

Traditional Pågen enters digital era

What are the possible advantages and pitfalls for Pågen to focus on supply chain processes and integration of e-commerce?

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Table of contents:

1. Introduction.....	3
2. Case presentation.....	3
2.1 Supply chain & Distribution.....	4
Upstream:.....	4
Downstream:.....	5
2.2 E-commerce.....	6
3. Theoretical framework.....	6
3.1 Supply chain management.....	6
3.2 E-commerce.....	8
4. Case analysis.....	10
4.1 Supply chain management.....	10
Advantages.....	10
Pitfalls.....	11
4.2 E-commerce in Pågen.....	12
Advantages.....	13
Pitfalls.....	14
5. Conclusion.....	16
6. References.....	17

1. Introduction

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The world is in a digital era and businesses must adapt and leverage technological advancements to stay competitive. It's a fundamental shift that reshapes traditional business paradigms. As businesses grapple with the imperative to embrace the digitalization, the interaction between technology and business has become a crucial factor in success.

This paper aims to investigate how this shift, and the strategies that emerge, can impact the Swedish bakery company, Pågen. Drawing insights from Laudon & Laudon *Management Information Systems: Managing The Digital Firm* for theory and referencing Pågen's own publications for details on their operation. The case study employs theoretical frameworks related to supply chain management and e-commerce to address the following research question:

What are the possible advantages and pitfalls for Pågen to focus on supply chain processes and integration of e-commerce?

2. Case presentation

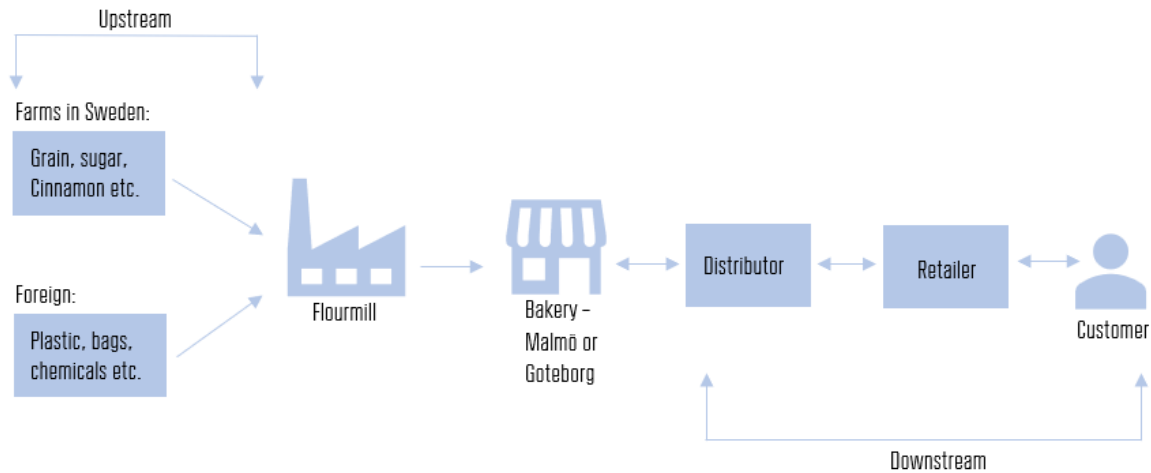
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Pågen was founded in 1878 by Swedish Anders Pålsson and his wife Matilda Pålsson as a local bakery in Skåne – originally called Pålsson bakery. Pågen's journey from a local bakery to a big player in the bakery industry began in the 1950's when Pågen began packaging their bread. This allowed them the opportunity of distributing their products to larger parts of Sweden. Even with traditional roots and beginnings, Pågen has so far demonstrated a remarkable ability to adapt to the evolving needs of the market. (Pågen A). Because of digitalization, industries are experiencing huge developments and companies must keep up to remain competitive and relevant. Taking advantage of the technologies and digitalization could bring potential benefits and pitfalls for Pågen, that we will focus on in this paper.

2.1 Supply chain & Distribution

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(Basic supply chain model for Pågen based on the general supply chain of an industrial bakery. Pågen's actual supply chain is not published.)



Pågen's supply chain is generally similar to the one of any industrial bakery. To illustrate this in a more understandable way, the paper will illustrate the upstream and downstream part as well as an example based on one of the most loved and more popular product: Giffjar.

