



5 TRANSIT IN IOWA CITY

This analysis compares and tracks the operations and performance of CAMBUS, Coralville Transit, and Iowa City Transit (also called the ‘study agencies’) from 2012 through 2017. The trends in this chapter represent performance relative to both previous years and each other study agency, providing context for future service improvements.

Data used in this analysis are from the National Transit Database (NTD), a federal database of transit data to which CAMBUS, Coralville Transit, and Iowa City Transit report annually. The analysis is conducted only through 2017 because that is the most recent year for which NTD data have been released. The key performance and operations indicators analyzed are:

- Annual passenger trips
- Annual revenue hours
- Passengers per revenue hour
- Annual revenue miles
- Passengers per revenue mile
- Total annual operating expenses
- Operating expense per passenger
- Operating expense per revenue hour
- Annual farebox revenue
- Average passenger fare
- Farebox recovery ratio

KEY FINDINGS

- Total ridership for all agencies has declined by 13% from 2012 to 2017
- The amount of service provided by all agencies did not change significantly from 2012 to 2017
- Efficiency in service provision and operating expenses declined significantly for all agencies from 2012 to 2017
- CAMBUS’ operating expenses are significantly lower than both Coralville Transit and Iowa City Transit’s, both absolutely and on a per-passenger and per-hour basis, due primarily to CAMBUS’ use of student operators



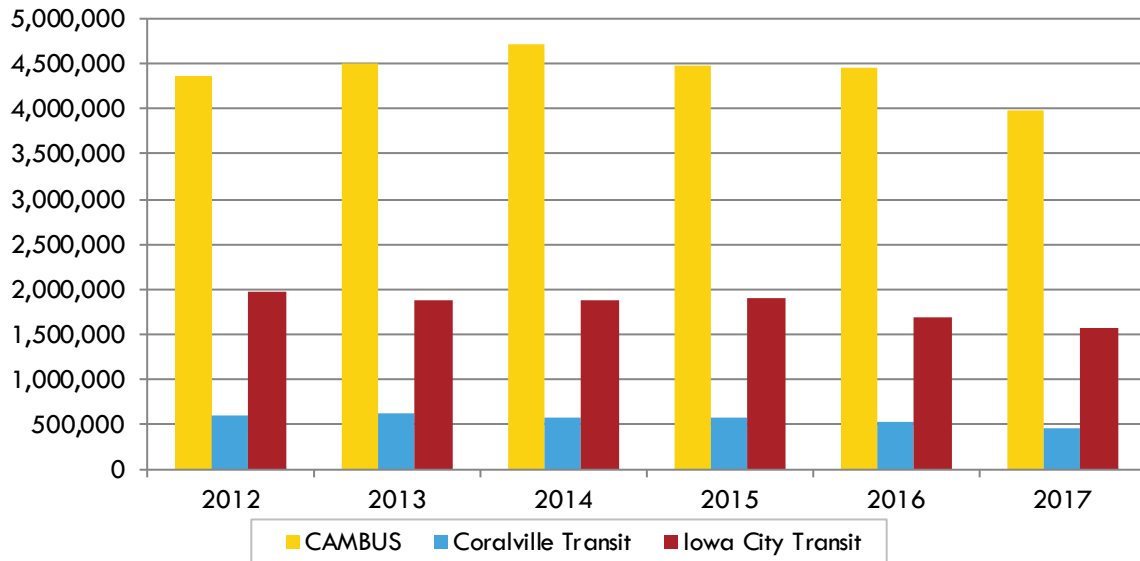
Operating Figures

Passenger Trips

Figure 5-1 shows unlinked passenger trips¹ for each agency. From 2012 to 2017, CAMBUS consistently recorded the highest number of annual boardings, with Coralville Transit reporting the fewest. From 2012 to 2014, ridership increased on CAMBUS before declining, with the largest dip occurring between 2016 and 2017 (-11%). The largest decrease in ridership for Coralville Transit occurred from 2016 to 2017 (-13%) and for Iowa City Transit from 2015 to 2016 (-11%).

