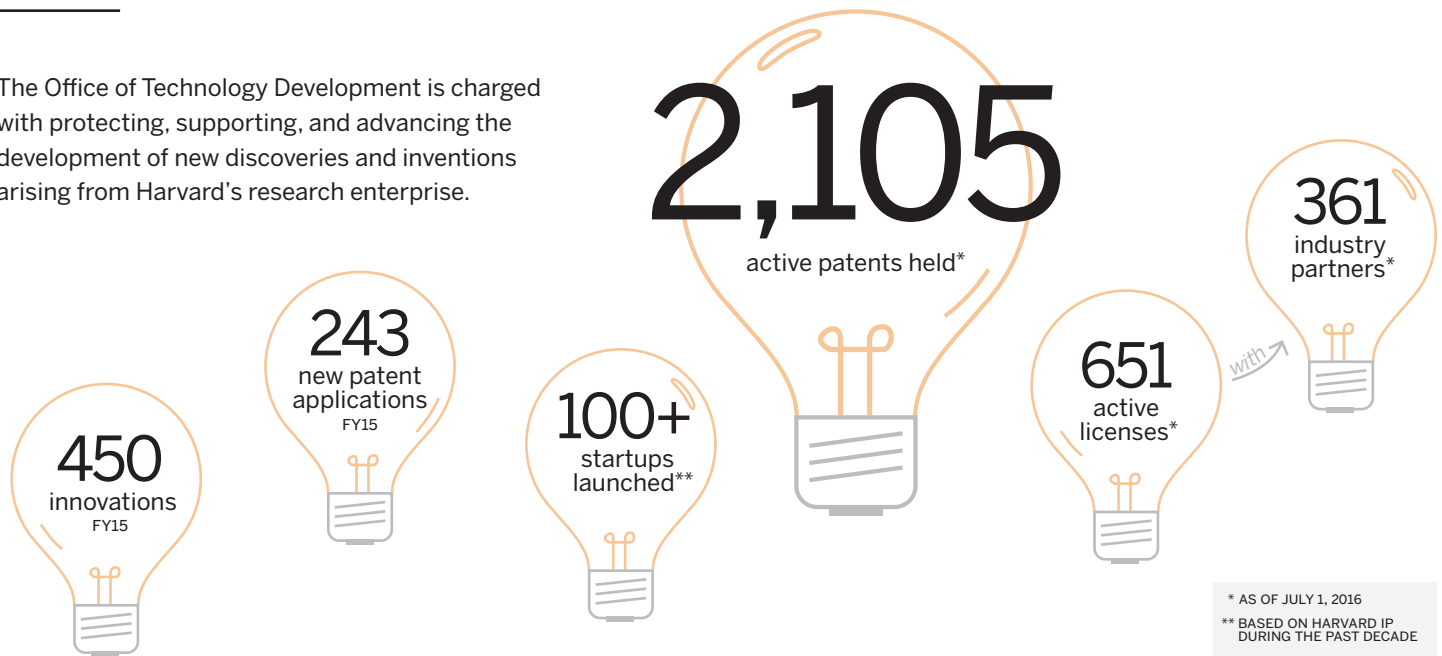


## INNOVATION

Making discoveries that attract private investment and launch new ventures, sparking our region's entrepreneurial spirit.

### AN ENGINE OF INNOVATION

The Office of Technology Development is charged with protecting, supporting, and advancing the development of new discoveries and inventions arising from Harvard's research enterprise.



#### THE HARVARD INNOVATION LABS

The Harvard Innovation Labs is a vibrant, cross-disciplinary ecosystem for the Harvard, Allston, and Greater Boston communities to explore innovation and entrepreneurship while building deeper connections. Between the i-lab's initial opening in November 2011 through spring 2016:

253,000+  
visits since opening



Harvard  
innovation labs

4,675+  
events have been held

75  
Experts in Residence  
hold regular office  
hours to mentor and  
advise entrepreneurs

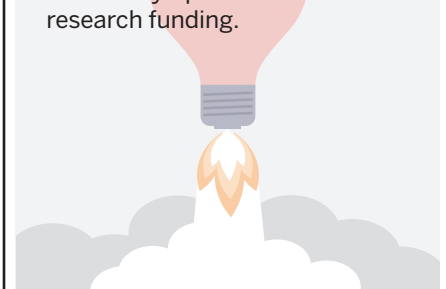
850  
community-partner  
sponsored events held  
at the i-lab in the past  
five years

70–100  
Harvard Ventures in  
Residence at any  
given time

#### BLAVATNIK BIOMEDICAL ACCELERATOR

\$13m

in grants were awarded to  
**68 projects** between 2007  
and 2016. These projects  
have, in turn, attracted  
an additional **\$28 million**  
in industry-sponsored  
research funding.





