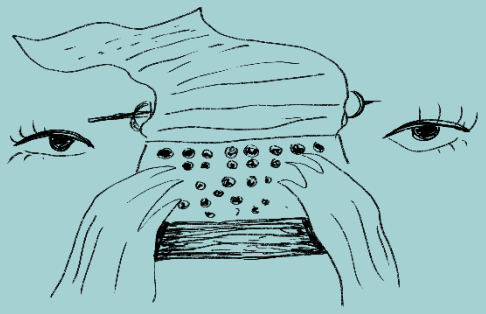
JD.com



JD.com, also known as Jingdong, is one of the two giant ecommerce players in China. Unlike the main competitor Alibaba, JD's operations stem predominantly from direct sales, end-to-end supply chain management and vertical integration rather than operating a platform for third party merchants like Alibaba does with its marketplaces Tmall and Taobao. This arguably makes the business operations more complex and CAPEX demanding which in turn entails a wide moat. Through the business model's dependency on tangible assets on a large scale, JD has built itself into a position which is very hard to replicate. For instance, JD is the only company in the world which can challenge, or even beat Amazon, in terms of supply chain efficiency, logistic technology and infrastructure at scale. During the first years of existence, they were getting a lot of complaints about poor customer service and uncertain deliveries. Therefore, JD invested heavily in their own logistics network. They cover literally 99% of China. I believe that the market underestimates JD's growth and margin potential and that the stock price of today is a result of a misconception of the underlying profitability of the business.

JD.COM

The story of Richard Liu and JD.com

Richard Liu is the founder of JD. Liu was born and raised in Chang'an, a small village outside the city of Suqian in the Jiangsu province of China. Grewing up, his family was very poor and the whole village lacked both running water and electricity. Liu has recently said that he remembers getting pork once or twice a year. Pork is still today one of his favorite meals. When he was young, he dreamt about becoming the village head and to be able to provide pork more regularly to the inhabitants of Chang'an.

Liu was a stubborn saver as a teenager. He eventually managed to save enough money to go on a road trip so Nanjing, a larger city in the Jiangsu province. He did not have any traveling experience at all during the time and got chocked when he reached the city. Something happened to Liu during this trip. He noticed that the other kids, the kids from the city, behaved, spoke, and dressed differently than him. This trip thus turned out to be something of a turning point for Liu as it was the catalyst for both an extreme drive and curiosity.

Liu knew that the most secure way out of the poverty and the small village was to study hard. His goals were high, as high as they could have been. He scored the highest point in the entire Jiangsu province at Gaokao in 1992 (Gaokao is the Chinese equivalent to SAT). Because of this Liu was able to choose any University he wanted to. Liu pursued a degree in sociology at Renmin University. When he moved from his home village to pursue his new adventure the whole village waved goodbye, and the 76 elders of the village gave him one boiled egg each. So, for the first few weeks on his adventure, he only ate boiled eggs.

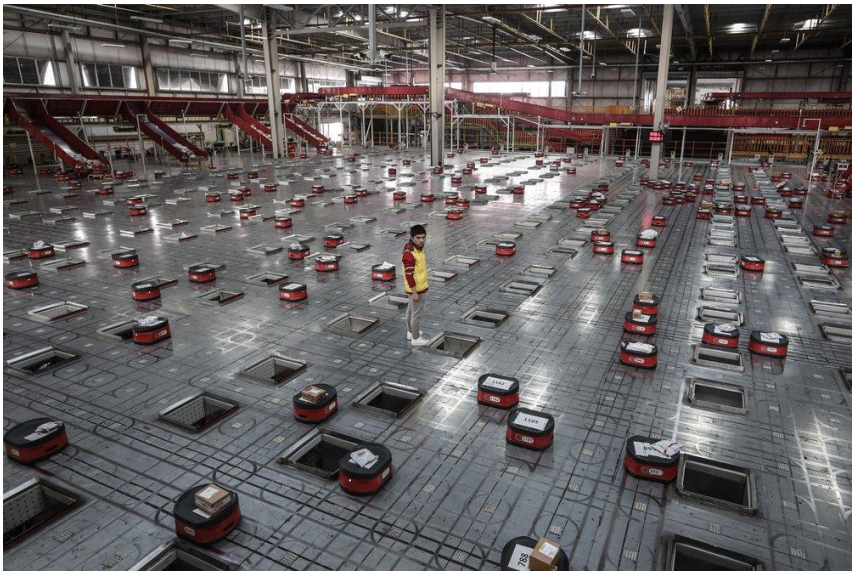
History shows that being poor and determined can be a very powerful combination. All the grit Liu got from his background turned out to be vital for JD's success. For example, Liu began to teach himself computer programming and started a part-time job on top of his studies. This was highly lucrative for him as computer programming was a scarce resource at the time. During his time at the university, Liu was able to save up enough money to purchase his own personal computer and cell phone, both quite expensive at the time, and even had a new house built for his parents. Besides this, he saved enough money to able to start his entrepreneurial journey.

I have become very excited about Richard Liu as an entrepreneur and leader. He has the characteristics of a hungry and driven entrepreneur with a huge vision of creating something enormous. One of his most compelling characteristics is his focus on creating value for the entire JD ecosystem, including customers, suppliers, employees, partners, and investors. This has led to a great relationship with the Chinese government since they share the idea of benefiting the society as whole rather than individual companies. Not least have this created an impressive culture.

Liu achieved his dream of helping his fellow village citizens from his childhood. He based his customer service center there and keeps on building it. This is also the town where the JD drone fleet is based. Liu's Story is like Jack Ma's. An interesting side note is that Beijng, Shenzhen and Shanghai are the top tier cities in China, and that Guanjo (the city were Jack Ma started and built Alibaba) pretty much has been added to this list. How come? Probably thanks to Jack Ma. Entrepreneurs are really superstars in China.

The business

JD predominantly operates within online retail. But saying that JD is only an online retailer would be a huge understatement. The core business consists of high-quality online retail which made up about 86% of revenue in Q3'21. This slice of the pie consists of both 1p and 3p sales. About 11% of revenue consists of logistics and rest is attributable to "new businesses", which is becoming a decent bag of options. During this report, I will mainly focus on the business segments being direct sales, marketplace operations, logistics and JD Health. I will only briefly mention some of JD's other business initiatives.



