

## **DROPSHIPPING IN THE AGE OF THE INTERNET – DOES IT REALLY WORK IN CRISIS?**

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**Purpose:** The main goal of this article is to present the dropship model to consider its advantages and disadvantages and find out, is it accurate way to develop business in short time under some uncertainty.

**Design/methodology/approach:** Most important problems and critical success factors of dropshipping model, and then assessing their mutual influence on each other were discussed. Costs that a start-up company running its business must incur were analyzed. In order to convince what kind of effects the online store may expect, simulations of requirements and costs on dropshipping platforms were conducted.

**Findings:** Dropshipping business model is quite risky and should not be treated as a panacea in times of crisis. Online stores, if they think about significant profits, must focus on finding their niche, building responsive websites and rely on a solid information system.

**Originality/value:** Simulation of costs of dropshipping business model under some uncertainty can be really helpful to start-up company running its business.

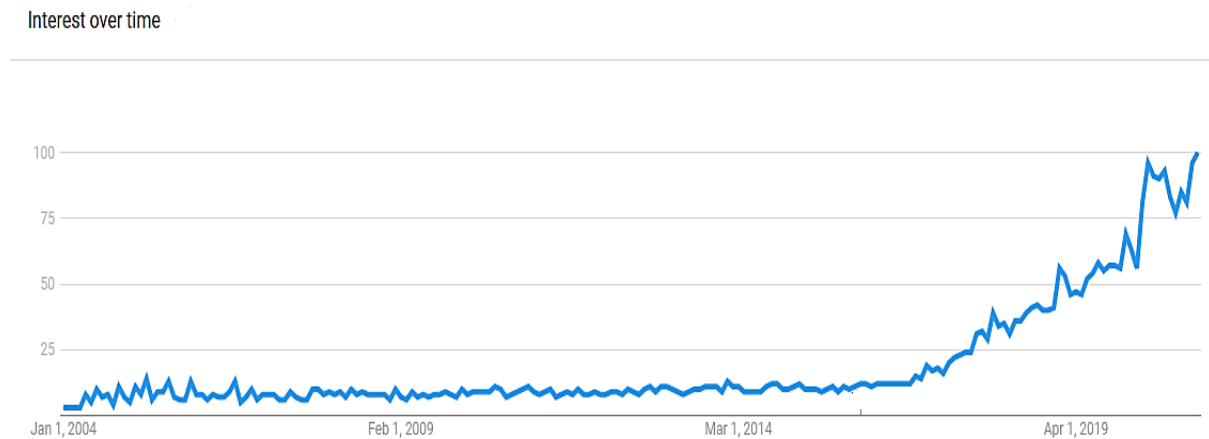
**Keywords:** management, dropshipping, business management, solving problems with uncertainty, supply-chain management.

**Category of the paper:** Research paper.

### **1. Introduction**

In the period from 2007 to 2009 a worldwide economic and financial crisis has began. A large number of companies were looking for savings, e.g. by converting cost units within the organization. At that time very great interest of various outsourced services aroused, including warehousing goods or employing self-employed workers. This phenomenon has also emerged recently as a result of the influence of COVID-19 virus pandemic situation on global economy. Massive efforts were made to look for ways to reduce the risk and properly manage the enterprise in conditions of uncertainty. It is no wonder that the concept of dropshipping has

become very popular again. As we observe on worldwide Web search interest over time (Fig. 1) this order fulfillment method is currently experiencing an upswing



