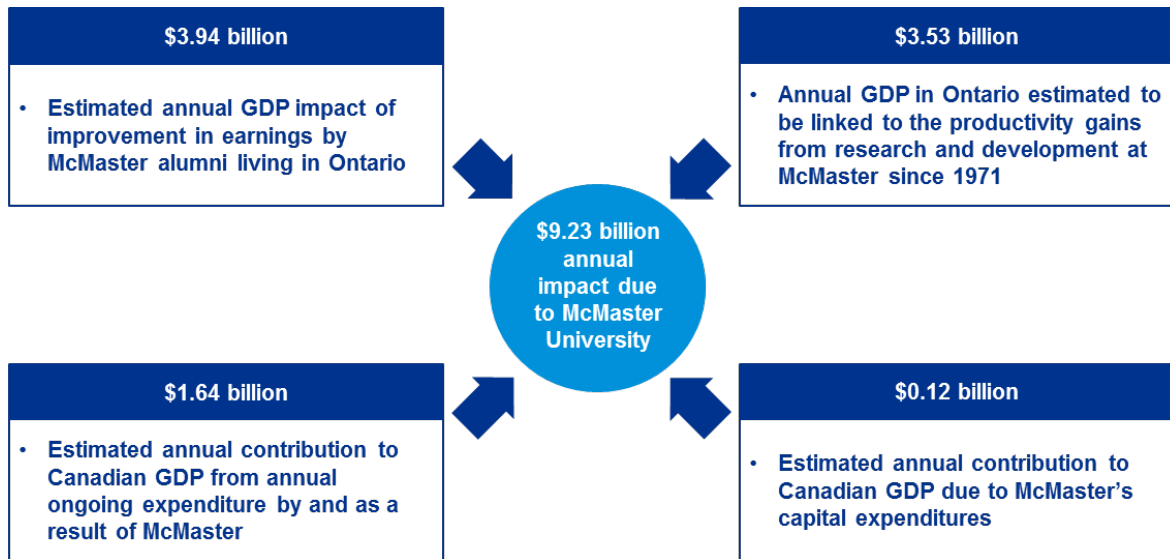


McMaster Economic Impact Study

KPMG LLP

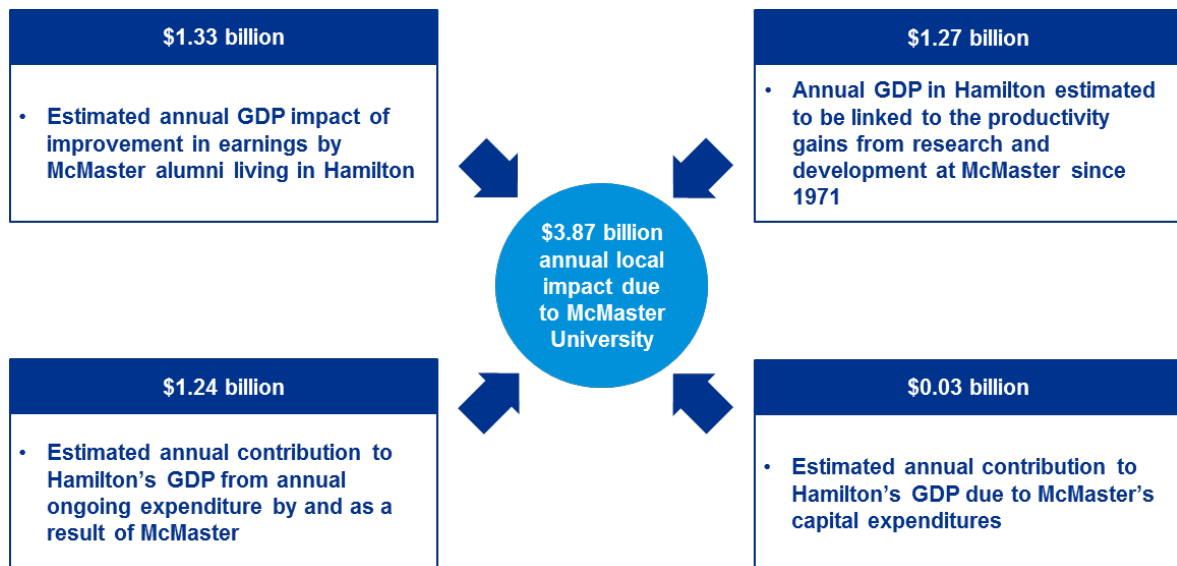
December 2017

Total Economic Impacts from McMaster University



Within this total economic impacts, it is also estimated that McMaster contributed **\$3.9 billion in GDP impacts to the City of Hamilton**. This is summarized in the following figure.