Ecommerce

The global retail market is forecasted to reach $30T by 2023, which corresponds to 4.5% average annual growth (CAGR). Ecommerce, which today is worth about $4T, is forecasted to grow with a CAGR of 16% through 2023. According to Emarketer, ecommerce accounted for 14% of total retail in 2019. This figure is believed to be 22% in 2023. Ecommerce is growing globally and accounts for an increasing share of total retail on all continents with each passing year.

This contributes to the fact that ecommerce is a fantastic industry to invest in. It has an obvious value proposition for customers, it is very easy to understand and has historically served as a great platform for optionality. Ecommerce provides lower prices, vast selection, and greater accessibility for the consumer. This means that e-commerce saves the consumer both time and money while giving the consumer more choices. Moreover, ecommerce platforms have in many regions transformed into leading fintech platforms, gigantic logistics fleets and cloud infrastructure suppliers.

The physical part of e-commerce is in many ways a protection against potential threats from disruptive technologies. This because someone who is trying to take market share in e-commerce obviously must build up their own logistics network, their own distribution centers, and their own production if they operate B2C. This both takes an enormous amount of time and costs an enormous amount of money.

JD has always focused a lot on 1p sales and vertical integration. Direct sales are the largest part of the company's operations. This means that JD owns the whole supply chain for the majority of its total topline. Which has led to the fastest, most reliable, and largest logistic fleet in China. JD's vertical integration allows it to ensure a more consistent level of quality more easily, which is particularly important in an economy like China's in which counterfeit and low-quality products and

services often is a concern. The focus on 1p sales is different from many of the toughest competitors, Taobao and Pinduoduo in particular.

Think of it, the JD logistics network are constantly trying to maximize utilization and efficiency for 75,000 + trucks, 2,200 + warehouses (including the cloud warehouses) and 200,000 + delivery personnel. This is extremely complex and labor intensive and mistakes in this process are probably made often. This is not something that can be replaced by a new globally scalable digital product. This literally takes years replicating. JD themselves has been investing aggressively in logistics for almost 15 years.

Therefore, it's reasonable to argue to the primary moat of JD's business is their extensive logistic fleet. Which in turn of course is heavily dependent on tangible assets. Capital-intensive businesses often trade at much lower multiples than the opposite. However, there can be strong competitive advantages hidden in a high capital intensity. The important thing then becomes to get a grasp of the basis for the high capital intensity. As you probably agree with, the valuation of a company does not only stem from the future cash flow. The future cash flow must also be adjusted for its risk.

In other words, the business is digitally scalable but relies on a giant a physical network. It both has huge CAPEX needs and enormous network effects on top of this. Although, if this is tied to the right digital service, like an ecommerce leading platform, logistics networks are interesting animals to study. The network effects evolve in parallel to the increase of digitization; when they start carrying some sort of information and when they connect people.

For example, I think there are good reasons why Buffett, who loves moats, has invested in airlines (even though he has now sold his last share). It's clear that he invested in something with strong moats due to the capital intensity, among other things, and that he made tradeoff between more security for the investment against less possible upside (as he usually does). I think it's wise to think in that direction, to focus on the downside more than the upside.

Ecommerce and logistics companies fall perfectly well into this category. However, apart from airlines, ecommerce companies have very a digital and scalable distribution model. But the business model shares the characteristics with airlines in terms of being protected by an extensive physical infrastructure. One should not forget that the brand recognition also primarily stems from these tangible assets, which in turn acts as an enabler for optionality.

Further, Buffett loves long-term trends of which can be trusted to the dawn of time. McDonalds, Amex and Coca-Cola are three great examples. McDonalds and Coca-Cola have been riding the trends of food and liquid, while Amex has been riding on the payments trend. It is easy to understand that humans always will need to eat, drink and make payments. I see the same thing for logistics. We will always have to transport things. But apart from the food and drinks trend, logistics has the potential to become fully automated and digitized.

If another player starts the same business, they will have to invest the same capital for the physical infrastructure. It literally doesn't take years to build something like this. It takes decades. Also, it is only a few players in the world that really can compete within this area. Usually, it is around three players for every continent that becomes dominant within the ecommerce/logistics cohort. I think we

will reach a point of time when ecommerce is more than 50% of total retail. Then everything will be shipped through these massive fleets.

As of Q1'20, third-party shippers represented over 40% of JD Logistic's revenue, which were a doubling of the third-party share of shipment volume in only two quarters at that time. The CFO said external volume from that point were contributing to the company's margin rather than depleting it. Vital inflection point.

Liu started JD 1998 with three golden rules:

- High Quality
- No Counterfeit
- No Negotiable Prices

As aforementioned, the focus towards high quality and no counterfeit were probably determined since counterfeit products and low quality was (and still is) a huge problem in China. It was with this in mind that Liu decided to invest heavily in 1p sales and vertical integration.

This looked promising, and JD managed to start a total of 12 physical stores before the SARS-CoV-1 epidemic hit China in 2003. As usual, the best companies and the best of people often succeed in turning a crisis into something positive. The story goes that one of the top managers at the company proposed that they should close some of the physical stores and sell online instead. This of course sounds like an obvious strategic turning point today, but at that time back in 2003 – 2004, a move like this required both courage and innovation. Only about one year into this shift JD decided to close the remaining physical stores due to the superior margin structure and growth for the ecommerce business.

Ecommerce is tough as competitors are selling similar or identical products with low customer switching costs. This is especially true in China given their aggressive mentality among founders and businesses. The result of this is usually a palpable price war which pushes down the margins. This is kind of the same story as we have witnessed within physical retail for the last 50 years in the U.S. It is important to remember that a business is only as good as its competitive situations allows it to be. However, the question I have been asking myself is; how does an ecommerce company stay ahead of the curve as current differentiators might become obsolete in the future?

