



Printing Revolution 2.0

Jo Gutenberg invented the printing press in 15th century Europe, sadly he will never know just how much he changed the world. Thanks to his invention, knowledge and the power that comes with it travelled further and wider than ever before.

Centuries later, this invention has inspired the stuff of dreams! Imagine scrolling through Pinterest, trying to find inspiration for a father's day gift. Then you find the perfect mug. Now imagine that you could have a machine in your house on which you could upload the design of the mug and that machine goes on to "print" the exact mug that you liked. Well, no need to imagine because as we all know by now, three dimensional (3D) printing is here! Here as in not just for industrial purposes but also for home use.

A few decades ago computers could only be seen in government and corporate offices but now they are everywhere. Similarly, 3D printers are entering a phase of mass production in fact there are 3D printers that can print other 3D printers. So how does this affect industrialisation as well as manufacturing, and other business activities?

Well, a rise in unemployment as an immediate consequence is a given whenever the productive capacity of machines improves. Not only are these printers employed in factories making vehicle & machinery components but as alluded to earlier, they can cut the manufacturer and even retailer out of the process altogether e.g. when people start printing consumables at home.

Widening disparities between the haves and have-nots is another foreseeable yet undesirable outcome because these machines, even when mass produced will probably only filter through to middle income households.

Then of course there's the issue of regulating standards and quality assurance. If anybody can set up a 3D printer in their garage, it

will be quite difficult to ensure compliance with standards on certain consumer products. Health and safety, for example, could be at risk if the situation isn't monitored sufficiently.

Another shortcoming is that industrialisation and consequently international trade prospects of developing countries could be adversely affected. For so long the participation of so called third world countries in global value chains was limited to the supply of raw materials. In recent years there has been a significant push for developing countries to gain market access to global markets for their value-added goods. If development follows previous trends, 3D printing will be more widely used in advanced economies in the years to come compared to newly industrialised countries. This scenario could place developing regions like SS-Africa right back at the bottom of the value chain since developed countries would have had head start i.e. an alternative and cheaper source for the manufactured products coming from the developing world.

On the upside new markets will be created for example, these machines need resin, powder, dye and even food among other inputs to be able to print products. Opportunities beyond the supply of inputs also extend to the manufacture and maintenance services of the printers which will still require some human involvement at least until machines become as dexterous as us. One of the highest earning phases of production is design; the widespread use of 3D printers will lead to a higher demand for design services. It just so happens that creativity is one of Africa's most competitive edges.

Product research and development (R&D) costs will also drop especially in the context of creating prototypes of parts and products allowing SMEs to penetrate markets that they had previously been barred from due to high R&D costs. SMEs that provide 3D printing services to other SMEs are another opportunity for the continent; they may not be affordable to the average small business but 3D printing cafés could be the new internet cafés in our communities.

Governments all over the world have a hard time building and maintaining infrastructure. The construction capabilities of 3D printing could very well improve the government's service delivery.

As manufacturing takes place from large scale to micro level production, competition will rise which should result in higher efficiency. Consequently, consumer welfare could improve as people get access to a greater variety of products at more affordable prices. Producers can also focus on niche markets or avoid holding unnecessary stock because they'd have the capacity to customise their merchandise on demand.

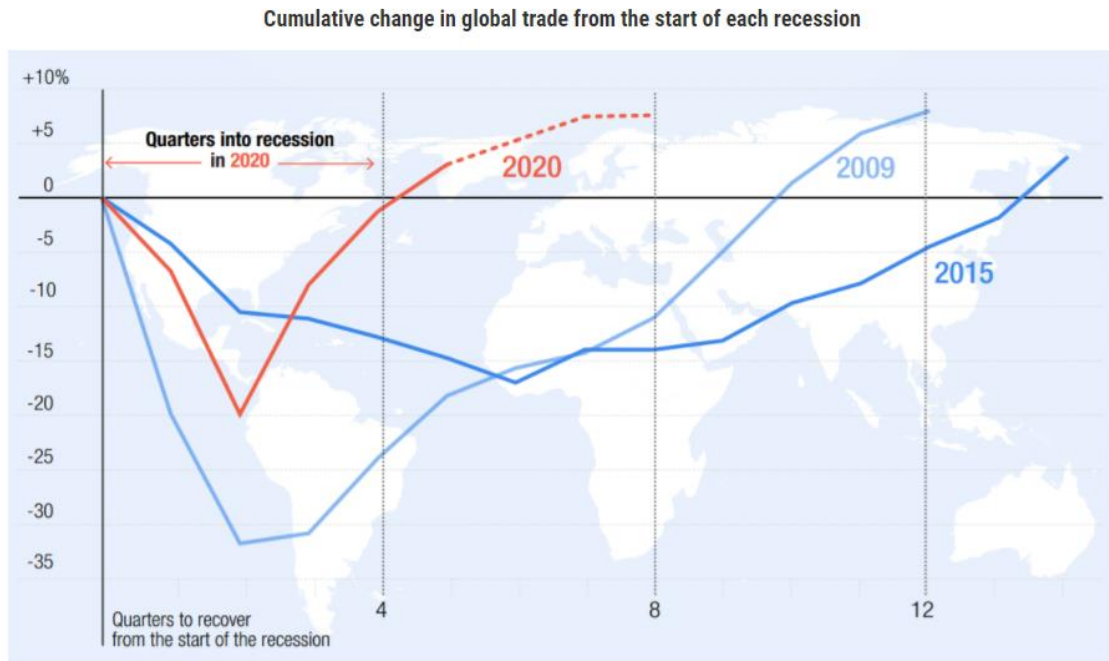
Three dimensional printing is indeed a disruption to business as usual. Naturally there are more negative risks than have been discussed above. However, while it is impossible to stop progress, we can catch up, mitigate those risks and exploit the opportunities (of which there are also many more than have been discussed).

A foundation needs to be laid to make this happen. This foundation requires the rapid transfer of skills, wider electrification, IP

protection, investment in SMEs and an overall progressive approach to policy making.

Vive la printing revolution!

TTT Stats



Source: UNCTAD calculations based on national statistics.

Current Affairs

Third wave sweeps across Africa as Covid vaccine imports dry up
WHO says continent urgently needs more jobs as eight countries report rise of 30% in cases in a week

Gains from Africa's single market must be equitable in order to enrich all nations on the continent

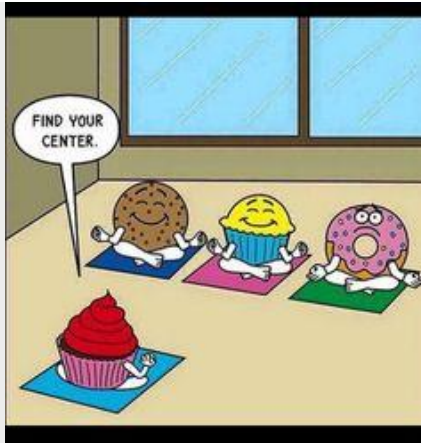
Jargon Junction

Import duty

Import duty is a tax collected on imports and some exports by a country's customs authorities. A good's value will usually dictate the import duty. Depending on the context, import duty may also be known as a customs duty, tariff, import tax or import tariff. - [Investopedia](#)

For the love of laughs...

For the love of life...



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