Overall, from 2012 to 2017, ridership decreased by 9% on CAMBUS, decreased by 23% on Coralville Transit, and decreased by 20% on Iowa City Transit. Ridership for all agencies combined has declined a total of 13% over the same period.

Figure 5-1 Annual Unlinked Passenger Trips by Agency, 2012-2017



Source: National Transit Database

¹ An 'unlinked passenger trip' represents a single boarding of a transit vehicle. Passengers that board an Iowa City Transit bus and then transfer to a CAMBUS vehicle, for example, are counted as two unlinked passenger trips.

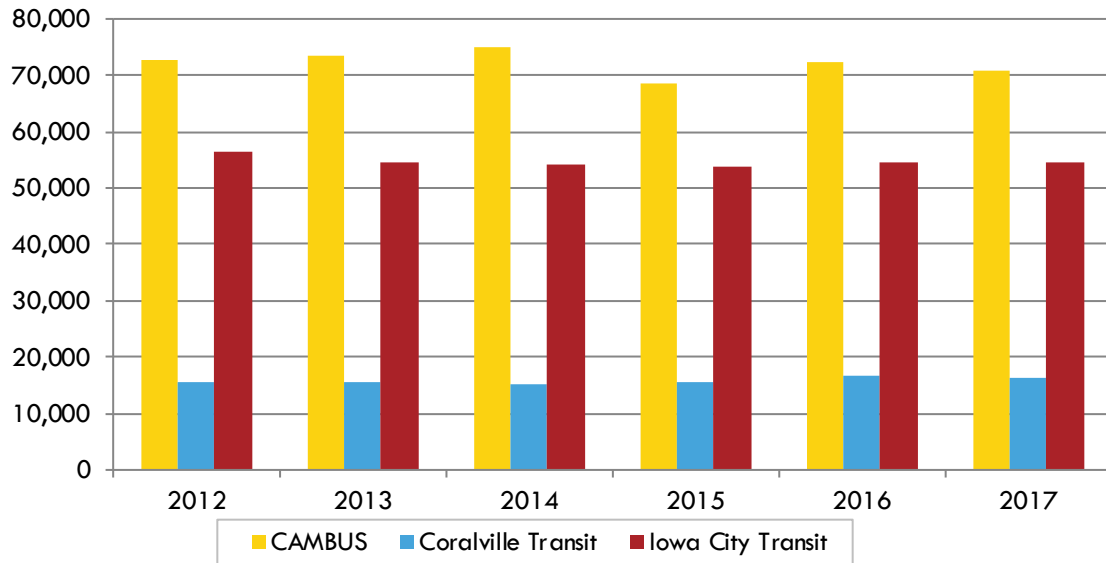


Revenue Hours

Annual revenue hours is a common measure of the amount of service provided by a transit agency. For the study agencies, annual revenue hours (Figure 5-2) fluctuated slightly from 2012 to 2017 but did not change significantly. From 2012 to 2017, CAMBUS has consistently provided the most service and Coralville Transit the least.

From 2012 to 2017, CAMBUS and Iowa City Transit decreased their annual revenue hours by 3%, while Coralville Transit increased its revenue hours by 5%.

