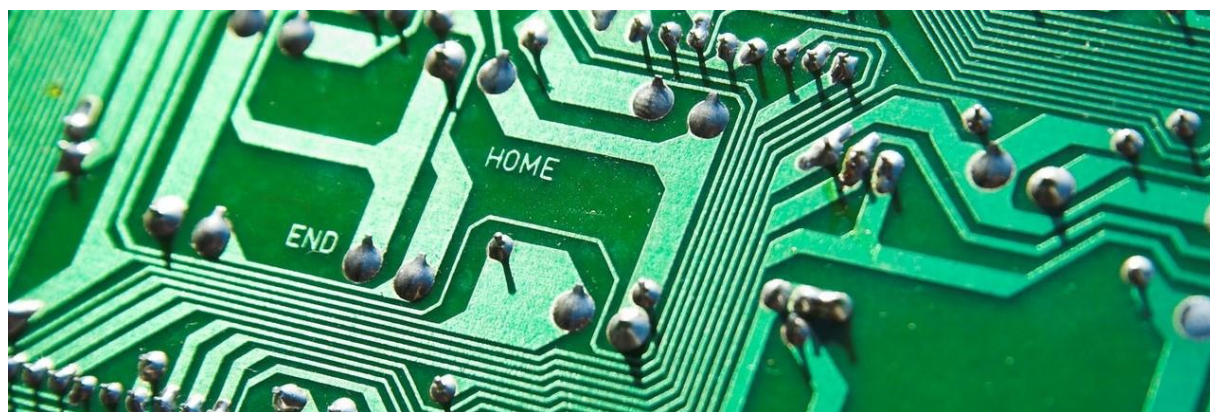


An opportunity to rethink our industry organization worldwide

Or how the Covid-19 could help us not be like the frog in the boiling water!

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Picture source : Pixabay

Huawei recently announced that they would open a manufacturing site in Western Europe, more precisely in France. It is, of course, a great piece of news, but moreover, clearly, the sign that a manufacturing industry could make sense in our old continent, contradicting then decades of offshoring high-volume electronic production in Asia. And the experience we all go through today with the Coronavirus crisis strongly triggers further thoughts in that direction.

Our salary costs? Yes, but it is also about industrial investments we did not want to do

Of course, we have all heard about the main issue, the salary costs. Let's simply keep in mind that manufacturing cost is not only driven by salary charges, but also by the manufacturing efficiency that depends merely on the factory equipment. Unfortunately, no investment in manufacturing equipment was made in Europe, while when visiting a fab in China at Compal, Foxconn, you could systematically see the latest up-to-date SMD or visual inspection machines.

Said in other words, the same 100 Chinese workers, while making 100 units per hour in their Asian factory, would have been able to make only 60 units of the same product in the factories available in Europe. The first condition for re-installing manufacturing in Western Europe is the willingness to invest CAPEX in installing and updating equipment.

Let's look at some real products and figures

In the past years, in large corporations but also with the company I created and ran, Siligence, I have been relying on Asian partners for the manufacturing of the products we sold to our B2B customers such as Orange, Swisscom, Canal+ or BT. I simply then studied again the data I still had on the bills of materials and made a simple analysis of their content in terms of the actual cost of components (and licenses) versus the cost of manufacturing.

For high volume electronics, for which the margin is really under high pressure, the cost of labor (MVA) charged by my suppliers was about 3 to 6% of the total product cost after landing in Europe, custom tax excluded (usually there were none, falling under a 0% tax category). Only considering doubling the MVA would lead to between 6% and 12%, which is not possible. Could other factors compensate, or at least limit, the impact of such increased MVA costs? Let's have a look at all the parameters.

We could save on logistics

The first apparent element is about outbound logistics. Transportation costs are still low enough to make manufacturing in Asia attractive, at least for low-size products, which is usually the case for high-volume electronics. Sea shipment for an STB or a router is generally about US\$ 1.00, including insurance. Considering the last mile by road is negligible, this means we could expect to gain about 1 to 2% of total product cost when locally produced. Interesting, but not enough.

The story is different when making use of air shipments, for which the cost is usually about US\$ 4.00 to US\$ 8.00, which offsets the difference in workforce cost. Air shipment is often used when introducing a new product, as it is the phase of time pressure to respect the product launch date. If we consider a product with 36 months lifetime, out of which 6 months with air shipment, we could estimate the average shipment cost being then US\$ 1.60 instead of US\$ 1.00, as mentioned above for pure sea shipment. Better, but still not enough.

Another point of interest is the cost of capital. Indeed, when shipped by boat, products are immobilized for about 6 weeks. Assuming a yearly interest rate at 3% (which is nowadays quite high), this makes the additional cost of about 0.3% on products when being stored for 6 weeks in a boat (conversely, this was the cost I usually applied when making an offer for a buffer stock of products installed in Europe).