I believe the answer is relentless customer focus and increasing the value proposition by bundling additional products or services. What consumers want has not changed. It is convenience, selection, price, and entertainment. What changes is how a consumer defines these variables over time. Convenience was once the closest store, selection was the biggest store, price just had to be good enough and entertainment could for instance be if something extraordinary happened at the shopping location (a shopping event with accompanying entertainment such as music or other performances in some fancy location for example). Now, however, convenience is one-day delivery, selection is millions of online stock keeping units (SKUs), price needs to be the lowest in the country if not the world and entertainment is the overall online experience (a lot of the entertainment variable is probably attributable to the brand). Moreover, leading businesses like Amazon are bundling services like video and audio streaming into their core e-commerce offerings which seems to become

a trend as well. Walmart has for instance started a similar initiative called Walmart + and JD has gone in the same direction with its JD Plus subscription.

As previously mentioned, JD has always put the customers first. In the early days, 70% of customer complaints involved delivery service. To solve this issue Liu decided to take the logistics operations in-house. JD is now the world leader alongside Amazon in terms of logistics efficiency at scale. But as other businesses eventually catch up, the question turns to what future differentiation will be.

One interesting avenue JD could invest further in is expanding its private label business. Developing private brands can not only benefit customers, but also benefit the digitization of manufacturers and improve the efficiency of the supply chain. This has become a trend for retailers around the world. Walmart has Marketside, Great Value, George and more; Costco has Kirkland, Chinese supermarket chain Yonghui has "Super Select", and Amazon has several of private label brands. In 2020, the market size of private label brands increased by 22.7%, which is over 12 times compared with the consumer goods market (1.8%), according to the white paper on private label brands by the Daymon Worldwide Shanghai branch and Kantar Consumer Index of U.K.

The white paper also shows that the private label market in China has a lot of potential. Nearly 90% of customers have the intention to try private label products, and over 50% of them have not tried one before. JD's private label brand is growing well. Jing Zao (which means "made by JD"), saw its number of customers and orders increase 4x y/y during 2020.

Vertically integrating deeper into the supply-side enables JD to leverage its vast amounts of consumer data to manufacture products specific to its customers' preferences. Chinese consumers already associate JD's brand with quality. Therefore, I believe it is a natural extension and adjacency for JD. While private label is lower price for consumers, it is also typically higher margin for the retailer since there is no "brand tax" involved and an additional layer of the supply chain is removed.

The opportunity for retailers is found when customers are not sure about brands, and to bundle access to their own private label products. For instance, JD could create a compelling bundle with its JD Plus subscription offering (which has above 20 million subscribers already). While JD Plus already offers free shipping along with discounts and rewards, JD could potentially bundle access to private-label products, financial services, or leverage its relationship with Tencent for access to services in the entertainment, local service, or transportation arenas (similar to the collaboration Mercadolibre has with Disney).

Logistics

Both JD and Alibaba are building revolutionary logistics networks across China. Traditional, physical networks, which gets increasingly more complex, automated, and intelligent. These businesses had been behind the scenes for a long time, until the JD Logistics IPO prospectus was published 17 May 2021. With the JD logistics IPO filing, we got complete insight into the entire JD logistics network for the first time.

When asked about comparisons, JD Log CEO, Yu Rui, made some interesting comments:

"If you must choose a reference, you can understand JD Logistics as AWS of China's supply chain." He separated the company's trajectory in three phases, believing we are now at 3.0: "3.0 is a service model similar to cloud services, which can be flexibly combined for customer's needs". He used a ten-year timeframe for it, so traders might want to stay away.

JD themselves call its logistics operations "Integrated logistics and fulfillment network". This contains; warehouse-network, transportation network, last-mile delivery, bulky item logistics network, cold chain warehouse management and cross border logistics. What's interesting is that many logistics companies are specialized for different types of deliveries. But JD says that they are doing the whole thing – everything that can and should be shipped – or at least the strive to get there.

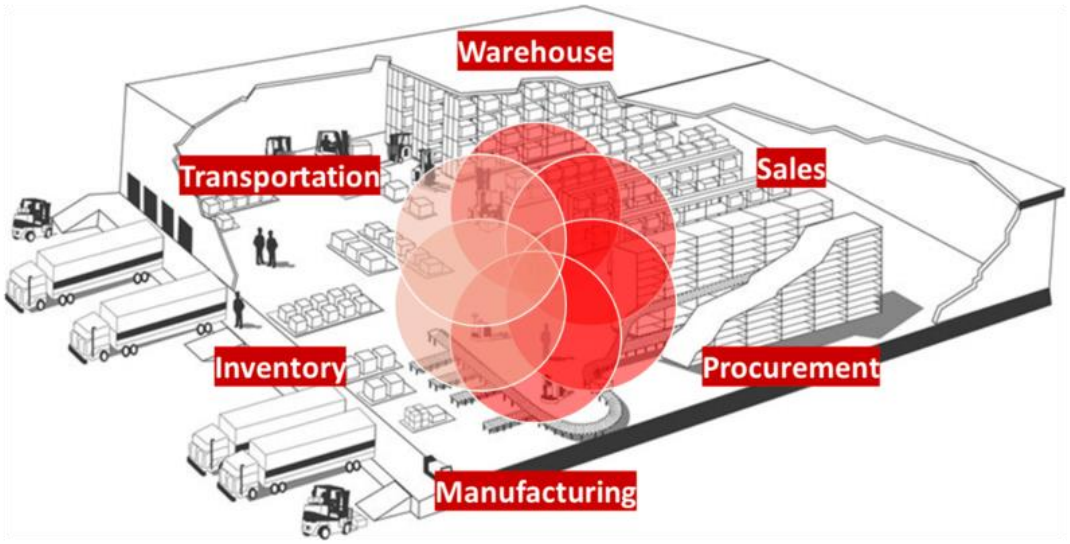
By looking at the short history of ecommerce, we can state that ecommerce companies that are willing to invest in physical infrastructure are the ones to dominate the industry. Amazon, Mercadolibre, Coupang, JD, Rakuten and Ozon are some of the market leaders in different regions and countries. There is probably a good reason why giants like Alibaba, Shopify and Sea Limited also started investing heavily in logistics in recent years. Note that investments in logistics won't necessarily mean owning every part of the value chain. In some lower-tier cities this might not make economic sense, for example. However, having sufficient control of the distribution channel is critical for delivering a great customer experience.

