



**On the cover**

The era of predictable improvement in computer hardware is ending. What comes next? Leader, page 11. After a glorious 50 years, Moore's law—which states that computer power doubles every two years at the same cost—is running out of steam. Tim Cross asks what might replace it: Technology Quarterly, after page 42. Win or lose, a computer program's showdown against a professional Go player is another milestone in AI, page 69

**The Economist online**

Daily analysis and opinion to supplement the print edition, plus audio and video, and a daily chart Economist.com

E-mail: newsletters and mobile edition Economist.com/email

Print edition: available online by 7pm London time each Thursday Economist.com/print

Audio edition: available online to download each Friday Economist.com/audioedition



Volume 418 Number 8980

Published since September 1843 to take part in "a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."

Editorial offices in London and also: Atlanta, Beijing, Berlin, Brussels, Cairo, Chicago, Lima, Mexico City, Moscow, Mumbai, Nairobi, New Delhi, New York, Paris, San Francisco, São Paulo, Seoul, Shanghai, Singapore, Tokyo, Washington DC

**8 The world this week**

**Leaders**

- 11 **After Moore's law**  
The future of computing
- 12 **The Petrobras scandal**  
Interrogating Lula
- 12 **Farming in Africa**  
Miracle grow
- 13 **China's economy**  
Ore-inspiring
- 14 **Europe's migrant crisis**  
A messy but necessary deal

**Letters**

- 15 **On Donald Trump, the Maldives, English law firms, Gaelic games**

**Briefing**

- 19 **African agriculture**  
A green evolution

**Europe**

- 23 **Europe and Turkey**  
A new migration deal
- 24 **German state elections**  
Mutti's challenge
- 24 **Nadia Savchenko**  
A modern martyr
- 25 **Italy's Five Star Movement**  
Smartening up
- 26 **Charlemagne**  
The necessity of culture

**Britain**

- 27 **Britain and the EU**  
Next stop: Brexit?
- 28 **Illegal immigration**  
Channel hopping
- 28 **Aston Martin and McLaren**  
Speed merchants
- 29 **Bagehot**  
The meaning of the Gogglebox

**Middle East and Africa**

- 30 **Women in Saudi Arabia**  
One step forward, one step back
- 31 **Transport in the Middle East**  
In a jam
- 31 **Equatorial Guinea**  
Palace in the jungle
- 32 **Rwanda**  
The Kagame dilemma
- 33 **Energy in Rwanda**  
What lies beneath Lake Kivu

**United States**

- 34 **Varieties of inequality**  
The great divergence
- 35 **Injustice**  
The ruin of many a poor boy
- 36 **Polling flops**  
Mich-fire
- 37 **Heard on the trail**  
GOP souvenir edition
- 37 **The primaries**  
Trump done well
- 38 **Becoming an astronaut**  
Mice in their million hordes
- 39 **Lexington**  
Cuban-Americans

**The Americas**

- 40 **Brazil's political crisis**  
Lula under fire
- 41 **Caribbean prisons**  
Blue seas, black holes
- 41 **Antiquities in Latin America**  
Returning the hatchet
- 42 **Bello**  
The return of inflation

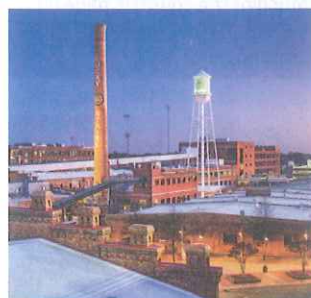
**Technology Quarterly**

After page 42



**EU, Turkey and refugees**

A European bargain with Turkey is controversial, but offers the best hope of ending migrant chaos: leader, page 14. The deal with Turkey was born of political desperation and faces many practical, legal and ethical difficulties, page 23



**The geography of inequality**

America's most successful cities, states and firms are leaving the rest behind, page 34



**Scandals in Brazil** Justice, not political war, should determine the fate of Brazil's government: leader, page 12. The charging of a former president makes a tense situation even more fraught, page 40



NT 16006120 - col. 500 107



**China's economy** In leaning towards stimulus rather than reform, China's leaders are storing up trouble: leader, page 13. The government's economic plan for the next five years will not live up to its promise, page 49. House prices are soaring in big cities, but oversupply still plagues much of the country, page 63. Melodious love-offerings for Xi Jinping, page 50



