

# »» Digitalisation in the textile, apparel and footwear industry – a threat to industrialising and developing market economies?

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The textile, apparel and footwear industry has played an important role in the rise of Southeast Asian emerging and developing economies. Seventy per cent of global exports come from this region. Digitalising production may put emerging and developing market economies at risk of losing their cost advantage. In order to reduce the cost of production, the industry is currently working on shifting production to countries with low labour costs. Digitalising the production of garments, textiles and footwear is aimed not so much at reducing costs but on making production faster and more customer-focused. The risk of moving jobs and possibly reshoring production to industrialised countries should therefore be rather low in the short and medium term.

Time and again, debates about the digitalisation of the working world address the possibility of reshoring production from emerging and developing countries. This scenario is based on the assumption that digitalisation enables complex and labour-intensive activities, such as sewing textiles and garments, to be automated as well. Losing this industry would significantly weaken the economies of emerging and developing countries. For many countries, especially in Asia, this sector is the backbone of industrial production, an important source of foreign currency and a major employer of a still growing population (Table).

**Table: Economic importance of the textile, apparel and footwear industry in 2016**

In per cent

Country	Share of total exports	Share of manufacturing	Share of manufacturing employment
Ethiopia	27	10	./.
Bangladesh	94	51	52
China	14	9	12
Cambodia	73	16	59
Myanmar	22	./.	56
Vietnam	23	13	39

Sources: UNCTAD; World Bank, ILO

The high economic importance of this sector for developing and emerging economies makes it pertinent to address its growth prospects in order to arrive at conclusions on possible risks to the future development of these economies. At the

same time, industrialised countries – particularly their policy-makers – are hoping to benefit from the digitalisation of production and bring back the lost jobs. Whether digitalisation does in fact threaten jobs and value creation in emerging and developing countries depends on how labour costs develop and how much it costs to set up digital production structures.

## Digitalising production is a challenge

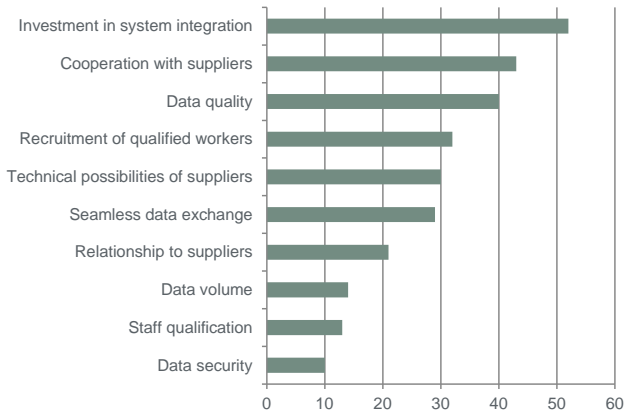
According to a McKinsey survey among chief procurement officers of the textile, apparel and footwear industry, the sector is grappling with a number of challenges in digitalising production (Figure 1), especially investment in system integration and cooperation with suppliers (four in ten mentions). Because of the very high division of labour in production, relations with suppliers play an important role. Production is globally organised and based on cooperation with small and medium-sized firms in emerging and developing countries. This particular form of organisation, for its part, has an impact on the ways in which production can be digitalised.

The willingness and, most of all, the possibilities of small and medium-sized enterprises in emerging and developing countries to digitalise their production influences the digitalisation ambitions of the global textile, apparel and footwear industry. In order for the benefits of digital production to fully materialise, the important elements of the global value chain need to be digitalised.

One of the reasons for this is that the labour markets in many countries of Europe and in the US are swept clean of workers as a result of the robust business cycle. A skills shortage is already becoming apparent at some locations and in certain sectors. Attracting workers with digital skills would thus involve high recruitment and labour costs. The chief procurement officers surveyed by McKinsey therefore also mentioned the training of in-house staff and the hiring of new workers as a barrier to digitalisation and shifting production onshore. This circumstance should also be taken into account with a view to the political debates on 'bringing back lost jobs'. The jobs that were lost in industrialised countries in the 1970s in the course of the new international division of labour are lost forever. A digitalised production of textiles and shoes would place entirely different demands on workers. Reshoring production would therefore have very little impact on the further reduction of unemployment in industrialised countries.