McMaster University's Economic Impacts to the City of Hamilton



The following subsections provide further commentary on breakdown of expenditures and economic impacts as a result of activities at McMaster.

6 Socioeconomic Impacts to the Hamilton Region

McMaster has maintained a long-lasting relationship with the Hamilton region through several means, including supporting local businesses, organizing and participating in community events, engaging in community-based research, and aligning to the City's economic development goals.

6.1 Supporting Local Businesses

As discussed earlier in Chapter 5 of this Report, McMaster plays a critical role in developing human capital. From a local and regional perspective, McMaster has been a source of skilled labour for the region and its businesses. For example, ArcelorMittal Dofasco, one of the largest steel-producing companies in the world and Hamilton's largest private sector employer⁸⁵, has hired many McMaster graduates specializing in advanced manufacturing and materials science.

In addition to indirectly supporting local businesses through the provision of skilled labour, the University also directly supports local businesses through the procurement of goods, services and labour as part of its operations. For example, the Faculty of Science sources many of its goods and services from nearby businesses, including chemicals, compressed gases, specialized water filters, and transportation services. As presented in Section 3.2.2 of this Report, data provided by McMaster shows that 26% of McMaster's purchases of goods and services are from Hamilton vendors. This represents over \$100 million in annual revenues to local businesses as a result of McMaster's capital and operations spending. Indirectly, McMaster's activities contribute to building a vibrant local economy, which then in turn support the Hamilton region in city-building aspects.

McMaster also plays a role in assisting businesses with the commercialization of their products and services. The Innovation Factor ("iF"), located at the McMaster Innovation Park ("MIP"), focuses on promoting commercialization of innovation and technologies developed by Small-Medium Enterprises ("SMEs") located in Hamilton. These businesses are diverse in their endeavours, including: advanced manufacturing, clean tech, information technology, life sciences, health care, and social innovation. The McMaster Industry Liaison Office ("MILO") is another resource focused on commercialization. It is a resource available for McMaster, Hamilton Health Sciences, and St. Joseph's Healthcare Hamilton and is responsible for assisting and facilitating the commercialization process, particularly through providing connective support among academia, industry, and government. Through MILO, there has been an increase in the creation of start-ups by both faculty members and students, as highlighted in section 4.4. Lastly, The Forge has contributed significantly to the technology business community through its role as a start-up incubator. Since its establishment in 2014, The Forge has incubated over 60 companies. Of these, two have moved out as self-sustaining and profitable ventures.

The Faculty of Science is involved in a five-year research project funded by the Social Sciences and Humanities Research Council of Canada through the **Automotive Partnership of Canada** ("APC"). The project aims to develop a clear understanding of the wide range of costs and benefits associated with the adoption of electric mobility and will help prepare the automotive sector, electric utilities,

⁸⁵ ArcelorMittal Dofasco, 2017, At a Glance, Available at: <http://dofasco.arcelormittal.com/who-we-are/at-a-glance/about-dofasco.aspx>

government and other stakeholders within the Hamilton region as well as further afield, for the future of mobility.

6.2 Supporting Community Events and Activities

McMaster plays an integral role in the community and has a number of initiatives which support the development of the Hamilton region, ranging from community-focused events, community placements, mentoring programs, and charity projects. The Network for Community-Campus Partnerships (the "Network") is the structure that facilitates initiatives between McMaster and its community partners to achieve collectively developed goals. Managed by the Office of Community Engagement, the Network fosters ongoing relationship-building between community and University partners through a variety of approaches and actions.

University-Sponsored Community Events

As an example of McMaster's role in the community, the University annually runs one week of events in Hamilton through a program titled "Big Ideas Better Cities". These events explore ways to build healthy, vibrant communities that work for everyone, young and old. The events include public talks, workshops and a public panel discussion. Further, the McMaster Children & Youth University ("MCYU") was launched in 2011 and is the first "children's university" in Canada with programming for interactive, family-based discovery. The program offers on-campus, family-oriented, monthly lectures on one Saturday a month. It also offers community-based programming for youth and their families through the "MCYU in the City" program.