Figure 5-2 Annual Revenue Hours by Agency, 2012-2017



Source: National Transit Database

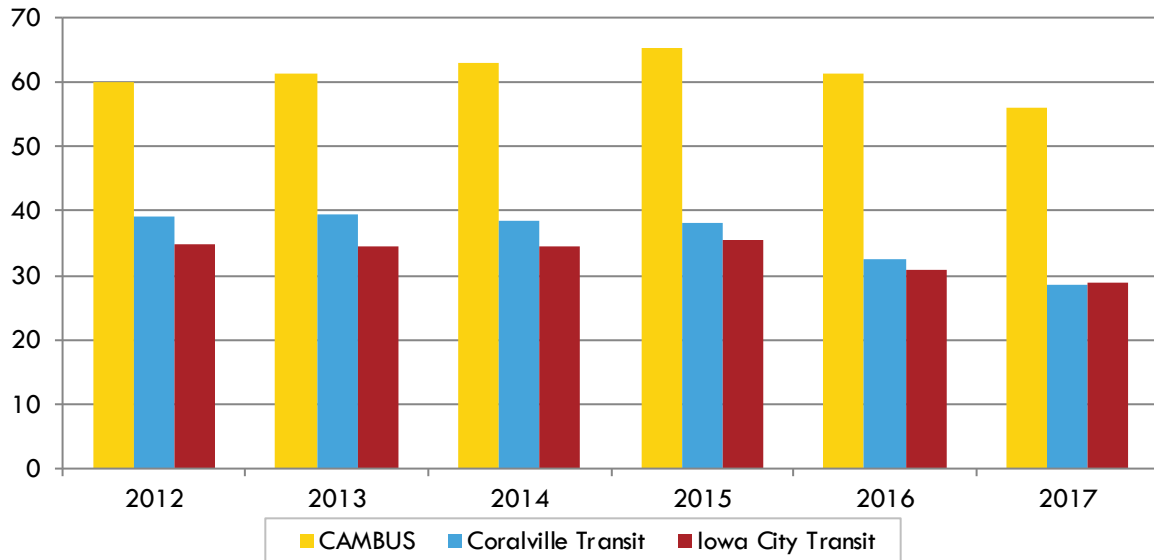


Passenger Trips per Revenue Hour

Passenger trips per revenue hour is a commonly used measure of service efficiency; providing more trips per hour can mean a transit service is using its resources more efficiently. Among study agencies from 2012 to 2017, CAMBUS has consistently provided the most trips per revenue hour of the three study agencies, while Iowa City Transit has typically provided the fewest (Figure 5-3). In 2017, Coralville Transit’s trips per revenue hour dipped below Iowa City Transit’s.

From 2012 to 2017, all study agencies experienced a decline in trips per revenue hour, with Coralville Transit’s being the most extreme (-27%) and CAMBUS’ the least extreme (-6%). Overall, Iowa City area transit agencies in 2017 carried 11% fewer passengers per revenue hour than they did in 2012. Because these agencies have not significantly increased the number of revenue hours operated, this decline in efficiency is likely due to falling ridership.

Figure 5-3 Passenger Trips per Revenue Hour by Agency, 2012-2017



Source: National Transit Database

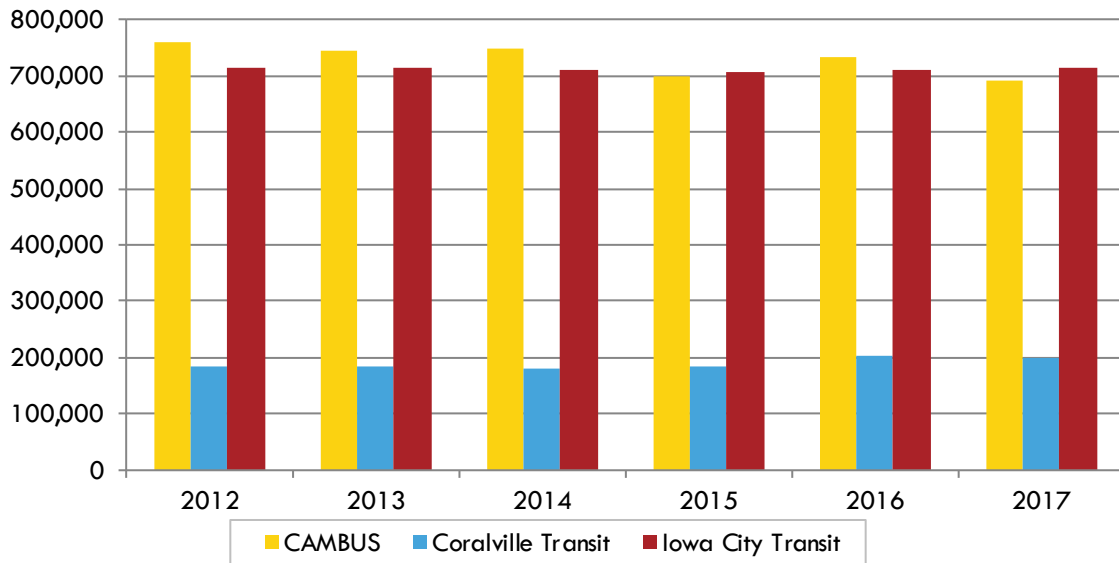


Revenue Miles

Revenue miles operated is a similar measure to revenue hours operated, proxying for the total amount of service a transit agency offers. From 2012 to 2017, CAMBUS and Iowa City Transit operated nearly identical annual revenue miles, while Coralville Transit operated significantly fewer (Figure 5-4).