JD describe their logistic infrastructure as six synergistic networks.

1. Warehouse-network. This is where things are kept. JD Logistics reached 1.300 warehouses owned or operated during the last quarter.
2. Transportation network. This is where things are moved. 75.000 + trucks and other vehicles and 200 + "sorting centers".
3. Last-mile delivery network. 72.000 + delivery stations. 200.000 + delivery staff.
4. Bulky item logistic network. This is sofas, home appliances, and generally things that are large, irregularly sized, and hard to move. They have about 90 warehouses and 185 sorting centers just for these types of items.

5. Cold chain logistic network. Fresh products and pharma. 100 warehouses and more than 2,000 vehicles specialized in fresh and perishable SKUs.
6. Cross border logistics. They are taking their network to southeast Asia and Europe but are concentrated against China. By June 30th, 2021, JD has been operating roughly 50 bonded and overseas warehouses globally in the US, UK, Germany, Poland, the Netherlands, Australia, and more regions. JD International Logistics' supply chain network reaches more than 220 countries and regions, and the company is dedicated to building two-way 48-hour pathways and establishing a robust and efficient cross-border infrastructure for global sellers and shoppers.

JD's software for logistics can be divided into three parts; warehouse management software (WMS), transportation management software (TMS) and order management software (OMS).



WMS decides how the inventory should be stored, which is a massive challenge. JD has a revenue stream which stems from B2B customers paying more if they want to be stored in the most optimal places to secure faster deliveries. This is kind of like ads, where companies pay to get a good place in the store. The challenge this brings is that JD often must re allocate their stores if companies pay them for that service. Of course, they must be able to be quick in this process. WMS optimizes the storage of goods and ensures benefits like expediting the transit of goods through the warehouse, ensuring the correct identification of products, maximize the use of available space, minimize the handling of goods, keeping accurate inventories, ensure on-time and correct deliveries, raise staff productivity, lower operational costs, automation of warehouses through interlinks with drones.

TMS is software for deciding the routs. This is probably the most complex component. Some packages go through several trucks and several warehouses to then be delivered to a last-mile delivery station. The decision must be made in a couple of hours tops (since they almost exclusively deliver within two days). There could also be bad weathers, stops in traffic, traffic accidents et cetera. This is extremely complex. I bet mistakes are made often in this process, and that the quick

digitization process of the network is of huge benefit for this task. Think of it, the JD network are always trying to maximize utilization and efficiency for 75.000 + trucks and 2.200 + warehouses (including the cloud warehouses). Their software can now learn how to allocate this thanks to AI. The software system is deciding optimized routes, real time tracking and tracing of goods and vehicles.

OMS decides how the orders should be packed. For example, if a customer orders 10 different things on JD.com it entails an optimization question regarding if this should be one shipment or several. In order to reach full optimization JD must decide whether they should make four or eight different shipments, and through which of the warehouses these shipments will pass. Usually, the full order is getting consolidated at a last-mile delivery station since getting only one delivery at the same time is better for the user experience. Also, in the context of group buying, I think it would be necessary with very sophisticated data driven ordering and order tracking to become a big player – which is a strong trend in China.

Software is constantly getting a bigger share of the revenue as JD connects more and more cloud warehouses. But this is mostly a physical network. This is more than just digital connection via a smartphone. This makes this business extremely labor intensive. They employee a couple of 100.000 in total (more precisely 315 000 according to Finviz). Just like Amazon, who has about 1 350 000 employees. Noteworthy and somehow chocking is that JD has about 30% higher revenue/employee in comparison to Amazon. In advance I had thought that an exact opposite relationship would be reasonable given that Amazon has more revenue streams that are less labor intense. Amazon of course has more earnings/employee given the big difference in marginal structures further down the income statement. This is also why Amazon's market cap is >16x higher than JD's. Anyways, the size of JD's network is impressive. They cover all of China (which is approximately in the same size as the US) with two-day delivery.

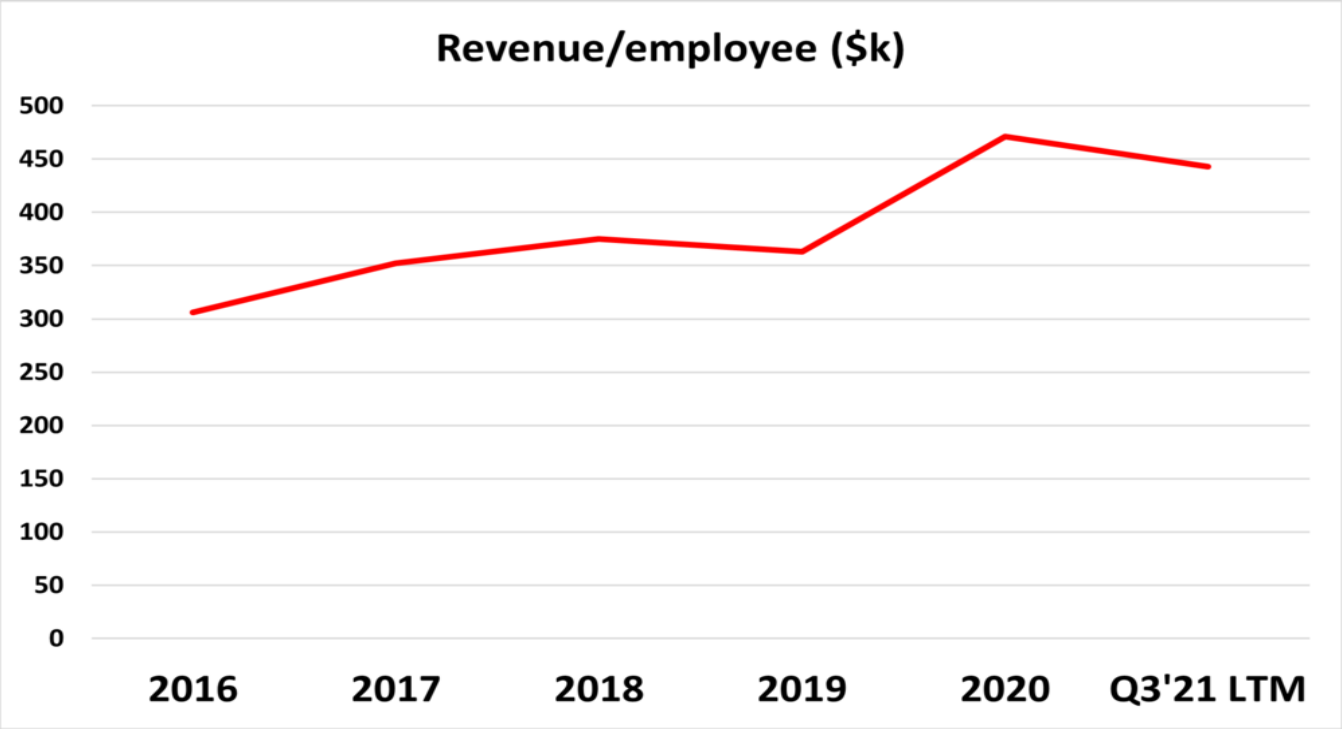
What is interesting with JD right now is that they story seems to be changing. They are digitizing the network. They are standardizing the interfaces, making this incredibly huge network more efficient through technology. Back in 2017, Liu said that JD would focus on three things: "Technology, technology, technology". They are trying to automate everything, including the trucks. This is also why I think it's reasonable to view JD and Amazon as competitors to Didi and Uber, and maybe even Tesla and the auto industry. This seems reasonable in theory; if they are the fastest and most efficient and data driven companies to transport things, why not also transport people?