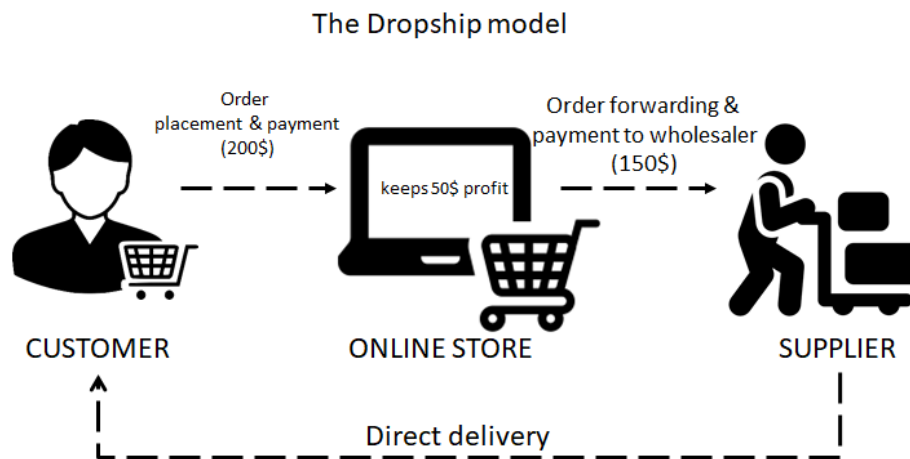
**Figure 1.** Dropshipping – worldwide Web search interest over time starting from 2014.

Source: own work based on: (<https://trends.google.com/>), access: February 2021.

According to Grand View Research report the global dropshipping market size was valued at USD 102.2 billion in 2018 and is expected to register a CAGR of 28.8% from 2019 to 2025, especially in case of following industries: toys, hooby & DIY, furnitures & appliances, food and personal care, electronics and fashion. What is the reason? The main goal of this article is to present the dropship model, consider it's advantages and disadvantages and find out, is it accurate way to develop business in short time. Last, but not least does it actually work during any economic crisis?

One of the pioneer writers of this concept – Aaron Kiely (Kiely, 2018) defines it as follows: in dropshipping, customers place products orders via online transactions. The paper considers how this concept works in the Age of Internet, where many online stores sell purchased product, and redirect the sales order to a third-party supplier, who then ships the order directly to the customer. The online store thus becomes a broker of sale, and the price the customer pays is obviously higher than the purchase price of the good offered by the whosaler. The broker earns on the margin - taking into account the cost of purchase and advertising, but doesn't bear the costs of goods' storage and shipping.

As shown in Fig. 2 dropshipping is an order fulfillment method that does not require a business to keep products in the warehouse. Instead of that, the store sells the product, and passes on the sales order to a third-party supplier (often manufacturer of goods), who then delivers the order drirectly to the customer.



**Figure 2.** The Dropship model.

Source: own work based on: (<https://www.oberlo.com/blog/amazon-dropshipping-guide>), access: February 2021.

Dropshipping gives the opportunity to develop your own business practically without capital or at a difficult moment for the enterprise, wanting to minimize costs, so it is a particularly good solution for small enterprises or startups. This concept is also a good idea in conditions of high uncertainty, when it is difficult to predict what will happen tomorrow, and company managers want to reduce logistics costs. It also allows you to focus and take care of the appropriate online store marketing strategy and product promotion.

However, dropshipping is not always a best way to generate sales revenue quickly, especially when we take into account all obstacles, threats and disadvantages. E.g. we cannot forget about competition - on the market we will find many sales brokers who offer similar products, often even ordered from the same drop-shipping wholesalers. Margin is always around 20% of manufacturer price, so how you can compete with other sellers and earn some money at the same time? The customer has contact only with the online store, often not even knowing who the real supplier is. If the quality of the products is bad and the customer wants to make a complaint, problems arise. Of course, everything must be approached in the right way, but it requires commitment and smart business decisions. Let's discuss advantages and disadvantages of dropship model and find out does it really work?

## **2. Advantages and disadvantages of dropshipping – does it actually work?**

In order to analyze the advantages and disadvantages of dropshipping, as well as determine whether it is an effective way of business development, especially in conditions of uncertainty, it is worth considering the most important problems and critical success factors, and then assessing their mutual influence on each other. The identified elements important for the dropship model are presented in the tables below:

