

The Perfect Latte In 91 Seconds



The Productivity Debate in 2015

The fastest growing economy in the G7, yet productivity running at 5% less than the G7 average. That's the UK in 2015. A contradiction in creating jobs, attracting foreign inward investment, restoring strength in financial services, but with a workforce that is less efficient than many of its closest allies. The productivity debate is one that has raged significantly in the media over the past year and there is little evidence to suggest that the current trend is in danger of changing.

But what lies at the heart of the productivity debate? A lack of management focus in business process efficiency, cost savings and resource optimisation? A change in people's work ethic, their commitment to 9-5, 5 days a week and the continued prevalence of social media as a distraction to the daily grind? It is undoubtedly a combination of factors. So where better to start looking at the challenges, than at your morning caffeine fix; your two shot, skinny latte...

The Latte Case Study

It may not look much; but that coffee that gets you through the morning (or at least part of it), is created using a tried and tested method that has been refined carefully over hundreds of years. Love, care and attention is invested in crafting that perfect latte. If you didn't already know, that process typically looks like this:



Now this is the purist approach to making a latte – one that you'll probably see at your local independent coffee house, but perhaps not one you'll find in your high street chain (there, some chains have just perfected the art of 'pressing a button'). It's a process that's outcome is dependent upon three key variables; the skill and craft of your Barista, the quality of the ingredients and the use of technology. But how long does that process take and how does this all link back to productivity? Our research study led us to a local independent coffee shop, where we were able to map the process of making a latte and look at how different Baristas followed that process and the impact upon timings (and productivity) as a result: The following shows our analysis of each Baristas approach to making that perfect latte, in comparison with the model defined above:

Barista	Steps	Time
Barista A	5 6 2 4 8 9 10 11 12 14 13 15	114 Seconds
Barista B	16 2 3 5 6 4 1 7 8 9 10 11 12 13 14 15	150 Seconds
Barista C	2 3 1 4 6 8 9 10 11 12 14 15 16	91 Seconds
Barista D	5 6 2 3 4 1 8 9 8 10 11 14 16 15 13	122 Seconds
Barista E	2 3 4 5 6 7 8 9 10 13 11 14 15 16	134 Seconds
Barista F	5 6 2 3 4 1 8 9 10 11 14 12 13 15 16	135 Seconds

The variance in times and the inconsistency in approach didn't necessarily lead to a degradation in quality, but did have the effect of impacting upon productivity. In our analysis, the optimum (read: minimum) time to make a latte was 1 min 31 seconds, however the times varied significantly with some Barista's taking longer than two minutes, an increase of more than 25% on the optimum timing. In the context of one latte, that impact is negligible (though the customer may consider those extra 59 seconds to be more precious), but when looked at in the context of a volume business, the reduction in productivity based on 200 coffees being made in a day is significant – it equates to 2 hours of lost time or 17% (for a 12 hour day). That means a potential cost of just over £4.7k per annum - in the coffee industry, where margins are wafer-thin, that kind of cost cannot easily be absorbed.

So what are the causes of variances in the timings? Well, we observed:

- Process deviation between Baristas. While the core activities were all undertaken, the order and methodology implemented all differed slightly, each having an impact upon timing and efficiency. In some cases minor elements of the process were missed completely (e.g. the steam wand purge). This is self evident in the process analysis modelled on the previous page.
- The different starting location of utensils (e.g. milk jug, portafilter, cloths) and the accessibility of them to each Barista.
- Environmental Factors – availability of milk and ground coffee beans, cleanliness of utensils, etc. at the outset of the process.
- Inconsistent machine pouring times (as a consequence of the tamping technique and portafilter fill by the Barista)
- Varying levels of energy and speed deployed by the Barista – inevitably, some Baristas were simply more active and efficient in undertaking each task within the process.

SIMPLY BY STANDARDISING THE LATTE MAKING PROCESS ALONE, ONE COFFEE HOUSE COULD SAVE £4.7K PER YEAR

While the timings were undertaken under controlled conditions, in normal circumstances, the Barista might also have been subject to interruptions or machine faults. Equally, they may have been able to combine elements of the process to produce more than one drink at a time. However, it is reasonable to state that ordinarily, the reasons outlined above would be the root cause for variances in efficiency levels. To that extent then, what could be undertaken to bring a greater level of predictability to latte making, for both the customer and the business itself from a resourcing perspective?