Upstream:

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In terms of their manufacturing, they often only work with products grown close to their bakeries situated in the Swedish cities Malmö and Gothenburg. For example, the flour they use in their products is produced in their own mills in Sweden (Pågen C). There is also a big focus on sustainable farming of their grain which is grown by around 200 farmers across Sweden. They have a "close and long-term cooperation" with their farmers and are therefore able to "know exactly where the grain comes from." (Pågen B). Such close collaborations not only assure the quality of the end product, but further minimises the carbon footprint that compliments the long-distance transportation of raw materials. The integration of local sourcing into their business model only furthers Pågen's commitment to environmental sustainability as well as helping to support local economies. In terms of packaging, they put a great emphasis on recycle-friendly plastic packaging. Furthermore, they try to limit the use of plastic, while ensuring a high shelf life for their products. "In recent years we have optimized the strength, format and thickness of our bread bags and switched to thinner materials in the stretch film we use around pallets during loading." (Pågen B).

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Regarding their actual production, all the products are produced in their bakeries which provides shorter transportation from the manufacturing sites to their bakeries. In the bakeries, sustainability is the main thing they want to implement.

Reducing food waste in their bakeries is therefore one of their main objectives. This is done by methods to create a “circular flow on the line”, essentially reusing dough that has gone to waste, which has led to a 2% food waste in their bakeries. In addition to this, the bread waste from bakeries and stores alike are recycled into animal feed on farms or renewable fuel for their bakeries (Pågen B). Furthermore, they also aim to create products that last longer on the shelves which inherently creates lower energy usage in their bakeries and reduces waste in homes as well. The longer shelf life of their products allows their business to expand by increasing the distribution to distant and remote locations. How they achieve a higher shelf-life is built upon a few factors. Firstly, they work to improve hygiene conditions and increasing the usage of high-quality materials (Pågen B). Furthermore, they constantly work upon the packaging, ensuring that it is protective and uses a small amount of plastic. They note that all of their packaging is recyclable, accounting for less than 5% of their carbon footprint (Pågen B). Lastly, Pågen has also implemented noise-lowering technology and try to reduce emissions to water and air during production (Pågen D).

Downstream:

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The downstream part of their supply chain is essentially in line with their sustainability goals and framework. Transportation, for example, is one part of their business where they try to work toward a more sustainable operation by: They aim to have vehicles with renewable fuel, use train transport for long-distance and train their drivers to manage their vehicles eco-friendly (Pågen B). Regarding their distribution network they sell bread, and most of their range, to Scandinavia and Germany while shipping selected products to 25 countries (Pågen A). In France, which represents their largest market for “Krisprølls”, they use train transport for their distribution, made possible by the long shelf-life (Pågen B). Using the train for long-distance shipping is advantageous since, according to DHL, it’s faster, more sustainable and cost effective (DHL). The full range of products, that’s sold in Scandinavia, has a special distribution which is self-run by Pågen. Once a store employs Pågen, it takes care of the supply and constant upkeep to ensure fresh products on the shelves. They additionally source

what products sell and what don't in order to gain important insight on the market while keeping transportation to a minimum (Pågen B).

2.2 E-commerce

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As of now, Pågen has a very limited presence in the e-commerce space with that type of transaction only being available on certain online shops. These shops are particularly present in Germany, where you can buy selected products through web transactions (Pågen E). While this is a type of platforms for their products, they have not established e-commerce themselves. Furthermore, they have not yet implemented any open systems for B2B e-commerce transactions. While there may be third-party e-commerce sites (such as Amazon, nordicexpatshop.com) that have Pågen products available, it seems reasonable to look into the possibilities and potential perils of implementing an eventual e-commerce sector independently.

3. Theoretical framework

3.1 Supply chain management

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A company's supply chain is an interconnected system of entities and operational procedures involved in obtaining raw materials, converting them into intermediate and final products, and delivering these final products to customers. This network connects suppliers, manufacturing facilities, distribution centres, retail establishments, and customers, facilitating the flow of goods and services from their source to consumption. In the supply chain materials, information, and payments flow in both directions. Supply chain management, SCM, is essential for businesses to compete and grow and to minimize inefficiency – as much as 25% of firms operating costs can be wasted due to these inefficiencies in supply chain. To lower this waste, firms can reevaluate the processes and management of the supply chain (Laudon & Laudon p. 371). A well-managed supply chain can minimize costs from production to distribution, ensure product availability for customers and possibly promote inventory management and sustainability. All these possible outcomes of SCM could leave the company with a competitive advantage.