**Table 1.**  
*The dropship model – main problems (PROB)*

<b>PROB no.</b>	<b>PROBLEM name</b>	<b>PROBLEM description</b>
<b>PROB1</b>	Low profit margins	On one hand, it is possible to reduce inventory and shipping costs, but on the other hand returns are low (~20% margin). This means it's crucial to ensure the right traffic on the website and take care of a large number of orders, because most of the money goes to the supplier anyway. It's necessary also to remember about the costs of maintaining the website, advertising, marketing, hiring employees to support the business
<b>PROB2</b>	Strong competition	Dropshipping does not require a lot of capital at the beginning, which is unfortunately associated with a lot of competitors, what is especially visible in the case of popular industries. The greater market player, the lower prices and richer the product portfolio
<b>PROB3</b>	Lack of control over supply-chain	Unfortunately, in this logistics model, dropshippers are very heavily dependent on suppliers and have practically no control over what the wholesaler is shipping. This can make communication very difficult. If any problem appears (e.g. return, complaint) – finding solution may take longer, because the online store basically can only serve as a sales broker
<b>PROB4</b>	Lack of branding	In dropshipping we have to separate the act of purchase from the brand of purchased goods. Unfortunately, customers become more attached to the second one. It is also crucial in maintaining constant traffic on the website, so quite problematic issue may be placing a new product of an unknown brand to the offer
<b>PROB5</b>	Issues with order processing	Wrong item sent to customers, delays, poor quality products or damaged deliveries, wrong order quantity, items out of the stock, wrong order settlement – the list of potential issues can be really long and as a dropshipper you are not responsible even half of it, but you have to deal with your customers and try not to lose their trust
<b>PROB6</b>	Boring and unuseful website	Website design is critical to your sales performance, so it's important to match it with your offer. It is also worth paying attention to the customers' needs. The website should also be useful in terms of collecting information about user behavior. The security of data and easy check-out (also as a guest without creation a profile) are also important issues
<b>PROB7</b>	Selection of wrong platform to promote online stores their offer	We make online purchasing decisions more and more often based on the opinion or recommendation of the community. It is worth including social media to promote your online store or products offered there. Rapidly we have an access to professional tools and algorithms that can support our marketing strategy development. It may attract more customers without without spending a lot of money
<b>PROB8</b>	Bad customer support and negative feedback	The role of sale broker does not end with the shipment of the product. Often, customers still need huge support. In dropshipping client is not able to contact the supplier directly and definitely needs help here. Lack of support means that we do not have sufficient knowledge about the needs and inquiries of our customers - no wonder we lose them without even knowing why...

Source: own work.

**Table 2.**  
*The dropship model – main critical success factors (CSF)*

CSF no.	CSF name	CSF description
CSF1	Implementation of a responsive website (e-commerce store)	Implementation of a website tailored to mobile devices and desktops. In this case, the best solution will be to choose and implement a responsive website. In addition, an essential element of such website is the creation of graphics that will be adapted to mobile devices (because nowadays most of the traffic is generated via smart phones)
CSF2	Implementation of an information exchange system - customer-store and store-supplier communication	When a store has multiple suppliers, the dropshipping model is difficult to apply, so this is a key issue. In addition, communication with the customer should take place not only using traditional methods (chat, newsletter), but also e.g. web-push notifications, which allows us to send recommendations, special offers, information about prices and discounts, product availability reminders about abandoned transactions, etc. - "churn factor" will decrease and also it will be possible to carry out retarget and remarketing campaigns, as well as increase customer loyalty
CSF3	Product knowledge management	Creation of accurate product descriptions. In addition, monitoring and collecting data about the demand for a given product or completely new goods (just added to the offer) should be one of the key issue on store's website
CSF4	Implementation of a loyalty program for key customers	The implementation of the loyalty program will enable key customers to purchase products with discounts, which will contribute strong store-customer relationship
CSF5	Creating marketing campaigns - custom feeds and dynamic re-marketing	In order to support the building strong customer relationship and achieve better sales results (e.g. at least 2 products per customer during one transaction), it is necessary to create appropriate marketing campaigns tailored to the current trends. Creating custom feeds taking into account the customer profile and complementarity of products is extremely important here
CSF6	The use of recommendation systems of well-known social media	Promoting products in posts and advertisements on Facebook or Instagram can be very useful, creating a community of online store's customers can also improve sales results. Sales groups interested in specific products can be further very helpful to promote items (social listening phenomenon)
CSF7	Creation of customer profiles and their opinions	In order to examine the quality level of the services provided by the store and to begin (if necessary) their improvement, it is crucial to know exactly what kind of customers we are dealing with. The surveys will allow us to collect opinions on offered products. At the same time, it is worth making sure that the purchase path is relatively short - the fewer steps customers have to take, the greater the probability that they will finalize it, a quick login to the account will definitely be the key to success here. Sharing the opinions of satisfied customers is equally important

Source: own work.