Faculty-Sponsored Applied Learning and Community Events

In addition to University-sponsored community events, individual Faculties are also involved in their own initiatives to support the development of the Hamilton region. Examples of these initiatives are provided below.

- The DeGroote School of Business hosts DeGroote Days, during which MBA students work with community organizations, non-profits and small businesses to provide services in exchange for applied-learning opportunities.
- The Faculty of Engineering holds an annual Engineering and Science Olympics for secondary school students and teachers across the province, with the prize being more than \$20,000 in McMaster Student Entrance Awards. Further, an all-female summer program called "Yes SHE Can" is led by female leaders and mentors from the Faculty and allows girls to explore their interests in Science, Engineering, and Technology.
- The Faculty of Humanities supports community engagement by investing in projects that integrate community leadership opportunities and through offering internship programs in partnership with local organizations. For example, the Faculty's Centre for Community-Engaged Narrative Arts ("CCENA") incorporates the stories and narrative traditions of community groups, individual community members, artists, and art organizations to provide support and facilitate conversations within the community.
- Let's Talk Science is a national outreach initiative that connects Faculty of Science educators with youths to deliver learning experiences that are focused in science, technology, engineering, and mathematics ("STEM") fields.

- The Faculty of Social Sciences runs McMaster's Research Shop, a program in which community organizations are able to approach the University with inquiries and are then teamed up with a student group who will assist them in addressing their problems. The initiative has proven to be successful and well-utilized in the Hamilton region. In 2016, it worked with more than 13 community projects and involved 40 McMaster students.
- With funding from the Hamilton Community Foundation, the Faculty of Health Sciences' Midwifery Education Program runs a pilot project that brings midwifery services to Hamilton's McQuesten neighbourhood. The project evaluates the introduction of group prenatal care and involves both midwifery and nursing students in the provision of care.

These activities sponsored by Faculties build direct relationships between McMaster's programs and members of the community. In turn, McMaster's profile can be elevated through the delivery of these programs. Moreover, the programs bring educational and interaction opportunities to specific demographics in the region of Hamilton and across the province of Ontario.

Faculties have also been involved in the development of community spaces. For example, the Faculty of Engineering invested in the creation of community spaces, such as the expanded John Hodgins Engineering (JHE) Lobby and the launch of the Thode Makerspace, a new interdisciplinary experiential learning space for the McMaster community to explore new technologies, learn technical skills and work collaboratively. The Faculty of Science's Physical Activity Centre of Excellence (PACE) is an exercise and training centre devoted to studying and improving the health and well-being of adults and people with chronic diseases and disabilities. Community members pay a monthly fee in return for personalized, one-on-one guidance and access to specialized equipment. In 2016, over 200 student volunteers worked closely with more than 500 community PACE participants.

These initiatives sponsored by McMaster and its Faculties help to strengthen relationships and connections between its students and the larger community. Through these initiatives, McMaster also provides mentorship opportunities that go on to expand both student and community capacities.

6.3 Community-Based Research

As outlined in Chapter 4 of this Report, McMaster is globally recognized for its research capabilities and has a history of partnering with the private sector, public sector and research institutes around the world to tackle a wide range of scientific and societal challenges through its research programs. McMaster also applies its research capabilities for the benefit of the Hamilton region through the Office of Community Engagement and through multiple initiatives exemplified below.

- **McMaster's Research Shop** supports public, non-profit and community organizations by providing Rapid Research Reviews – reports containing academic literature reviews, key interviews, and a survey of existing practices, completed within six to eight weeks. The process provides community groups with the information they need, while also giving McMaster students the opportunity to apply their research skills to real-world, local problems.
- **The Faculty of Social Sciences' Scholar-in-Community Program** connects faculty members with organizations in the Hamilton community who may benefit from the knowledge and skillsets that faculty members have to offer. The first Scholar-in-Community ran a year-long research project in 2015/16 aimed at developing strategies to lower the rate of involvement that immigrant families have with child-welfare agencies. The project brought together representatives from St. Joseph's Immigrant Women's Centre, the Children's Aid Society and the University to produce resources to help immigrant families adapt to their new home and to address gaps in the current child-welfare system. Interviews were conducted with parents, social workers and community

members about their experiences, and the findings were used to help train social workers at McMaster.

