Production Digital Textile Market

December 17, 2018

The Production Digital Textile Print Market – History to Date

Digital textile print systems vendors sold their first digital printers of textiles back around 2001. In the ensuing 17 years they then went to where most textile printing was done at the time – China – and sold digital R2R systems to Chinese printers who wanted to be able to differentiate their offerings and offer faster response. As Chinese labor costs rose and textile printing spread beyond China's borders to other Asian countries in particular, the sales reach of digital vendors was extended accordingly.

Then as the Fast Fashion high-cycling female apparel market began to take off in Europe digital print vendors sold more systems within Italy and other European countries to those analog textile printers who still survived in Europe on the back of the high-luxury design markets in Italy and some other EU countries. Digital in this case supported these fast fashion cycles sometimes as short as 3 weeks, and was able to showcase its best value proposition in fast response within a fashion-driven consumer market. However, as the Fast Fashion market grew, print capacity was strained in the limited EU print market and Turkish printers next to Europe became more important as digital customers in support of the growth of Fast Fashion. North America with almost no remaining print capacity was in a worse position.

To bring the picture right up to date, lack of print plant capacity has probably slowed Fast Fashion digital print markets, while at the same time low end dye sub print has come to make up a part of the apparel offering for Fast Fashion and associated markets at very low systems acquisition costs (1/10), and is now to an extent competitive to higher specification R2R systems through separate channel leverage in circumstances of an analog print channel bottleneck. At the same time ink costs combined with the economics of digital production print, which do not have to include plate production and machine down time between print runs, have combined to make digital single pass very high-volume systems look competitive to Rotary Screen, which still commands 90+% of all textile print (mostly in Asia). But there are now also perceived headwinds from Chinese low-cost single pass systems competitors, even though their systems are mostly not the technical equivalent of Western systems.

So with respect to single pass systems there is some opportunity in renewing and extending the existing installed base of single pass or high-productive serial systems in or near Europe mostly, addressing the Fast Fashion market there on the basis of providing a next generation system with improved technology and economics in favor of a fast response value proposition. But the larger single pass opportunity is mostly in Asia around substituting more or less gradually Rotary Screen analog textile print systems.

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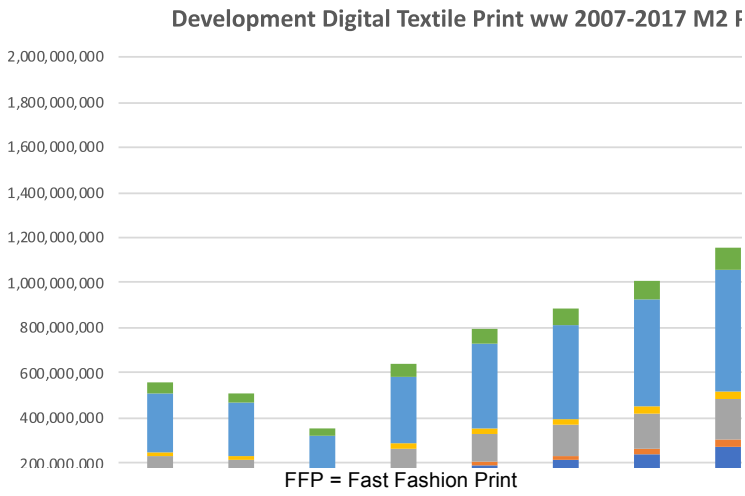

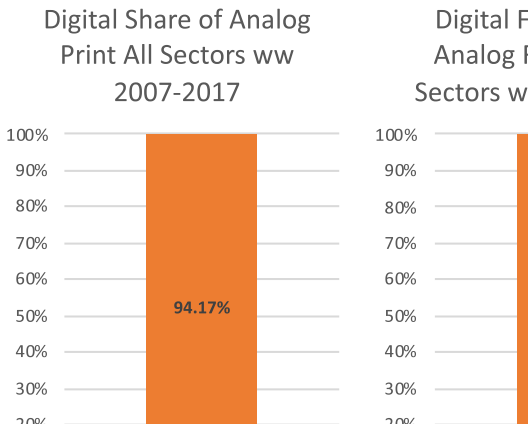

Size of the Rotary Screen Textile Print Market

Based roughly on an average Rotary Screen system annual capacity at about 5M M2, and assuming a market for printed textiles at about 29B M2 annually, and making allowances for other technologies

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Comment: In our estimates we consider 5-6M lm width 1,5

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and variables this would suggest to us that there are between 3,000 and 4,000 Rotary Screen systems worldwide printing textiles. That probably translates to about 1,000-1,500 sites. We also think that about 4-5 Rotary Screen systems are sold new into the ww market each month (say 50/year).

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Comment: I understand the math behind, unfortunately don't have data on this but I know that in Turkey the IB should be approx. 500 units.