**Figure 1: Barriers to digitalisation: What are the three main barriers to the digitalisation of production?**

In per cent, multiple responses were possible



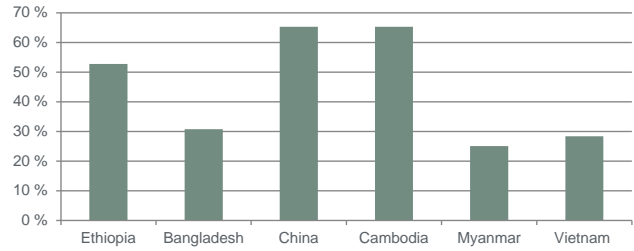
Source: McKinsey Apparel CPO Survey 2017

**No wage pressure in emerging and developing countries**

The chief procurement officers do not regard the labour costs in emerging and developing countries as problematic, however, even though the wage costs have risen in the past years, particularly in Asia, a powerhouse of the industry. Many countries, especially China, have introduced or raised minimum wages. For the development of wage costs, however, it makes a difference to international firms whether the increase is regarded in nominal or real terms. The devaluation of local currencies has allowed the increased labour costs to be partly offset. In this way, Bangladesh, Malaysia and the Philippines were able to reduce their labour costs compared with other countries (ILO, 2016). There is another aspect, however, that also slows the increase in wage levels in many emerging and developing countries. Minimum wages are not always adhered to, as the ILO observes critically. Thus, introducing a minimum wage or increasing it does not automatically raise the cost of labour as a factor of production. Besides, minimum wages in Asia are at different levels. The highest wages are in countries that have had textile, apparel and footwear production for a longer period of time. Labour costs are particularly low in countries that have only recently opened up to the global market. These include the Southeast Asian countries Cambodia, Myanmar and Vietnam. However, labour costs remain low in Bangladesh, too, an established production location. Outside Asia, Ethiopia is currently gaining a foothold as a new location for the textile, apparel and footwear industry. Chinese and Turkish companies in particular are making use of the favourable labour costs of this location in an attempt to maintain steady global production costs and market shares. In line with this development, the countries named here have increased their exports, with Bangladesh, Myanmar and the Vietnam achieving the highest export growth (Figure 2). Chinese exports have grown strongly, too. This is due, among other factors, to the different (minimum) wage levels within the country. The interior regions have a lower wage level than the coastal regions, enabling them to attract investment.

**Figure 2: Export growth of the textile, apparel and footwear industry in Southeast Asia 2007–2015**

In per cent

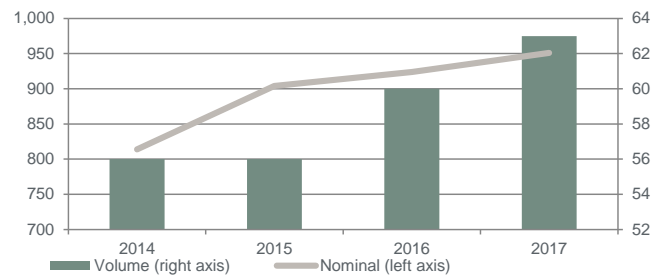


Source: WTO

The search for new production locations with low labour costs will continue in 2018 as well, according to Just-Style, a think tank of the US textile and apparel industry. In an industry-wide survey, 80% of the surveyed companies responded that they were looking for locations within Asia in order to slow the increase in production costs, stating that Bangladesh and Vietnam benefited most from this move<sup>i</sup>. Interestingly, digitalisation of production as a measure for lowering production costs did not play a major role. Given the responses from the industry survey, it is not surprising that textile, apparel and shoe imports from emerging and developing market economies into the European Union are growing in volume and value (Figure 3). Approx. 80% of these imports come from Southeast Asia, that is, Bangladesh, Cambodia and Vietnam (Eurostat). This trend will continue in 2018 as well – despite the fact that the digitalisation of production is beginning.

