

**Post Graduate Diploma in Management, 2019-21**

**Business Innovation & Growth Strategy**

**Sub. Code: DM-451**

Trimester – IV, END-TERM EXAMINATION, September 2020

Time: 2 Hrs 30 Min

Max Marks: 50

Roll No. -----

Instructions:

1. Students are required to write their Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means**. In case of rough work please use answer sheet.

**SECTION A (3X10=30 Marks)**

1. The year is 2030. Autonomous vehicles are beginning to become mainstream in many parts of the world. Identify at least 5 industries/sectors where autonomous vehicles have a systems impact. What might be the nature of the impact? (CILO-1) 10 marks

OR

There is a robot. The robot's name is "X Æ Z-19" and it is a sentient being. And as per Issac Asimov's third law X Æ Z-19 has the right to protect its own existence. X Æ Z-19 was created by you. And X Æ Z-19 has been doing some amazing work. But now, you have come out with a newer and better robot X Æ Z-20. And you have decided to terminate X Æ Z-19. Is there an ethical dilemma here? What is it? What is your response to the ethical dilemma? (CILO-1) 10 marks

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2. You work with a firm that is at the frontier of space exploration. You have been assigned the task of assessing the pattern of diffusion of space tourism. How will you do it? What could be the pitfalls? How will you overcome them? (CILO-3) 10 marks

OR

ABC company is over 5 decades old and has been very successful. The company's CEO realises that things are now changing and the future is likely to be significantly non-linear compared to the linear past that they have come

from. The need is to develop a culture that fosters significantly greater innovation in all aspects of the company's working. You have been hired as a consultant to advise the CEO. What will your advice be?

(CILO-3)

10 marks

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3. You and two other friends have decided to launch an online business in the education space. The basic premise of your venture is to ease the pain experienced by students in preparing for their exams and assessments. How will you apply the network effect in structuring such a venture? Who will be the key players and what will be the relationships between them?

(CILO-2)

10 marks

OR

Aravind Eye Care (AEC) has successfully innovated, developed and deployed a low cost eye care business model targeting base of the pyramid customers in rural India. While AEC's offerings address the extreme affordability challenges of the customers that they serve, they do so without compromising on quality as measured by outcomes, and they compare with the best in the world on various quality parameters. AEC now seeks to grow beyond India. How will you help AEC develop a strategy for international expansion with its innovative approach to eye care? (CILO-2 & 3)

10 marks

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**Case study on next page**

**SECTION B**

**(Case Study)**

**Note: Case Study is Compulsory (20 marks)**

**The Wall Street Journal**

**At Western Firms Like Adidas, Rise of the Machines Is Fuelled by Higher Asia Wages**

Robot shoemakers help bring manufacturing home

By **KATHY CHU** in Hong Kong & **ELLEN EMMERENTZE JERVELL** in Ansbach, Germany

June 9, 2016

The opening of Adidas AG's first factory in Germany in more than 30 years is one of the most visible examples of global brands bringing manufacturing home because of rising labor costs in Asia.

Adidas's 50,000 square-foot factory, in the Bavarian town of Ansbach, will rely on robots and customized automation to produce 500,000 pairs of athletic shoes a year—well below 1% of Adidas's total annual production of 300 million pairs—when full production starts in 2017. Adidas says manufacturing in Germany will help improve the quality of its shoes, cut the time it takes to bring products to market and slash warehouse costs.

“People want flexibility and speed,” said Gerd Manz, Adidas's vice president of technology innovation, adding that similar facilities are planned around the world, including in the U.S. next year. The way brands currently manufacture “stands in the way of that,” he said.

The move to manufacture closer to customers is becoming more popular with companies facing rising labor and transportation costs—coupled with worker shortages—in much of the developing world. In addition, consumers want new styles of shoes and unique electronics and they want them quickly—forcing global brands to rethink how they make their goods.

Nike Inc. said it has begun working with contract manufacturer Flex on technology that will allow it to make shoes closer to its major markets. Apple Inc. has expanded production of its Mac computers in the U.S. And the world's third-largest contract manufacturer, St. Petersburg, Fla.-based Jabil Circuit Inc., says it is turning to automation to prepare for a future where factories are smaller and closer to customers.

“What factories are doing right now is mass production,” said KC Ong, senior vice president of operations at Jabil, a circuit board and electrical-parts maker for companies including Apple and Electrolux SA. “In the future, it will be customization at satellite factories. We are standardizing in our factories so if we have to set up in a lot of different locations, then we can do it.”

The center piece of Jabil's vision for the future: a boxy white platform, up to a meter wide, with robotic arms that can be transported from one factory to another. The platform can be reprogrammed easily to perform different tasks related to assembly of printed circuit boards.