Economic Opportunity for Rotary Screen/Digital Substitution

First, a new rotary screen system with say 6 colors would cost significantly under $1M, and many systems are resold on the second-hand market as well, which has a further effect in depressing economic systems value. Against that a new single pass digital print system would cost easily well over $2M at its true economic valuation, and to that a significant monthly service charge could develop at levels of several thousands of dollars a month, if we follow the infrastructural lesson of non-textile single pass Inkjet markets elsewhere. On top of that issues of variably-available financing are also relevant, especially given the diversity of countries and financial conditions now governing the operation of production textile printing markets.

With respect to running costs between rotary screen and digital, independently of issues around acquisition cost, the picture is more favorable, and it is what has driven such interest in single pass systems in recent times. This is to a great extent due to the fact that the digital print market has been allowed largely to nurture an open competitive ink market, with the result that ink prices for digital print have approached levels not so far from those of already-low-cost analog inks. Combine that phenomenon with the lower process costs of digital single pass print where plates do not have to be made with associated direct and time costs, and where presses do not have to be stopped to change the print image with the time and labor costs that involves, and you have what many people on the analog side see as a tempting convergence of cost. Anyway, that's the largely untested theory.

It is difficult to obtain certified data around a true cost comparison but at minimum as an illustration of opinion by a major market participant in the digital textile market with their own single pass systems (SPG Stork, NL) we came across a quantification in Apparel Views magazine. We cannot vouch for the accuracy of the data ourselves, but the source is credible and the data shows some of the current assumptions being made about Rotary Screen/Digital cost comparisons by other people beyond just Stork. Stork is one of the major suppliers of Rotary Screen systems as well, by the way. The data offered shows digital costs getting close (say around 20% more expensive) to Rotary Screen costs at under 1,000 linear meters (1.8M w). This is a pure economic cost comparison and does not take account of the less directly tangible but highly valuable benefits of digital around fast response, workflow automation, streamlined product customization etc.

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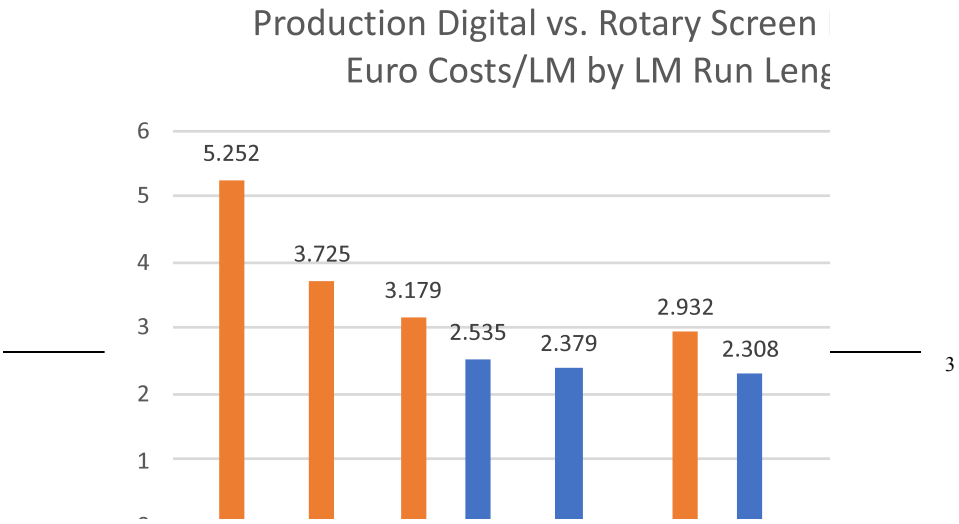

Data courtesy of SPG Stork, NL

The first barrier systems like Reggiani's Bolt will have to overcome is acquisition costs within the context of variably available credit in Asian countries. Furthermore, it is high risk capital for expenditure on new technology. It probably needs to be assumed that the first 2-3 years will only see the larger, more progressive or richer printers take the plunge. However those top companies will be able to pay enough to sustain the early market in the next 2-3 years in our view.

But the issues around adoption of digital single pass technology in some degree of substitution of rotary screen are not just about economics. In other single pass markets like high speed continuous feed inkjet markets for book and transaction printing, or in markets for corrugated or label production print – all of which are now established single pass production markets – there has been a correlation between success and high levels of service and support. This is because sustaining predictable uptime in single pass is much harder than for a serial print system. Single pass is much less forgiving for a number of reasons among which, once a nozzle fails you cannot just substitute it with the next one coming along on the moving carriage. You can deal with it in single pass, but it is significantly more complex.

Providing such high levels of service and support is also a lot more difficult and expensive in Asia than in Europe or the US. Of course, Reggiani for example has years of experience in Asia and is as well organized as anyone to arrange for such levels of support. But it will be a step up even for them and will call for selective applications of new resources. For all these reasons early single pass sales into the new market of rotary screen substitution will probably be relatively restrained for the near future, and that is reasonable with a major step in technology development.

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