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Dealing with Demand Volatility

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In a *Supply Chain Europe* Exclusive, Xavier Farrés outlines a pragmatic approach to the latest supply chain thinking.

I still have vivid memories of the day I realized that my job was about to get considerably more complicated. Four years ago a particular customer called me at 16.30 "requesting" another 500 cases of a product needing to be shipped the next morning. The process of generating sales forecasts was going to be very different from this point!

Looking at the current level of promotions on the High Street, it is unsurprising that demand volatility is considered by practitioners as one of the most challenging issues supply chains have to contend with.

This paper has been produced to shed light on how supply chains throughout the consumer industry struggle to adopt a holistic approach to tackle the issue of demand volatility. Using the latest literature from industry experts and in depth interviews with 14 key executives from leading companies such as Wal-Mart, Unilever, and Carrefour , we will highlight some key areas that when implemented support a best in class supply chain that drives lasting business value.

In the following sections we will review the market conditions that supply chains have to operate in and what companies are currently doing to combat demand volatility. We will also look at how they can overcome their biggest challenges.

Supply Chain Market Conditions

Examining the markets that supply chains operate in, we must recognise that the latest economic downturn has prompted a change in retailer and brand behaviour as consumers have become ever more price sensitive. Intensity of promotional activity has increased so much that retailers and brands are frequently creating entirely new deals or changing promotion mechanics at the last minute. This is in a bid to react to competitor's activity or to hit sales targets.

It is now common to find competing deals running in parallel at the same point-of-sale. This is creating a vicious cycle on price that is very difficult to break. Customers are continuously seeking the best deals and they are switching brands on impulse. As a result brand equity and customer loyalty are being eroded. Business community have termed this trend in behaviour, 'consumer promiscuity'. Recent data in UK (1) and China (2) is showing that consumer promiscuity is on the rise. Nonetheless, the highest growth channel, e-commerce, promotes this behaviour by definition; making competing offers and brands available with a click of a button. The digital world is offering consumers more choice and better deals and this is very compelling for a large proportion of the market.

The digital world offers other insights too. Long-established retailers believe that their e-commerce customers are more loyal and consequently digital sales are easier to forecast (3). Consumers value the convenience of online shopping and the delivery options that the channel offers. The purchasing experience is increasingly seen as the main reason to counterbalance price attractiveness in digital purchasing decision making. The personalisation and ease of experience are enabling organisations to manage some of the customer promiscuity, and even drive up customer loyalty.

However one thing is clear, market rules are rapidly changing. But established supply chains and their operating models have not been designed to operate under these new rules. The process of organisations responding to these new consumer requirements and rapidly adapting to them, is not an easy task.

"For Wal-Mart, the capability of executing supply chain changes is becoming a key competitive advantage. An efficient supply chain is fundamental to our purpose of saving people money so that they can live better. This drives us to continually find new solutions to deliver the best offer to our customers at the lowest possible price. For example, we sourced beef from the US and imported it to Japan, to sell in Seiyu stores. We managed to sell it for 50-60 yen cheaper than any of our close competitors. This helped us to increase sales in the category by 200%." (Scott Price. CEO Wal-Mart Asia).

Coping with Demand Volatility

There are a number of key factors organisations need to control when coping with the challenges of demand volatility and consumer promiscuity.

Improved Planning

Latest technological developments are allowing companies to enhance their supply chain planning processes. These improved planning tools allow for more sophisticated algorithms that can process more data and use inventory optimisation technology to generate ‘what if’ scenarios. Interestingly the most innovative solutions on offer are designed by small software companies such as Kinaxis, Terra Technology, TXT, ToolsGroup, Solvoyo and Logility.

Companies are also using behavioural market segmentation, to introduce better consumer knowledge into the process. For example, a global FMCG has introduced a better understanding of consumption levels resulting from promotions (consumption elasticity), thus being able to better anticipate sales after promotions. To optimise the use of this rich data they are also raising the statistical and analytical capability of their teams.