From 2012 to 2017, revenue miles operated by each agency have changed only slightly; CAMBUS operates 9% fewer revenue miles, Coralville Transit operates 8% more revenue miles, and Iowa City Transit has not changed its annual revenue miles operated. Overall, the study transit agencies operated 3% fewer revenue miles in 2017 than they did in 2012.

Figure 5-4 Annual Revenue Miles by Agency, 2012-2017



Source: National Transit Database

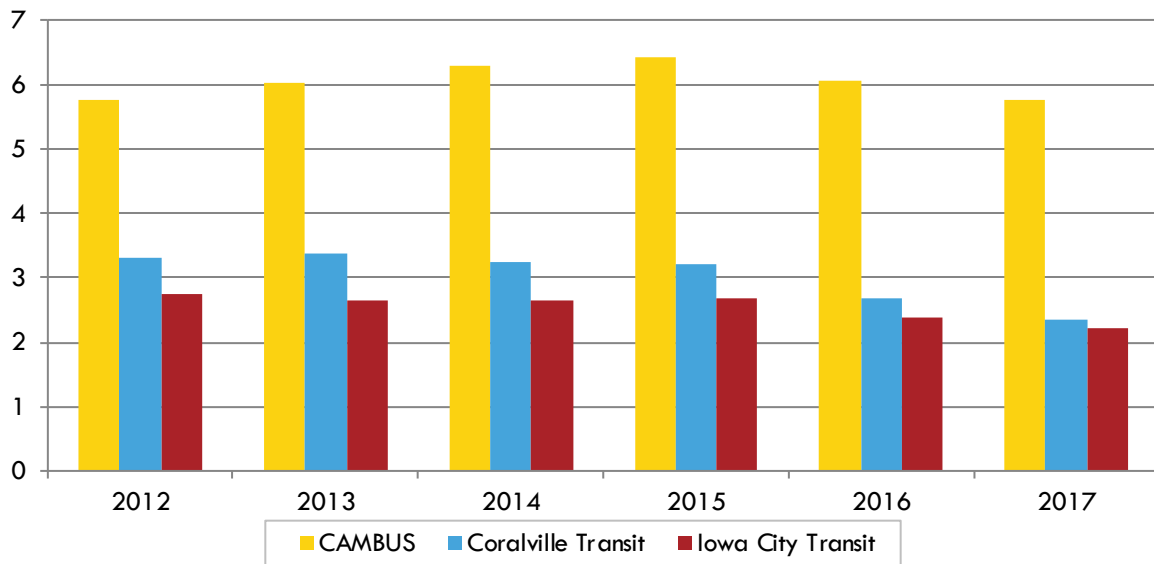


Passenger Trips per Revenue Mile

Like passenger trips per revenue hour, passenger trips per revenue mile is a helpful metric for assessing a transit agency’s efficiency. From 2012-2017, CAMBUS consistently carried the most trips per revenue mile (approximately six trips per revenue mile), and Iowa City Transit carried the fewest (between two and three; Figure 5-5).

From 2012 to 2017, CAMBUS’ trips per revenue mile rose and then fell, peaking in 2015. Coralville Transit’s passengers per revenue mile declined by 29% and Iowa City Transit’s declined by 20%. Overall, the combined agencies’ trips per revenue mile declined by 10% from 2012 to 2017. Because these agencies have not drastically increased the number of revenue miles operated, this decline is likely primarily due to declining ridership.