I think Harvard has true thought leaders—people who are at the top of their game. If I find someone who is zeroed in on a problem I care about and doing it in a way that I see a future in, on many occasions it's a Harvard professor, or a Harvard student or post-doc.

**CARMICHAEL ROBERTS**  
GENERAL PARTNER, NORTH BRIDGE VENTURE PARTNERS



## VENTURE CAPITAL AWARDS

In 2014 and 2015, young Massachusetts companies received nearly **\$10 billion** in venture capital funding, and more than half of those companies have a strong connection to Harvard.

2014

**\$4.41bn** received by MA companies

**341** companies received funding

**62%** (212) of those have a Harvard connection

**14%** (48) have a connection to a Harvard affiliated teaching hospital

2015

**\$5.5bn** received by MA companies

**321** companies received funding

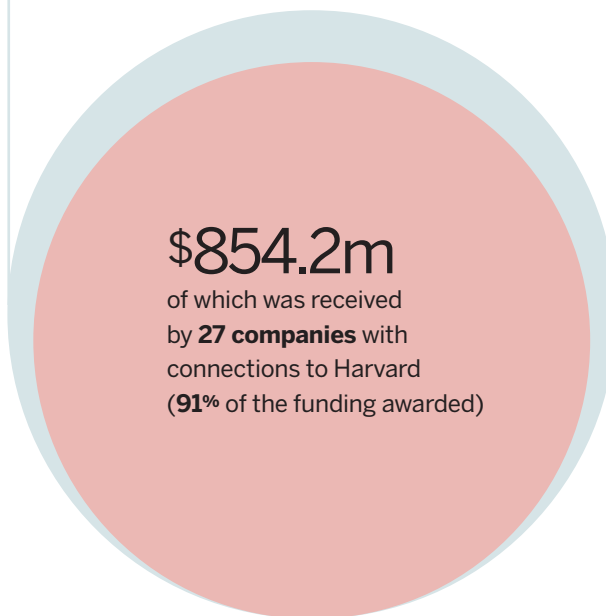
**72%** (232) of those have a Harvard connection

**16%** (59) have a connection to a Harvard affiliated teaching hospital

## 2015 BIOTECH DEALS

**\$933.9m**

in venture capital funding was received by **30 companies** in Massachusetts



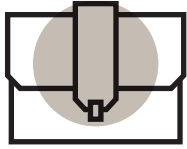
**\$854.2m**

of which was received by **27 companies** with connections to Harvard (**91%** of the funding awarded)

## SELECTED HARVARD CONNECTIONS VENTURE CAPITAL BACKED MASSACHUSETTS COMPANIES THAT RECEIVED FUNDING IN 2015



Some companies are still in "stealth mode," making it impossible to assess possible Harvard connections. In addition, the amount of venture capital funds some companies received is not yet publicly available.



## EMPLOYMENT

Serving as one of the largest employers in the state, Harvard provides good jobs that help employees grow and advance their careers.

