

Toy Association White Paper

Toy Sourcing:

The Next 10 Years, Changes, Challenges & Opportunity!

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"China is no longer the low-cost producer of anything. It's only the pre-existing sunk costs of the industrial plant. I realise that you don't move that industrial plant overnight, but if it's going to die anyway, sooner rather than later." Peter Zeihan, Geopolitical analyst ¹

If we look back a few years, China was very solidly serving as the primary, (and for many companies) only, toy manufacturing hub. Although there were cost inflation pressures, we could nearly always secure sufficient manufacturing capacity, with inventory delivered more or less on time and with reasonably cost-efficient pricing.

Looking further back in time, China's unparalleled growth in toy manufacturing began en masse soon after Deng Xiaoping famously announced that China was 'opening up' to the rest of the world. China at that time was a backward agrarian economy with major poverty issues and with tens of millions of people starving, and therefore China had an abundant cheap labour force keen to find paying work.

Low-cost labour is one of the major elements required for toy manufacturing. The majority of toy products come and go in one year, so there is usually no sense in automating/robotising production, as the investment is not usually amortisable in one year and therefore generally proves to be prohibitively expensive. Toys tend to need quite a few people on the production line, because unlike basic plastic items like Tupperware for example, toys tend to need additional assembly, decoration and packing off most often. So, China's opening up at a time of extreme poverty in the country was a major opportunity for

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¹ https://www.youtube.com/watch?v=UA-jOLF2T4c

the toy industry, as we could access the massive, highly motivated and above all cheap labour pool. Throughout the 1980s, 1990s and even into the noughties Toy production in China grew and grew, peaking somewhere around \$40billion (USD) on an annual basis due to the abundance of cheap labor, which enabled us to keep price points low over time & ensure sales volume growth.

Despite some mostly fairly minor frustrations working with Chinese factories over the years, even the most negatively minded toy people would have to admit that overall, China's factories are efficient, expert and highly experienced – China has been a fantastic partner for the global toy industry. However, toy companies became complacent about China's role supplying cheap toys to the world, presuming that the status quo would remain in place forever more. We built up large Hong Kong and China teams and offices, which created significant organisational and structural inertia, and incentives for Hong Kong based sourcing teams not to properly investigate and consider changing manufacturing location. The vast majority (i.e. 90%, maybe even 95%) of toy production ebbed over to China over the years. Most third-party toy factories closer to home markets closed or changed their business model or industry as a result because they couldn't compete with China's low costs, efficiency and available capacity.

All of which has lead us to today, where we have a toy industry which is still highly reliant on China at a time of economic, social and geopolitical change in China and the broader world. The bottom line here is that the toy business is over dependent on production capacity in a country which no longer offers enough certainty of capacity over the mid-term or low enough pricing to justify the share of toy manufacturing which remains in China today.

In 2020, China's GDP per capita was \$10,500 USD (equivalent) versus a pitiful \$195 USD in 1980. To put that in context, the USA was at \$63,544 in 2020 versus \$12,575 in 1980. China's people now need greater wages to live in modern day Chinese society than they can earn producing \$3 or \$4 goods like most toys. We could delve into great depth of detail on about China's advancement over time, but the point is fairly indisputable - the bottom line is that if you look afresh at China's suitability for being the primary global toy manufacturing hub today, versus where we started, China today is increasingly better suited to building real cars versus toy cars!

The issue of wages for factory workers is closely linked with the problem of factory worker shortages. One of the primary reasons why Chinese toy factories have over time found it harder and harder to bring in enough labour to meet demand is because the traditional model of travelling away from home for long periods of time to live and work in a factory only makes sense if the wages on offer are good enough to allow the workers to send enough money back home to support their families, and with China's manufacturing capability moving up the value chain, there are industries much further up the ladder who can afford to pay higher wages than toy factories can.

There is another dark looming problem with China's labor supply. The birth rate is the lowest it has been for more than 6 decades. China currently has c. 20m too few workers according to analysts estimates, and this issue is only going to get worse over time due to the ticking demographic time bomb. China is currently estimated to have the world's fastest ageing population. The impact of the one child policy has been to ensure that the abundant labour of the 1970s to the 2000s will give way to a massive labor shortage and a significant

population decrease in the 21st century – according to Forbes, China's population is currently on track to drop from c. 1.4bn currently to 732 million in 2100.²

The ultimate reality of this is that at some point, and with a risk of this being sooner rather than later, China's toy factories are going to either go out of business or find something else more expensive to produce. This is a major risk for the toy industry, because right now China's capacity is still critical to ensure sufficient global supply of toys & the majority of toys are still produced in China. At the same time, the other toy production hubs are growing, but not yet ready to take on the bulk of toy production.