Figure 5-5 Passenger Trips per Revenue Mile, 2012-2017



Source: National Transit Database

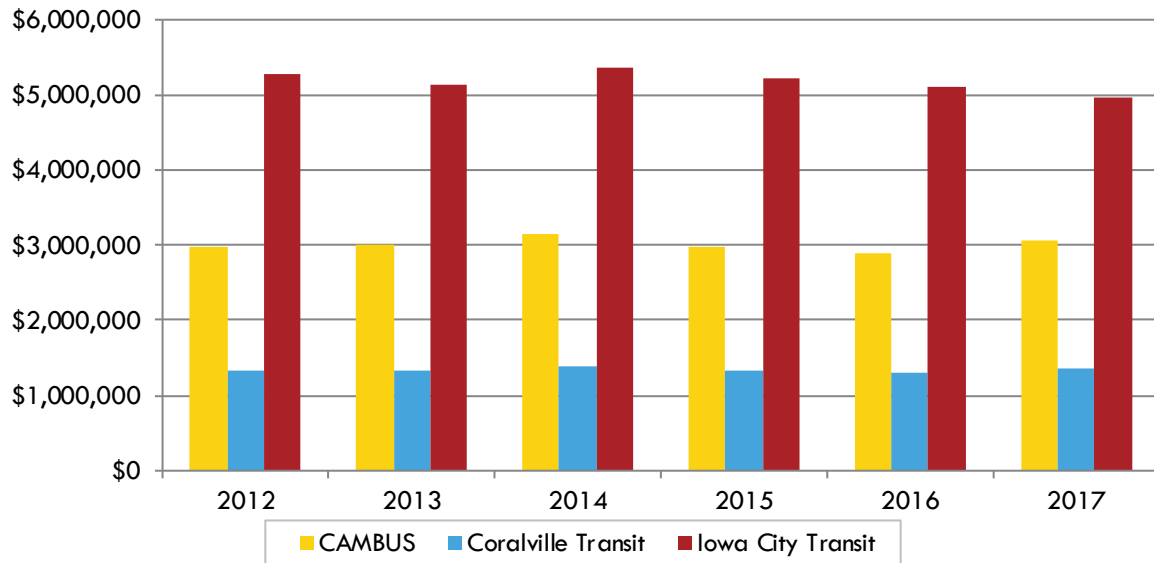


Expense Figures

Operating Expenses

Figure 5-6 shows the total annual operating expenses for the three study agencies. From 2012 to 2017, Iowa City Transit operating expenses have been more than \$5 million per year—by far the most of the three study agencies. CAMBUS, despite operating significantly more revenue hours, has lower total annual operating expenses, at approximately \$3 million. This lower total cost is primarily due to CAMBUS’ use of student operators, although it also benefits from sharing facility maintenance expenses with the University of Iowa. From 2012 to 2017, operating expenses have not significantly changed for any agency, although Iowa City Transit’s total annual operating expenses did decline slightly, by 6%.

