

Platform Sharing: Who Wins From the "Same Same But Different" Manufacturing Trend?

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French carmaker Renault rescued its Japanese counterpart Nissan from the Asian financial crisis a decade ago. In September 2010, the two automobile manufacturers formally renewed their alliance. They vowed to jointly develop vehicle platforms for at least 10 new models to cut costs by 30%. German automaker Daimler (Mercedes-Benz) has also joined the collaboration in what Renault-Nissan chief executive Carlos Ghosn boasts will be a powerhouse. "When you add the [research and development] of Renault, Nissan and Daimler, we are the largest in the industry," he said at the Paris Motor Show in September. "We have every kind of technology, particularly if we get organised within ourselves. It can be a competitive advantage."



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Such sharing arrangements are becoming increasingly common in the global auto industry. Take the new Alfa Romeo Giulietta, the mid-sized Italian car launched with the marketing allure of actress Uma Thurman in May. The Giulietta was developed as a computer model from concept to crash testing. It was the first based on Italian carmaker Fiat Group's new global compact platform, which will share components with the US manufacturer Chrysler, the company that Fiat helped to save from the global financial crisis in 2009 (previously Fiat came to the rescue of Alfa Romeo in the mid-1980s).

Platform sharing is growing, although little is understood about the economics of the strategy. While research shows cooperation between carmakers is generally producing lower car prices, the popularity of platform sharing raises questions. For instance, will customers end up paying more when two competing car companies cooperate in joint developments? Is it collusion? And, are regulatory authorities such as the Australian Competition and Consumer Commission (ACCC) right to be suspicious? As political economics pioneer Adam Smith observed: "People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices."

However, when big players join forces, it can be good for almost everyone, insist [Hodaka Morita](#) and [Arghya Ghosh](#), microeconomic researchers at the Australian School of Business (ASB) who have been using theoretical models to evaluate how sharing platforms impacts on the auto market. Their research reveals that community interests are being well served by collaborations and partial ownership arrangements, such as Fiat's 20% share in Chrysler, brought on after the US auto giant filed for bankruptcy in April 2009. Surprisingly, in these arrangements, competition may even increase between collaborators and sometimes reduce prices, putting downward pressure on the market. Morita, a specialist in industrial organisation and organisational economics, notes collaboration is a worldwide trend and the big players in the auto industry are certainly not the only ones getting together to pool development costs. Computer companies such as IBM, Sony Group, and Toshiba have jointly developed a high-performance microprocessor. Flatscreen TV makers Hitachi, Toshiba and Panasonic have joined forces to make LCD panels. Pharmaceutical companies are using each other's distribution networks. The Yokohama and Continental tyre companies are also setting up a joint venture to use the same nationwide sales network in Japan. And in Australia, there's no shortage of such joint ventures to keep the competition watchdog

busy. It objected to miners BHP and Rio Tinto cooperating on iron ore production in Western Australia, but allowed airlines Virgin Blue and Etihad to run joint services – but not Virgin Blue and Air New Zealand.

Revvng Up Sharing

It's in the car industry – where developing new models is a complex, billion-dollar undertaking – that the practice has been developed and is now picking up speed with globalisation. Not all alliances have worked out, notably those involving General Motors' turbulent recent history. In the 1980s, Fiat, Alfa Romeo, Saab and Renault cooperated on a European sedan platform. Now Ford has shared platforms, including one for "compact class" vehicles involving Volvo, the Ford Focus and the Mazda3, all of which compete head on for sales in Australia. Honda shares a common platform for its sport-utility vehicle, the CR-V, and Civic models. Toyota uses the same platform for its Landcruiser and high-end Lexus LX models.

In 1999, Renault saved Nissan in the Asian financial crisis by taking a controlling 44% shareholding and announcing plans to jointly develop models. It sought to benefit from Nissan's expertise in the 4WD market and through its marketing experience in Asia and America. Its latest plan, announced in September, takes the concept much further in designing a common platform for medium-sized sport utility vehicles and sedans, standardising 70 key components, including windows and brakes. Renault and Nissan's link-up with Daimler will put Mercedes' "drivetrains" (which send power from a vehicle's engine to its wheels) into Nissan Infiniti sedan models. The small Mercedes A- and B-Class vehicles will share platforms with Renault's Clio and Megane. Daimler's electric Smart car and battery-powered Renault Twizy will share technology. Daimler chairman Dieter Zetsche says: "Our skills complement each other very well. Right away, we are strengthening our competitiveness in the small and compact car segment and are reducing our CO2 footprint ... We know that we can make brand-typical products based on shared architectures. The individual brand identities will remain unaffected."