The additional risk with focusing toy sourcing on China is geopolitical. There are many potential risks to supply we could conceive. We have seen in Russia that geopolitical risks are not to be taken lightly with Russia's markets effectively closed off from the world and many sections of the Russian economy hit hard by heavy sanctions imposed following their invasion of Ukraine. Relations between the governments of the USA & China are well beyond scope of this White Paper, but it is surely objective fact that the relationship between the two biggest economies in the world is more difficult than it has been in living memory. The reality is of course that the toy business is a long way down the list of strategic concerns for governments, but these are more turbulent times than most of us have experienced, which further supports the case for developing manufacturing sources outside China.

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 $^{^{2} \, \}underline{\text{https://www.forbes.com/sites/stuartanderson/2020/09/03/chinas-population-to-drop-by-half-immigration-helps-us-labor-force/?sh=34ef1d793d65}$

Moving To Alternative Toy Manufacturing Hubs: Realities, Potential, Risks & Opportunities

The major global toy companies have been working on diversifying their supply chains for years, on the basis that they have the biggest production spends, and their required level of capacity can't be developed quickly should a quick transition out of China become necessary. Statements from several major stock market listed toy corporations in the last few years suggest that some major toy companies are already sourcing c. 50% of their inventory from factories outside China.

While the major toy companies have been wrestling with the challenges of developing new suppliers and new production hubs, many companies are yet to seriously embrace the fact that the status quo as we knew it in China has entered a moment in time of considerable change. The reality we need to prepare for is that the future of toy sourcing does not look easier to manage for toy companies. It is going to be harder, riskier, higher maintenance & require more resources and management time to effectively manage going forward.

Moving away from China's 40-year experience, knowledge and supply chain is inevitably going to be painful. Whereas larger corporations have teams of people they can deploy at a managerial level and can trim headcount in one location to build up another, smaller companies don't tend to have the resources to adapt, and so the same people will need to upskill, multi-task and cover greater breadth of geographies, legal frameworks and complexities. Another advantage for larger companies is the growing trend for dual tooling on high volume products, this allows the company to mitigate the risk of supply chain disruption by investing in an extra set of tools in an alternative production location. This might be possible if you have products which sell hundreds of thousands or even millions of

units, but smaller companies selling products in the tens of thousands or less are unlikely to be able to justify this extra expense so easily.

Moving From A Primary Single Hub To Multi-Hub Sourcing

Looking forward, the roles for Sourcing teams are going to include more research-oriented vendor finding alongside portfolio risk analysis. This strategic element will become a more and more important part of the role of Sourcing teams, sitting alongside the traditional negotiation and supplier management roles they have had. Looking back in time before China's rise, the Toy business sourced from multiple hubs including Japan, Taiwan, Hong Kong, maybe Korea and some 'Nearshoring' hubs. So, it's not like this has never happened before, it just hasn't happened in the working lifetimes of most people in the toy business today.

Today, Toy production exists and is growing in Vietnam, India, Indonesia, Thailand, other
Asian countries and to a degree closer to home. The potential and prospective growth for
each hub must be investigated on a case-by-case basis:

VIETNAM

Vietnam is the second biggest toy manufacturing hub currently, with more than one hundred export level toy factories. To put those 100+ factories in context, it is estimated that China has between 5,000 to 10,000 toy factories, which should make clear how big the challenge is here & just how much progress still needs to be made in developing production capacity outside of China.

One notable feature of Vietnam's toy factories is that they are predominantly owned by Chinese businesspeople. As China's competitiveness for toy manufacturing has diminished over time, many Chinese factory owners set up new plants in Vietnam (choosing Vietnam because it is culturally and geographically closer than some of the other options). This has arguably been a good thing AND a bad thing for the toy industry, because all that expertise of production methods and processes is being retained and used for the benefit of the toy industry. The challenge though is that much of the supply chain and management teams remain the same, which does not entirely deliver a 'China free' alternative solution. The potential risks of this situation were made clear during COVID-19 lockdowns in China when the factories in Vietnam were sometimes able to open but did not have all the components required to run full production because they were struggling to get shipments from locked down Chinese factories and ports.