When companies decide to invest time and resources into SCM it is important that they are aware of both the potential advantages and pitfalls. One of the pitfalls worth considering is the bullwhip effect, where information on demand gets distorted as it passes through the supply chain. The bullwhip effect can lead to distorted orders, excessive inventory, and inefficient production scheduling (Laudon & Laudon p. 376) To limit the bullwhip effect companies can reduce uncertainties about demand and provide up to date information for all members of the supply chain (Laudon & Laudon p. 377).

Within the supply chain there is also the push and pull dynamics. A push-based supply chain model involves producing goods based on anticipated demand forecasts (Laudon & Laudon p. 379). The push-based model will work well when the demand is relatively stable and predictable. This model also supports economies of scale as products can be produced in bulk, when the companies have come up with a prediction for the demand. With the push-based model comes the risk of overstocking or a stockout if companies have not correctly predicted the demand, this will lead to waste and possibly a decrease in customer satisfaction. There will also be a higher holding cost as large inventory is needed for the products that have been produced in advance.

The pull-based model is also referred to as the demand driven model, where production is triggered by actual customer demands (Laudon & Laudon p. 379). This model will have reduced holding costs as products are only produced by actual customer's demands. This also eliminates the risks of overstocking and lowering risk of stockout, therefor possibly increasing customer satisfaction. What this model does lack, is the ability to benefit from economies of scale as ordering in small quantity usually results in higher cost per unit. Another possible disadvantage of the pull-based model is that there may be delays in fulfilling customer orders due to the time it takes to produce goods after receiving orders.

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As society becomes more dependent upon digital tools and products, so does the market and as a result companies supply chains. An implementation of digital tools into our supply chains has emerged as a result of this. These tools have led to a more flexible and transparent marketplace that can prove beneficial to companies. As mentioned by Laudon and Laudon: *“Digital markets are flexible and efficient because they operate with reduced search and transaction costs, lower menu costs (merchants' costs of changing prices), greater price discrimination, and the ability to change prices dynamically based on market conditions.”*

(2022, p.413). The digital market and the strategies that emerge inherently affect the supply chain. For instance, the ability to price products dynamically will mean a relationship between suppliers, producers, retailers and consumers that is quite volatile but often market adaptable. Furthermore, Laudon asserts how “*Digital markets provide many opportunities to sell directly to the consumer, bypassing intermediaries such as distributors or retail outlets*”(2022, p.413). This in turn affects the supply chain as well and in combination with dynamic pricing creates a more complex supply chain for leadership to manage.

3.2 E-commerce

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In today’s digital world, E-commerce is the fastest growing form of commerce, and it is predicted to show even further growth (Laudon & Laudon p. 407). E-commerce is described by Laudon & Laudon as “[...] the use of the internet and the web to transact business (2022, 406). By the end of 2023 it is expected that the global E-commerce market will “hit” \$6.3 trillion and 20,4% of all retail sales by 2024 (e-marketer p. 4). This fast market growth is why it is so important for companies to understand and strategically navigate the dynamic landscape of E-commerce.

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The key to understanding E-commerce is to understand its wide reach and marketing capacity. Traditionally, the transformation that E-commerce made on traditional marketing was with the “eyeball gathering” marketing. As described by Laudon “The primary measure of success was how many eyeballs (unique visitors) a website produced and how many impressions a marketing campaign generated.” (Laudon, Laudon. 2022. p.408). This is often performed by the so-called RTB (Real-time bidding) for ad slots on websites (2022, p.423). However, more ways to perform this marketing has developed in line with the growth of social platforms and the mobile phone. The marketing type that developed as a consequence of these developments was the social-mobile-local marketing: A connected type where conversations on social platforms, pop-up ads and a wide accessibility created a marketing strategy for firms to pierce the whole of a person’s digital presence (2022, p.408).

The concept of e-commerce and its marketing capacity can be advantageous to firms all around the globe. Because of the digital devices’ reach and the information available, it provides a bigger and more “knowable” customer base (Laudon, 2022, p.409). This customer base is also *ubiquitous* meaning that it is available at all times providing a great advantage to

traditional store-run retail (Laudon, 2022, p.409). The greatest advantage of e-commerce however can be interpreted as the cheap information available and how firms can apply the information gathered to create greater value for every customer. Laudon asserts this: “E-commerce technologies reduce information collection, storage, processing, and communication costs while greatly increasing the currency, accuracy, and timeliness of information.” (2022, p.410). Companies are in essence able to gain, retain and maximize the value of each customer using the techniques that the information availability presents.