- **The McMaster Centre for Climate Change** maintains an on-campus weather station which produces real-time and historic weather information for McMaster researchers and the local community. The Centre has also established a weather network across local high schools, where local weather data is made available to students and teachers for teaching and lab exercises at four Hamilton region high schools.
- In a joint university-community initiative, McMaster has partnered with United Way Toronto & York Region on the **Poverty and Employment Precarity in Southern Ontario (PEPSO)** research project. PEPSO aims to gather much-needed data on trends in precarious employment and encourage policy debate and further research. The impacts of PEPSO research is demonstrated by its many citations in federal, provincial and municipal government proceedings regarding precarious employment. Furthermore, the PEPSO research survey is being replicated in London, Ontario by the London Poverty Research Centre at King's University College, and in the Niagara Region by the Social Justice Research Institute at Brock University and United Way Niagara Falls & Greater Fort Erie through the **Poverty and Employment Precarity in Niagara (PEPiN)** project.
- With funding from the Hamilton Community Foundation, the **McMaster School of Nursing's Health in the Hubs initiative** combines existing research evidence around health issues with residents' views to come up with potential solutions.

6.4 Case Studies: Supporting City of Hamilton's Strategic Priorities

In its 2016-2020 Economic Development Action Plan, the City of Hamilton set out a vision to "be the best place to raise a child and age successfully."⁸⁶ Through extensive stakeholder engagement, and contextualized in the City's current state of its local economy, the City of Hamilton set out six goals in its Economic Development Action Plan. These goals are outline in Figure 40.

⁸⁶ 2016-2020 Economic Development Action Plan, City of Hamilton

Figure 40. City of Hamilton's Six Goals for its Economic Development Mandate



Source: City of Hamilton, 2016, 2016-2020 Economic Development Action Plan

These six goals coincide with the areas of socioeconomic impact McMaster has and continues to impart on the local community. The following cases highlight some of the initiatives undertaken by the University in support of the City of Hamilton's economic development goals. Anecdotally, McMaster's involvement and continued relationship with the City has played an influential role in attracting private investment and philanthropic donations to both the University and the City.

The case studies below reflect the long-standing relationship between the City and McMaster, and how the two entities have continued to grow and evolve together over the years. The long-term success of these partnerships is strengthened by the two parties' ongoing dialogue and collaboration to maintain a common understanding of the partnership's goals – such as maintaining relevancy of programs delivered at the post-secondary institution against the municipality's development objectives as they are updated over the long term.

Grow Non-Residential Tax Assessment & Increase the Number of Living-Wage Jobs

The City maintains the goal of attracting and retaining businesses in Hamilton for the purposes of growing non-residential assessment and increasing living-wage jobs.



In fall of 2016 and 2017, McMaster University was one of only 15 companies selected as a top employer in the Hamilton-Niagara region. This marks the third win for the University since it began entering in 2015.*

Not only does the University employ roughly 6,200 people in Canada in full-time positions, most of which are high-skilled positions, it also has committed tremendous investments towards helping to develop Hamilton into a thriving business region.

*McMaster Daily News. (2017, November 22). McMaster Named a Top Employer in the Hamilton Niagara Region. Available at: <https://dailynews.mcmaster.ca/article/mcmaster-named-a-top-employer-in-the-hamilton-niagara-region-2/>

"Our people are our greatest asset"
— Wanda McKenna, AVP and Chief Human Resources Officer, McMaster University

Graduates of McMaster University go on to seek employment within the City of Hamilton, as is the case with many graduates of its Health Sciences programs. A significant percentage of physicians, nurses, and other health care specialists in Hamilton health care centres have received training and education from the University.

In addition, McMaster alumni hold positions in regional agencies and make decisions regarding the city's strategic directions and economic development projects. The knowledge and skillsets that students develop over the course of their academic careers at McMaster help prepare them to undertake roles that have lasting impacts on local businesses, the wider communities, and the nation at large.

Support the Growth of a Diversified Economy

The City maintains the goal of attracting and retaining businesses in Hamilton for the purposes of growing non-residential assessment and increasing living-wage jobs.



The **McMaster Manufacturing Research Institute** maintains the goal of enhancing productivity, quality, and product/process innovation through pursuing new manufacturing research projects with partnering academia.