Today logistic costs are cheap enough to manufacture offshore, but...

Altogether (but let's be careful when talking about relative cost – simple mathematical rule tells us that adding fraction is sometimes a wrong way to make calculation) we could reach a 2% gain in terms of outbound logistic costs when manufacturing locally. Not enough, but not so bad as it starts being visible on the bottom line.

What's about the remaining % of the additional cost? Well, we could expect that the use of more and more automated processes in component mounting, of new solutions (for instance, AI-

based) for quality control and robotics for goods movement and storage will help to reduce the fraction of the workforce costs in the coming years.

But let's enter now another dimension, beyond pure accounting rules and low headed book-keeping calculation. Let's talk about environmental and social impacts.

... other costs exist that are not (directly) in the business balance sheets

Of course, I will not have the answer here, as making a model, even simplified, to assess the cost of environmental impact and social impact is not possible – at least for my limited modeling capabilities. The quick assessment made above clearly shows that manufacturing in Europe might have a marginal effect of a few %, depending of course on the kind of products considered.

I feel that just a few % of margin weights quite nothing when compared to what is at stake in terms of the environment. As individuals, are we ready to pay a few % more on a router or a simple electronic device to contribute to a better climate? As business managers, are we prepared to lose a fraction of our gross margin to help the same way?

The question is similar in terms of social impact. Reducing the unemployment rate by a few % could help to reduce the social charges. Could we easily compare such social costs with a 2 or 3% margin on manufactured products? I feel that the gap is not so large, and that compensation looks in the same order of magnitude.

Then, combining both environmental and social aspects leads us to another consideration: product lifecycle. Indeed, while products are manufacturing overseas, many of them are being - hopefully - refurbished for being re-used. Many telecom operators do this for their home gateways or set-top boxes, as this is a way to reduce CAPEX but also the environmental impact.

Indeed refurbishing a product must be local. It does not make any sense to export and then re-import products, both for transportation costs but also for custom issues (export and re-import of used products is a nightmare in terms of tracking for VAT). It means that we already have local factories to achieve product refurbishments. Then why couldn't these factories manufacture the brand new products as well, with additional CAPEX? When looking at the total product lifecycle, there should be a way to optimize both CAPEX and the usage of the workforce.

Re-industrializing Europe could make sense in a stability period by monetizing environmental and social impacts

As a first conclusion, it looks like manufacturing in Europe, in times of stability, could still make sense when taking a global picture encompassing environmental and social costs on the equation. But we speak here about stability period, which has not been the case of the past few weeks. It looks like a simple virus might bring us another analysis of our worldwide economy.

Indeed, we simply showed above – though not having a mathematical rigor – that including social and environmental aspects could help to justify having some manufacturing activities in

Europe. The simplest way to fully explain it from a purely economic point of view would be to restore some custom (or green) taxes on the products, as we simply demonstrated that these taxes would be a matter of a few %.

But re-industrializing Europe is an absolute must to be safe in crisis periods

Dame Nature simply used a brand new virus to force us to realize the instability of our system: Europe announced the first budget of 37 billion Euros to help to sustain our economy in front of the impact brought by this virus. Well, I did not do the maths, but I am pretty sure we could translate this in some % of the product margin. Said in other words, any insurance company would then simply tell us that being insured against such a situation would be about the % of our sales. No need to go for installing a custom tax: we simply need to change our accounting rules, and make some mandatory provision in our books when our business depends on offshore manufacturing.

The Covid-19 thus offers us an excellent opportunity to step back and think about our worldwide industrial organization. Indeed, this virus created a real immediate crisis, showing us what could be 20 or 30 years from now the situation with the climate deteriorated as it will be if we do nothing. Could we keep the same fluid and smooth logistics if floods, hurricanes, and storms happened every day? The answer is simply no. The situation will then be similar to the crisis we are currently experiencing if we do not change our system. We need to change our approach along with two axes, one being clearly how our industry is organized worldwide (the other being of course working for the climate).

The Covid-19 can simply allow us not to be the frog in the boiling water! It shows us the situation we shall be in if we do nothing now, forcing us to react while the water temperature is still moderate and before we are boiled.

We must aim at a re-industrialization that remains global while moving locally

Re-installing local manufacturing will make a worldwide economy more robust and will also have a positive environmental and social impact. The solution will not lay in closing borders and isolating regions. Manufacturing will be needed everywhere (including China as its internal market keeps on growing), moving from centralized production towards a sort of edge-manufacturing. The Huawei case shows that investment can come from any place to the benefit of all parties. We are all living on the same planet.