However last minute promotional behaviour driven by consumers and competitors (outlined in the previous section) makes the whole process difficult to forecast. To succeed it becomes critical to understand the supply chain in real time and react accordingly. FMCGs companies are putting a lot of focus into understanding competitor deals in the same category and the shelf space allocated from day-one-of leading promotions. Field sales reps feed live information via smart phones (picture and chat) to planning teams who in turn can ensure they take appropriate action in the fastest time possible. More advanced companies are taking this one step further by using social media for capturing the early signals coming from consumers, however there is still a long way to go until this becomes an effective and more widespread practice.

There is clear evidence of the benefits obtained by implementing the actions explained above, but they won’t by themselves solve all challenges that demand volatility entails. There are other aspects to consider that are explained in following sections.

Greater Agility

Organisations increasingly need to embed agility in their supply chains by placing stocks closer to consumption points, reducing the set-up times of production runs or implementing postponement techniques. This increased flexibility in manufacturing systems may require significant investment in time and money. In any case, it is clear that becoming more agile is an aspect of supply chains that organisations cannot ignore. All the companies we have spoken to are taking action to react faster to market changes, thus being agile is a requirement all supply chains will have to meet to maintain competitiveness. It is a given.

Point Of Sale (POS) Data Sharing

Sharing information between business partners is a proven way to achieve higher levels of efficiency and effectiveness, especially when managing promotions. By doing so suppliers can react faster and better to market changes, thus avoiding the negative consequences of the Forrester effect.

One interesting initiative is the ‘Tesco Connect’ project. Tesco has created a free web portal that allows the sharing of forecasted orders with suppliers taking into account daily sales forecasts by item and store combined with the Tesco logic of creating full pallets, trucks and good depot utilisation. The benefits of the initiative have been a 10% reduction in lost sales at stores and increased distribution efficiencies for suppliers.

However for many organisations achieving the level of collaboration needed to make the most of this information sharing is not an easy task, rather it is a challenge to overcome, as we shall discuss in following sections.

What are the biggest challenges?

In researching this paper with 14 organisations a number of common challenges have arisen that each is trying to resolve.

SKU Effectiveness

Companies surveyed indicated that product portfolios have increased as a consequence of the current business environment, responding to the need of meeting consumer demands in different distribution channels. Higher number of SKUs means higher numbers of changes in factories, less efficient transport lots, increased safety stocks in warehouses, new positions in picking areas, increased labour and lower rotation in point-of-sales' shelves. There is a common understanding these costs are infrequently fully accounted for correctly.

If cost generation is allocated to each activity and SKU, it will ultimately facilitate better decision making on the product range, thus allowing companies to better identify SKUs that are not adding value and thus reduce demand volatility by having more efficient product portfolios.

The Extended Supply Chain

The work done on demand volatility by Professor Martin Christopher from Cranfield University (4) provided the background to good discussions on the best way to organize an extended supply chain, resulting from adding together the supply chains of a manufacturer and a retailer.

This model of the future considers the point-of-sale on-shelf stock levels as the trigger for replenishing the whole chain. This model currently works best with high volume products. Low volume products may generate inefficient logistics lots, at which point the case for collaboration between business partners becomes stronger in order to overcome these challenges.

However in an extended supply chain it's unlikely that a single dedicated central planning and distribution role is able to produce better outcomes. Manufacturers don't have the expertise for distributing to stores whilst retailers don't have the knowledge of managing production plants. Consequently this process can only work in a genuinely collaborative environment.

"*The model of the future has to start from the shelf and be managed under a collaborative approach between FMCGs and retailers. Barriers within and between businesses partners that prevent collaboration have to be removed "*. (Jesus Lorente, CSCO Carrefour Spain).

Collaboration – How to Overcome the Barriers

Collaboration in the supply chain has long been a focus for businesses trying to improve their total costs, agility and responsiveness to market requirements. However participants estimate that only 30% of total retail volume is managed in a collaborative mode. Collaboration between manufacturers and retailers is a key factor for reducing inventories, logistics costs and increasing product availability in stores.