JD.com is the only e-commerce platform in the world to provide small-to-medium sized warehousing, oversized warehousing, cross border, cold chain delivery, frozen and chilled warehousing facilities, B2B and crowdsourcing logistics. They opened the logistics platform to partners so that they can leverage JD's unparalleled nationwide logistics network to provide an industry-leading level of delivery service. JD can achieve rates of approximately 90% of orders delivered the same or next day, a rate of fulfillment that no other e-commerce company of JD's scale can match globally besides Amazon.

The warehouses are usually constructed in a way that the goods come in at the back and get stored in 50-meter-high shelves. JD built the world's first fully automated warehouse in Shanghai and are currently investing heavily in drones for delivery and automatic delivery robots. The most advanced warehouses are in Beijing and Shanghai and serve as a watermark for what all the warehouses could

look like in the future. As of today, storage is the most automated part of the supply chain. That is the robots in the warehouses collecting goods which they bring to the trucks and between shelves (although, they have delivery robots as well).

An interesting key figure is revenue/employees since it indicates if the company increases its labor effectiveness over time (which tells us something about the logistics network increasingly getting automated and more efficient).



So, what is so interesting with logistics? What's interesting is that the story behind logistics seems to be changing. Both JD in China and Amazon in the US currently demonstrates that logistics will end up being a huge service industry. In parallel with outsourcing their own logistic capabilities to other companies, they are also making the physical infrastructure more and more technology dependent which increases its efficiency. Someday, it might end up looking like this.

Many investors neglect that logistic will be a giant service industry. Further, the argument of that it does not matter much to get a delivery within two hours or three days is recurring. Fair, for some items and some people it does not. However, for many SKUs, fast on-demand delivery, and the predictability this entails, could end up being a hygiene factor. My guess is that these transaction and information based gigantic IoT fleets, with AGV and AMR tech, will continue to amaze in terms of optionality. We'll come back to this later.

"We figured out early that the best way to serve the consumer with high quality while reducing costs is by investing in technology. So, we spent a lot of money and a lot of time building our supply chain, with our automated warehouse, autonomous vehicles, drones, etc. The objective was to guarantee the quality not for today but for the future."

– Richard Liu

Owning the supply chain through JD Logistics is JD's USP and moat and will continue to be so moving forward. JD has been strategic in terms of branding JD Logistics as an independent subsidiary in order to easier attract competitors to JD Retail. JD Logistics started being treated as whole subsidiary in 2014, meaning that it would provide logistic services for parties that are not JD. The idea culminated on the JD Logistics IPO in May 2021. That gave the status of independency it needed to continue flourishing, reaching a US$ 40 billion market cap at the IPO date (although JD.com still holds a 64% stake). JD Logistics is clearly on the right track by showing of metrics such as 70% 5-year growth CAGR with great operational leverage in Q1'21, and with external volumes contributing to the company's margin rather than depleting it. It still makes operational losses though and will probably keep burning cash for a while.

To become a successful ecosystem, the opportunity lies in the network and value proposition for and between customers and companies. As previously mentioned, the most complex and difficult-to-replicate component of this is the logistics fleet and the brand. This is already in place for JD which ought to entail huge opportunities for optionality. JD can for example use these components to keep bringing more third-party sellers to the platform which will increase both margins and network effects. JD has already started to become the go-to logistics platform also for other commerce platforms competing with themselves and Alibaba. For instance, FarFetch, Pinduoduo, CPMG, Tencent Mini Programs and so on and so forth. They all save insanely much capital by going with JD's logistics solution instead of building their own fleet. JD Logistics only has about 5% market share, so the market is still highly fragmented.

Lastly, JD and Tencent recently announced an increased partnership within warehouse management and logistic services. The project and the increased partnership were said to be one of the most important steps in JD Logistics' opening-up move.

JD Health

JD Health is the healthcare subsidiary of JD.com. It was started in 2017 and started independent operations in 2019. JD Health was, just like JD Logistics, listed successfully on the Hong Kong Stock Exchange (JD.com still owns 67% of JD Health). JD Health's products and services cover the entire pharmaceutical industry chain, and the complete medical process, health management scenarios, and life cycle of users, aiming to build the most comprehensive "Internet + Healthcare" ecosystem in the industry. Leveraging JD's core strength of supply chain, JD Health has become a leading pharmaceutical retailer in China, with extensive presence in B2C, B2B and O2O services.

China has several medical problems. These include poor structure of the Chinese medical system, inadequate/unequal resources, long waiting times, expensive medical services, sub-par medical quality and high medical costs per person in relation to GDP per capita. The domestic health care system predominantly consists of both private and public coverage plans. 95% of the population has coverage, but almost 70% of Chinese coverages go only as far as half of total medical costs.

