

UNIVERSITY OF MASSACHUSETTS SCHOOL OF PUBLIC HEALTH AND HEALTH SCIENCES

Real Estate Impacts of MGM Springfield in Springfield and Surrounding Communities

July 3, 2019

Henry Renski, PhD Associate Professor UMass Center for Economic Development University of Massachusetts Amherst

Thomas Peake Senior Research Analyst UMass Donahue Institute, Economic and Public Policy Research Group

Andrew L. Hall
Senior Research Analyst
UMass Donahue Institute, Economic and Public Policy Research Group

Denis McAuliffe Research Assistant UMass Donahue Institute, Economic and Public Policy Research Group

Jonathan Astor Research Assistant UMass Donahue Institute, Economic and Public Policy Research Group

Acknowledgements

Support for this study came from the Massachusetts Gaming Commission under ISA MGC10500003UMS15A establishing the Social and Economic Impacts of Gambling in Massachusetts study. This multi-year project was competitively bid via the Massachusetts Gaming Commission Request for Response (MGC-RA-2012) for Research Services and awarded to the University of Massachusetts Amherst in April 2013. The UMass Amherst research team would also like to thank the key informants from Springfield, MA who agreed to take the time to speak with us about the impacts MGM Springfield has had on housing and real estate in the community.

SUGGESTED CITATION:

Renski, H., Peake, T., Hall, A., McAuliffe, D., & Astor, J. (2019). *Real Estate Impacts of MGM Springfield in Springfield and Surrounding Communities*. Amherst, MA: University of Massachusetts Donahue Institute, Economic and Public Policy Research Group.

Table of Contents

Acknowledgements	i
List of Tables	
List of Figures	
Executive Summary	
Real Estate Conditions in Springfield: Initial Impacts	
Residential Real Estate	3
Residential Property Sales	3
Impacts on Residential Property Sales	3
Impacts on Median Sales Price of Residential Properties	8
The Residential Rental Market	11
Residential Rent Prices over Time	13
Commercial and Industrial Real Estate	17
Inventory	17
Vacancy and Absorption	22
Lease Rates	27
Conclusion	32

List of Tables

Table 1. Residential Housing Sales Summary, Springfield and Surrounding Communities, 2008-2018	11
Table 2. Real Median Rents (2018 Dollars), 2008/12 and 2013/17	
Table 3. Vacancy Rates, 2008/12 and 2013/17	
Table 4. Commercial Inventory, Massachusetts, Springfield, and Surrounding Communities, 2008-2018	
Table 5. Industrial Inventory, Springfield and Surrounding Communities, 2008-2018	
Table 6. Commercial Vacancy and Absorption, Springfield and Surrounding Communities, 2008-2018	
Table 7. Industrial Vacancy and Absorption, Springfield and Surrounding Communities, 2008-2018	
Table 8. Valassis Vacancy Rates, Springfield and Surrounding Communities, 2008-2018	
Table 9. Commercial and Industrial Lease Rates, Springfield and Surrounding Communities, 2008-2018	
List of Figures	
Figure 1. Massachusetts Host and Surrounding Communities	2
Figure 2. Number of Residential Property Sales by Type, Springfield, 2008-2018	
Figure 3. Single-Family Home Sales in Springfield vs. the Region and State, 2008-2018	5
Figure 4. Condominium Sales in Springfield vs. the Region and State, 2008-2018	5
Figure 5. Multi-Family Sales in Springfield vs. the Region and State, 2008-2018	6
Figure 6. Location of Single-Family Homes Sales, before and after MGM Springfield License Awarded	7
Figure 7. Location of Condominium Sales, before and after MGM Springfield License Awarded	7
Figure 8. Location of Multi-Family Sales, before and after MGM Springfield License Awarded	8
Figure 9. Single-Family Homes, Median Sales Price (2018 Dollars), 2008-2018	9
Figure 10. Condominiums, Median Sales Price (2018 Dollars), 2008-2018	10
Figure 11. Multi-Family Homes, Median Sales Price (2018 Dollars), 2008-2018	10
Figure 12. Median Estimated Rent Price in Springfield vs. the Surrounding Region and State (2018 Dollar	rs),
2008-2018	14
Figure 13. Number of Commercial and Industrial Buildings, Springfield, 2008-2018	
Figure 14. Change in Number of Commercial Buildings, 2008-2018	
Figure 15. Change in Number of Industrial Buildings, 2008-2018	18
Figure 16. Springfield Rentable Building Area, 2008-2018	
Figure 17. Commercial Rentable Building Area, 2008-2018	
Figure 18. Industrial Rentable Building Area, 2008-2018	
Figure 19. Commercial Vacancy Rates, 2008-2018	23
Figure 20. Industrial Vacancy Rates, 2008-2018	
Figure 21. Commercial Net Absorption, 2008-2018	
Figure 22. Industrial Net Absorption, 2008-2018	
Figure 23. Office Commercial Lease Rates (2018 Dollars), 2008-2018	
Figure 24. Non-Office Commercial Lease Rates (2018 Dollars), 2008-2018	
Figure 25. Industrial Lease Rates (2018 Dollars), 2008-2018	30

Executive Summary

Key Findings: Residential Real Estate Indicators

- Sales of single-family homes in Springfield, Massachusetts flattened in the wake of the Great Recession of 2009. However, home sales picked up in 2014, just before the license was awarded to MGM and continued through 2018 when MGM Springfield opened. Since the economic recovery matched the awarding of the MGM Springfield casino license, it is difficult to truly distinguish the impact of the casino from the more general economic recovery on sales of single-family homes.
- Between 2009 and 2011, Springfield's single-family home sales saw decreasing growth rates. After 2011, Springfield's rates were below those of the surrounding communities and the rest of Hampshire and Hampden Counties. However, all three experienced steady growth after the license was awarded to MGM in 2014, although this growth could be interpreted as being due to broader market conditions.
- Between licensing and opening of MGM Springfield, condominium sales in the rest of Hampshire and Hampden Counties experienced quicker growth rates than both Springfield and its surrounding communities.
- Inflation-adjusted median sales prices in Springfield have increased slightly or remained flat for single-family homes and condominiums between the casino's licensing and opening. Only multifamily home prices have increased dramatically during that time. Key informant interviews suggest that this phenomenon could be due to investors buying up multi-family homes.
- Median sales prices in Springfield's surrounding communities and the rest of Hampden and Hampshire Counties experienced very little change during that time for single-family homes, condominiums, and multi-family homes.
- Median gross rents in Springfield, the surrounding communities, Hampden and Hampshire
 Counties, and the state as a whole increased in the period prior to and following the awarding of
 the MGM Springfield license. This suggests that increases in the study region could be following
 larger state trends.
- Springfield's residential vacancy rate saw a 1.2% decrease in the most recent years of data following the license award while the combined surrounding communities and the rest of Hampden and Hampshire Counties saw their vacancy rates increase at rates of 0.6% and 1.5%, respectively.
- Key informants from Springfield noted the increasing pressure on the housing market and
 increasing rental costs. Key informants were unsure whether these trends could be attributed to
 the licensing and opening of MGM Springfield and teased out from larger market forces and other
 development projects.
- Springfield key informants raised concerns regarding the speculative buying of properties in Springfield. For instance, many of the key informants discussed investors buying multi-family buildings and raising rents and/or buying a property and leaving it vacant with the hope of selling higher. Key informants also discussed concerns regarding displacement and an increase in evictions.

Key Findings: Commercial and Industrial Real Estate Indicators

- For most of the study period (2008-2018), Springfield added new commercial space at a slightly faster rate than the Commonwealth as a whole, but lagged in terms of industrial buildings. That trend reversed at the end of 2018 with the addition of a very large industrial facility.
- Vacancy rates—or the share of rentable building area which is listed on the market—have fallen in Springfield over the last 11 years and were lower than the statewide rates at the end of 2018. It is difficult to determine how much potentially rentable building area remains off the market.

- Average lease rates for office and industrial properties were consistently much lower in Springfield
 and its surrounding communities than in the Commonwealth as a whole. Lease rates in Springfield
 and its surrounding communities were more comparable to the state for non-office commercial
 properties.
- The development and opening of MGM Springfield introduced a substantial amount of new commercial space to the Springfield real estate market and may have contributed to a fall in commercial vacancy rates. Otherwise, there were few obvious breaks from past trends that could plausibly be attributed to the casino.
- Springfield key informants discussed the increased patronage of downtown Springfield as a result
 of MGM Springfield. Key informants did note that increased foot traffic and spillover impacts onto
 businesses as a result of the casino are limited to businesses and restaurants adjacent to MGM
 Springfield.

Real Estate Conditions in Springfield: Initial Impacts

This report details the Social and Economic Impacts of Gambling in Massachusetts (<u>SEIGMA</u>) research team's examination of the initial impacts of MGM Springfield on the residential, commercial, and industrial real estate markets for Springfield and its surrounding communities. It follows the <u>Baseline Real Estate</u> <u>Conditions, Host Community Profile: Springfield</u> report that documented residential, commercial, and industrial real estate trends prior to the opening of MGM Springfield.¹

The purpose of this study is to document any notable changes to the Springfield area's real estate market following the awarding of a casino license to MGM Springfield in February 2014 and the subsequent opening of the first resort-style casino in Massachusetts in August of 2018. Since MGM Springfield has been open for less than a year at the time of writing, there are some data sources which we had hoped to use, but which do not include any post-opening data due to lags in publication. For other measures, we were able to obtain more recent data, including real estate data from Zillow and the Multiple Listing Service (MLS), as opposed to the more dated L3 Assessors' Data.