Collaboration works best when supported from the top of an organisation and with multifunctional teams in place working with business partners to achieve common goals. When there is not a clear mandate from the top it's much more difficult to align functions and create accountability.

There are two typical kinds of barriers that prevent collaboration.

- Internal barriers exist when commercial functions want to control interactions with business partners, often because of conflicting functional goals.
- Barriers between business partners caused by the lack of trust between the two parties.

Overcoming these barriers requires the management of both the rational and emotional aspects of the relationship. In many cases an independent third party is recommended to objectively deal with the complexity that this entails.

To build trust and align objectives across organisational boundaries, companies will need to break with their traditional approaches to these extended relationships. Some functions will be more prepared than others to embark on a collaborative process; the intercompany nature of a supply chains puts the supply chain team in an ideal position to do so. The collaboration framework developed by Boxwood, a London based consultancy that specializes in business transformation, stresses the importance of having good leadership in place capable of looking across organisational boundaries and facilitating the emotional and rational aspects of the relationship.

The Boxwood collaboration framework

The Boxwood collaboration framework enables companies to diagnose the obstacles that are preventing effective collaboration and then build a plan to overcome these barriers and implement effective collaborative practices with their supply chain partners.

Dr John Gattorna's Dynamic Alignment

In addition to the Boxwood model for collaboration, the work by Dr J. Gattorna (5) allows prioritization of collaboration relationships within the supply chain. The Dynamic Alignment methodology outlined by Dr John Gattorna proposes supply chain segmentation based on customer buying behaviours as a solution to deal with demand volatility. The organisational design of each supply chain configuration is based on multifunctional teams working across the functions, but in synch with them. These teams are driven by joint key performance indicators; values and leadership styles that are aligned to the different customer behaviours identified in the market.

Companies using Gattorna's design models find they can be more aligned to market requirements. Unfortunately the supply chain functions often find that senior leadership are unaware of the benefits and greater revenues that these changes can and do deliver.

A good example of an organisation that has engaged the senior team and implemented new supply chain models is Unilever, Asia who have created new revenue streams by amending their supply chain implementing the Dynamic alignment approach.

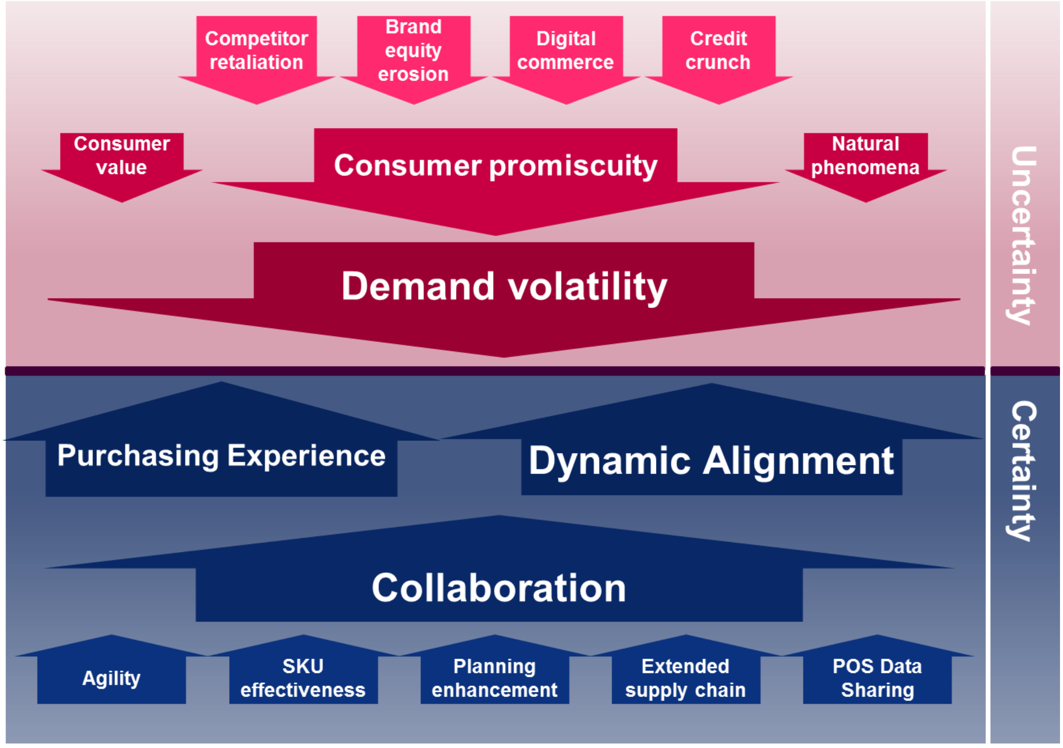
"*Under Dr Gattorna's guidance, Unilever has found better ways of fuelling growth, reducing costs and servicing customers successfully. This initiative has now prompted Unilever to roll-out the learning obtained, globally.* "(Alfons van Woerkom, Customer Service Director, Asia AMET Russia. Unilever).