Figure 5-6 Annual Operating Expense by Agency, 2012-2017



Source: National Transit Database

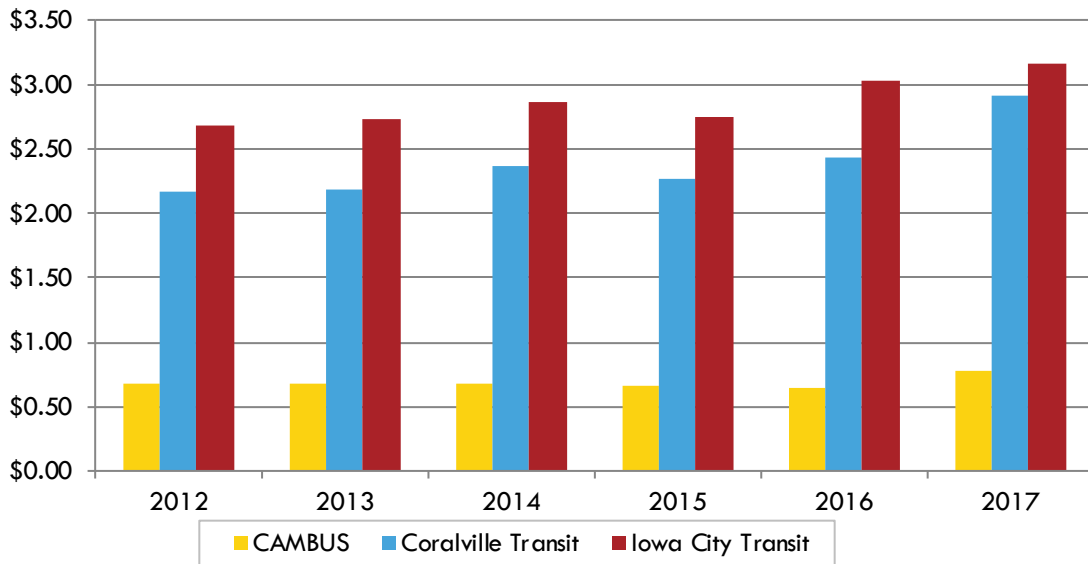


Operating Expense per Passenger Trip

Operating expense per passenger trip is a common measure of a transit agency’s cost of providing service. From 2012 to 2017, operating expense per passenger trip increased significantly for all three study agencies (Figure 5-7). During the five-year study period, Iowa City Transit has typically had the highest cost per passenger trip, followed closely by Coralville Transit.

From 2012 to 2017, CAMBUS’ cost per passenger trip has increased by 13%, Coralville Transit’s cost per passenger trip has increased by 34%, and Iowa City Transit’s cost per passenger trip has increased by 18%. Across all three agencies, the operating cost per passenger trip increased by 13% from 2012 to 2017. Because the amount of service offered by each agency has not significantly increased, this is likely primarily driven by ridership losses.

Figure 5-7 Operating Expense per Passenger Trip by Agency, 2012-2017



Source: National Transit Database

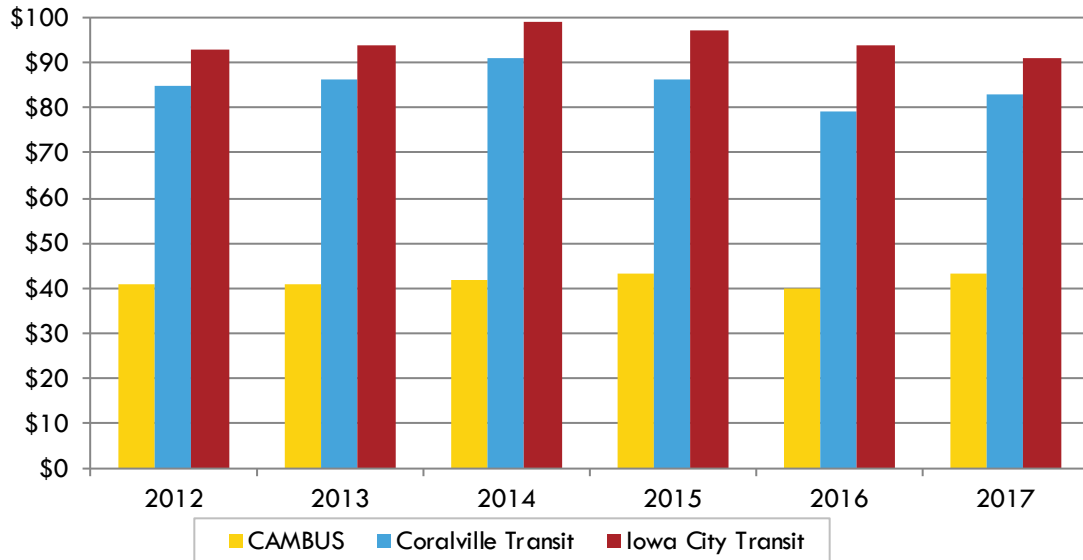


Operating Expense per Revenue Hour

Operating expenses per revenue hour are another common measure of the cost of service provision. From 2012 to 2017, both Coralville and Iowa City Transit typically spent over \$80 per revenue hour on service, while CAMBUS spent approximately \$40 per revenue hour (Figure 5-8).