The other consideration with Vietnam is the limited scope for expansion in a country with a population of 97m and a workforce of 56 million, versus China with around 780 million workers out of a total population of around 1.4 billion. Vietnam as a consumer product manufacturing hub has great strengths and offers good opportunities for the toy industry to switch production from China with less disruption than might be found in other alternative hubs. However, the production capacity potential in Vietnam is significantly more limited, and as such, Vietnam is unlikely to become THE primary hub in the way China has been. That means that even though Vietnam may work fairly smoothly, and it may be easier to deal with the same factory owners as we always have (just in a different location), Vietnam is only going to be part of the solution for the toy industry.

INDIA

India is the only country in the world with massive potential for capacity uplift for toy manufacturing. Although many toy companies report sourcing from India has its challenges, the reality is that of all the countries in the world, only India can eventually match China's toy production capacity and available cheap workforce. In addition, of all the alternative toy manufacturing hubs, India is the only hub with the existing latent industrial capacity and ambition to develop full local supply chain for toys, which as referred to in the analysis of Vietnam above is a major consideration for true strategic supply chain diversification.

India is going to take time to develop into a super-efficient toy production hub - it is frankly not realistic to expect factories who have been doing this just a couple of years to compete with the efficiency of those who have been in the game for decades and who have established supply chains in full depth and breadth. Whereas Vietnamese toy factories have benefited from a transfer in management expertise and toy specific production know how, Indian toy factories have generally had to figure it all out from scratch. Companies who go to India expecting a higher level of 'hand-holding' and supplier oversight will typically benefit from some cost savings and potential to rapidly increase available capacity, albeit with some extra management grind and teething troubles.

India has a massive labor advantage versus any other country in the world – India has a massive, young, cheap labor force with nowhere enough jobs to go around. With just under 1.4 billion people and a workforce of more than 400 million, India is the only country where there will be a massive excess of labor available at low cost for at least the next decade. If China's retreat from toy manufacturing were to suddenly accelerate, then the toy industry

could desperately need access to India's cheap labor pool to ensure sufficient production capacity going forward.

INDONESIA

Indonesia is generally speaking becoming the second-choice hub for Chinese owned factory groups to set up a plant outside of China. Indonesia has some obvious advantages – with a population of c. 274 million people and a workforce of 144 million. Indonesia also has comparatively low labor costs with factory line worker wages in the vicinity of \$300 USD per month (less in more remote areas of Indonesia). Indonesia then has two of the major components for toy production – high labor availability and low wages. There are challenges however, with smaller ports to consider (versus China obviously, but even versus India). Historically Indonesia was seen as being potentially politically unstable, although that situation seems to be evolving. The country is also somewhat prone to natural disasters with around 500 tornadoes each year for example, with the country sitting on seismic fault lines and with limited capability to deal with disasters – this does suggest some risk of supply chain disruption. In summary, Indonesia does have a limited number of good toy factories, and more factories are being established and/or extended every year. Indonesia also offers the opportunity to work with very experienced Chinese factory owners and management teams. Indonesia can be expected to grow in importance over the coming years therefore.

OTHER ASIA

There is also some limited toy manufacturing to be found in other countries, including

Thailand, Malaysia & The Philippines. In general, these countries lack sufficient industrial

capacity, infrastructure and supply chain support to take on a major role. These other Asian

countries can still be expected to grow, but there is no other obvious major candidate to take on a major proportion of the toy production currently in China.

IS NEARSHORING THE BIG SOLUTION WE ARE LOOKING FOR?

On the face of it, it is logical to want more manufacturing to be as close to home as possible. There is a clear argument for the social and strategic value of bringing manufacturing back home in order to support local jobs and to protect the U.S. economy. The challenge with manufacturing at home though is higher labor rates versus Asia, which in turn would result in significantly higher retail prices. Mass market retailers have put so much pressure on keeping prices low over time on the basis of decades of cheap supply from China, that there would need to be an entire pricing culture change to allow for a significant resurgence in Nearshoring for toys. It seems unlikely that retailers and consumers would tolerate such price rises.

As a result, while Nearshoring is likely to increase, at least over the short term, it will not reach the scale required to avoid the need for Asian production hubs. Historically, the local production which has been retained has been either a). very large items such as rideons, playhouses and other big items which would be prohibitively expensive to ship or b). items where there is less labor required i.e. board games which are largely automated printing processes with a limited labor requirement.