Conclusion

The research in support of this paper has shown that in addition to technological and management aspects such as agility, sku effectiveness, planning enhancements and POS data sharing, it is vitally important to develop the emotional skills needed to foster collaboration and enable an effective extended supply chain.

Mastering the customer purchasing experience, especially in a multichannel environment, will become one of the most important factors in increasing customer loyalty and therefore demand stability. To do this, organisations must design their extended supply chains from the point-of-sale backward. This linked with managing the rational and emotional aspects of collaborative working, supply chain designs aligned to market behaviours, and with the support of senior leaders will be most effective at delivering cost reductions and revenue gains coincidentally

All the aspects that drive and counteract demand volatility are summarized in the following diagram:



About the Author

Xavier Farrés is an International Supply Chain Consultant and Associate at Gattorna Alignment, a Sydney-based global supply chain ‘thought leadership’ firm led by Dr John Gattorna,

Xavier started his career working with John Gattorna in Australia. After finishing his MBA in Sydney, he went back to his home city Barcelona, to work for a Procter & Gamble Joint Venture in Spain, where he held several positions, ultimately working within the P&G European organisation.

He has also help Senior Supply Chain positions for Sara Lee and a local Spanish FMCG. During the last two years Xavier has been working as a consultant for Boxwood, a London-based and award-winning business transformation consultancy.

Currently he is an Associate at Gattorna Alignment, where he is involved in developing cutting edge supply chain thinking under the guidance of Dr John Gattorna.

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Acknowledgements

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Special contributions

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Dr John Gattorna. Global Supply Chain 'Thought Leader' Author, and Adjunct Professor, Universtity of Technology, Sydney.

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References

1. **A1 Retail Magazine**. Latest news. Shopper promiscuity increases as consumers seek the best supermarket deals.
2. **Max Magni and Yuval Atsmon**. February 12, 2012. Wooing the promiscuous Chinese Consumer. Business Insider.
3. **El Economista.es**.10th October, 2012.El 71% de los compradores online son fieles a un único supermercado en Internet,
4. **Partha Priya Datta, Martin G. Christopher . 2011**. 'Information Sharing and Co-ordination Mechanisms for Managing Uncertainty in Supply Chains: A Simulation Study'. International Journal of Production Research, Vol. 49, No. 3, pp 765-803.
5. **John Gattorna. 2012** 'Supply Chain Innovation for Competing in Highly Dynamic Markets'. Chapter 2 'From Integration to Alignment: challenges and solutions'. Edward Sweeney, Dublin Institute of Technology. Pietro Evangelista, IRAT-CNR & University of Naples Federico II. Alan McKinnon, Heriot-WattUniversity. Emilio Esposito, University of Naples Federico II.