**Figure 3: Textile and apparel imports into the EU**

In EUR billion and kg million



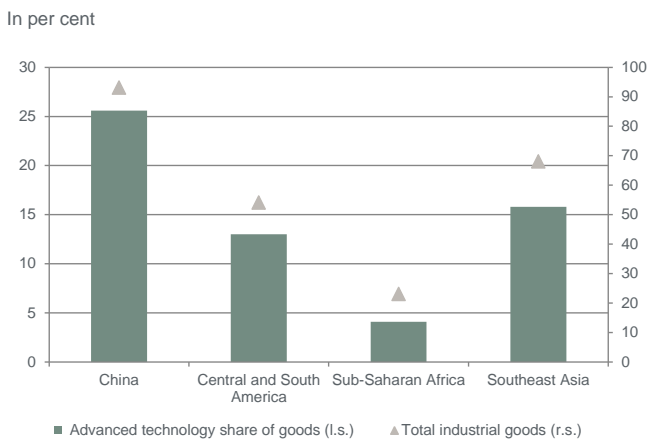
Source: Eurostat

<sup>i</sup> Barrie (2017) State of Sourcing 2018 – Just-Style survey results. Available at: [https://www.just-style.com/analysis/state-of-sourcing-2018-survey-supply-chain-shifts\\_id132448.aspx](https://www.just-style.com/analysis/state-of-sourcing-2018-survey-supply-chain-shifts_id132448.aspx). Last accessed on 23 April 2018.

**Broad digitalisation is a theme for other sectors**

The use of 3D printers has so far been limited to the production of prototypes and the manufacturing of very small quantities. However, this year (2018) Adidas plans to produce around 100,000 shoes with the aid of a 3D printer, out of 300 million pairs of shoes the company aims to produce this year. This is a very small proportion that will hardly impact on the company’s production structure and its geographic division of labour. In introducing digital production, an industry-wide goal is to speed up and improve the development of prototypes and models and to individualise products. This is also confirmed by the Just-Style industry survey (see endnote i). The companies’ strategies do not yet involve the digitalisation of mass production. The digital production of models and prototypes is designed to merely improve the inputs of analogue mass production. One industry consultant does not expect digital production to grow by a significant degree before the year 2022, and only in the automotive, electronics, medical technology and engineering industries. Here, however, the share of exports of emerging and developing economies is low – with the exception of China (Figure 4). The impacts of digitalisation on value creation and jobs in emerging and developing countries should be minimal at first.

**Figure 4: Emerging and developing countries’ export shares of industrial goods in 2016**



Source: World Bank

UNCTAD (2017) argues along the same lines and sees the danger of job losses to digitalisation in the medium term rather in industrialised countries and in countries where automation of production is already very far advanced. These include, in particular, the Asian tiger states of the first generation (Republic of Korea, Taiwan, Hong Kong and Singapore) and China. Many poorer emerging and developing countries do not belong to this ‘risk group’. Thus, the labour cost advantage involved in producing labour-intensive products, such as sewing textiles and footwear, remains despite the new possibilities provided by digital production.

**Nearshoring instead of digitalisation**

A continuing important trend is the manufacture of trend fashion items with a short shelf life in the proximity of major sales markets. As part of this development, nearshoring – the expansion of production in the vicinity of major markets (Europe and US) – will grow. Production locations in Turkey, North Africa, Eastern Europe and Central America should continue to gain importance in this development. Outside Europe and the US, emerging and developing countries, especially China, constitute an important sales market for these products because of their growing middle class. Locations that have favourable labour costs and are close to the Chinese market will therefore continue to gain importance in the years ahead as well, even if the labour costs in these countries should increase further. Production there is relatively cost-effective and the shipping of trend fashion is easy to organise. Experience from Mexico, Turkey and Southeast Europe illustrates how these locations can maintain and even expand their textile and apparel industry despite relatively high labour costs because of their proximity to major markets.

**Summary**

To be able to assess the risks of digitalisation to the economic development of emerging and developing countries, it is useful to explore the developments in the textile, apparel and footwear industry as an example because these industries are of high economic importance to many countries, especially the poorer ones. The analysis has shown that companies regard the costs of digitalisation and labour in industrialised countries as very high because of the very tight labour markets. This still deters many firms from advancing the digitalisation of (mass) production and bringing it back to industrialised countries. In order to reduce costs, many businesses are thinking about expanding production in Asia – despite the introduction or increase of minimum wages in the region. In addition to the search for low-wage locations, a further trend in the industry is what is referred to as nearshoring – expanding production capacities in the vicinity of major markets. This also benefits emerging and developing countries in Southeast Asia owing to their proximity to the Chinese market. This development ties part of the production to emerging and developing countries. This should be kept in mind in the debate on digitalisation and the reshoring of production to industrialised countries. It can therefore be observed that, in the short to medium term, there is a low risk of production in the textile, apparel and footwear industry moving away from emerging and developing countries. However, it cannot be ruled out that price and competitive pressure and the search for new and more cost-effective production locations may lead to the migration of jobs to other emerging and developing countries. There are signs that this is already happening. ■