**Farming in Africa** After many wasted years, African agriculture is improving quickly. How to keep that trend going: leader, page 12. The farms of Africa are prospering thanks to persistence, technology, population growth and decent government, pages 19-21



**The Wallenberg century** The lessons from 100 years of a family's industrial empire, page 58

## Asia

- 43 **The Philippines' election**  
A family affair
- 44 **Politics in Kiribati**  
Making waves
- 45 **Religion in India**  
Holy noodles
- 45 **Taiwanese identity**  
Multiculti roots
- 46 **Japanese politics**  
Abe agonistes
- 48 **Banyan**  
Asia not gloating, but fretting

## China

- 49 **A new five-year plan**  
Unlucky for some
- 50 **Political music**  
Praising Xi in song
- 50 **Carbon emissions**  
Modest targets
- 51 **Trade with North Korea**  
What sanctions?

## International

- 53 **Civil servants**  
Mandarin lessons
- 54 **Exam-cramming in India**  
Turn over your papers...now

## Business

- 55 **Health care**  
Things are looking app
- 56 **Fracking companies**  
DUC and cover
- 57 **Royal Enfield**  
Approved by mothers-in-law
- 58 **The Wallenberg group**  
A Nordic pyramid
- 59 **BMW at 100**  
Bavarian rhapsody
- 60 **Retailing**  
Shops to showrooms
- 62 **Schumpeter**  
Mexico keeps the faith in globalisation

## Finance and economics

- 63 **Chinese property**  
For whom the bubble blows
- 64 **Buttonwood**  
High tech, low finance
- 65 **America's economy**  
Inflation rises, unnoticed
- 65 **Commodities**  
Steel chrysanthemums
- 66 **Greek banks**  
On the front line
- 67 **Financing divorce**  
Till debt us do part
- 67 **Discount brokerages**  
Free trade
- 68 **Free exchange**  
Feminist economics

## Science and technology

- 69 **Artificial intelligence**  
The Go showdown
- 71 **Early human diets**  
Without fire?
- 71 **African science**  
Crucible
- 72 **The internet of things**  
Cool beans

## Books and arts

- 73 **Singapore, a graphic novel**  
Lion City march
- 74 **British political biography**  
The shredding of Tony Blair
- 74 **Mervyn King and the financial crisis**  
End of alchemy
- 75 **Rebooting India**  
Economics 2.0
- 76 **Johnson**  
The @rt of punctuation
- 80 **Economic and financial indicators**  
Statistics on 42 economies, plus a closer look at employment

## Obituary

- 82 **Nancy Reagan**  
Keeping control



**Women's progress (and lack of it)** In Saudi Arabia progress for women is going into reverse under the new king, page 30. Feminist economics deserves recognition as a distinct branch of the discipline: Free exchange, page 68

## Subscription service

For our full range of subscription offers, including digital only or print and digital combined, visit [Economist.com/offers](http://Economist.com/offers) or call the telephone number provided below: **Telephone:** +44 (0) 845 120 0983 or +44 (0) 207 576 8448

Subscription for 1 year (51 issues)	
Print only	
<b>Euro-zone countries</b>	€188
Denmark	DKr 1,399
Hungary	HUF 58,107
Norway	NKr 1,379
Poland	PLN 809
Sweden	SKr 1,636
Switzerland	SFr 255
Other Europe (ex UK)	€188
Middle East - GCC	US\$347, £243
South Africa	Rand 1,700, US\$175, £120
Middle East and Africa	US\$280, £196

## Principal commercial offices:

25 St James's Street, London SW1A 1HG  
Tel: 020 7830 7000

Rue de l'Athénée 32  
1206 Geneva, Switzerland  
Tel: 41 22 566 2470

750 3rd Avenue, 5th Floor, New York, NY 10017  
Tel: 1 212 541 0500

1301 Cityplaza Four,  
12 Taikoo Wan Road, Taikoo Shing, Hong Kong  
Tel: 852 2585 3888

## Other commercial offices:

Chicago, Dubai, Frankfurt, Los Angeles,  
Paris, San Francisco and Singapore



PEFC certified

This copy of *The Economist* is printed on paper sourced from sustainably managed forests certified by PEFC [www.pefc.org](http://www.pefc.org)