As of December 2020, JD Health had 20 million SKUs, with over 12,000 third party stores. JD Health's JD medicine delivery covers over 300 cities in China, providing 24 hours delivery, same day delivery and 30 mins delivery (depending on what items being delivered and in which city). In

comparison the biggest competitor for JD Health, Ali Health (surprise), has over 23,000 third party stores with over 33 million SKUs. Ali Health provides 24-hour delivery in 100 big cities in China.

The products range from a medicine marketplace – of course offering deliveries within 30 minutes and 24 hours a day – to TeleHealth with doctors in real time or AI driven. This combined with JD's high efficiency principles has made JD Health the leading online pharmacy in China. JD Health has approximately 30% market share while Ali Health is just behind with 25% of the market. Both provide online consultation, chronic disease management, general practice, and consumer health care services as well as physical stores.

The pandemic has of course served with a lot of tailwinds for both JD and Ali Health. In fact, JD Health managed to capture more online pharmacy market share than the four biggest pharmacies together. It took JD Health three years after its launch to become the largest pharmacy in China. This tells a lot about the brand and the strong synergies between logistics services and sales of healthcare products. Online pharmacy is also heavily dependent on scale (predominantly trough low-cost advantages, logistic capabilities, and brand recognition). This entails the possibility for JD Health to offer cheaper prices, just as in other retail categories.

Revenue for JD Health has been growing at a 90% CAGR 2017-2020, reaching $3B in revenue 2020. Current market cap is $26,3B. With JD.com's 67% stake in JD Health, it makes up about 17.6% of JD.com's total market cap today.

JD Health is rarely spoken about. But with the synergies between supply chain management, fast deliveries and a brand that is associated with high quality and trust – JD Health should be viewed as a subsidiary with a lot of potential for value creating going forward.

Other bets

JD.com also runs other operations than the afore mentioned ones. For examples, JD CENTRAL, JD ID, Dada and JD Finance. I will cover them briefly since none of these initiatives are more than options today.

JD CENTRAL is a e-commerce and business retailer in Thailand and is a joint venture between JD and Thailand's largest retailer Central Group. JD CENTRAL officially began operating in 2018 and is a combination of direct-to-consumer and marketplace businesses. Its self-defined role as a digital enabler differentiates the company from most e-commerce players in Thailand, the second largest economy in Southeast Asia.

The company is the first online shopping platform in Thailand to claim to provide 100% authentic products, echoing the "zero-tolerance to counterfeits" promise of the mother company. Thailand's e-commerce market is mostly dominated by consumer-to-consumer (C2C) players. Combining the forces of Thailand's powerful offline retail conglomerate Central Group, with the long-term e-commerce expertise of JD, the company introduced the concept of an online mall with guaranteed quality. Thanks to its own- and third-party delivery resources, including eight self-built warehouses. Today it covers the whole of Thailand with rapid delivery services. Management revealed that JD CENTRAL saw 550% GMV growth between 2018 – 2020 and 169% sales growth during 2020. JD.ID is a similar initiate but located in Indonesia.

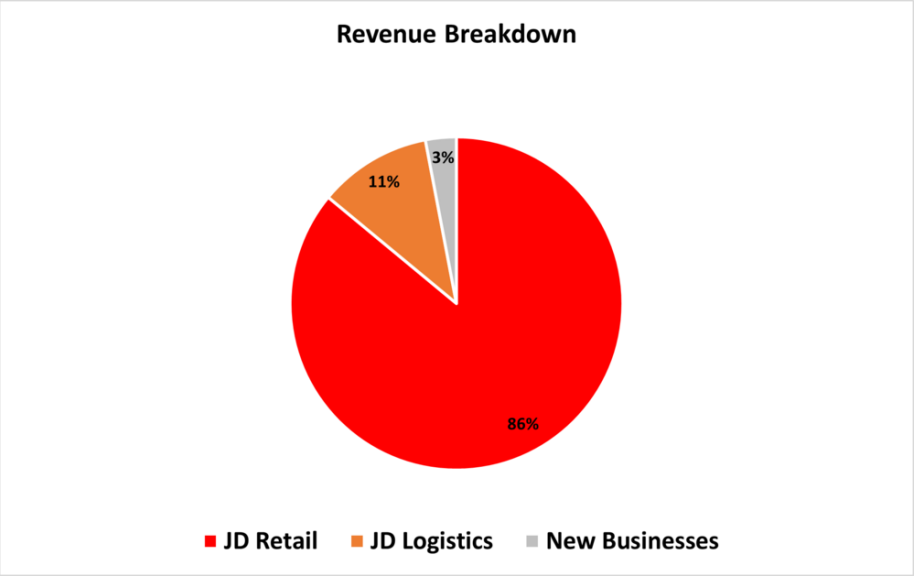
Dada is an on-demand delivery company operating solely in China, of which JD has a 51% equity interest in. Foremost, Dada delivers groceries and has now established partnerships with 82 of the top-100 supermarket chains in China. It operates two main business segments. Dada Now, which is a delivery network focusing on sub one-hour deliveries, and JD-Daojia (JDDJ), a delivery service mainly for groceries. Dada does not operate within food delivery since its completely dominated by Meituan which makes the barriers to entry tough. Dada is still a losing operation but delivers great topline numbers. Dada has performed an ~80% 5-year revenue CAGR 2016-2021. LTM GMV was $5.92 billion and increased with 75% during Q3'21.

JD Finance used to be the finance unit of JD. Started from October 2013, JD Finance began operating as an independent company, focusing on being a partner to financial institutions through its technology solutions. It takes full advantage of technology integration and cross-company synergy, allowing the company to offer corporate, retail, and rural customers safe and customized financial services. To customers, JD Finance provide series retail products and services to over 400 million individuals, majorly consumer finance, payment, and wealth management products. To businesses, they provide technology solution/service to over 700 financial institutions. Based on its parent company, JD Finance's core advantages lies in massive, multi-dimensional and dynamic big data coupled with the cutting-edge technology. JD has said that JD Finance's revenue will come from serving financial institution instead of holding financial assets in the future.

