

DAY IN WORDS

Now is time for good dinners and good wine. We will think about it in one month's time. I think we will miss Vincent (Kompany) a lot.

— **PEP GUARDIOLA**, Manchester City manager, at the club's treble-winning parade

I have no qualms about saying that I am not getting married. People go bald after getting married. I'm happy on both, the personal and professional fronts.

— **ARJUN KAPOOR**, actor, on marriage rumours



New Delhi, India, is very important... I have decided to appoint Moin-ul-Haq... who will be sent to Delhi, and I hope that he [Haq] will deliver.

— **SM QURESHI**, Pakistan foreign minister, on appointing the new High Commissioner to India

DAY IN NUMBERS

₹90k

crore, is the govt's target to raise capital through PSU divestment for 2019-20

0.6%

expected global fall in number of bank machines in the next six years, says consulting firm RBR

AROUND THE WORLD

BLOOMBERG NEWS ON THE DEBATE ABOUT IMPORTS

Why imports are good for America

PRESIDENT Donald Trump last week tweeted a declaration that his tariffs on Chinese goods had boosted US economic growth in the first quarter of 2019.

The idea that imports subtract from gross domestic product is a common fallacy. So why do some people mistakenly believe that imports subtract from GDP? It's because of the confusing way that economists define the different components of output.

Imports spur consumption, which is good for the economy

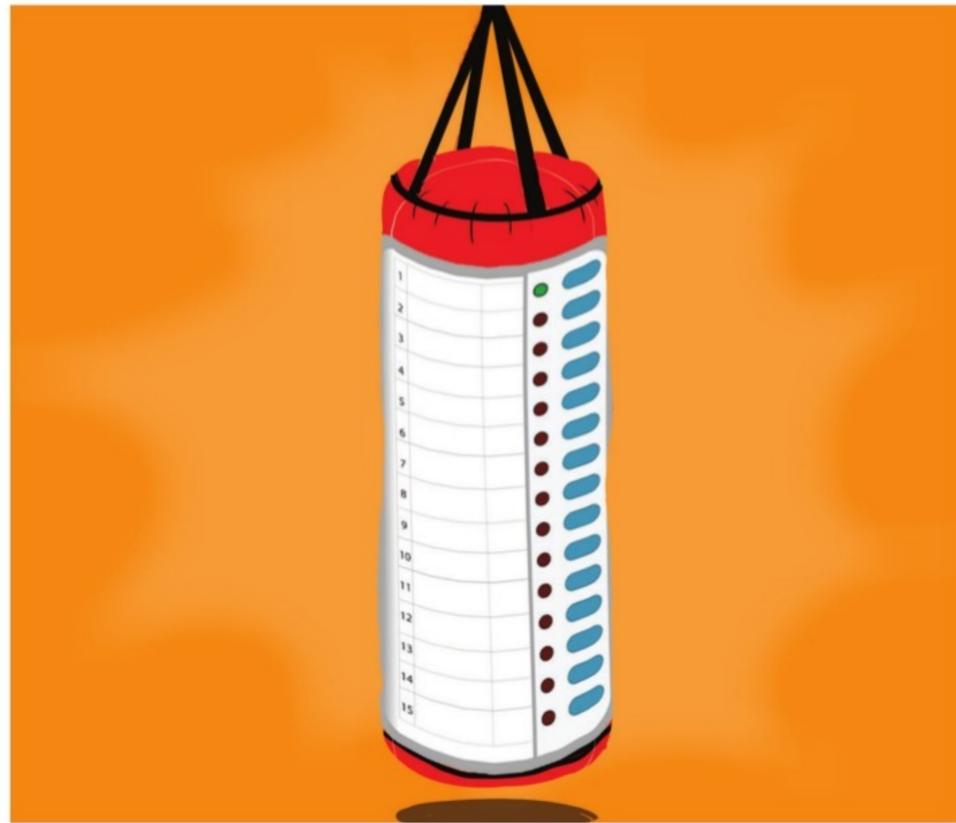
Although imports subtract from net exports, they also add to the other components of output — consumption, investment and government spending.

When an American buys a chair from China for \$50, it decreases net exports by \$50, but it raises consumption by exactly the same amount. The two effects net out exactly.

Unfortunately, the way economists decided to define GDP makes imports' negative contribution to the equation highly visible but hides their positive contribution from view.

NEWSMAKER OF THE DAY

BY SIDDHANT JUMDE



ELECTRONIC VOTING MACHINE

Opposition parties asked the Election Commission to ensure that there is no discrepancy in the operation of EVMs after online videos emerged of machines being transported post-elections.