### PEOPLE DIRECTLY EMPLOYED BY HARVARD IN MASSACHUSETTS

# 18,335

#### TOTAL PEOPLE IN MASSACHUSETTS DIRECTLY EMPLOYED BY HARVARD\*

##### ACADEMIC

5,320

3,298  
faculty

2,022  
post-docs

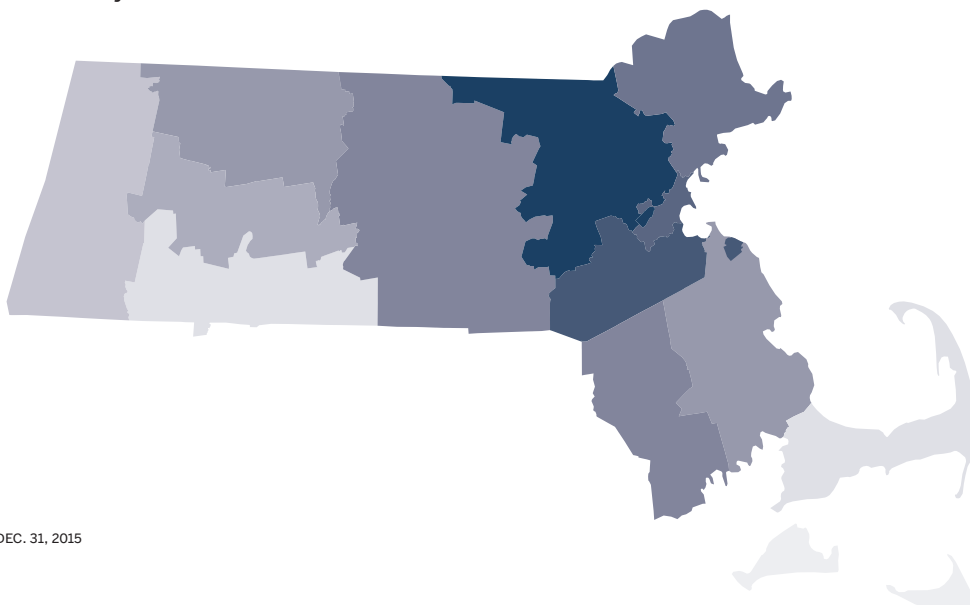
##### NON-ACADEMIC

13,015

staff members responsible for supporting Harvard's academic mission and the day-to-day operation of the University

#### RESIDENCE OF HARVARD EMPLOYEES IN MASSACHUSETTS\*

Harvard has been the largest employer in the city of Cambridge for 18 consecutive years.



Barnstable	33
Berkshire	2
Bristol	168
Dukes	0
Essex	706
Franklin	16
Hampden	5
Hampshire	16
Middlesex	10,666
Nantucket	0
Norfolk	2,068
Plymouth	329
Suffolk	3,418
Worcester	257
Outside of MA	651

\*AS OF DEC. 31, 2015

The Summer Youth Employment Program allows Harvard University managers to connect with amazing students who truly represent the future of the workforce. These opportunities help students develop invaluable skill sets, gain firsthand experience in the workplace, and set them up for success in the future. It's an immensely valuable program for Harvard that will grow our relationship with these communities in the years to come.

**MICHELLE GORDON-SEEMORE**

DIRECTOR OF RECRUITMENT SERVICES, HARVARD HUMAN RESOURCES



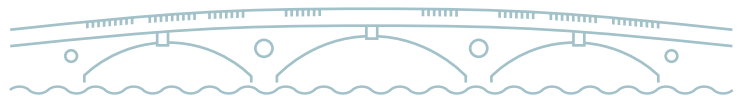
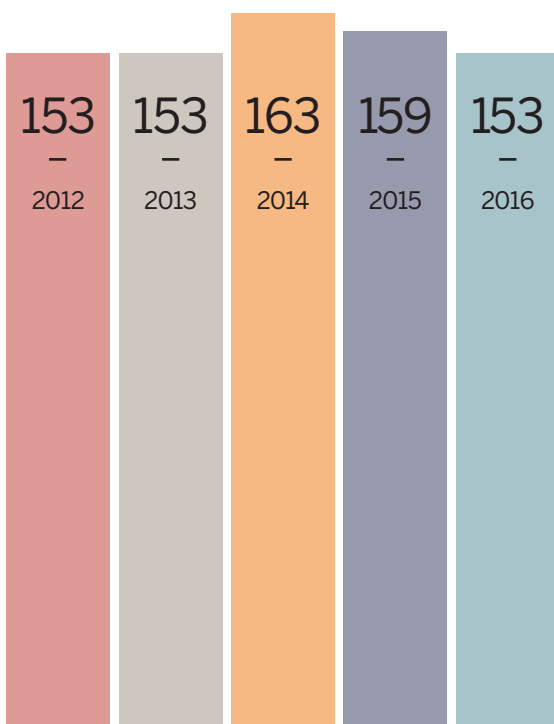
## PROFESSIONAL DEVELOPMENT

Harvard offers its employees—nearly **50 percent** of whom are represented by a union—an array of professional development opportunities, and we partner with our host communities to establish strong internship programs for high school students.