In this time period, Coralville and Iowa City Transit’s operating cost per revenue hour peaked in 2014 and declined thereafter, for a total change of -2% from 2012 to 2017. CAMBUS’ cost per revenue hour increased by 5% in this time period but remained significantly lower than Coralville and Iowa City Transit’s.

Figure 5-8 Operating Expense per Revenue Hour by Agency, 2012-2017



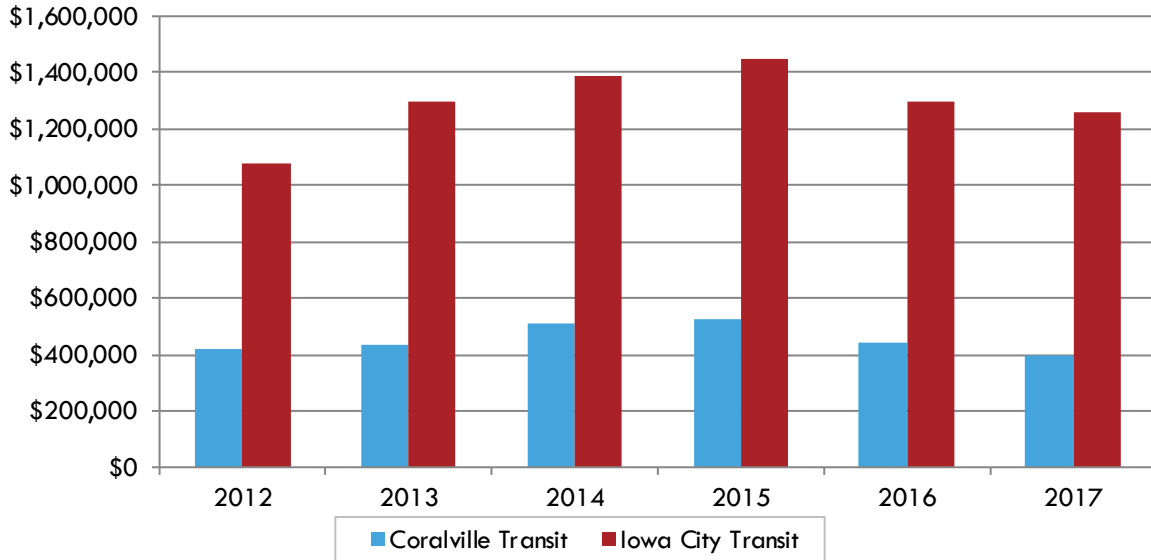
Source: National Transit Database



Farebox Revenue

Farebox revenue is determined by ridership, fare evasion rates, and the costs and usage rates of various fare products. From 2012 to 2017, both Coralville Transit and Iowa City Transit’s farebox revenues peaked in 2015 and declined in the following two years (Figure 5-9). CAMBUS does not charge riders a fare. The decrease in farebox revenue for Coralville and Iowa City Transit is likely primarily caused by falling ridership.