**Table 3.***The dropship model – cross table of critical success factors (CSF) vs problems (PROB)*

	PROB1	PROB2		PROB3	PROB4	PROB5	PROB6	PROB7	PROB8
CSF1		X					X		
CSF2				X		X			X
CSF3					X	X			
CSF4									X
CSF5	X	X			X		X	X	
CSF6								X	
CSF7				X		X	X		X
X - CSF may contribute elimination of the problem (PROB)									

Source: own work.

As you can see, there are many ways to solve the key problems in dropshipping. Nevertheless, the advantages and disadvantages of this logistics model must be taken into account. The undoubted advantage is that there is no need to involve large initial capital – initial costs to run business are rather low (see Chapter 3). Depending on the supplier we cooperate with, we can also have an access to a wide range of products, which makes our offer much more interesting to customers. The only thing we need as a dropshipper is an interesting website, we do not have to worry about costs of storing and shipping goods or maintaining inventories. We can also easily update the product catalogue. On the other hand online store is only the sale broker and this has its consequences. The biggest disadvantage (as our calculations below present) we have to propose customer relatively high price and still we can expect very low margin at the same time. So even medium-level profit is associated with considerable involvement to keep right website traffic (e.g. how to increase number of visitors or number of daily orders?). This often requires additional tools to implement our marketing strategies – like social media advertisements. Additionally, it is difficult to build your own brand, especially when the risk related to the quality of the goods and the service of the order is quite high. Due to low initial costs and relatively easy access to dropshipping wholesalers, we can also expect strong competition. Is it the optimal idea for a business in crisis? It depends - if we want only minimize costs, it can work. However, when at the same time we expect significant profits - here you should be more patient and, above all, work very hard to attract more customers and follow their purchase decisions. An important element here is an efficient information system. However again, It is hard to resist the impression that we are heavily dependent on suppliers and their pricing policy as well.

### 3. Online store costs simulation based on dropshipping platforms

To assess whether the dropshipping model is actually profitable, we should analyze first all costs related to the launch such business. Costs that a start-up company must incur were analyzed, taking into consideration on the example of a small enterprise operating in Poland.

These expenses can be divided into two groups - first: initial costs - related to running a business, and the second to its maintaining. According to Comănescu (Comănescu, 2020) in the first group we can include:

- costs of registering a company (in the case of a sole proprietorship in Poland, around 700 PLN = ~200\$<sup>1</sup>)
- Internet domain purchasing (in case of the most popular Polish hosting company nazwa.pl starting set includes domain+additional basic services around 400 PLN = ~100\$).

Then we should take into account the costs of cooperation with a dropshipping wholesaler (like Ali Express Dropship, Alibaba, BigBuy Europe, Salehoo,Shopify, Ptakonline, Ab Pl, A-LAN, DROPCOM, EKOHURT, GaryLand, VivaB2B) and maintaining an online store. How to calculate them? First of all it is heavily dependent on the scale of our product range and terms of cooperation. According to Chodak (Chodak, 2008) we should definitely take into account the demand of our products, which can be calculated using following formula:

$$D_i = \frac{c * A_i}{M^e} \quad (1)$$

where:

$D_i$  - demand for a given item (number of orders for the  $i$ -th assortment item),

$A_i$  - expenditure on advertising of the  $i$ -th item in the assortment,

$M$  - percentage margin, which is the ratio of the store's selling price to the price specified by the supplier,

$e$  - price elasticity of demand,

$c$  - conversion rate, determining the percentage of people who clicked on the sponsored link and purchased goods and can be calculated as:

$$c = \frac{1}{10} * (1 - M) + \frac{1}{10} \quad (1)$$

Of course total demand ( $D$ ) is the sum of individual demand of assortment items ( $n$ ):

$$D = \sum_i^n D_i \quad (2)$$

Chodak (2008) mentioned also that costs of maintaining of online store in dropshipping model can be divided into 3 subgroups:

Marketing costs (MC), defined as:

$$MC_i = \frac{B}{CPC} * \frac{\frac{s}{x_i^{s+1}}}{\sum_i^n \frac{s}{x_i^{s+1}}} \quad (4)$$

<sup>1</sup> Dependent of course on current currency rate.

where:

$MC_i$  - the number of purchased clicks for the  $i$ -th position,

$B$  - daily budget for sponsored links,

$CPC$  - cost per one click,

$x$  - assortment item number, it reflects the relevance (importance) of a given product for the store,

$s$  - Pareto distribution shape parameter.