In addition to the funding and research interest brought to Hamilton through McMaster's research projects, initiatives to promote awareness of high-skilled careers in, for example, STEM fields among youths have continued to support the diversification of Hamilton's economy. The shift from being a town predominantly known for its manufacturing capabilities to now having Canada's most diverse economy, according to the Conference Board of Canada, can be linked to the efforts on the part of McMaster. Currently, Hamilton's largest and most active industries include advanced manufacturing, agri-business and food processing, creative industries, goods movement, ICT and digital media, and life sciences.

Focused on understanding and developing methods to treat human and animal disease, the **McMaster Immunology Research Centre** invites students and faculty from health sciences and sciences to participate in cutting-edge research initiatives.



A free public art gallery located on McMaster's main campus, the **Museum of Art** houses five galleries and more than 6,000 works of art. It attracts visitors onto campus as well as provides learning and research opportunities for McMaster community.

Build a Talented Workforce

A strong competitive advantage of setting up shop in Hamilton is the quality of the City's workforce, which it hopes will become one of Ontario's best.



McMaster
Centre for
Continuing
Education

McMaster is devoted to providing higher education opportunities for people at all stages of their life, ensuring that this knowledge transfer is showcased through a strong Hamilton workforce. In addition, a large portion of the undergraduate and graduate student populations come from the GTHA.

Established in 1931, the [McMaster Centre for Continuing Education \(CCE\)](#) offers more than 300 courses and workshops in areas that include business and management, communication and design, health and social services, and metallurgy.

Numerous career resources, events, and flexibility in learning options are made available to students in an effort to create a dynamic, integrative experience for adult learners. Students are able to leverage McMaster's reputation for academic excellence to further their personal development and continue the tradition of lifelong learning.

Adding value to the broader community, the CCE also offers corporate training services for organizations interested in developing the skillsets of their employees. Employers are also qualified to receive the Canada-Ontario Jobs Grant when choosing to invest in their workforce through the CCE.

Create a Culture of innovation and Entrepreneurship

Known as "the Ambitious City", Hamilton is working towards maintaining a culture where innovation and entrepreneurship prospers.



iF is a not-for-profit regional innovation centre that dedicates resources towards accomplishing the following objectives:

- Commercializing new ideas;
- Supporting SMEs during each phase of growth; and
- Building a culture of innovation in Hamilton.

The [City Lab Project](#) is a partnership among McMaster, the City of Hamilton, Mohawk College and Redeemer University College to create an innovation hub where students, city staff and community stakeholders are able to go to develop solutions that support city priorities. This initiative offers opportunities that benefit the overall Hamilton community in the following ways:

- Post-secondary students gain and develop skills through solving problems affecting the city, and may be presented with employment opportunities after they graduate;
- Academic and public groups are able to work in a collaborative environment, supporting the creation of synergies between schools and the City; and
- City staff are exposed to and can consider a pool of creative ideas that may have applications in many regional development challenges.

Develop Vibrant Commercial and Cultural Districts

To maintain a high quality of life for its citizens, the City will focus on developing its arts and culture scene, create vibrant neighborhoods, and support commercial districts.



First introduced in 2003, [Pangaea](#) is McMaster's largest annual multicultural celebration and invites members of the University and the Hamilton community to attend events celebrating diversity. In 2017, Pangaea showcased more than 15 ethnicities and cultures.

PANGAEA

Diversity, creativity, and freedom of expression remain on the forefront of importance at McMaster and is showcased through the numerous initiatives the University supports.

Founded in 1963 as [McMaster Radio](#), [CFMU](#) has grown to become a prominent voice in the campus and community. The station has been named Radio Station of the Year by the Hamilton Music Industry Awards and is dedicated to upholding their mission of redefining radio:

"We are a public meeting space for many voiceless dimensions in our society – local cutting-edge artists and musicians, marginalized groups, multicultural families, and people with a keen social conscience."

Invest in Infrastructure that Drives Economic Growth

Hamilton will strategically invest in infrastructure that will drive economic growth such as through new ICT (broadband) networks and social infrastructure.



The [David Braley Health Sciences Centre](#), located in downtown Hamilton, is dedicated to the advancement of health sciences innovation, research, and education across Canada while providing high quality medical services to Hamiltonians. This \$84.6 million project received joint funding from McMaster alumni, David Braley, the City of Hamilton, and the Province of Ontario.

Adding to the Hamilton downtown revitalization initiative, the David Braley Health Sciences Centre is the new home to Hamilton Public Health Services, and is comprised of a large family health clinic and several McMaster departments. The centre is also open to the public for rental and booking space.