### SUMMER JOB PLACEMENT HIGH SCHOOL STUDENTS

781

jobs Harvard has provided for Cambridge and Boston high school students over the past five years



### HARVARD BRIDGE PROGRAM

An education and training program open to all Harvard staff and faculty, the Bridge Program offers classes including academic writing, business writing, college preparation, career exploration, computer skills, English for speakers of other languages (ESOL), high school diploma preparation, advanced pronunciation, and more. Bridge students may also request one-on-one tutorial sessions, including citizenship preparation. Career development services include individual counseling, professional internships, and job shadowing opportunities. The following information about the Harvard Bridge Program is current as of July 2016.

3,421

students who have enrolled in classes through the Bridge Program since 2000

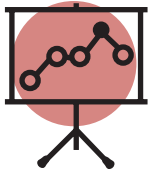
240

employees have become US citizens through the Bridge Program since 2007

In 2015, the Bridge Program offered **six weekend computer classes** to Harvard service employees. These trainings allow employees to continue to develop professionally and personally, and they accommodate employees' normal work schedules.

70

Bridge students took part in the Healthy Harvard initiative, taking Mindfulness Meditation classes, which help employees to reduce stress and improve the quality of their lives.



## IMPACT

Harvard's economic, health, and social impacts are felt around the globe and in our backyard. In Massachusetts, Harvard's 50,000 alumni are playing leading roles at world-renowned teaching hospitals, cultural centers, and research institutions.

### ALUMNI



A Harvard alumni or faculty member serves on the board or in management of **23 of the 25 largest nonprofits** in Massachusetts (as measured by total assets according to the Boston Business Journal).

271,000

estimated alumni living in the United States

2,430

alumni hold senior leadership positions in or were the founders of Massachusetts companies

49,600

estimated alumni currently living in Massachusetts

47

Harvard alumni are members of the 114th Congress

### VISITORS



70,253

people visited the Harvard Information Center in 2015

### EMPLOYEES



18,335

employees made Harvard the fourth largest employer in Massachusetts in 2015

### DOCTORS



10,400

doctors at Boston-area hospitals hold academic appointments at Harvard Medical School

### AWARDS AND RECOGNITIONS



95

Nobel laureates and Pulitzer Prize winners have been members of the Harvard faculty

AAA

Harvard's stable presence has been cited by bond rating agencies as contributing to Cambridge's triple-A bond ratings



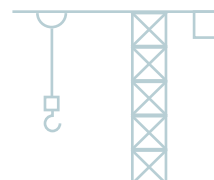
Harvard has been a terrific partner in working to ensure that excess food from its dining halls does not go to waste, and instead finds its way to our neighbors who need it most. Harvard's commitment, time, energy, and resources have made a lasting difference in the battle on hunger.

**SASHA PURPURA**  
EXECUTIVE DIRECTOR, FOOD FOR FREE



## SPENDING BENEFITS THE LOCAL ECONOMY

In FY15, Harvard spending totaled almost \$5 billion; Harvard personnel expenses totaled \$2.2 billion. The majority of Harvard spending went to purchase supplies, maintain and expand the physical plant, and run the University. These activities cost \$2.8 billion.



**\$2.8bn**

spent on construction and to purchase supplies and services

**\$1.4bn**

spent in Massachusetts

**\$785m**

spent in Boston

**\$129.6m**

spent in Cambridge

### CONSTRUCTION SPENDING

**\$433m**

spent on construction

**\$373m**

spent in Massachusetts

**\$183m**

spent in Boston

**\$22.3m**

spent in Cambridge

### SUPPLIES AND SERVICES SPENDING

**\$2.4bn**

spent on supplies and services

**\$1bn**

spent in Massachusetts

**\$601.6m**

spent in Boston

**\$107.3m**

spent in Cambridge









**HARVARD**  
UNIVERSITY