

Study explores link between selling and leasing market prices for cars

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Changes in the selling prices of cars can be used to improve calculations for how much people should be paying to lease a vehicle, according to a new study.

Researchers from Norwich Business School at the University of East Anglia (UEA) and Athens University of Economics and Business (AUEB) have for the first time modelled the relationship between variations in leasing and selling market prices, using almost 10 years of data from the US, the world's largest automobile market. They suggest that in order to determine more accurately the monthly payments agreed in leasing contracts, firms need to take into account the prevailing selling, also known as cash, price of vehicles.

For households in developed countries the [car](#) is typically the second largest asset purchased after a house, and in the US a third of all cars sold are financed via leasing. The study, published this week in the *Journal of Banking and Finance*, finds that when selling prices go up in one month leasing rates tend to go down in the following months.

Despite its importance, the link between leasing and selling markets for vehicles is not yet fully understood and the standard way companies calculate leasing rates ignores any interactions between the two. The researchers say this could lead to customers paying significantly more or less a month, while the firms could be incurring losses rather than making a profit. To address this problem they have developed a new pricing approach for lease vehicles, which allows changes in the selling

market prices to have an effect on leasing market prices and vehicle values at the end of the contract.

They use the example of a car worth \$30,000 (USD) in the cash market which is leased for six months with a monthly finance rate of 1% and has a value of \$25,000 at the end of the contract. Using actual market selling prices for a particular month, the traditional way of calculating the monthly instalment would result in the leasing firm undercharging by more than 40% per cent, or \$466, a month. This is because selling prices increased significantly by over 1.5% that month and then leasing prices dropped, in line with the findings in the study, by a total of 2.61% over the next six months.

Using the new model the study predicts a 1.77% decrease in lease prices over the six months and a lease payment calculation which is much closer to the fair price, since the difference is less than 5% or \$73 a month. Although in this example consumers may seem to be better off, this is not the case when cash prices drop rather than increase, which is equally likely. Leasing firms may try to deal with the uncertainty in leasing rates and their profits by charging higher monthly instalments.

Raphael Markellos, professor of finance at Norwich Business School, said: "The results suggest that we can make more accurate predictions about car leasing rates and residual values on the basis of cash prices. If the companies ignore this relationship, mistakes are more likely and sometimes these will benefit the consumer at the expense of the leasing firms, sometimes it will be the other way round. We are all much better off if we can reduce these mistakes as much as possible. This will allow firms to make better decisions which in turn can lead to significant savings for consumers who lease cars.

"Our results also have potential implications for other durable good leasing markets, which range from commercial vehicles, home

appliances and computers to property, aircraft and ships. We must keep in mind that this is a huge market, since in the US alone equipment leasing and finance is estimated to be worth more than \$700 billion."

More information: The study 'Dynamic interaction between markets for leasing and selling automobiles', Dr Athanasios Andrikopoulos and Prof Raphael Markellos, is published in the *Journal of Banking and Finance*.

Provided by University of East Anglia

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