Note that JD has more subsidiaries that won't be described in this report such as JD Property (real estate) and JD Technology (AI initiatives) and JD Cloud. These are all small parts of JD.com today and are in my opinion therefore not worth focusing on, yet.

Revenue breakdown

The company reports three segments, JD Retail, JD Logistics and New businesses. JD Retail consists of online retail, online marketplace, and marketing services in China. JD Logistics includes both internal and external logistics businesses. New businesses mainly include JD Property, Jingxi, overseas businesses and technology initiatives.



JD Retail

- 86% of revenue
- 23% growth in Q3'21

JD Logistics

- 11% of revenue
- 53% growth in Q3'21

New Businesses

- 3% of revenue
- 33% growth in Q3'21

Total growth for Q3'21 was 25.5%.

Logistics and other services revenue have seen strong consistent growth over many quarters now:

Q1'20 54%
Q2'20 54%
Q3'20 73%
Q4'20 95%
Q1'21 109%
Q2'21 72%
Q3'21 53%

Q3 numbers:

Revenue +25.5%

- Product +23%
- Services +43.3%
  - Marketplace and Ads +35%
  - Logistics and Other +53.1%

Annual Active Customers +25%
Op. Cash Flow TTM +10%
Flat FCF TTM due to lots of CAPEX in this quarter

Between 2018 – 2020, revenue CAGR for JD was 27.5%. Considering that this CAGR was boosted by COVID tailwinds for ecommerce during 2020 (which also makes the y/y comps tougher), the revenue increase of 25.5% for Q3'21 should be viewed as very strong. Product increased by 23% and services by 43.3%. In part, the strong result has to do with JD's increased market share ever since Alibaba opened their ecosystem. Number of sellers on JD was up 3x y/y (!). Management also expects that 3p will keep growing faster than 1p in Q4. Both Alibaba and Pinduoduo disappointed in Q3 and JD keeps gaining market share. This indicates that JD's niche and competitive advantages keeps getting stronger.

The highlights from Q3'21 is in other words that the high margin businesses (B2B), which ultimately will make JD to an ecosystem, keeps growing faster than the traditional business. Also, the relative strength against peers tells us that JD keeps gaining market share.

So, how about the margins? Free cash flow and bottom-line margins keeps being close to zero since JD keeps investing heavily in both CAPEX and R&D as well as lowering prices. Stock based compensation surged almost 600% y/y which should be watched going forward. I won't draw any conclusions from this before it becomes a trend for several quarters.

Q3'21 margins

Gross 14.2%
EBIT 1.2%
Net -1.3%

On the cost side, one interesting metric that Henry, (@BuyandHoldd at Twitter), wrote about in his latest piece on JD is the Revenue/S&M, which currently sits at 28x for JD. As a comparison JD's main competitors Alibaba and Pinduoduo have a 7x and 2.5x multiple respectively. It's clear that JD has an advantage on that front. Amazon currently have 133x Revenue/S&M. Also, this might tell us something about the competitive landscape in China. As we all know, competition eats margins and vice versa. Lastly, cash was flat at $13 billion (15% of market cap) as was debt at $450 million.

Competition and competitive advantages

Alibaba is JD's toughest competitor. Alibaba's marketplace model is very successful in long-tail categories like apparel. But there seems to be room in China's massive $5 trillion retail market for another business to operate a first-party retail model in standardized categories like electronics and home appliances. Since JD takes on inventory risk, they could achieve beneficiary procurement scale over time and guarantee product quality in a country rampant with fake goods. By operating logistics in-house JD could deliver goods far faster than others. This entails a compelling value proposition to consumers with a scale-based, competitive-advantage flywheel. As JD receives more orders, the cost per order declines, and JD passes these cost savings along to consumers, subsequently driving additional purchases – like the dynamic of Walmart, CastCo and Amazon.

"Most other players focus on traffic, we believe the way to win the game is supply chain infrastructure driven by tech... we see this as a business heavily relying on supply chain. This involves taking advantage of core capabilities to provide users with a high quality experience and better pricing." (Sandy Xu)

In addition to Alibaba, there is plenty of other competition. For example, Pinduoduo, Kuaishou, Douyin, Meituan and WeChat who are all growing very fast and are successful in their respective niches. The Chinese tech scene is generally characterized by extremely tough competition. However, most of these players are focused towards 3p sales which gives them different margin structures in comparison to JD. This arguably makes JD's moat larger in comparison, but the margin possibility becomes weaker. Thus, vertical integration and supply chain management is where we find JD's strength but also its weakness.

The risks to any investment thesis generally boils down to events and circumstances that would materially change the trajectory of future free cash flow generation and returns on invested capital. This ultimately depends on whether the business has a sustainable competitive advantage. For JD, its competitive advantage is a great customer experience derived from its vertically integrated model. Specifically, process efficiencies and economies of scale in retail procurement and logistics. I believe these advantages are durable given the time and capital necessary to build a model to rival JD's and the complexities to operate at scale. However, if Alibaba or another competitor were to neutralize the components which differentiate JD's customer value proposition, it would be a material risk to my thesis. Alibaba has been increasing its investments in in recent years since they bought enough shares to become a majority owner in the logistic subsidiary Cainiao in 2019.

Also, there are certainly risks associated with the Tencent partnership. Especially since Tencent's Mini Programs has gained huge traction within ecommerce during recent years and because WeChat accounts for approximately 25% of JD's overall traffic. For Pinduoduo, this number is estimated to be 40%. However, as far as I know Tencent still use JD Logistics for all its logistics operations. I think there are several factors which mitigate the Tencent related risks:

- Building in house logistics in not in line with Tencent's strategy of running a capital light platform
- The time, capital and complexity required to rebuild nationwide logistics networks
- Both JD and Tencent has Alibaba as their biggest competitor. This ought to make them more likely to collaborate with each other.

Last week Tencent communicated that they plan to distribute shares worth $16b in JD as dividend. This will decrease Tencent's equity stake from 17% to 2%. The communicated reason is that Tencent wants to avoid more monopoly issues, and that JD now is a mature business in comparison to many of their other holdings, which in fact do not fit their usual investment model.

