

[Home](#) » [Politics](#)

# How many factory workers in India have lost their jobs to robots?

Only 0.1% of industrial jobs have been lost to robots so far, a study shows

Last Published: Tue, May 08 2018. 12 01 PM IST

Pramit Bhattacharya

Enter email for newsletter

[Sign Up](#)



Photo: Bloomberg

**New Delhi:** The number of robots deployed by Indian firms has witnessed a 200-fold increase since the turn of the 21st century. Yet, the stock of industrial robots in India in

2016 at 16,026 accounts for barely 0.1% of India's industrial workforce.

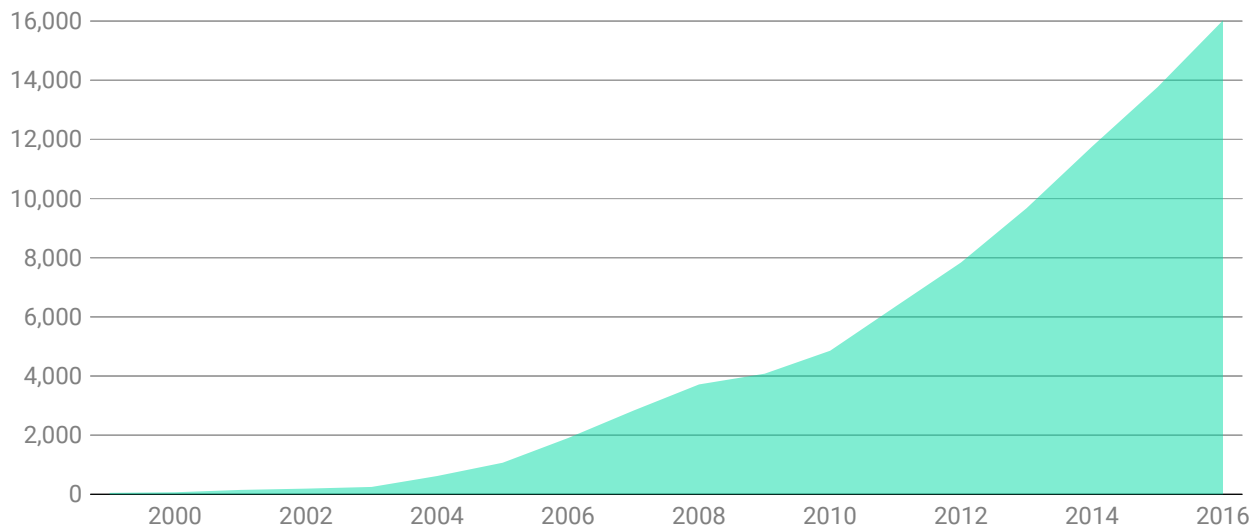
These are the striking findings of a first-of-its-kind study on the use of industrial robots in India by Sunil Mani, professor and director at the Centre for Development Studies (CDS), Thiruvananthapuram.

Mani's analysis based on the latest data from the International Federation of Robotics (IFR) and the Annual Survey of Industries (ASI) shows that the density of robots per 10,000 manufacturing workers has increased from less than 1 in 2000 to almost 10 in 2016.

The IFR defines an industrial robot as an “automatically controlled, reprogrammable, and multipurpose [machine]”.