Figure 5-9 Annual Farebox Revenue by Agency, 2012-2017



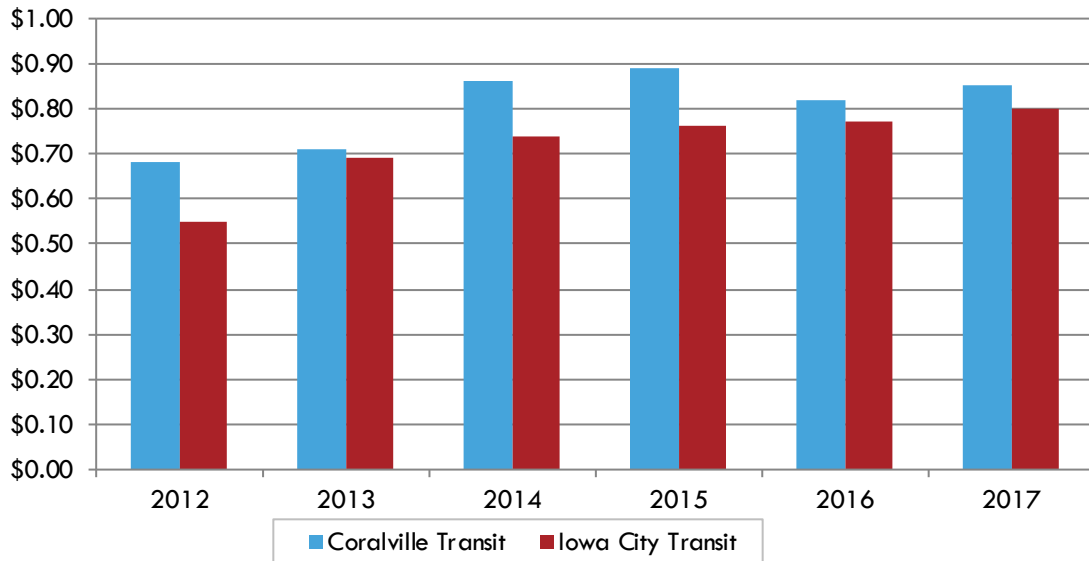
Source: National Transit Database



Average Fare

The average fares paid to a transit agency normalizes farebox revenue by ridership, allowing for a closer examination of trends in fare payment. From 2012 to 2017, the average fare paid by riders peaked for Coralville Transit in 2015 and declined afterwards (Figure 5-10). The average fare paid by riders on Iowa City Transit increased steadily from 2012 to 2017.

Figure 5-10 Average Fare by Agency, 2012-2017



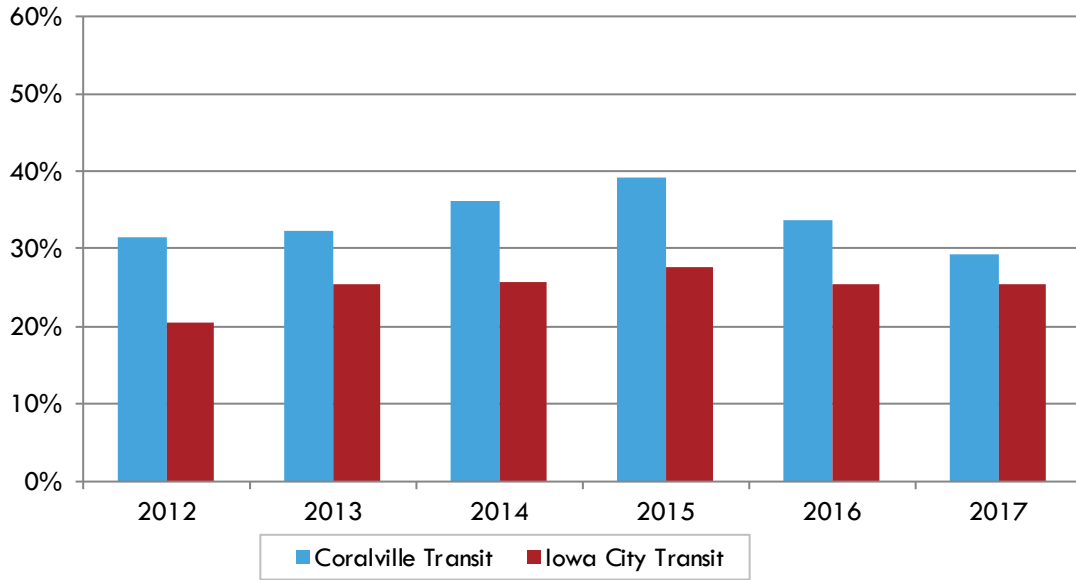
Source: National Transit Database



Farebox Recovery Ratio

Farebox recovery is a ratio of farebox revenues to operating expenses and is used to help estimate what percent of a transit agency's operations are funded by rider fares. From 2012 to 2017, farebox recovery rates peaked in 2015 for both Coralville Transit and Iowa City Transit, declining in the years following. CAMBUS does not collect rider fares. Because operating costs are not significantly declining for these agencies, the decline in farebox recovery ratio is likely primarily due to falling ridership.

Figure 5-11 Farebox Recovery Ratio by Agency, 2012-2017



Source: National Transit Database