Internet costs ( $IC$ ), calculated using following formula:

$$IC = HC + n * sc + d * \frac{D}{k} \quad (5)$$

where:

$IC$  - Internet costs,

$HC$  - Hosting costs,

$sc$  - cost of service of one assortment item,

$n$  - number of assortment items,

$d$  - cost of a single order,

$k$  - average number of assortment items in one order.

Operating costs ( $OC$ ) - all fixed costs incurred by the store that are not included in other categories

To summarize total costs of maintaining dropshipping business ( $TC$ ) can be calculated as a sum:

$$TC = MC + IC + OC \quad (6)$$

and of course potential profit based on formula:

$$P = \sum_i^n (PP_i - SP_i) - TC \quad (7)$$

where:

$P$  - profit from sale of goods,

$PP_i$  - purchase price of the  $i$ -th product,

$SP_i$  - selling price of the  $i$ -th product,

$TC$  - total costs.

In order to convince what kind of effects the online store may expect, we conducted some simulations of requirements and costs on dropshipping platforms. Here are some results.

Frist calculations are based on the following assumptions:

- only small company, which wants to run its online store were taken into consideration,
- on average, out of every 100 visitors to our store 2 people will place an order,



- the average order value will be \$45 (with at least 2 products),
- margin is 2x, which means it's necessary to charge customers double the price which online store pays the supplier,
- on average it costs you \$0.35 to attract one visitor to our site.

According to Oberlo dropshipping traffic calculator - to earn 1000\$ in 5 days it will be necessary to attract 2000 visitors and achieve 40 orders per day. It seems quite difficult and disproportionate to the potential gains.

In turn Salesource (product price calculator for Shopify and AliExpress dropshipping) allows us to calculate potential profits taking into consideration product purchase price and shipping costs. E.g. when we assume that wholesaler price will be 20\$ (+5\$ of shipping costs), it turns out that recommended retail price should be even higher, than our first assumption – almost 70\$! Final selling price may vary slightly, but Salesource recommend staying within the price range for optimal sales results (between 58.63\$ and 79.33\$). Additionally we should remember about cost per acquisition (CPA) which will be equal 23\$ to promote our product, because in the dropshipping business model, most of this money is going to be spent driving traffic to our online store website via paid advertising. It will be even increased, when we decide to use Facebook ads or in case of luxurious item. Profit is simply what is left after all expenses have been taken away from the total revenue – in this case we can expect 21\$. In the table below calculations for other product purchase prices were presented (shipping cost is the same, but of course it's depended on supplier conditions).

**Table 4.**

*Product price calculation in the dropshipping model*

Product price \$	Recommended retail price \$	CPA \$	Profit \$	Price range \$	Total product price \$
45.00	112.49	37.50	24.55	95.61-129.35	50.00
100.00	209.99	70.00	34.99	178.48-241.48	105.00
1500.00	3009.99	1003.33	501.66	2558.48-3461.48	1505.00

Source: own work based on salesource.io.

## 4. Summary

The major aim of this paper was to present the dropshipping model, consider its advantages and disadvantages and find out, is it accurate way to develop business in short time and answer the question does it actually work during any economic crisis, because recently we observe again increased interest in this issue. Beginner dropshippers need to understand that this logistics model is not just another 'piece of cake' concept - it is a full-time business that requires patience, consistency and a lot of hard work. Moreover, this type of business activity is quite risky and should not be treated as a panacea in times of crisis. It is certain, however,

that dropshipping will continue to develop in e-commerce. Online stores, if they think about significant profits, must focus on finding their niche, building responsive websites and rely on a solid information system.

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