Our impact evaluation uses a comparative approach. It considers changes in the host communities before and after the opening of the casino. It then compares these observed changes to other areas that are facing similar market conditions but are unlikely to be impacted by the casino development. This is necessary because other events that have little or nothing to do with the specific development, such as changes in national and state economic cycles, can have a considerable impact on local market conditions. Without accounting for these external forces, one can easily misattribute an apparent increase or decrease in property sales or values to the development. However, finding a suitable comparison group is difficult, especially given practical data limitations. Communities with similar market conditions are often neighbors and potentially subject to spillover impacts. Conversely, distant communities might provide a false baseline of comparison because they are not subject to similar market or regulatory conditions.

The impact of a new casino facility may spill beyond the borders of its host community. Thus, in addition to Springfield, we also track market conditions among nearby areas designated as "official surrounding communities" by the Massachusetts Gaming Commission. There are eight surrounding communities in the Springfield region, making it impractical to report specific trends for each within the limited confines of this report. For this report, we compare historic trends in Springfield and its surrounding communities to the rest of the communities in Hampden and Hampshire Counties, and against the Commonwealth as a whole (Figure 1). When working with data that prevented us from taking averages across communities, we present data from Hampden and Hampshire Counties to illustrate the broader region. We believe that these broader regions stretch beyond the likely sphere of influence of the casino on real estate conditions. Still, we recognize that these are not ideal comparison groups, and we err on the side of caution in our interpretation of the evidence.

¹ A copy of the *Baseline Real Estate Conditions* report is available for viewing and download from https://www.umass.edu/seigma/sites/default/files/Real%20Estate%20Profile%2C%20Springfield_2016-08-30%20%28final%29_0.pdf.

² For real estate trends of each surrounding community, please contact Dr. Mark Melnik, Director of Economic & Public Policy Research at the UMass Donahue Institute.

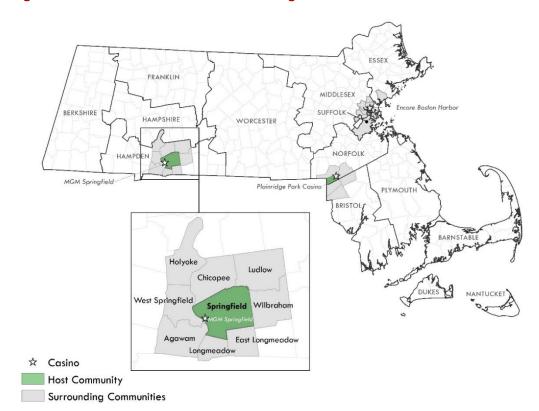


Figure 1. Massachusetts Host and Surrounding Communities

In January 2019, Dr. Rachel Volberg (SEIGMA Principal Investigator) and Dr. Alissa Mazar (SEIGMA Project Manager and Research Associate) also began interviewing key informants in Springfield with a specific focus on real estate conditions and housing and concerns surrounding gentrification and displacement. This is part of a larger effort to conduct key informant interviews with representatives—from community organizers to healthcare officials to economic development officers—in the casino host communities of Springfield, Everett, and Plainville. The goals of the qualitative interviews are to: (1) gain an on-the-ground understanding of the social and economic conditions in host communities prior to the development of a casino, during the process of constructing a casino, and while hosting a casino, (2) utilize qualitative data of impacts to triangulate findings from quantitative data, and (3) pinpoint mechanisms to explain quantitative trends and correlations.

The SEIGMA research team requested a single interview from potential key informants by contacting their professional offices by email and/or telephone. If a key informant agreed to an interview, formal consent was obtained. Interviews were not confidential as officials/representatives spoke in their professional capacity and in their area of expertise. Interviews were audio recorded and excerpts from the interviews are integrated into reports and presentations. Interviews were conducted with Geraldine McCafferty, Director of Housing, City of Springfield; Liz Bewsee, Housing and Economic Justice Organizer, Arise for Social Justice; Catherine Ratté, Principal Planner—environment and land use, Pioneer Valley Planning Commission; Rose Webster-Smith, Lead Community Organizer, Springfield No One Leaves; and Denise Jordan, Executive Director, Springfield Housing Authority.

Residential Real Estate

Residential Property Sales

Residential property sales are among the most direct indicators of changing real estate market conditions. They are often used to measure the impact of new development on surrounding areas. A sustained rise in the number and market values of properties following the construction of a new casino may occur as investors are willing to buy properties at higher prices. Conversely, a decline in property values may indicate negative impacts resulting from possible fears of increased traffic, crime, noise, or other negative externalities.

Our analysis uses property sales reported by the proprietary Multiple Listings Service (MLS). The MLS is used by real estate brokers to share information with other brokers about listed properties and potential buyers and is frequently used by analysts to measure market conditions. The MLS includes property sales of all types but this analysis only includes those classified as "arms-length" transactions. This excludes sales between family members and other situations where the sales price is not a clear reflection of market value. We focus on several general types of residential properties, namely: single-family residential, condominiums, and multi-family residential. We ignore other types of residential land uses, such as mobile homes and vacant lots as they are relatively rare.

We use the MLS to track the number and market value of property sales in Springfield and its surrounding communities compared to the state and the remainder of Hampden and Hampshire Counties. We begin tracking market conditions starting in 2008 through 2018, the year in which MGM Springfield opened and the most recent full-year for which data were available at the time of writing. We also use the detailed address data in the MLS to examine sales trends at varying distances from the site of the casino.

Impacts on Residential Property Sales

Known as the "City of Homes," it should come as no surprise that single-family home sales dominate Springfield's residential market (Figure 2). There were 1,272 single-family homes sold in Springfield in 2018, accounting for 74 percent of all residential property sales. Multi-family homes comprise most of the remaining residential property sales. There were a total of 365 multi-family homes sold in 2018, or 21 percent of total residential property sales in Springfield. Condominiums represented four percent of total residential property sales in 2018 with 71 total sales. Therefore, our analysis focuses on single-family homes, condominiums, and multi-family homes.

1,400 450 License MGM Springfield Number of Multi-Family Home and Conodominium awarded opened 400 Number of Single-Family Home Sales 350 1,000 300 800 250 200 600 Single-Family Multi-Family 150 400 Condominium 100 200 50 0 2009 2010 2011 2015 2016 2008 2012 2013 2014 2017 2018

Figure 2. Number of Residential Property Sales by Type, Springfield, 2008-2018

Source: MLS and Massachusetts Association of Realtors

Comparing Springfield to more distant communities in the region can help us determine whether the observed change in sales is due to local factors (namely the opening of MGM Springfield) as opposed to broader market trends.³ There has been a steady rise in single-family home sales in Springfield and the surrounding communities since 2014 (Figure 3). This is also the year that MGM Springfield was awarded its license. However, we cannot attribute all of this growth to MGM Springfield. Single-family home sales also grew for the state and the outlying areas of Hampshire and Hampden—areas where it is doubtful that the casino could have had a noticeable impact. It does appear, however, that single-family home sales grew slightly faster in Springfield and the surrounding communities post-2014. This is especially true in the two years since 2016, where the state and outlying areas (e.g., Agawam, East Longmeadow, Holyoke, and West Springfield) began to slow relative to Springfield. While not definitive, the evidence suggests that the construction and opening of MGM Springfield may have had a positive influence on the market for single-family home sales in Springfield and its surrounding communities. At a minimum, it is safe to say that MGM Springfield has not, thus far, had a noticeably dampening effect on the volume of local home sales.

.

³ We assume that, although Springfield and its neighbors might be impacted by MGM Springfield, more distant communities in Hampden and Hampshire Counties would be less so, and thus provide a benchmark for measuring casino-related impacts. However, the further away, the more likely the housing market is subject to different market dynamics and may not necessarily make a good basis for comparison. It is particularly important to note that Springfield and its surrounding communities tend to be far more urban than outlying communities in Hampden and Hampshire Counties, and the housing market in Hampshire County (in particular) is highly influenced by the large population of college students and faculty.

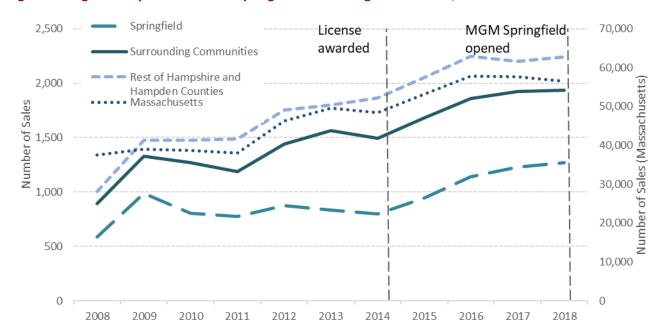


Figure 3. Single-Family Home Sales in Springfield vs. the Region and State, 2008-2018

Source: Multiple Listing Service and Massachusetts Association of Realtors

The relatively small number of condominium sales makes it difficult to identify trends. Nevertheless, we find little evidence that condo sales in Springfield were at all affected by the awarding of the casino license or opening of MGM Springfield. Springfield condominium sales peaked in 2013 (before the license was announced) and have remained relatively flat since (Figure 4). There has been an uptick in condominium sales in the surrounding communities, but this also does not appear to be related to MGM Springfield. Instead, it appears to be part of larger regional sales trends which began several years before the casino license was awarded to MGM Springfield.

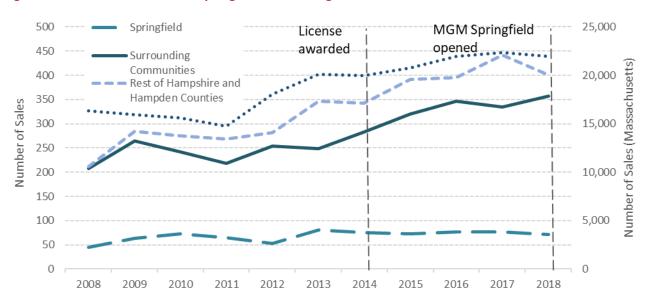


Figure 4. Condominium Sales in Springfield vs. the Region and State, 2008-2018

Source: Multiple Listing Service and Massachusetts Association of Realtors

Multi-family home sales show a marked increase in Springfield since 2014, when the license was awarded (Figure 5). The surrounding communities, and the rest of Hampshire and Hampden Counties to a lesser extent, also show an increase in multi-family sales during that same period. However, sales of multi-family homes appear to have slowed in 2017. Before the award, multi-family home sales in Springfield had been trending downward since 2009. It is possible that MGM Springfield played a role in reversing that trend, although we cannot know definitively whether that rise was due to MGM Springfield. The pattern of sales in multi-family homes in the surrounding communities and rest of the region, in contrast, was rather flat prior to the license award. With more data we will be able to track trends in multi-family home sales beyond 2018.