Analysts with expertise in manufacturing say automation is crucial to moving operations closer to home because machines can replace increasingly expensive human labor on some of the most manual and repetitive tasks. Manufacturers also view automation as a way to maintain strict quality standards and boost workplace safety by having robots do the most dangerous jobs.

Adidas said inventory, logistics and supply-chain costs will decrease in the new factory. Retail and sportswear companies typically have to order large quantities of product from manufacturers based on sales projections. If these projections aren't met, the products sit in warehouses and in some cases are eventually marked down at the cash register.

Between 2014 and 2018, industrial robot sales will nearly double to 400,000 units, according to the International Federation of Robotics, driven by labor shortages and rising costs in the developing world.

For now, many Western brands are moving only a small percentage of their production away from developing countries. For instance, while U.S. production of shoes and clothes has risen for six consecutive years, 97% of the clothes and 98% of the footwear sold in the U.S. was imported in 2015, according to the American Apparel & Footwear Association.

Also, the products that Western companies are manufacturing close to home are often premium goods rather than cheap items made at a fraction of the price in developing nations. Proponents of automation say technological advances are making it possible to produce lower-cost goods closer to customers.

“The factory is going to be more customized, and costs won't go up,” said Robert Atkinson, president of the Washington, D.C.-based Information Technology and Innovation Foundation.

Still, for many global brands, this factory is years away because tasks that require dexterity—such as sewing together delicate pieces of apparel—are better done by humans for now, manufacturers say.

Adidas says its German factory, which is run by German manufacturer Oechsler AG, will help it fulfill growing demand for its shoes, but won't reduce its footprint in Asia.

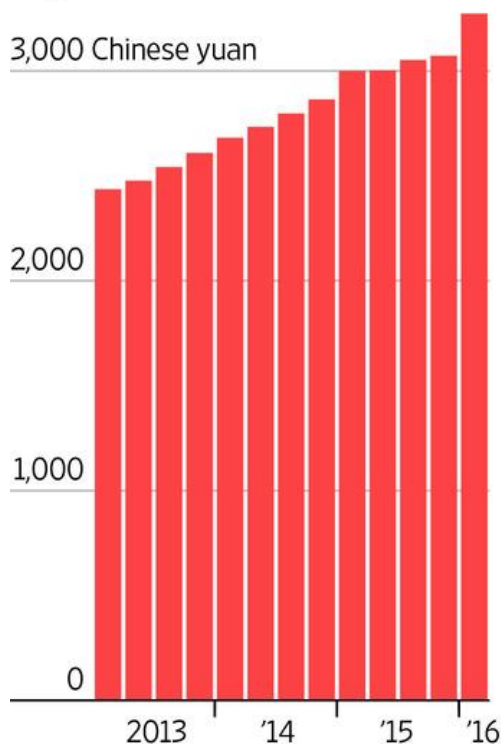
The facility could also cut manufacturing time for a new shoe design to a few hours from several weeks. One machine can do the work formerly done by three machines in making

Adidas's shoe soles, and produce more complicated designs, according to Mr. Manz. That will free up the 160 workers that Adidas's smart factory will employ to concentrate on more complex tasks, such as sewing the sole onto the shoe.

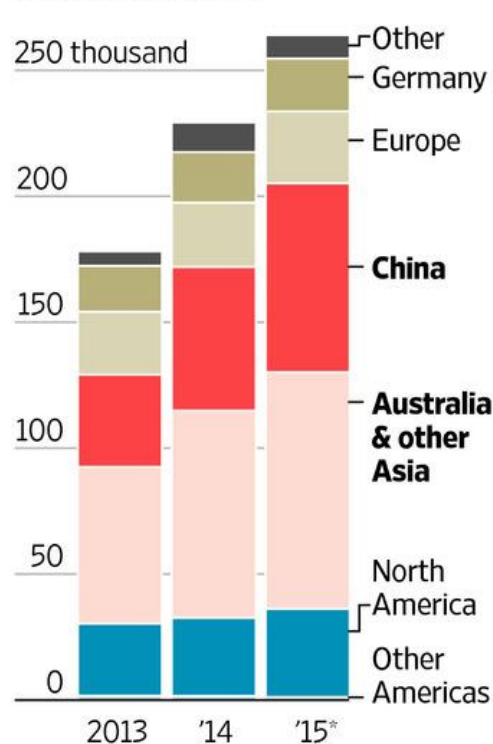
## Hard-Wired Labor

As wages rise in China and other parts of Asia, manufacturers are increasingly turning to robots and automation.

**Average monthly income for migrant workers in China**



**Estimated global shipments of industrial robots**



\*Forecast 3,000 yuan = \$457 Sources: CEIC (wages); International Federation of Robotics  
THE WALL STREET JOURNAL.

### Questions

1. What impact might such advances on account of the Fourth Industrial Revolution have on Indian business organizations? (10 marks)
2. What should be the Innovation Strategy of Indian business organizations in such a situation? (10 marks)

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