Furthermore, it allows for intermediaries within the supply chain to essentially be cut. Using the digital world and the different e-commerce platforms, firms are partly able to sell directly to the customer thus circumventing the retail stores and all the costs included in that concept. Laudon describes this as such: “*The removal of organizations or business process layers responsible for intermediary steps in a value chain is called **disintermediation***” (2022, p.412). Important to note however is that disintermediation has different effects in different industries. The business model that has emerged as a result of the direct B2C (business to consumer) over the internet is the E-tailer, notably used by companies such as Amazon (2022, p.416).

Moreover, the supply chain is further disrupted by e-commerce in the shape of B2B (Business to business) transactions. E-commerce influence on B2B transactions could be great in the automation of supplier, purchaser and manufacturer relationships. Technologies for this refers to automated inventory filling, shipment tracking and a global scale of the supply chain (Laudon & Laudon, 2022). Using these technologies, companies are able to establish relationships that significantly cut costs because of the automation significantly reducing overhead in the shape of too many supplies being delivered or too few being delivered. The main technology that can perform these standard tasks is the Electronic Data Interchange (EDI). It’s a versatile computer-computer program that automates these tasks which inherently reduces the need for man-power and thus costs (Laudon & Laudon, 2022, p.430). This is especially beneficial since it streamlines inventory management and distribution logistics.

4. Case analysis

4.1 Supply chain management

(Student no. 169646)

When companies focus on supply chain management (SCM), they utilize different strategies to optimize the processes involved in the production and delivery of the product. These strategies and focus on SCM can result in various benefits and pitfalls that need to be strategically analysed before companies engage in SCM. This paper will now discuss some of the possible advantages and pitfalls for Pågen to focus on supply chain management with the specific example of their product Giffjar.

Advantages

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The focus on supply chain management could streamline Pågen's internal and external processes, leading to increased operational efficiency. This could include optimizing production, distribution, and transportation, inventory, and minimizing waste. One of the big advantages available to Pågen is reducing costs associated with stockouts or overstock. Pågen could, through SCM systems, meet an optimal inventory level and ensure that enough stock is available to meet customer demands (Laudon & Laudon, 2022, p. 380). Pågen being able to meet customer demands and prevent stockouts could also increase customer satisfaction, as the products would be available when customers expect them. This approach aligns with modern SCM trends focusing on agile and responsive systems, further enhancing Pågen's competitiveness in dynamic market conditions. Preventing overstock would also lead to less waste and overall better sustainability for Pågen, which is an important factor for a big portion of consumers. In fact, a report from McKinsey found that making environmental, social, and governance-related claims are associated with higher product growth and that consumers generally will pay more for sustainability (McKinsey A). Furthermore, SCM could enable Pågen to better respond quick to changes in market demand or external factors. It would be a great advantage for Pågen to gain this flexibility to adapt their production and distribution. For Pågen to have a better overview of their supply chain and the processes would also allow them to make more informed and faster decisions when necessary (2022 p. 380).

(Student no. 169646 & 170647 & 169512)

As mentioned, the push- and pull-based models could yield both potential advantages and disadvantages for companies. Pågen could utilize the strategies presented and combine both push and pull models, to possibly benefit from both. This could entail Pågen using strategies from the push-model on production of goods that historically have shown a stable and predictable customer demand. Meanwhile Pågen would integrate pull strategies for production of goods, that perhaps are newer and have an uncertain and varying demand. Moreover, the push-based model works with low uncertainty of demand, while pull-based work with high demand uncertainty and low scale importance, aligning with the aforementioned sustainability goals. This hybrid push-pull model can allow Pågen to be agile by switching between the two. For example, they could employ the push-based model in “Normal” times where the market is stable while having the ability to switch once uncertainty or market changes are coming. This approach balances the advantages of both models, optimising inventory levels and reducing costs.

(Student no. 169646)

Lastly, it is relevant for Pågen to consider the possible advantages that come with the implementation of a digital supply chain. The digital supply chain could provide even better real time data throughout the supply chain, which could aid management in making more informed decisions and potentially minimize the risks of overstocking or stockouts. For Pågen it could mean in real-time data that could be analysed faster and quickly make changes in production depending on customer demand or other external factors. Furthermore, it could enhance the efficiency for Pågen with the automation of routine tasks, possibly even minimizing risk of human error and leading to cost reductions (McKinsey B).