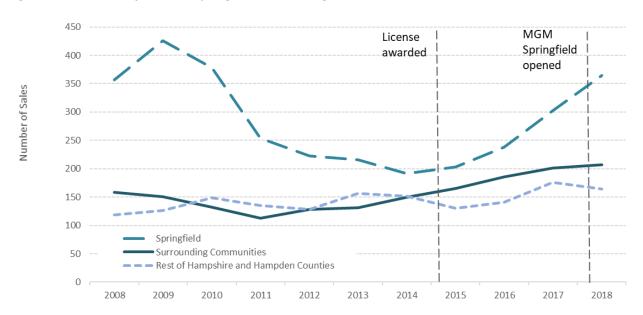


Figure 5. Multi-Family Sales in Springfield vs. the Region and State, 2008-2018

Source: Multiple Listing Service

We also consider whether the relative location of home sales has shifted before and after the opening of MGM Springfield. With the aid of Geographic Information System (GIS) software, we identified the location of nearly all residential property sales in Springfield and its surrounding communities. Figure 6 shows where single-family home sales were concentrated in 2012-2013 (prior to the announcement of the casino license) compared to the two most-recent post-award years of 2017-18. Darker shading in the maps represents heavier sales concentrations. Although there is a greater overall level of sales activity in 2017-2018, there does not appear to be a major shift in the relative location of the sales of single-family homes after the license was awarded. There are very few single-family home sales in the immediate vicinity of MGM Springfield to begin with, and most of the heaviest concentrations are several miles away. Given that closer neighborhoods are more likely to feel the direct impacts of development, it should come as no surprise that our initial analysis is one of muted or negligible impacts on area home sales. It would likely be several years before the casino might influence residential location and development decisions on a scale

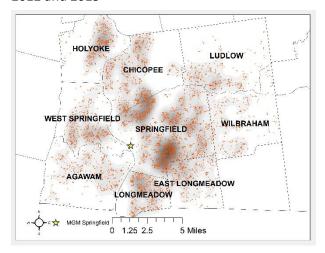
⁴ The location matching process involves joining the MLS to GIS databases of individual parcels produced by MassGIS and the Boston Redevelopment Authority. These GIS databases are based on digitized parcel maps, which are linked to assessors' data, and can be used to identify the latitude and longitude coordinates of every matched parcel. The vast majority (roughly 98 percent) of all sales were located to parcels in this first round. The remaining sales are located through street address matching using the Master Address File developed by MassGIS. Our final match rates were well in excess of 99 percent, which is a very high match rate for this type of work.

large enough to trigger changes in the spatial pattern of development or have a noticeable impact on more distant parcels.

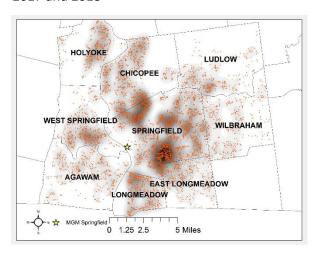
Figure 7 provides a similar analysis of condominium sales. As with single-family homes, we do not see a large locational shift. However, there does appear to be at least some increase in the number of condominium sales in neighboring areas. There is an increase in condominium sales in the immediate area surrounding MGM Springfield as well, but it is not overwhelming. Finally, Figure 8 represents the location of multi-family home sales before and after MGM Springfield was awarded its casino license. Like single-family and condominium sales, there is an increase in sales activity, but there is no noticeable shift in the location of these sales. The bulk of the increase in multi-family sales look to be concentrated in Springfield and Holyoke. There do not seem to be any direct impacts of MGM Springfield on the location of single-family, condominium, or multi-family home sales. However, we do see a general uptick in overall sales activity which may or may not be a result of the new casino.

Figure 6. Location of Single-Family Homes Sales, before and after MGM Springfield License Awarded

2012 and 2013



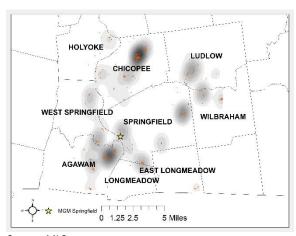
2017 and 2018



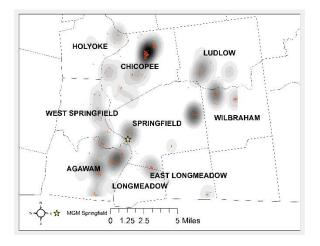
Source: MLS

Figure 7. Location of Condominium Sales, before and after MGM Springfield License Awarded

2012 and 2013



2017 and 2018

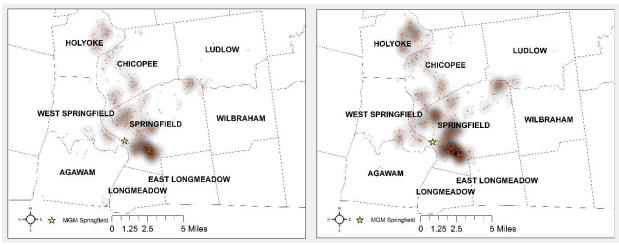


Source: MLS

Figure 8. Location of Multi-Family Sales, before and after MGM Springfield License Awarded



2017 and 2018



Source: MLS

Impacts on Median Sales Price of Residential Properties

If the MGM Springfield casino has had an immediate impact on the local housing market, it is more likely to be reflected in changes in the sales price than in the number of sales—at least in the short term. Yet, the possible impacts on sale prices are unclear. On the one hand, the new facility may diminish home values if it leads to increased traffic, noise, fear of crime, etc. On the other hand, the casino may cause home prices to rise if redevelopment encourages more people to move into the area.

It is difficult to separate the influence of MGM Springfield from the overall improvement in the housing market, which has experienced a steady climb since 2012. Single-family homes in Springfield typically cost far less than the rest of the region or the state (Figure 9). The Springfield average home sold for \$160,000 in 2018—roughly \$70,000 less than its surrounding communities and nearly \$100,000 less than the outlying communities of Hampden and Hampshire Counties. However, the median sale price for a single-family home in Springfield has grown faster than the region or the state average in recent years. Between 2014 and 2018, the median price of a single-family home in Springfield grew by 22 percent, compared to 8 percent for the surrounding communities and 5 percent for the remainder of Hampden and Hampshire Counties. To put this in perspective, if the sales price of housing in Springfield grew at the same rate as the outlying communities, the typical Springfield home would have sold for about \$140,000 instead of \$160,000 in 2018—a modest, but noticeable difference. This is also faster than the overall Commonwealth (11 percent), which is heavily influenced by Boston region market.

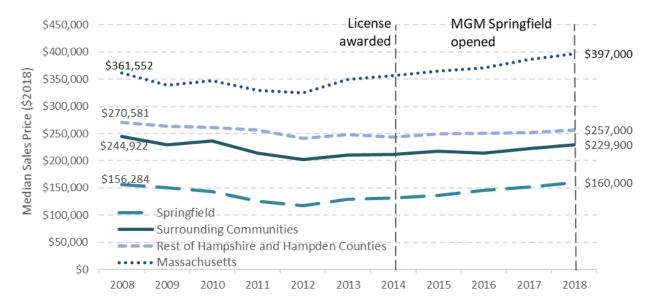


Figure 9. Single-Family Homes, Median Sales Price (2018 Dollars), 2008-2018

Source: MLS and Massachusetts Association of Realtors

While the overall trend is positive, we must be cautious in attributing this change purely to MGM Springfield. The upward trend of Springfield and its surrounding communities began several years before the announcement of the license, and we see no noticeable bump in the years following the announcement. There has not been enough time to determine whether there has been an increase in home values in the period following the grand opening of the casino in August 2018. Given that the median incomes of some of these communities are lower than the state average, it is also important to note that rising residential property values could contribute to gentrification. We will continue to track local and regional trends in real estate and housing affordability to answer these questions. Indeed, while it appears that the Springfield market is doing relatively well, we cannot purely attribute this growth to MGM Springfield or determine yet whether low-income residents are becoming displaced.

We find little evidence that the awarding of the casino license has had much impact (positive or negative) on the sales price of condominiums in the region. The real sales price for a Springfield condominium has been essentially flat since 2012 (Figure 10) and remains lower than it was just prior to the recession in 2008. The same is basically true for condominium sales in the surrounding communities as well as the remainder of Hampden and Hampshire Counties.

\$400,000 License MGM Springfield \$375,035 awarded opened \$350,000 \$318,982 Median Sales Price (\$2018) \$300,000 \$250,000 \$199,874 \$200,000 \$184,000 \$163,281 \$150,000 \$151,000 \$150,452 \$113,000 Springfield \$100,000 Surrounding Communities \$50,000 Rest of Hampshire and Hampden Counties Massachusetts 2018 2010 2012 2013 2014 2015 2016 2017 2008 2009 2011

Figure 10. Condominiums, Median Sales Price (2018 Dollars), 2008-2018

Source: MLS and Massachusetts Association of Realtors

The median sales prices of multi-family homes in Springfield appear to have been trending upward since 2012, two years prior to the awarding of the casino license (Figure 11). For Springfield's surrounding communities, multi-family home sales prices have slightly increased since 2015 and reached \$210,000 in 2018—their highest point in 10 years. Multi-family home prices in the rest of Hampden and Hampshire Counties rose in 2014 but seemed to resume their pre-award levels starting in 2015. MGM Springfield's presence may have played a role in these trends, although it is still unclear from the available MLS data whether MGM Springfield had any impact on multi-family home prices in this region.

