

# Focus: Asia

**A Commentary and Ergonomic Travel Report by Susanne Kiel,**  
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## **Best-practice ergonomics – on the road in China, India and Japan**

Looking after our partners in Asia gives me a completely new perspective on the typical ergonomic issues that arise in every market. The initial situation is often so different that national OEMs frequently have to find completely different and very exciting solutions to ergonomic problems. I would like to take a brief look at “RAMSIS in Asia” with you, using China, India and Japan as examples – and who knows, this could perhaps help you to solve problems in your own market?

# Emotion controls the automotive market – and consequently the ergonomics

Germans love their cars – but so do the Chinese, Japanese and Indians. However, successful car makers in China will not succeed with the same concept in India and Japan. Climate, infrastructure and the emotional aspect of what is expected of the car differ too much – and this means some stiff challenges for ergonomics. What all three markets have in common is that traffic jams and road chaos play no role at all for car buyers – so drivers and passengers usually spend even more time in the vehicle, and this again increases the requirements for ergonomics and interior design.

## Large vehicle – small interior

While in Germany, the sporty vehicle is the new status symbol, large sedans are in demand in China, despite the traffic jams – and drivers simply love the “Made in Germany” vehicles. Chinese brands are lagging behind (at the moment). Customers love their luxury too much and their freedom of movement in the vehicle interior. As in the world of luxury fashion, they want to look like James Bond if they have a James Bond suit. However, the Chinese are on average smaller than Central Europeans, so the cut of the suit must be different – and the same applies to vehicles. Chinese male and female drivers also want to feel like James Bond, the Bond girl or “M” and not be cast into the land of the giants,

so the ergonomic concept has to be just right. The market is also on the move too, because many Chinese OEMs are discovering ergonomics and improving driving comfort as a result. The challenge here is that Chinese ergonomists have to “retailor the interior” in such a way that the extensive space is well structured and there is sufficient support for the driver and passengers. To achieve this, the percentile scale must change, for instance. What were once good ergonomic designs for drivers from Central and Northern Europe must now be redesigned for shorter and more petite drivers. The Chinese market leader VW seems to succeed in this, so other manufacturers follow suit.



Three out of four vehicle manufacturers worldwide use RAMSIS. The leading ergonomics tool has a market share of more than 75% worldwide, including leading vehicle manufacturers in Asia.

## Small vehicle – large interior

In Japan, logic wins when it comes to buying a car – but only at first. The available space determines the size of the vehicle. When you buy a car in China, you must be able to prove that there is a parking space available for it – and since space is scarce (and expensive) in almost all areas, an increasing number of small vehicles are being bought. This means that more attention to detail is being paid to interiors – and now logic gives way to emotion. Just because the vehicle looks small from the outside, doesn't mean that it's small on the inside. Room and free space in the interior are also key points here, because in contrast to China, there is not too much space in Japanese vehicles, there is just not enough. This is why Japanese ergonomists use RAMSIS to "conjure up" a "large vehicle that requires little space."



## Robust, robust, robust, with plenty of room for passengers

India is very different. The automotive market has developed so rapidly here that the infrastructure is lagging far behind market development. Roads and byways (where they exist) are often designed for heavy monsoon rains. Western brands have little chance in this sales market – their vehicles get stranded on the extra high curbs too easily. Indian vehicles are considered robust and versatile and are a real expression of Indian engineering expertise. "Made in India" is a big plus point, as is low fuel consumption. Automatic vehicles are consequently not in demand in India, but comfort is very important. Even in India, traffic congestion is not a counter-argument for buying a car, but it does affect the ergonomics of the vehicle. Indian vehicle manufacturers, for example, often have a different startup position than those in the west; RAMSIS even holds the gear stick and presses the

clutch down for a relaxed stop-and-go. Space allocation in the vehicle interior is also an important factor, with headroom playing an important role. Vehicle ingress and egress – and sitting in the vehicle – must be comfortable, even while wearing a turban. As many passengers as possible should



also be able to travel in the vehicle; but even in shared taxis, they may not come into contact with one another, even if the roads are bumpy – so Indian ergonomists "structure" the interior of a robust vehicle in such a way that there are clearly divided spaces for each vehicle occupant.



## Ergonomics in new markets

I can draw a very specific conclusion when I analyze these relatively young car markets – it's the individual market itself, the consumers and their emotions that determine the ergonomic requirements. So we can learn a lot from other cultures and their view of the car, but also from the interesting solutions that local ergonomists find for their country's vehicles.



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