Pitfalls

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Before investing a lot of time and money into managing the supply chain, it is important to consider the possible pitfalls. A company like Pågen must always keep in mind the possible external factors, such as natural disasters, that can impact the supply chain. Even with a well-planned and managed supply chain, companies can't control external factors, what they can do though, is prepare as best as possible for these scenarios.

One potential outcome that Pågen should consider is the bullwhip effect. It may occur if there are inconsistencies in demand forecasting or if there is a lack of real-time information sharing among supply chain partners. The bullwhip effect can lead to distorted orders, overstocking, waste and inefficient production. Improved communication and data sharing across the supply chain could help Pågen limit this, but it is a pitfall to be aware of when focusing on SCM.

It is also relevant for Pågen to acquire knowledge of push- and pull-based supply chain models. As mentioned, the push-based supply chain involves the production of goods based on predicted customer demand (Laudon & Laudon p. 379). If Pågen were to rely too heavily on the push-based model, it could lead to an overproduction hence potential waste, which would not support the sustainability Pågen claims and customers seem to value (Pågen B). With the pull-based model the production of goods is triggered by actual customer demand (Laudon & Laudon p. 379). By focusing on the pull-based model, Pågen could avoid overproduction and therefore wastage. This model could still pose challenges for Pågen, such as not being able to accommodate unexpected spikes in customer demands, as production happens when customers order. Pågen not being able to deliver their products to customers when they expect it, could lead to a decrease in customer satisfaction.

(Student no. 169646)

Lastly, Pågen must consider the potential pitfalls of the integration of tools from the digital supply chain. This integration could be time and money consuming at first, as it will require training for employees when introducing new digital solutions and systems. This is also to say that there can be a resistance to change and adapt to new technology within the company, especially for a more traditional company like Pågen. Sufficient training or even possibly change in management could be the key for a smooth transition for Pågen (McKinsey B).

4.2 E-commerce in Pågen

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An implementation of E-commerce in a traditional bakery (retail) company such as Pågen might seem like a completely ludicrous idea. However, in our current information age that essentially is built upon efficiency and digital implementation, there are certain strategies in e-commerce Pågen actually can use. This paper aims to discuss what the implementation of e-commerce in Pågen can result in, from both a negative and positive point of view. Before

highlighting specific examples however, it is important to note that e-commerce can have differing ramifications depending on the extent to which you implement it. For example, some companies may have run all of their business through e-commerce and some may run a very small part of their business through e-commerce. Thus, the following discussion will attempt to discuss both of these “levels of implementation” without actually giving an opinion as to what would work best for Pågen.

Advantages

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The first strategy that can prove useful to Pågen is implementing the social-mobile-local marketing, made possible by the digital realm. Pågen is in actuality a very marketable firm, with bread and especially their pastries they can use the traditional e-commerce marketing strategies to gather a “hype” around their products. Firstly, they can use the digital platforms, using the RTB, to gather eyeballs on their products through advertising on popular platforms. While this is an investment it can develop a growth in awareness about the company. Furthermore, the social and conversational marketing implemented by the firm could advance the firm’s reach by using network effects, creating an exponential reach based on the people and their digital networks. Using this marketing strategy, Pågen can naturally gather a bigger customer base with lower cost than the traditional marketing strategies. To maximize this strategy's effectiveness, Pågen should consider integrating enhanced analytics for deeper insights into customer preferences, enabling more targeted and effective campaigns on digital platforms.

Secondly, Pågen can also implement B2C sales on a website to bypass the intermediaries involved in their supply chain. By selling products directly to consumers they should gather higher profits through, essentially saving time and man hours. Firstly, they can use their existing transportation network to fill the demand of customers. By doing this, Pågen can ensure the quality of the transported goods and bypass the aforementioned inventory checks which, in theory, should reduce the hours worked by their employees. This would maximize self-profits, which is also done inherently by e-commerce since the retail stores would not get a part of the profits. Secondly, they can use B2C selling on digital platforms to extend the reach of their products to more countries to effectively scale the company. As of now, Pågen only sells Krisprølls and Giffjar to other countries but through the implementation of a website and the direct B2C transactions they might be able to extract more value from the

existing customers that reside outside the part of the world where they sell their whole range. Doing this would scale the company and make it more dynamic and resistant to eventual gripes with retailers for example.