- Process standardisation could be implemented to:
 - Ensure that the starting point for each Barista is optimal for every latte made (e.g. the milk jug has been cleaned, the portafilter free of used coffee beans and the milk wand purged). Utensils could be stored in a standard place ready for their next use and returned to that position upon completion.
 - Bring consistency to the process, to ensure that every Barista follows the same set of steps, in the same order. Notwithstanding human behaviour and the challenges in embedding a repeatable process that can be shared across a workforce, a documented, proceduralised approach that is indoctrinated at the outset of an individual's training programme offers the best hope of achieving a degree of process adherence.
 - Remove the degree of variability in timings. While human behaviour will dictate that some tasks will take some Baristas longer than others, standardising method and approach will establish a framework within which a Barista can produce a latte.
 - Improve quality. Ultimately, one of the key objectives of this process is to produce a quality product that the customer will enjoy – variability in the process diminishes the chances of achieving that on a consistent basis.
- A refresher training programme could be implemented to ensure that all members of staff have an equal level of competency. An assurance process could be utilised to maximise adherence to process and quality levels
- The layout of the counter area could be remodelled to ensure that all equipment involved in the making of the latte is easily to hand.

Of course, proceduralising the process, training Baristas to follow it religiously and achieving true standardisation is not a short term initiative or one that guarantees a systemic uplift in productivity. All too often, process improvement initiatives (historically pursued via time-boxed Lean, Business Process Re-engineering and Six Sigma programmes) fail to 'stick' because the impacted businesses, teams or functions are left to embed the changes and frequently those processes that looked great in the workshop or the boardroom, suddenly appear less feasible in the cut and thrust of the shop-floor or office.

Equally, process perfection shouldn't be pursued at any cost either. Process optimisation is an evolution and while changes in technology, in thinking, in people and in consumer behaviours create opportunities to continually refine processes, there is a limit to what can be achieved. Revisiting our Latte process is a prime example of the balance that needs to be struck between efficiency and quality. We already know that the perfect coffee machine pour should take between 20 and 30 seconds and that it takes approximately 12 seconds to steam the milk (though those two activities can be undertaken in parallel). Tasks such as filling the portafilter, cleaning the wand and the jugs are all crucial to the process of making the latte and they each take a specified amount of time. 'Travelling' time (e.g. the time spent moving around the counter area, obtaining the cup and saucer, using the grinder, pouring the milk, is also a factor and it is subject to how the coffee shop layout has been designed. There therefore becomes a point at which the law of diminishing returns is triggered and any significant increase in efficiency begins to impact upon the quality of the product. In the pursuit of the perfect latte, quality cannot be compromised at the expense of speed.

To ensure that we were fairly assessing the art of making lattes, we also visited branches of Costa and Starbucks near to our independent coffee house and there we observed the following:

- Greater resource provision, resulting in more activities being undertaken in parallel (drawing the conclusion that while 91 seconds is the optimum time to make a latte for a single Barista, some activities could be undertaken in parallel to reduce the elapsed time, if not the effort). It is also important to recognise that while the elapsed time may fall (potentially delivering a better experience to the customer), the cost to the business remains the same.
- A fundamentally different approach to making a latte in some instances, particularly at Starbucks where the machine did more of the work that would traditionally be associated with a Barista.
- The production times were consistently lower than those experienced at the independent coffee shop, largely due to the two factors documented above, but also, a consequence of the higher footfall associated with chain coffee shops, where speed carries greater significance. In our view, this did result in an inferior product than that produced by the independent, but a product that probably meets mass market appeal and the degradation in quality can therefore be justified.

Productivity

At the outset of this paper we proposed to consider those factors impacting upon productivity within the workplace. Thus far, we have focused primarily on process design and the opportunities for optimisation, based upon our case study of the perfect latte. Evidently, this is not the only factor in informing productivity; in addition, there is the key facet of 'capability' – e.g. how good is an individual able to carry out their role to the standards expected. Capability itself can be defined by a number of characteristics including competency and attitude. While it is relatively simple to design process changes, embedding them is a challenge in itself, not least because it is dependent upon the competency and attitude of those resources responsible for carrying out that process.

In our analysis, we have seen a very small snapshot of the productivity challenge typified by a small independent coffee shop, but experienced in every organisation in the land. Yet, we've also seen the opportunity that exists to increase that productivity immeasurably without impacting upon quality. Following a logical, methodical approach that starts with analysis of the current environment, studies the impacts of demand and supply and seeks to address deficiencies in the current process, can and will deliver improved productivity. Just remember though, that perfect morning latte that you've come to rely on is only perfect, in 91 seconds (or thereabouts!)