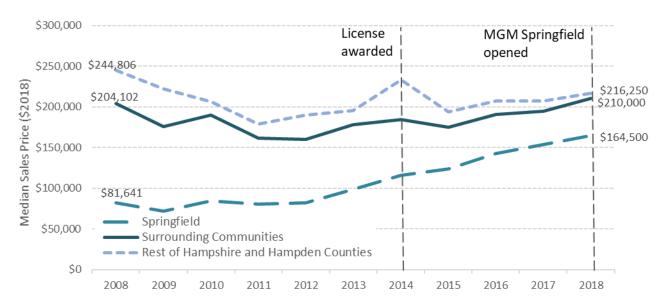


Figure 11. Multi-Family Homes, Median Sales Price (2018 Dollars), 2008-2018

Source: MLS

Table 1 provides a summary of single-family home, condominium, and multi-family home sales for the host community (Springfield) as well as the eight officially designated surrounding communities, as compared to the immediate region and state. There is no consistent pattern of changes in property sales of single-family, condominiums, or multi-family homes in Springfield and its surrounding communities before and after the awarding of the license and opening of MGM Springfield. Single-family home prices increased in Springfield from 2008 to 2018 but decreased in each of the surrounding communities as well as the rest of Hampden and Hampshire Counties. Only Ludlow and Wilbraham experienced an increase in condominium prices, while multi-family home prices rose in half of the surrounding communities, particularly in East Longmeadow and West Springfield where price increases exceeded \$20,000. Meanwhile, the total number of sales for the three main residential housing types increased since 2014, when the license was awarded.

Table 1. Residential Housing Sales Summary, Springfield and Surrounding Communities, 2008-2018

	Single-Family Homes			(Condominiun	ns	Multi-Family Homes		
		Median	Change in		Median	Change in		Median	Change in
	Number of	Sales Price	Real Median	Number of	Sales Price	Real Median	Number of	Sales Price	Real Median
	Sales in	in 2018	Sales Price	Sales in	in 2018	Sales Price	Sales in	in 2018	Sales Price
	2018	(\$2018)	2008-2018	2018	(\$2018)	2008-2018	2018	(\$2018)	2008-2018
Massachusetts	56,562	\$397,000	\$35,448	21,981	\$375,035	\$56,053	**	**	**
Springfield	1,272	\$160,000	\$3,716	71	\$113,000	-\$37,452	365	\$113,000	-\$109,401
Surrounding Communities	1,935	\$231,700	-\$19,054	357	\$157,000	-\$17,944	207	\$210,000	\$5,898
Agawam	221	\$230,000	-\$34,749	92	\$155,000	-\$37,730	8	\$217,750	-\$3,846
Chicopee	427	\$185,000	-\$12,629	106	\$127,000	-\$20,245	84	\$211,500	-\$1,932
East Longmeadow	205	\$260,000	-\$7,082	8	\$325,500	-\$30,220	2	\$227,250	\$63,969
Holyoke	197	\$205,000	-\$7,849	25	\$79,900	-\$33,172	79	\$196,000	\$3,561
Longmeadow	255	\$334,000	-\$10,057	6	\$272,725	-\$84,265*	**	**	**
Ludlow	199	\$217,900	-\$20,316	35	\$245,000	\$68,889	12	\$216,000	\$11,898
West Springfield	242	\$220,000	-\$10,927	48	\$70,250	-\$56,876	21	\$223,000	\$24,730
Wilbraham	189	\$302,500	-\$14,149	37	\$331,750	\$110,154	1	\$218,800	-\$3,587
Rest of Hampden and Hampshire Counties	2,243	\$252,000	-\$16,131	400	\$176,000	-\$7,983	164	\$216,250	-\$28,556

Source: MLS and Massachusetts Association of Realtors

Note: *This change is from 2009 since no condominiums were sold in Longmeadow in 2008. **State-level housing sales and housing price data are available only for single-family homes and condominiums. No multi-family homes were sold in Longmeadow in either 2008 or 2018.

The Residential Rental Market

Rentals are a relatively large component of Springfield's housing market, with 29,999 rental units comprising roughly 53 percent of occupied housing units compared to the statewide average of 37 percent. Springfield makes up 34 percent of the entire stock of rental units in the rest of Hampden and Hampshire Counties. Rental units are also the dominant form of housing closest to MGM Springfield. Ninety-three percent of housing units in the census tracts surrounding MGM Springfield are renter-occupied and these tenants are the most likely to feel the immediate impact of any change in the housing market.

Unfortunately, the data on rental market conditions is not as robust as property sales. The most comprehensive source of community-level rental data is the American Community Survey (ACS), which is produced by the U.S. Census Bureau. The ACS collects data annually and pools the data across multiple years to ensure a sufficient sample size for reporting smaller areas. The data for most Massachusetts municipalities is available only in five-year periods, the most recent release being data pooled from 2013 to 2017. As a result, these data cannot show year-to-year changes in market conditions. Nor can they be used to directly show the effects of the opening of MGM Springfield in Springfield or its neighboring communities. However, the data can help illustrate the changes that have taken place following the casino's award of the license and leading up to its opening.

Table 2 shows median gross rents in the two most recent five-year periods adjusted for inflation.⁵ Although lower than Hampden County and the state, Springfield's median gross rent of \$879 per month is similar to most of its neighbors—with the exception of Longmeadow where rent is notably higher. Monthly rents in Springfield also have not risen as fast as most other communities, although they are still generally consistent with area trends. In the period from 2008/12 to 2013/17, there was only a \$26 increase in median gross rents in Springfield, which is just below trends in the state and Hampshire Counties. Wilbraham was the only surrounding community to experience a decrease since the 2008/12 period whereas communities such as East Longmeadow and Longmeadow experienced an increase of more than \$200.

Table 2. Real Median Rents (2018 Dollars), 2008/12 and 2013/17

	Gross Rent (\$2018)							
	2008/12	2013/17	Change					
Massachusetts	\$1,155	\$1,202	\$47					
Springfield	\$853	\$879	\$26					
Surrounding Communities								
Agawam	\$924	\$998	\$74					
Chicopee	\$850	\$907	\$57					
East Longmeadow	\$722	\$951	\$229					
Holyoke	\$728	\$814	\$86					
Longmeadow	\$1,219	\$1,429	\$210					
Ludlow	\$926	\$945	\$18					
West Springfield	\$856	\$870	\$13					
Wilbraham	\$876	\$794	-\$82					
Immediate Region								
Hampshire County	\$849	\$887	\$38					
Hampden County	\$991	\$1,065	\$75					

Source: U.S. Census Bureau, American Community Survey Five-Year Estimates

There is some evidence that the rental market in Springfield has been tightening in the past few years, although this has yet to translate into notably higher rents as there remains ample supply. Table 3 shows five-year vacancy rates for Massachusetts, Springfield, and its surrounding communities, specifically for 2008-2012 and 2013-2017. Although its rental vacancy rate of nine percent is higher than most other communities in the region, Springfield's vacancy rate declined by 1.2 percentage points between 2008/12 and 2013/17. Only Wilbraham saw a greater drop in its vacancy rate, while outlying towns in Hampden and Hampshire saw a net increase in vacancy rates.

⁵ The ACS reports both contract rents, the amount that tenants pay each month to their landlords, as well as gross rents, which account for the fact that some contract rents include utilities while others do not. This analysis focuses on median gross rents, which are more likely to indicate the true costs of rental housing.

Table 3. Vacancy Rates, 2008/12 and 2013/17

	5-Year Vacancy Rates (%)					
	2008/12	2013/17	Percentage Point Change			
Massachusetts	9.9%	9.7%	-0.2			
Springfield	10.3%	9.0%	-1.2			
Surrounding Communities	5.3%	5.7%	0.4			
Agawam	4.2%	3.6%	-0.6			
Chicopee	7.2%	6.9%	-0.3			
East Longmeadow	3.4%	2.9%	-0.5			
Holyoke	5.8%	9.6%	3.8			
Longmeadow	2.5%	2.3%	-0.2			
Ludlow	4.6%	6.4%	1.8			
West Springfield	4.9%	3.8%	-1.1			
Wilbraham	4.7%	2.1%	-2.6			
Rest of Hampden and Hampshire Counties	6.6%	8.0%	1.4			

Source: U.S. Census Bureau, American Community Survey Five-Year Estimates

Residential Rent Prices over Time

To track changes in the cost of rental housing, we use the Zillow Rent Index. Zillow is an extensive online real estate database that consists of more than 110 million homes which they use to produce various measures and data. The Zillow Rent Index tracks the median rent in a specific geographic area. Through their proprietary models, Zillow has created an index for estimating rent that is unaffected by the mix and stock of homes at a specific time. Their models observe recent rental listings, prior sales transactions, tax assessment information, and geographic location to generate estimated rental values for homes in the area. The Zillow Rent Index reports the median estimated rent prices monthly which allows for close monitoring of the changing rental housing prices over time. The data is available back to November 2010. Further explanation for the Rent Index can be found on Zillow's methodology page.⁶

The Zillow Rent Index is not a representative sample like the ACS. The ACS data is taken from the U.S. Census bureau where tenants are asked how much they pay for rent, which may be less than the market rate. The Zillow Rent Index is instead an estimation of the median rent where proprietary models take in various measures of rental houses and produce an estimate of median rent at that time in a specific location. While the actual rent prices of the Zillow Rent Index may differ from the ACS gross rents, the Zillow Rent Index is useful for analyzing trends over time because it tracks a constant stock of rental houses, which is unaffected by the rental houses currently on the market. The Zillow Rent Index acts as a measure of the overall rental market in a specific location, compared to the ACS data which takes into account the actual gross rent paid by the tenants at that time. The Zillow Rent Index takes into account all rental properties in the area for which it has an estimate, whether the rental house is occupied or not. The ACS data only includes rental houses that are occupied and paying rent. This may cause differences in the Zillow Rent Index and the ACS gross rent data if the unoccupied rental houses are on average more expensive or