Time will tell whether the rather bland Nissan brand takes some lustre from up-market Mercedes, but the track record of the alliance so far has been encouraging. Nissan sells the Dualis and X-Trail sports utility vehicles in Australia, which were developed on the same platform as the Renault Koleos. Despite the similar underpinnings, there is competition between the models on price, power and design. In dealer showrooms, far from colluding, the salesmen competitively criticise the opposing model. Asked about the respective merits of the vehicles, one Sydney Nissan salesman even claimed that Renault had an uncertain future selling cars in Australia, its service charges were higher and spare parts less available, while a Renault salesman emphasised the high-class quality of the Koleos' seats, sound deafening and ride over the Nissan's – and offered to negotiate over the higher price. Renault Australia marketing manager Mark Jasper says the vehicles are completely different, and the challenge in sharing platforms is in keeping the distinctive "DNA" of each of the collaborators. "Ford managed this with Volvo, Jaguar and Land Rover, maintaining the integrity of the cars while sharing platforms with mass-produced vehicles," he says. "GM did not do it so well with Saab or by putting different badges on the same platform in different countries."

Jaspers says Renault's a small player in Australia compared to Nissan. "Nissan has a strong reputation with 4WD models, and it probably beefs up the perception of Renault with the Koleos," he says. "So there's different marketing, we emphasise the positives and play down the negatives of sharing platforms."

Considering Collusion

Ghosh and Morita use a simple theoretical framework to help understand the economic effect on consumers of platform sharing, points out [Professor Kevin Fox](#), director of the Centre for Applied Economic Research at the University of New South Wales. Their model addresses the question of why firms share platforms and the effects of platform sharing on competition. "Their theoretical approach – using quantitative and analytical tools – formalises the issues and differs from real-world observations, anecdotal evidence and empirical studies, which are also crucial to research in economics," says Fox. "In

platform-sharing arrangements, firms need to carefully consider the costs and the benefits, although this is only the tip of the iceberg. Competition policymakers and anti-trust agencies are often interested in the implications of economic arrangements more generally."

Fox says while collusion and cartels have been extensively studied in economics, "little is known about the impacts on the welfare of society of these new arrangements, which are surprising and quite subtle".

Morita says the economic model depends on identifying the different aspects of platform sharing. "For instance, if competitors produce cars on the same platform, it's bad for business if their products look too similar when they are competing for the same customers," he explains. "The good thing is they can save on fixed costs through cooperation, so there is a trade-off. Economists are interested in such trade-offs – for example, is the good news greater than the bad news? How does platform sharing impact on consumers? Are they happy or not?" It seems it's good news – on lower prices – for some, and bad news – in less distinctive models in the market – for others. "The second welfare analysis is whether platform sharing is good for society as a whole or is it compromising the market for motor vehicles?" Morita asks. "The two firms may or may not care whether consumers are happy or not. Are consumers better off with platform sharing? Using theoretical analysis, we looked at the trade-off by comparing the circumstances where we have platform sharing and when we don't and found that platform sharing is for the better." Morita is discussing the findings with empirical researchers as he delves deeper into the issue. The theoretical model is a new concept "and (results) may not be the same for all cases", he notes.

The large sums of money involved in building new vehicles make these important questions. The record in the real world of car companies in joint ventures has been mixed at best. As well, competition watchdogs are wary of the anti-trust implications and they are also worried about partial ownership arrangements that often accompany competitor collaborations. The new economic model has thrown up several propositions. One is that when firms collaborate, the effect on prices is not as obvious as it might appear. When the researchers modelled the car industry as only comprising three firms, the collaboration between firms 1 and 2 intensifies the competition between the two because it reduces their product distinctiveness. Their price and profit decrease along with the distinctiveness of their products.

Another proposition highlighted by the model is that competitors are more likely to collaborate as the degree of fixed-cost savings through cooperation increases. And a third proposition showed that as competition causes firms 1 and 2 to charge lower prices, this imposes downward pressure on others, known as firm 3. But this does not necessarily result in lower prices. Since the collaboration between firms 1 and 2 makes their products more distinct from firm 3's product, it weakens the competition with firm 3, allowing it to raise prices (and earn higher profits than if the three firms traded independently). So the collaboration indirectly affects consumers by lowering prices of firms 1 and 2 but raising firm 3's car prices.

The fourth proposition is that consumers are better off when firms 1 and 2 charge lower prices in the collaboration – if their car purchase is closer to their most desired product characteristics. The upshot is that consumers who purchase a car product from firms 1 or 2 in collaboration get a lower price – even if it is farther away from their most desired product characteristics – so they are better off than if there was no collaboration. Less well off are the consumers who prefer product variety. Proposition 5 shows that competitor collaboration leaves the consumer better off overall, than if there was no collaboration. Given that competitor collaborations are often accompanied by partial ownership arrangements, Morita and Ghosh found that, contrary to the fears of anti-trust authorities, they brought overall benefits to consumers and society by inducing competing firms to form a collaboration that leads to lower prices.

While the researchers have been focussing on the auto business, the model has further potential for big business and regulatory issues, suggests Morita. "For instance, under what circumstances do firms A and B take equity ownership in other firms to induce knowledge transfer?" he asks. "We are doing a theoretical analysis of how these connections affect society and whether or not they are for the greater

good – or, should the ACCC intervene?"

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