## The number of industrial robots in India has risen sharply since the turn of the century

The chart depicts the operational stock of industrial robots in the country

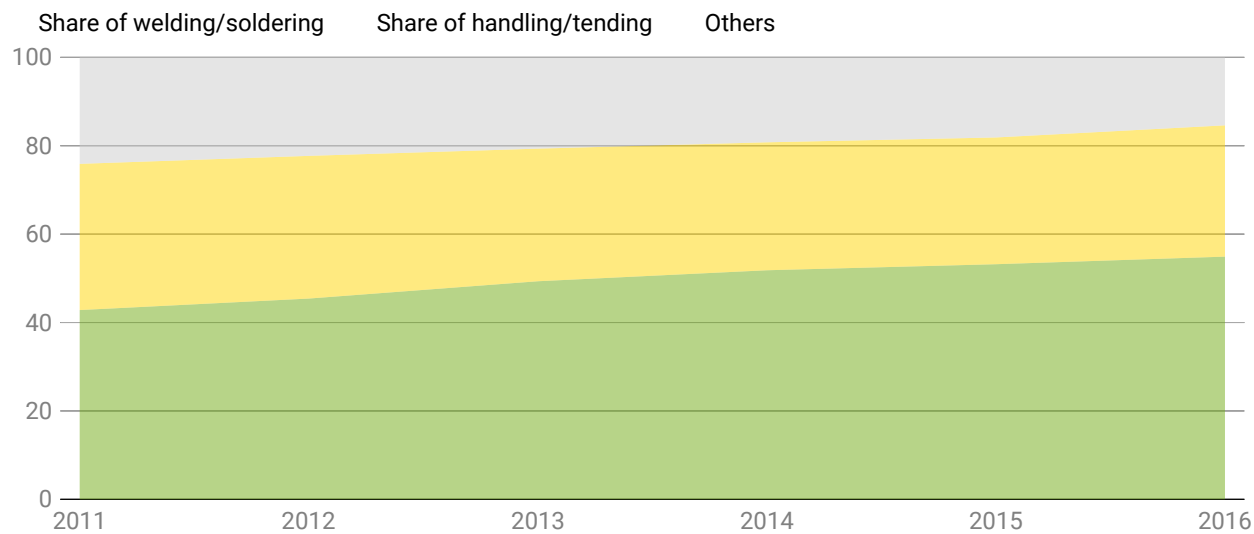


Source: 'Robot apocalypse: does it matter for India's manufacturing industry?', Sunil Mani, CDS WP Dec 2017; International Federation of Robotics 2017 • [Get the data](#) • Created with [Datawrapper](#)

The use of robots in India, as elsewhere, has been largely concentrated in tasks which are very difficult for human workers to do, **Mani's research** suggests. A large chunk of industrial robots deployed in the country have been in the auto industry to perform two very specific tasks—arc and spot welding—which are hazardous for workers to perform. The other task where robots are increasingly being used is that of machine tending or handling, which also involves risks for human workers. Robots performing these two tasks account for 84% of industrial robots deployed in the country today.

# A majority of industrial robots in India are deployed for welding or soldering

The figures depict the (%) share of robots deployed for each task.



Source: 'Robot apocalypse: does it matter for India's manufacturing industry?', Sunil Mani, CDS WP Dec 2017; International Federation of Robotics 2017 • [Get the data](#) • Created with [Datawrapper](#)

India's experience in this regard is no different from that of other countries, Mani notes. Globally, the large-scale use of industrial robots began in the 1970s in tasks related to welding—arc and spot welding—largely in the auto industry. Since then, the only other task where the use of robots has increased significantly is machine handling and tending.

The evidence so far suggests that robots are unlikely to replace all kinds of industrial workers. Rather, specific tasks within certain occupations are more likely to be automated.

Mani's research appears to be in sync with the latest reports on automation and jobs published recently by the World Bank and the Asian Development Bank (ADB). While the World Bank has argued that the **jobs threat from automation** is grossly exaggerated in its draft World Development Report 2019, the ADB in its **Asian Development Outlook 2018** report has pointed out that automation affects only certain tasks in certain industries, and that job losses because of automation can often be offset by rising demand for goods and services which create new jobs.

Nonetheless, the development of artificial intelligence (AI) could lead to new kinds of robots, which are more flexible, and are able to perform tasks that were hitherto considered non-automatable, Mani argues.

Yet, with one of the lowest robot densities in the world, India may have less to worry at the moment compared to other economies.