⁶ Zillow Rent Index: Methodology https://www.zillow.com/research/zillow-rent-index-methodology-2393/.

less expensive than the occupied rental houses. Zillow states that it has estimates for 138,200 homes in Hampden County and 50,400 homes in Hampshire County.⁷

There has been a notable rise in rental rates in Springfield and its surrounding communities after MGM Springfield was awarded the Western Massachusetts casino license. 8,9 However, it is unclear how much of this increase is due to the casino independent from broader market trends. Between November 2010 and 2014, real rents in Springfield were in decline—as were those for surrounding communities and the remainder of Hampden and Hampshire Counties (Figure 12). In the year immediately following the announcement of the MGM Springfield license, median rents rose quickly, rising by nearly \$360 between June 2014 to June 2015 in Springfield. Rents in surrounding and outlying regional communities also grew, but by a somewhat lesser amount—closer to a \$300 increase in the year following the announcement of MGM Springfield. So while Springfield residents may have noticed higher prices coinciding with the award of the MGM Springfield license, similar hikes were felt in other areas where MGM Springfield was unlikely to have had much of an influence. Regardless, these accelerated growth rates were not sustained. Real median rents remained almost unchanged since June 2015. There has been a small increase in rents in the months since the grand opening of MGM Springfield, but it is premature to tell whether this is a temporary or sustained trend.

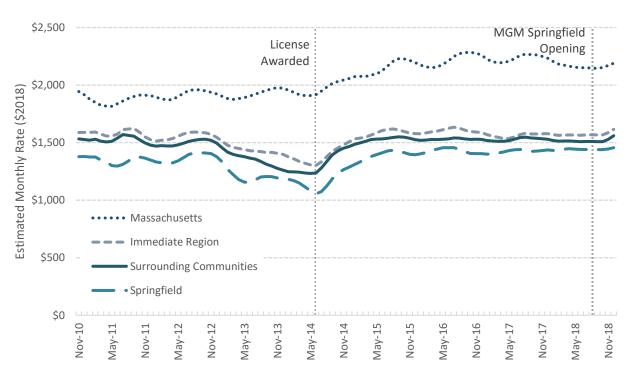


Figure 12. Median Estimated Rent Price in Springfield vs. the Surrounding Region and State (2018 Dollars), 2008-2018

Source: Zillow Rent Index Time Series: Multifamily, SFR, Condo/Co-op by City, https://www.zillow.com/research/data/

⁷ The accuracy of the Zillow Rent Estimate and the actual rental price of a unit can be seen here: https://www.zillow.com/howto/DataCoverageRentZestimateAccuracyMA.htm.

⁸ The median rent for the immediate region was estimated as a weighted average by rental unit counts for individual communities using data reported by Zillow. Due to availability constraints, the immediate region for the Zillow data is the entirety of Hampshire and Hampden County including Springfield and the surrounding communities.

⁹ The median rent for the surrounding communities was estimated as a weighted average of rental units of the officially recognized Massachusetts Gaming Commission surrounding communities which include Agawam, Chicopee, East Longmeadow, Holyoke, Longmeadow, Ludlow, West Springfield, and Wilbraham.

Key informants from Springfield discussed their perceptions of the impacts of MGM Springfield on the housing and rental markets in Springfield. Key informants discussed the increasing pressure on the housing market and rising rental costs, though not attributing all of it to the casino:

We have seen some upward pressure on the housing market [...] but it is impossible for me to say how much of that is attributable to the casino [...] there have been so many development projects going on here. The casino is one high profile one among several.—Geraldine McCafferty, Director of Housing, City of Springfield

In 2013, you could get a 2-3 bedroom for \$950. Now you're looking at \$1,400-\$1,600. —Rose Webster-Smith, Lead Community Organizer, Springfield No One Leaves

You can still buy a house for really affordable prices, but rentals are really high. —Catherine Ratté, Principal Planner—environment and land use, Pioneer Valley Planning Commission

Springfield key informants also raised concerns regarding the speculative buying of properties in Springfield and evictions and displacement:

We've had some more outside investors coming in, buying a lot of multi-family housing and raising rents. And there is a feeling that it is speculative and is likely tied to the casino. [...] Regarding rent prices, there seems to be some upward pressure as a result of speculation. [...] There is a lot of speculative buying with the hope of getting high rents. But then they realize, they really can't get those rents. [...] They are still holding, sitting on them and waiting to see if that is still to come. — Geraldine McCafferty, Director of Housing, City of Springfield

MGM has impacted property values and rental prices because they are attracting investors, which is pushing up the rental costs. [...] People are getting pushed to Chicopee, they are getting pushed to Holyoke, because if you get evicted right now, there are no apartments to rent. It is so hard to find a place to rent here in Springfield without paying out the nose.—Rose Webster-Smith, Lead Community Organizer, Springfield No One Leaves

I am aware of some speculation. You can see the block right across from MGM Springfield, there is a lot of waiting and hoping that "we are going to sell for more" [...] people are waiting thinking they are going to make a mint.—Catherine Ratté, Principal Planner—environment and land use, Pioneer Valley Planning Commission

In 2011, we lost 365 units of affordable housing and very few of them were replaced. And that was right around the time they started talking about the casino. And it was pretty obvious that landlords were looking for ways to get tenants out of properties in the South End and in Metro Center because they expected to get more money once the casino opened.—Liz Bewsee, Housing and Economic Justice Organizer, Arise for Social Justice

It is difficult to say whether it's the result of the casino or not but there has definitely been an uptick in evictions. [...] I've been keeping track of the number of cases going to Housing Court versus District Court in Springfield, and the number of cases overall is climbing. —Liz Bewsee, Housing and Economic Justice Organizer, Arise for Social Justice

[...] there is a lot of concern on City Council about displacement but there is not much they can do about it at this point because the market is coming in and renovating properties and they are not protected. —Catherine Ratté, Principal Planner—environment and land use, Pioneer Valley Planning Commission

Commercial and Industrial Real Estate

Inventory

The market for commercial and industrial real estate is another important indicator of the health and nature of an area's economy. This section of the report analyzes Springfield's commercial and industrial real estate inventory, the extent to which that space is utilized, and the price of the space. As before, we focus on whether there have been any observable changes following the license award and opening of MGM Springfield.

The section makes extensive use of data from CoStar to provide information on indicators not generally tracked in publicly available data sources. CoStar data are available for most of Massachusetts on a quarterly basis from 2008 to present.¹⁰ This analysis will cover the 10-year period between the 1st quarter of 2008 and the last quarter of 2018.¹¹

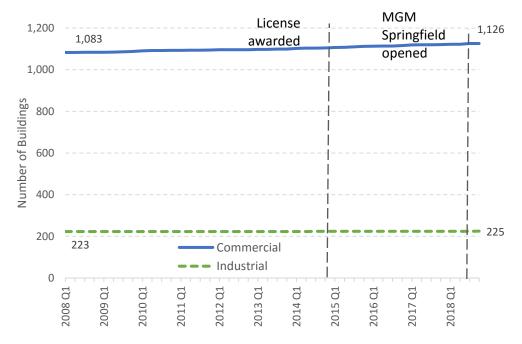


Figure 13. Number of Commercial and Industrial Buildings, Springfield, 2008-2018

Source: The CoStar Group Inc.

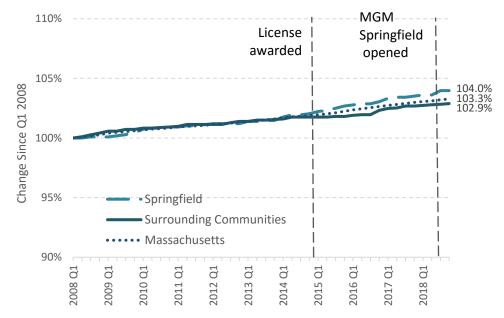
The commercial building stock of Springfield has increased somewhat over the years, while the industrial stock has stayed almost the same. The city had a total of 1,351 commercial and industrial buildings at the end of 2018. Over the 10 years studied, Springfield's commercial building stock rose from 1,083 to 1,126 buildings, while its industrial building stock increased from 223 to 225 buildings (Figure 13).

¹⁰ For more information about CoStar Group Inc. and the CoStar database, please visit http://www.costar.com/. The data used for this analysis is not available for download without a CoStar subscription.

¹¹ We define commercial real estate as any real estate that CoStar defined as Office, Retail, Flex, Hospitality, Health Care, or Sports & Recreation. Industrial real estate is any real estate that CoStar defines as Industrial. These definitions were chosen to best approximate MA Department of Revenue classifications.

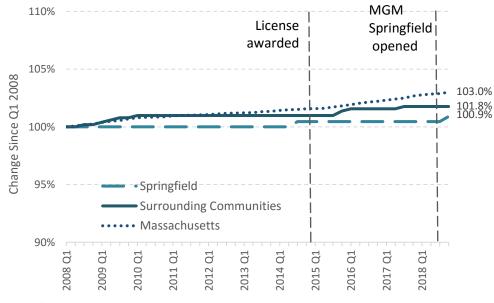
Springfield experienced slightly faster growth in number of commercial buildings than either the Commonwealth or the surrounding communities (Figure 14). This appears to be a continuation of historic trends statewide rather than being associated with the awarding of the MGM Springfield casino license or opening, per se. While Springfield outpaced both the state and its surrounding communities in commercial buildings, it lagged in the growth of industrial buildings (Figure 15).

Figure 14. Change in Number of Commercial Buildings, 2008-2018



Source: The CoStar Group Inc.

Figure 15. Change in Number of Industrial Buildings, 2008-2018



Source: The CoStar Group Inc.