E-commerce implementations in their processes can also increase their efficiency and reduce the overhead they have. This could initially be done by automating their B2B transactions. Though they have many suppliers close to their production facilities, automation of the suppliers further away with for example EDI for plastic bag delivery, can reduce the need for supplier check-ups and increase the efficiency of production. Moreover, they can implement EDI in their relationship with the retail stores they deliver to as well. By logging the inventory digitally, they're able to have constant control over the status of their products in store. This will allow Pågen to; Control the quality and supply of products, gather information remotely on which products sell more respectively less and inherently render the need to check up on the status of products obsolete.

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Viable e-commerce revenue models, in Pågen's case, would be concerning sales and more specifically B2C transactions. A subscription revenue model could present an alternative for customers who consume products regularly, or when organizations such as retailers want continuous supply of the products. In order to promote their own e-commerce platforms, they can market the platform through online marketplaces. Open online marketplace for their products expands their opportunities for more revenue and deeper customer relationships with better feedback loops. This open marketplace can be nicely integrated with a private industrial network in order to create more connected systems, allowing both Pågen and its business partners (both suppliers and distributors) to easily deliver goals and manage their supply chains better.

Pitfalls

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While e-commerce could be advantageous, as is listed above, it does bring about some pitfalls. For a company like Pågen it could be argued that a remake of their delivery structure, where supply is made to order, could have disadvantages. Firstly it does, in a way, contradict some of their aims especially in reference to their sustainability framework. As mentioned earlier, they constantly aim to decrease the emissions from their delivery process and home delivery could be assumed as contradictory to this. In line with this, the volatility of e-

commerce and a whole transition to e-commerce for Pågen could entail more waste in “bad times”. This volatility provides a tough transition since they have to assume the demand which inherently entails a risk for over or under-supply. Moreover, while the transition may mean a way to maximize profits by bypassing intermediaries, it is a process and one that is bound to have mistakes embedded in it. This inherently forces the question if it’s worth the risk.

A transition to e-commerce and a general involvement with the current technologies also bring about certain guidelines to which a company such as Pågen should adhere. If they were to adopt the social-mobile-local marketing, it does entail generating a lot of information on customers in order to target marketing towards certain customers. The behavioural targeting is effective since they might have information on general food habits or if they’ve bought from Pågen before. Although having this information on potentially un-knowing customers inherently provokes ethical questions. For example, if it’s necessary for an industrial bakery company to have this information solely for profit-maximization. Furthermore, if the information is not secure it entails a risk for cybercrime which could have big ramifications legally for the company and for the customers.

Another pitfall they might encounter once implementing e-commerce is the reaction to the drastic change in company identity. Many of Pågen’s current processes are established and fully functioning, which they have been doing for a long time. Generally speaking, Pågen could be dubbed a legacy company and with that comes certain criteria from the people. A viable guess is that a full transition to e-commerce by Pågen would surprise people, disrupting the goodwill of the company. This could obviously have positive consequences such as an increased reach but a drastic change in direction might also lead to people completely disregarding the company. A company usually needs a loyal customer base and especially food retailers and if they’re not able to get the food directly they might switch to another company. It’s also likely that the freshness of the bread is imagined to be worse by customers, if bought online, at least in the opinion of the writer.

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E-commerce business models are often designed and integrated into digitally run businesses which could present another pitfall for Pågen. People might just not be interested in a weekly supply of Pågen products. This is due to different reasons Firstly; individuals might not have any interest in ordering food from companies separately – people would just use one single

platform to order all their groceries. Secondly, e-commerce as such requires digital literacy, which is not universal. Lastly, people might just be reluctant to switch from the supermarket to e-commerce which inherently makes an implementation of such services risky and perhaps costly.

5. Conclusion

Pågen is naturally a very traditional company and implementing e-commerce and supply chain management does mean quite a transition for them. Although, there are definite advantages to this strategy. These, as with implementing digital tools in general, mostly relate to the improved efficiency as a result of data-driven operations. For example, the e-commerce marketing could improve the reach of the company since the marketing essentially reaches more people on the internet. This is also the case with the B2C sales and the improved supply chain which inherently makes the day-to-day operations of the company more efficient. Thus, the advantages of implementing the aforementioned strategies could increase profits by either cutting costs or bettering the efficiency. However, there are pitfalls to this implementation and Pågen must consider the ramifications of these before moving on. Pivoting to e-commerce could present identity and security problems for Pågen where the positives outweigh the negatives. As is the case with the supply chain where you may ask why you would fix something if it isn't broken. Ultimately, the digital age presents many opportunities that even a traditional company such as Pågen could use but in order to reap the rewards you have to consider the potential pitfalls.

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