# India has one of the lowest density of robots in the world

The figures depict the robot density per 10,000 industrial workers in each country in 2015

	Manufacturing	Auto	All other industries
Korea	531	1,218	411
Japan	305	1,216	213
Thailand	52	859	22
China	49	392	24
Malaysia	33	281	22
Brazil	11	125	5
India	10	54	1

Source: 'Robot apocalypse: does it matter for India's manufacturing industry?', Sunil Mani, CDS WP Dec 2017; International Federation of Robotics; Annual Survey of Industries • [Get the data](#) • [Created with Datawrapper](#)

Over the long term though, this could become a worry even for India. If AI-enabled robots are indeed able to replace human workers in a wider variety of tasks, this could put a far greater number of jobs at risk even in countries such as India.

While **economists are still divided** on how many jobs will be lost to automation in the coming years, there is fair amount of agreement that educated and skilled workers will continue to enjoy a premium even in an automated world.

The takeaway for policymakers is clear: invest in high-quality education for all.

**First Published: Tue, May 08 2018. 08 44 AM IST**

TOPICS:

[JOBS](#)

[FACTORY JOBS](#)

[JOBS IN INDIA](#)

[AUTOMATION](#)

[ROBOTS](#)

## You May Like

Sponsored Links by Taboola

### America's First-Daughter Ivanka Trump [Gallery]

Work + Money

### Strategic Management Certification from IIM Rohtak - Why you should apply?

Talentedge | IIM Rohtak

### Parents of LKG to Std 10 Kids are Loving This Box!

Curiositi

## If I don't get 3.5 lacs, I may lose my child due to hole in his heart

Ketto

## Why investing at Dwarka Expressway is better than rest of Gurgaon?

Sobha Limited, Gurgaon

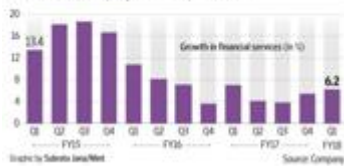
## 13 Amazing Drone Photos [Gallery]

Far & Wide

### EDITOR'S PICKS »

#### THE DRAG OF LEGACY SERVICES

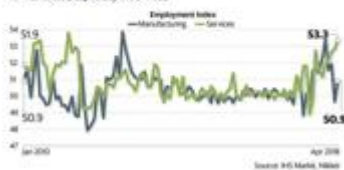
Cognizant's financial services vertical, which contributes 32.3% to revenues, has been growing at a sluggish pace because of pressure on traditional services and a move by large banks to captive centres.



## Cognizant results show Indian IT's growth acceleration theory is sputtering

#### Chart 1 Job growth at last

The Purchasing Managers' Index data shows decent job growth in the formal sector, especially in services.

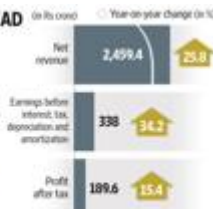


## Long drought in formal sector jobs is ending, PMI data shows

#### POWERING AHEAD

Exide Industries turned in a strong performance on the back of sales traction, beating estimates on the Street.

Exide margin  
13.7%



## Exide Industries recharges sales to stoke profit margins amid high lead prices

---

**Home**

**Lounge**

**Specials**

**Companies**

**Multimedia**

**Technology**

**Opinion**

**Money**

**Contact Us**

**Industry**

**Science**

**About Us**

**Politics**

**Education**

**Advertising**

**Consumer**

**Sports**

**Mint Apps**

**Sitemap**

**Brand Stories**

**DesiMartini**

**Livehindustan**

**Shine**

**Subscribe**

**Hindustantimes**

**Board Results**

**Syndication**

---

[Subscribe to our Newsletter](#)

Enter your email

**Subscribe**

---

[Privacy Policy](#)

[Terms of Use](#)

[Mint Code](#)

[RSS](#)

Copyright © 2018 HT Media Ltd. All Rights Reserved

Get Notifications