Another measure of an area's building inventory is *rentable building area* (RBA), measured as the usable area (in square feet) of an area's building stock. Unlike changes in the number of buildings, the RBA accounts for the sometimes dramatic size differences in buildings. Although commercial buildings comprise a larger share of Springfield's RBA, the typical industrial building is much larger. For example, while industrial buildings make up only 17.3 percent of the commercial and industrial building stock, they account for 27.6 percent of the RBA in Springfield.

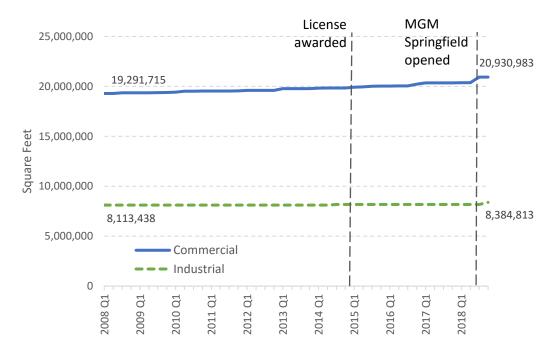
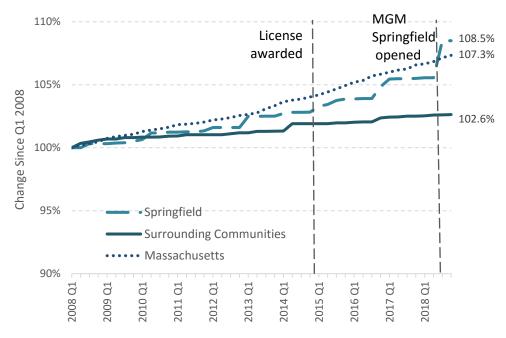


Figure 16. Springfield Rentable Building Area, 2008-2018

Source: The CoStar Group Inc.

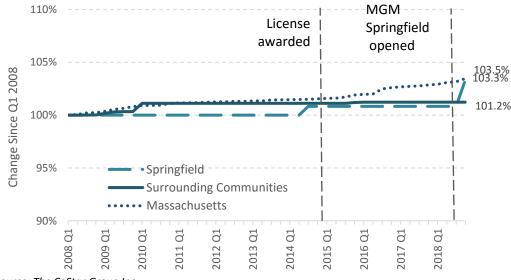
Springfield's growth in commercial RBA outpaced its surrounding communities but lagged behind the Commonwealth until the third quarter of 2018 (Figure 17). The opening of MGM Springfield was almost certainly one of the main drivers of this growth. In future years, we look forward to examining whether MGM Springfield will trigger spillover commercial development.

Figure 17. Commercial Rentable Building Area, 2008-2018



Springfield only increased its industrial building inventory by two buildings since 2008, leaving few opportunities for growth in industrial RBA (Figure 18). That said, the two new industrial buildings did account for enough growth in RBA to almost match the Commonwealth's growth rate over the same time period. An analysis of the CoStar records suggests that neither of these new buildings were related to the development of the casino. The CRRC MA rail car factory in East Springfield is one of the other new buildings in Springfield's economy. This is a reminder of the importance of caution when attributing changes in Springfield's economy to the opening of MGM Springfield.

Figure 18. Industrial Rentable Building Area, 2008-2018



Source: The CoStar Group Inc.

Table 4 reports changes in the number of commercial buildings and RBA for Massachusetts, Springfield, and individual surrounding communities. At four percent, Springfield is one of only three area communities to exceed the Commonwealth's growth in commercial buildings since 2008. Since MGM Springfield was awarded their casino license in the 2nd quarter of 2014, Springfield's growth in terms of both buildings and rentable building area exceeds that of the Commonwealth, with Springfield's RBA growth rate exceeding every one of the surrounding communities between Q2 2014 and Q4 2018.

Table 4. Commercial Inventory, Massachusetts, Springfield, and Surrounding Communities, 2008-2018

	Number of Buildings (Q4 2018)	Percent Change, Q1 2008-Q4 2018	Percent Change, Q2 2014-Q4 2018	Rentable Building Area (Square Feet, Q4 2018)	Percent Change, Q1 2008-Q4 2018	Percent Change, Q2 2014- Q4 2018
Massachusetts	53,457	3.3%	1.5%	1,100,574,338	7.3%	3.4%
Springfield	1,126	4.0%	2.0%	20,930,983	8.5%	5.5%
Surrounding Communities	1,998	2.9%	1.1%	28,077,102	2.6%	0.7%
Agawam	226	6.6%	2.7%	2,439,333	4.7%	1.0%
Chicopee	525	1.7%	0.4%	5,003,232	1.9%	0.6%
East Longmeadow	110	1.9%	0.9%	1,342,493	1.9%	1.4%
Holyoke	565	2.0%	0.9%	10,099,722	1.1%	0.5%
Longmeadow	35	2.9%	2.9%	854,723	2.5%	2.5%
Ludlow	93	3.3%	1.1%	1,208,451	7.8%	0.5%
West Springfield	366	3.4%	1.7%	6,031,323	1.8%	0.8%
Wilbraham	78	5.4%	0.0%	1,097,825	18.5%	0.0%
Rest of Hampden and Hampshire Counties	1,827	3.5%	1.1%	22,824,985	6.8%	1.3%

Source: The CoStar Group Inc.

Springfield experienced a slower rate of growth in industrial buildings but a higher rate of growth in industrial RBA from 2008 to 2018 (Table 5). Most of the large developments in the surrounding communities, either in terms of buildings or RBA, occurred prior to MGM Springfield's license award in 2014. From Q1 2008 to Q4 2018, the less densely populated areas in Hampden and Hampshire Counties actually saw a faster rate of growth in both industrial buildings and industrial RBA than did Springfield, Springfield's surrounding communities, or the Commonwealth as a whole.

Table 5. Industrial Inventory, Springfield and Surrounding Communities, 2008-2018

	Number of Buildings (Q4 2018)	Percent Change, Q1 2008-Q4 2018	Percent Change, Q2 2014-Q4 2018	Rentable Building Area (Square Feet, Q4 2018)	Percent Change, Q1 2008-Q4 2018	Percent Change, Q2 2014-Q4 2018
Massachusetts	11,171	3.0%	1.5%	419,177,835	3.5%	2.0%
Springfield	225	0.9%	0.9%	8,384,813	3.3%	3.3%
Surrounding Communities	520	1.8%	0.8%	25,427,620	1.2%	0.1%
Agawam	64	0.0%	0.0%	2,066,720	0.0%	0.0%
Chicopee	129	1.6%	0.0%	7,677,157	0.9%	0.0%
East Longmeadow	31	3.3%	3.3%	3,289,791	0.1%	0.1%
Holyoke	181	1.1%	1.1%	8,633,600	0.2%	0.2%
Longmeadow	1	0.0%	0.0%	253	0.0%	0.0%
Ludlow	26	0.0%	0.0%	526,203	0.0%	0.0%
West Springfield	79	3.9%	1.3%	2,580,222	8.9%	0.2%
Wilbraham	9	12.5%	0.0%	722,367	0.4%	0.0%
Rest of Hampden and Hampshire Counties	330	4.8%	0.9%	15,241,944	6.7%	0.5%

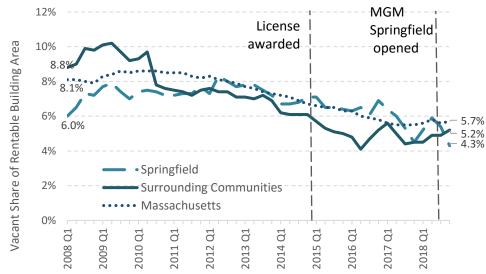
Vacancy and Absorption

The next set of metrics considers how available space is being utilized. First, we consider vacancy rates. A vacancy rate is the percentage of rentable building area that is not currently in use.¹²

Figure 19 shows commercial vacancy rates in Springfield, its surrounding communities, and Massachusetts. Owing to the smaller number of total buildings, it is to be expected that the trends for Springfield and its surrounding communities are more volatile than the statewide trend. While many factors, including nation-wide economic growth, have likely effected this trend, it is noteworthy that Springfield's commercial vacancy rate has fallen to its lowest level in the study period. As the construction of the casino displaced existing commercial tenants, it is likely that many of those tenants moved to previously vacant space elsewhere in Springfield or in the surrounding communities.

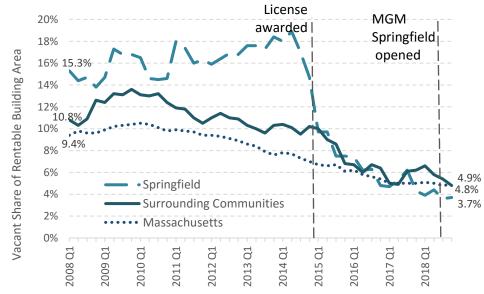
¹² CoStar vacancy rates do not take into account abandoned buildings that are not on the market and thus may underestimate true vacancy rates in communities with considerable economic blight.

Figure 19. Commercial Vacancy Rates, 2008-2018



Springfield's industrial vacancy rate has fallen precipitously since 2014 (Figure 20). However, this fall actually started a few quarters before the award of the license and continued through the end of 2018. This makes it doubtful that the casino had any direct role in this decline.

Figure 20. Industrial Vacancy Rates, 2008-2018



Source: The CoStar Group Inc.