Brace for the next big tech battle

THE FOURTH Industrial Revolution is underway. Fuelled by rapid innovation, technology is currently passing through a disruptive phase. It is critical for the automotive sector to increase connectivity of products that are based on cellular technologies which, in turn, are subject to international telecommunication standards, such as 4G or 5G.

Cars and 5G

Changes foreseen in the automotive industry are going to be software intensive and algorithm driven. Traditional automotive companies did not (and some perhaps still do not) consider these as a part of their core business.

Usually, standardised technologies are created as a result of advanced R&D by innovative organisations, which are then legally protected by numerous intellectual property rights (called standard essential patents or SEPs).

For any product or process company to use these standards, they have to acquire a licence from the SEP owners and pay them royalties. But, in reality litigation worth billions of dollars involving (mis)use of SEPs has kept courts around the world occupied for over a decade now. Widely known as the 'smartphone litigation war' these cases mostly involve communication technologies that are used in smartphones. With new SEPs and standards being created for 5G, the real fear is that the complications around patent licensing may exacerbate legal disputes.

For the very first time, the manufacturing might of the global automotive industry will face off with the tech-intensive, trend-setting cellular/wireless chipset industry. On the one hand are incumbent automotive manufacturers (Toyota, Ford, Volkswagen, General Motors, etc) and automotive suppliers (Bosch, Denso,

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Delphi, Continental, etc) while on the other hand are tech companies (Google, Cisco, Microsoft, Apple, IBM, etc), semiconductor companies (Qualcomm, Intel, NVIDIA, etc), electric vehicle companies (Tesla, LeEco, Tencent, etc) and ride-sharing companies (Uber, DiDi, Ola, etc).

Communication technologies to make cars connected and smarter are indispensable for the automobile sector as their application goes beyond the ability to stream music, support wireless Internet or provide GPS navigation. Since vehicles are susceptible to accidents, a 5G capable smart car can help seek immediate assistance and reduce the risk of casualty. Moreover, cloud connectivity can help in live tracking of the vehicle and deliver over the air (OTA) updates.

Tech at a premium

For the technology sector, assurance of fair remuneration for use of their patented technologies is non-negotiable. The ground is set for a face off between the two most technologically dynamic and economically vital industries.

Players in both industries should try to strike deals in a more transparent and predictable manner to avoid lengthy and resource-intensive litigation. What can further throw a spanner in the works is the emergence of connected and self-driving vehicles. According to reports, connected cars may account for more than 80 per cent of all vehicles on road by 2040. A 'smart' connected car of the future will communicate with other cars and also with other devices, network infrastructure and agencies with the ability to transfer data over a network without human intervention. This interconnectivity will heavily rely on patent-based technology standards. Smart vehicles with cloud and network connectivity, and new methods of communication, will depend on emerging 5G technology standards. Here comes the interesting part — telecom companies

own almost all patents essential to implement the 5G standard. Until now, automobile companies have largely been feeding off open standards, where technologies have been made accessible without any royalties. Auto manufacturers would now have to understand the new reality where license for communication technology for use in vehicles will have to be paid for. In such a scenario, most patent-licencing disputes that have ensued in the past decade are likely to repeat.

But, unlike the smartphone sector, there exists little or no scope for reciprocal licensing in the automotive sector, making it an uphill task for automobile manufacturers to negotiate licences.

Adapting to laws

When it comes to the licensing of SEPs for vehicular application, the ball is firmly in the court of telecom companies.

Several telecom companies are now mature to deal with such issues as both licensors and licensees of patented technologies, but automotive companies are new to this.

As the global market adopts 5G, automotive companies need to be more informed, more vigilant and more proactive in understanding essential patent licensing, technical standards, and appropriate legislative and regulatory processes and actions. The litigation has started.

In Germany, chip-maker Broadcom has sued automobile giants Audi and VW in 17 individual cases for infringement of patents related to wireless communication in a car. Given the enormity of the problem and potential implications for the entire automotive industry, several automotive suppliers to these German car giants have joined the legal tussle. Another major German carmaker, BMW, has recently finalised a patent licence for a portfolio of communication technologies. Only time will tell where the industry is headed and what is going to be the cost of decisions it takes now.

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DAILY HUMOUR

“Make no mistake about why these babies are here — to replace us.”

— Jerry Seinfeld



SO FUNNY

Learning a foreign language is pointless, I'm not even allowed to talk to strangers.

“I hate small towns because once you've seen the cannon in the park there's nothing else to do.”

— Lenny Bruce