In the past few years, due to the massive increase in shipping container costs and other factors, there has been an uplift in both outsourced toy production and toy companies themselves building or expanding factories south of the border in Mexico. Mexico is likely to play an increasingly important role in toy manufacturing going forward, with a population of

nearly 130 million and an available workforce of around 57 million, and with a comparatively young population, Mexico has the labor pool to support toy manufacturing at a lower cost than is possible in the USA. Unskilled factory workers in Mexico can expect to earn in the region of \$700 to 900 USD per month, which is obviously significantly higher than Asia, but also considerably less than in the U.S. Mexico's other clear advantage versus other toy production hubs is proximity to market, with most locations in the USA reachable by truck in a few days. In recent years we have seen several major toy companies setting up new factories or extending existing factories in Mexico, and we can expect to see that trend gathering pace in the coming years.

Looking over the pond into Europe, traditionally Eastern Europe offered some options for plastic manufacturing. This has been significantly disrupted by the war in Ukraine though, as factories in other Eastern European countries tended to import labor from Ukraine due to very low labor costs there. The other challenge with Eastern Europe is that most countries have EU membership which is likely to see wages rise substantially over time, eroding the labor cost advantage in an ongoing structured way. At this point, therefore, Mexico looks likely to grow capacity for toy production to support the North American toy market more than is likely in Europe or near to Europe thus far.

In summary on Nearshoring – we are likely to see an increase overall across the next decade, especially in Mexico and especially from toy companies willing to setup & manage their own factories. But this ongoing ramp up starts from a fairly low base and in the short term is not going to replace the need for access to Asia's much cheaper labor pool and available workforce and industrial capacity.

Toy Manufacturing In The Long Term

For right now, the transition of toy manufacturing out of China is well underway, although there is a long way to go yet in this process, and we should remember that we are still in the early stages of this transition. Currently most toy companies can still expect to be sourcing the majority of their inventory from China, but we need to be preparing for and managing the ongoing transition with diligence, as it is difficult to predict and adapt to the pace of change. As Winston Churchill said: "This is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning!"

Longer term, there are two key technologies currently advancing at great pace which could completely revolutionise toy manufacturing – that being artificial intelligence and robotisation. Currently the available robots are limited in dexterity and flexibility for production tasks, this is a significant limitation in an industry like the toy business where the majority of products come and go in a year. This makes robots less viable than in other industries like automotive where the products remain essentially the same for years and for millions of units.

Looking into the future though, if robots are developed with much greater dexterity and therefore flexibility in potential production tasks, alongside much greater intelligence, then it is completely conceivable that we could look to nearshore on a much greater basis, because suddenly we wouldn't need extensive human labor to produce toys anymore. At this point we could have a production building on site in a new unit next to our warehouse, just like many old-time toy companies had! This would greatly speed up the supply chains, reduce the annual cashflow marathon of ordering stock from afar and waiting for it to arrive

before we can sell it. Looking at the current rate of advancement though, it is possible that most people currently working in the toy business will be retired before that vision can become a reality. In the meantime, we should expect a short term filled with supply chain challenges, risks BUT also with opportunities if we are bold and diligent enough to embrace the ongoing transition.

IN CONCLUSION - HOPE SPRINGS ETERNAL!

In conclusion, the reality is that this process of toy production moving away from China is most likely to take time, maybe a decade, during which period we may not see any major milestone changes versus the slow ebbing drip of change with a few less suppliers every year in China, and a few more elsewhere. But if we want to look at the biggest current risk to the toy business, then it is the potential for sudden, significant drops in production capacity in China. The key to managing the ongoing and forthcoming change in this space is to be prepared. We should be able to keep sourcing a significant proportion of our toys from China for the next few years at least, and probably beyond, but that shouldn't be seen as an excuse for 'an ostrich head in the sand' approach to alternative sourcing solutions in the meantime.

The reality of how factories go out of business is chaotic and sudden – they don't phone their customers to inform them that: "We may be going out of business in 2 to 3 years because things are getting tight and we are struggling to make enough margin to continue, so perhaps you should start to think about transferring production elsewhere." Instead, they will remain seemingly hungry for business, even desperate for business until the day they shut the factory gates, leaving your tooling trapped inside at the behest of a distant landlord

you don't know. That isn't a wild scenario, many toy companies have had this happen to them, and it can cause significant commercial damage.

Looking forward, the companies that manage this supply chain risk most effectively will likely come through this ongoing time of transition as the most successful overall. We certainly have interesting but challenging times ahead.

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