Next, we consider *net absorption*, or the net change in occupied space in an area's rentable building area from one quarter to the next. Net absorption measures the difference between rentable building area that is newly occupied and the rentable building area that is no longer occupied since the last period. Since net absorption is presented in terms of square feet instead of a share of rentable building area, it captures changes in the market that may not be detected by the vacancy rate alone. For example, a vacant building

that is taken off of the market entirely would cause a fall in the vacancy rate, but no corresponding change in net absorption. Analysis typically considers several consecutive quarters of high positive net absorption as indicative of shrinking supply of available space and sends a signal to developers that the market is ripe for construction. Net absorption is measured quarterly, so each point measures the net change in occupied rentable building area during that quarter. Zero net absorption indicates no change from the previous quarter. Although typically measured in square feet, Figure 21 and Figure 22 report net absorption in standardized units (i.e., each divided by its standard deviation) to allow for comparison across Springfield, its surrounding communities, and the Commonwealth.

Springfield, like its surrounding communities and the Commonwealth, saw a good deal of volatility in its commercial net absorption over the course of the study period. One difference is that, while all three geographies experienced more quarters of positive net absorption than negative net absorption, Springfield and its surrounding communities experienced less of those quarters than the Commonwealth as a whole (Figure 21). While Massachusetts experienced 40 out of 44 quarters of positive net absorption, Springfield and its surrounding communities experienced only 29 and 28 quarters of positive net absorption, respectively.

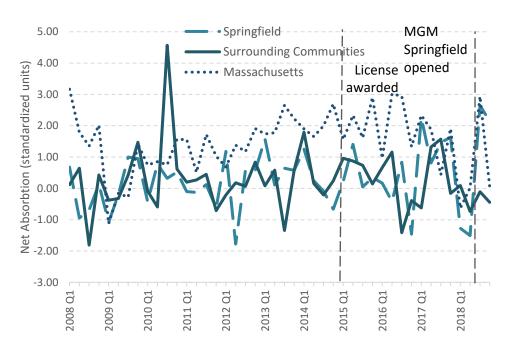
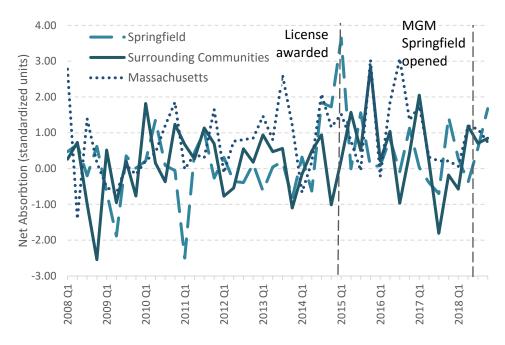


Figure 21. Commercial Net Absorption, 2008-2018

Source: The CoStar Group Inc.

Massachusetts also had more quarters of positive industrial net absorption than Springfield or its surrounding communities (35 in Massachusetts versus 28 in Springfield and 30 in the surrounding communities), although the discrepancy was not quite as pronounced. The industrial data shows more very large changes in net absorption, which is to be expected given the very large rentable area of many industrial properties.

Figure 22. Industrial Net Absorption, 2008-2018



Springfield and most of its surrounding communities had a lower commercial vacancy rate than that of the Commonwealth in the fourth quarter of 2018 (Table 6). Every geography being studied saw their commercial vacancy rate fall and their net absorption rise between Q1 2008 and Q4 2018. Some, however, have experienced a small increase in vacancy rates since MGM Springfield's gaming license award in Q2 2014.

Table 6. Commercial Vacancy and Absorption, Springfield and Surrounding Communities, 2008-2018

	Vacancy Rate (Q4 2018)	Change, Q1 2008- Q4 2018	Change, Q2 2014- Q4 2018	Net Absorption (Q1 2008- Q4 2018)	Net Absorption (Q2 2014- Q4 2018)
Massachusetts	5.7%	-2.4%	-1.4%	74,791,217	39,558,013
Springfield	4.3%	-1.7%	-2.4%	1,154,425	438,180
Surrounding Communities	5.2%	-3.6%	-0.9%	1,087,827	745,835
Agawam	1.4%	-3.6%	-3.1%	207,001	54,665
Chicopee	2.0%	-5.8%	-2.3%	96,568	53,010
East Longmeadow	5.8%	-2.6%	-0.1%	277,177	271,445
Holyoke	4.4%	-2.9%	2.6%	35,987	29,653
Longmeadow	3.5%	-2.9%	-0.6%	35,563	25,708
Ludlow	8.1%	-4.4%	0.2%	108,985	71,018
West Springfield	2.9%	-3.1%	-0.5%	124,490	120,308
Wilbraham	3.9%	-2.9%	-1.2%	1,674,176	1,340,983
Rest of Hampden and Hampshire Counties	6.0%	-3.8%	-4.0%	453,982	53,831

Source: The CoStar Group Inc.

Springfield and the surrounding communities' industrial vacancy rate was also lower than that for the Commonwealth at the end of 2018. Within the surrounding communities, Agawam and East Longmeadow have industrial vacancy rates quite a bit higher than that of the Commonwealth. Springfield and all of its surrounding communities, except for East Longmeadow and Longmeadow (which CoStar indicates only has one industrial facility), experienced positive net absorption over the 11-year study period. Springfield joined East Longmeadow in experiencing negative industrial net absorption between the award of the MGM Springfield's casino license and the end of 2018.

Table 7. Industrial Vacancy and Absorption, Springfield and Surrounding Communities, 2008-2018

	Vacancy Rate (Q4 2018)	Change, Q1 2008- Q4 2018	Change, Q2 2014- Q4 2018	Net Absorption (Q1 2008- Q4 2018)	Net Absorption, (Q2 2014- Q4 2018)
Massachusetts	4.9%	-4.5%	-2.8%	34,600,255	15,116,933
Springfield	3.7%	-11.6%	-15.2%	1,253,651	-236,854
Surrounding Communities	4.8%	-6.0%	-5.3%	1,837,832	458,947
Agawam	14.4%	2.2%	0.5%	52,696	61,759
Chicopee	1.8%	-13.9%	-9.5%	962,374	232,384
East Longmeadow	16.5%	13.7%	-0.6%	-401,205	-424,394
Holyoke	1.8%	-8.0%	-6.5%	746,403	164,040
Longmeadow	0.0%	0.0%	0.0%	0	0
Ludlow	3.0%	-8.9%	2.1%	66,850	78,100
West Springfield	2.8%	-3.7%	-0.8%	338,964	313,808
Wilbraham	0.4%	-13.7%	-5.4%	71,750	33,250
Rest of Hampden and Hampshire Counties	3.2%	-5.9%	-12.1%	2,105,941	201,575

Source: The CoStar Group Inc.

Table 8 presents an alternative concept of vacancy rates, taken from Valassis Lists, a direct mail marketing firm that supplies United States Postal Service vacancy data to the web-based mapping company PolicyMap. As mentioned above, CoStar's vacancy rates capture properties that are currently on the market but not occupied. Commercial or industrial buildings that have been abandoned altogether, or whose owners have chosen not to put them on the market, are not included. Valassis' vacancy rate measures the share of vacant addresses. It considers all buildings, but is based on a share of buildings and not square footage. This measure also does not distinguish commercial from industrial properties. While they may not be directly comparable, when viewed together, both CoStar and Valassis help to provide a more complete view of industrial vacancy in the host and surrounding communities.

With a Valassis vacancy rate of 12.9 percent, Springfield joins Holyoke (19.4 percent) and West Springfield (13.5 percent) in possessing a rate higher than that of the Commonwealth as a whole. While these figures reflect a different concept of vacancy than the concept presented by CoStar, they do suggest that many communities in the region have a relatively high business vacancy rate, and that Springfield is no exception.

Table 8. Valassis Vacancy Rates, Springfield and Surrounding Communities, 2008-2018

	Valassis Vacancy Rate, All Businesses, Q4 2018
Massachusetts	10.6%
Springfield	12.9%
Surrounding Communities	
Agawam	8.2%
Chicopee	9.7%
East Longmeadow	N/A
Holyoke	19.4%
Longmeadow	5.2%
Ludlow	N/A
West Springfield	13.5%
Wilbraham	8.1%
Hampden County	11.8%
Hampshire County	10.0%

Source: Valassis Lists

Notes: Vacancy rates from Valassis Lists are defined as the share of vacant addresses according to the U.S. Postal Service.

Lease Rates

Price is another important factor in an area's real estate market. While there are a number of factors that determine what price property owners can charge in rent, it stands to reason that those areas with higher lease rates are seen as more desirable by businesses and organizations seeking rental space. However, there are a few caveats. First, some organizations own the real estate that they occupy, and those properties are not included in the CoStar lease rate data. Second, individual buildings may possess characteristics that make them particularly valuable to certain types of businesses and organizations. For example, on-site security, three-phase power, or easy access to the highway may be essential for the operations of some businesses but unimportant for others. This can make a direct comparison difficult. In this respect, the difference in lease rates between municipalities may say as much about the industry mix and business activities of those municipalities as it does about their relative economic health.

We analyze lease rates separately for industrial and commercial space, dividing commercial leases into two groups: office and non-office real estate. This is because there are often significant differences in the lease rates between office and non-office real estate.¹³

Commercial lease rates in Springfield and its surrounding communities are far lower than the Massachusetts average—which is heavily influenced by the high priced Boston area market (Figure 23). Regardless, we see little evidence that the announcement of MGM Springfield has had a large influence on commercial lease rates in the area. There was a slight increase in lease rates in the months following the

¹³ Office commercial real estate often includes the offices of professional service firms (e.g., lawyers, doctors, and government buildings, etc.), while non-office commercial real estate includes restaurants, retail stores, sports and entertainment facilities, transportation facilities, and many other types of real estate. Lease rates for industrial real estate are presented separately.

announcement—but the differences are marginal and the natural volatility in the data makes it difficult to establish clear patterns.

MGM \$30.00 Springfield| License opened awarded \$25.00 Cost per Sqare Foot (\$2018) \$21.71 \$20.00 \$17.39 \$15.00 \$15.63 \$10.00 Springfield **Surrounding Communities** \$5.00 Massachusetts \$0.00 2018 Q1 2008 Q1 2011 Q1 2013 Q1 2014 Q1 2016 Q1 2010 Q1 2012 Q1 2017 Q1 2 2009

Figure 23. Office Commercial Lease Rates (2018 Dollars), 2008-2018

Source: The CoStar Group Inc.

There is less discrepancy between Springfield and the Commonwealth when examining non-office commercial lease rates. Aside from some volatility over the last few years, lease rates for all three geographies have tended to track fairly closely with one another (Figure 24). Springfield saw commercial non-office lease rates fall rather dramatically between the award of MGM Springfield's casino license and MGM Springfield's opening day. The rapid growth in lease rates towards the end of 2018, however, has made up for much of that loss. Springfield's surrounding communities experienced a similar pattern of decline followed by rapid growth in lease rates, although that decline took place over a longer span of time than in Springfield.

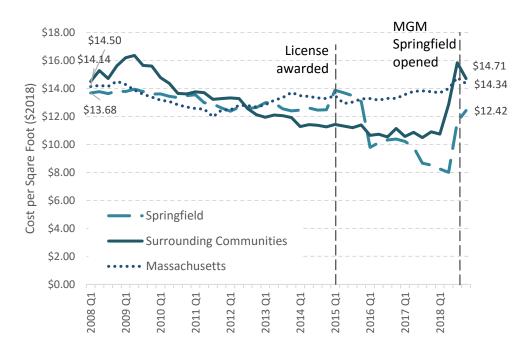


Figure 24. Non-Office Commercial Lease Rates (2018 Dollars), 2008-2018

Lease rates for industrial properties in Springfield and its surrounding communities were also consistently lower than those in the Commonwealth as a whole (Figure 25). Adjusted for inflation, Springfield's average industrial lease rate rose by 72 cents over the study period, while the average in the surrounding communities fell by \$1.01. Neither reached the state average, which started and ended the study period above \$6, adjusted for inflation, and only briefly fell below \$5. This may reflect different types of industrial activity occurring in Greater Springfield versus other parts of the Commonwealth. For example, certain industries (manufacturing; warehousing; shipping) may prefer lower cost facilities in Western Massachusetts over Eastern Massachusetts properties with higher lease rates and specialized facilities.

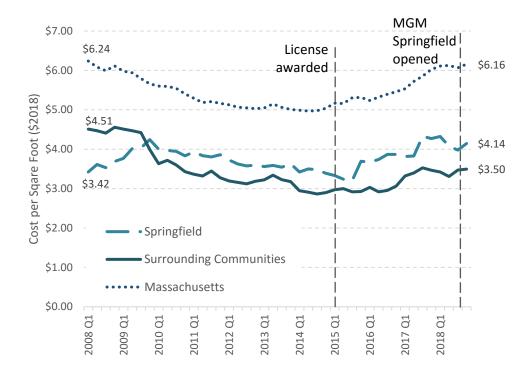


Figure 25. Industrial Lease Rates (2018 Dollars), 2008-2018

Table 9 shows lease rates in Springfield, its surrounding communities, and Massachusetts. Even within its region, Springfield's average office lease rates are low, with only Chicopee being lower. Adjusted for inflation, office lease rates have risen in most of Springfield's surrounding communities, but have very slightly decreased in Springfield itself. Only Longmeadow and Wilbraham have average office lease rates in excess of the Commonwealth's average rate. Non-office commercial lease rates, which can cover a fairly diverse group of properties, tend to be more diverse as well, with rates as low as \$8.95/square foot in Agawam to as high as \$29.17/square foot in Longmeadow. While data are unavailable for Longmeadow and Wilbraham, average industrial lease rates tend to be similar to the Springfield lease rate in Q4 2018. The large changes observed over the 11-year period, however, suggest that may not have always been the case. Of the surrounding communities, Ludlow is an outlier in having an average industrial lease rate in excess of the Commonwealth's average rate.

Table 9. Commercial and Industrial Lease Rates, Springfield and Surrounding Communities, 2008-2018

	Offi	ce Lease R	ates	Non-O	ffice Lease	Rates	Industrial Lease Rates		
		Percent	Percent		Percent	Percent		Percent	Percent
	Q4 2018	Change,	Change,	Q4 2018	Change,	Change,	Q4 2018	Change,	Change,
	Rate Per	Q1	Q2	Rate Per	Q1	Q2	Rate Per	Q1	Q2
	Sq. Ft	2008-	2014-	Sq. Ft	2008-	2014-	Sq. Ft	2008-	2014-
	(\$2014)	Q4 2018	Q4 2018	(\$2014)	Q4 2018	Q4 2018	(\$2014)	Q4 2018	Q4 2018
Massachusetts	\$21.71	-13.5%	6.3%	\$14.34	1.5%	6.8%	\$6.16	-1.3%	15.7%
Springfield	\$15.61	-0.1%	1.4%	\$12.42	-9.2%	-1.5%	\$4.14	21.1%	10.8%
Surrounding Communities	\$17.39	5.4%	15.5%	\$14.71	1.4%	28.8%	\$3.50	-22.5%	19.8%
Agawam	\$16.11	-14.2%	3.8%	\$8.95	-33.4%	-17.0%	\$4.41	-51.2%	11.0%
Chicopee	\$13.90	6.3%	-5.3%	\$15.00	1.5%	22.9%	\$4.70	12.1%	12.2%
East Longmeadow	\$17.60	-8.8%	5.5%	\$24.49	44.2%	12.5%	\$2.47	-53.3%	4.7%
Holyoke	\$16.34	18.7%	40.1%	\$15.30	19.7%	45.8%	\$3.97	38.3%	71.7%
Longmeadow	\$28.63	42.8%	37.0%	\$29.17	-12.7%	31.2%	N/A	N/A	N/A
Ludlow	\$18.74	50.5%	13.6%	\$17.88	69.0%	32.9%	\$9.75	94.5%	149.4%
West Springfield	\$17.37	-0.3%	7.1%	\$15.08	3.3%	35.7%	\$4.96	-35.9%	104.6%
Wilbraham	\$22.95	N/A	60.0%	N/A	N/A	N/A	N/A	N/A	N/A
Rest of Hampden and Hampshire Counties	\$19.78	-0.6%	9.1%	\$12.92	3.3%	3.7%	\$4.34	-0.4%	32.1%

The desirability and value of commercial and industrial real estate in Springfield may also be impacted if MGM Springfield results in increased patronage of the downtown area. Springfield key informants discussed increased foot traffic in downtown Springfield as a result of MGM Springfield. In particular, key informants noted that increased foot traffic and spillover impacts onto businesses as a result of the casino are currently limited to businesses and restaurants near MGM Springfield:

MGM has had some impact on retail because there are a number of local businesses that are now downtown. There are a couple of restaurants that relocated downtown waiting for the casino to open. But businesses aren't really thriving outside of that casino district. [...] My guess is that maybe in the summer time they may start coming away from the casino more toward metro downtown to the entertainment district. —Denise Jordan, Executive Director, Springfield Housing Authority

I have seen increased foot traffic around the venue and it does seem that there is spillover into downtown. How far? I can't say. [...] There are more [people] around on Main Street in the evenings.

—Geraldine McCafferty, Director of Housing, City of Springfield

The restaurants around the casino, the new ones and existing ones, there is definitely spillover. We were making lunch plans with people that used to work for the city and they were saying, "where can we go where there's isn't a line anymore? There never used to be lines in Springfield." And the downtown in the evenings is also much livelier. —Catherine Ratté, Principal Planner—environment and land use, Pioneer Valley Planning Commission

Conclusion

Springfield is the fourth largest city in New England and the largest city in its metro area of over half a million people. It is by far the largest community to currently host a casino in New England, and that size certainly plays a role in how the casino affects the real estate market in the community. For example, while MGM Springfield's reported plan to hire roughly 3,000 employees would likely create a serious need for housing in much smaller communities like Plainville, Springfield may be more able to meet those numbers, both in terms of labor force and housing stock. In fact, the Executive Office of Labor and Workforce Development reported that in 2018, Springfield already hosted 7 employers with 1,000-4,999 employees each, in addition to one employer (Baystate Medical Center) with 5,000-9,999 employees.

Another factor affecting Springfield's housing dynamics may be unused space. Much of the data collected for this study is collected during the course of various commercial transactions, and while that data is timely and useful, there is a sense that, at least in Springfield's downtown, there may be large amounts of space that is unutilized. Census data shows that the Springfield in 1960 housed roughly 20,000 more residents than the Springfield in 2010, suggesting that there may be underutilized residential space in the city as well.

While there were few major developments in the Springfield real estate market that could confidently be ascribed to the casino beyond an increase in the amount of commercial space in the city and a corresponding decline in the commercial vacancy rate, that does not necessarily mean that other impacts will not become apparent over time. The timeliest data available to us reported up to December 2018. As the casino continues to operate, its effect on the labor market, municipal finances, and the general feel of the city might create impacts that could not be seen four months out from opening. It is also possible that the effects of the casino will become clearer as less timely data, such as data on building permits and evictions, becomes more available for research. At this time, however, the available data does seem to indicate that the award of a casino license to MGM Springfield, and the subsequent opening of the casino, have not affected Springfield's real estate market, or that of the surrounding communities, in any major way.

Springfield key informants raised concerns regarding the increasing pressure on the housing market and increasing rental costs. Key informants did note that they were unsure whether and how much of this trend could be attributed to the licensing and opening of MGM Springfield compared to other market forces. Springfield key informants also raised concerns over the speculative buying of properties in Springfield and were quite confident that this was related to the licensing and opening of MGM Springfield. For instance, many of the key informants discussed investors buying multi-family buildings and raising rents and/or buying a property and leaving it vacant with the hope of selling higher. Key informants also discussed concerns regarding displacement and an increase in evictions. Finally, Springfield key informants discussed increased foot traffic in downtown Springfield as a result of MGM Springfield but noted that these spillover impacts are currently limited to businesses and restaurants close to MGM Springfield.