At first, I interpreted this as horrible news for JD since a big part of their business is reliant on Tencent partnerships and traffic from WeChat. But this might end up being net positive for JD since their independency now increases. There have been rumors among analysts in China that the only reason JD has not been serving ByteDance (TikTok), Kuaishou and Douyin internationally is because Tencent (which has been the largest equity owner in JD for many years now) has not allowed them to do it. So, if one big part of the long-term bull thesis is that JD Logistics will become the AWS of supply chain management and logistics, this might end up being very positive. Tencent also communicated that they will keep all existing partnerships with JD. The JD stock plunged 6% on this news.

I think it's fair to state that ecommerce is China is becoming a fight between those with physical infrastructure (JD and Alibaba) and those with consumer attention (ByteDance, WeChat, Pinduoduo). That said, JD's moat should be questionable. How eager are the consumers of getting their goods faster and more reliably as a tradeoff towards an arguably better UX and sometimes even better price elsewhere?

Profitless growth

JD is using its superior scale as a retailer to achieve lower cost of goods sold via purchasing power against the suppliers. By being bigger than the rivals, they can get their goods cheaper. This means that they can either have a higher gross margin, because they could have kept the price like their competitors, or they can lower prices and have a smaller gross margin, but cheaper selling price. What JD has traditionally done is to keep their gross profits artificially low. That is, they pass these savings on to the consumers to keep the prices lower. In doing so they are often cheaper than others. What happens is of course that more customers come to them, and they grow topline rather than gross margin, which should be better for the long-term. This leads to the flywheel that we've seen in the U.S for e.g., Amazon, Walmart and CostCo. They can now keep squeezing their suppliers and get even more purchasing power as the ecosystem grows larger. As an investor, I think JD's pronounced strategy regarding profit less growth is vital to understand. Management think they can achieve high single digits or low double digits margins if they flipped the focus from growth/moat to profitability. I have no reason to doubt it.

Optionality

JD should be viewed as they are in the business of moving things, not only in the business of ecommerce and logistics. As aforementioned, my perception is that JD has built the most complex and expensive components in terms of creating a platform. They should be able to put one or several high-margin businesses on top of that. As the company executes on this and as the market realizes this in parallel – JD should also be valued more like an ecommerce platform instead of a physical retailer like Walmart and CostCo (more on this later).

If we apply a 10-year time horizon, I think their current position entails an opportunity for great optionality. They could for example turn out to be the logistics provider for companies like Walmart, Tencent, Pinduoduo, Bytedance, Shopify and Google (Walmart, Tencent and Google are equity owners in JD). The bull case is that JD Logistics gets to the position of AWS for logistics. Further, their massive fleet of IoT hardware could turn out to be a security service (since all robots/vehicles have very sophisticated cameras). The autonomous vehicles market is also up for grabs since JD keeps invest heavily to make their whole logistic infrastructure autonomous. This could maybe end up being a competitor to Uber and Didi in the long run. Lastly, waste management (as JD already have entered) is also a huge industry that JD seems to fit perfectly for. The global market for waste management is forecasted to be worth $543B in 2026, according to MarketsandMarkets Research. All this of course seems kind of messy and feels far away today. But my point is that their extensive physical infrastructure in combination with their huge technology investments should be able to turn into more than just ecommerce. For example, in 2020, the CEO of JD Logistics said that more than

100,000 robots will join the JD logistics family in the next five years. Also, JD's culture and leadership should keep serving as catalysts for further optionality.

"The philosophy (of JDL Technology) is handling complexity with simplicity. We leave complexity and difficulties to ourselves and simplicity and convenience to customers. Through simple and optimized logistics technology products, we tackle complicated problems throughout the supply chains of different industries while improving circulation efficiency."

- CEO of JD Logistics, 2020

I also want to mention two of the most exciting options going forward. JD mini programs and JD's infrastructure as a service business. JD mini programs is an open platform that uses JD's complete chain of marketing, transaction, payment, membership, and logistics to enable merchants to build their own online shops. In other words, JD mini programs empowers merchants with JD's technology and services to help them comprehensively enhance the user experience. Merchants can choose to sell on the JD.com site the traditional way or to do it via the mini program structure which allows merchants to create a closer relationship to their customers since the website drives through their own brand even though its JD's underlying technology. Think of it as JD sells their infrastructure as white label.

JD's infrastructure as a service, or smart cities, is basically operation systems (both hardware and software), currently for parks where it was initially tested during H1'21. The system, which uses advanced technologies such as AI, IoT and digital twin, will help manage and operate the whole park in a more intelligent, efficient way, and increase convenience for public services, as well as ensuring that visitors can enjoy worry-free services. This includes a screen with a heat map that will guide visitors on which parts of the park are overly crowded and the expected duration of that traffic and will also alert the park managers when the traffic flow hit its peak on one spot. Another example is the system can automatically alert park workers nearby when a trash can is overflowing and direct them to the can for cleaning according to an app's map navigation. Additionally, to achieve an omni-channel experience and support more flexibility, JD has included a series of contactless offline facilities in the park, such as autonomous delivery vehicles as well as providing autonomous park entrance and payment solutions. As aforementioned, waste management and different forms of surveillance should have great long-term potential.

Short take on regulations

The highlight for 2021 for all Chinese tech stocks is of course the regulations from the Chinese Communist Party (CCP). JD has always been on the good side of government. However, the government goal is not to increase companies' market caps but to incentivize companies that create value and evolve the society. The most common misperception I've noticed is investors believing that CCP purposefully wants to hurt foreign investors. That's a strange conclusion given that foreign investors make up less than 5% of the Chinese market. Although the ownership structure is different

for companies that have been targets of the recent increased regulatory activity within the Chinese tech cluster.

I'm not saying that I agree with the government's heavy-handed actions. But I do think that investors should at least considerate the government's perspective and their "why", and thereby hopefully not only view this as pure negative. I think it's fair to state that JD has benefited from the increased regulations predominantly against Alibaba, since they now are being forced to open their ecosystem. This at least seems to serve as beneficial for JD, but it's probably still too early to tell.

It should also be mentioned that JD was fined last year for misreporting prices and offering false promotions on its retail site, so they are not immune against the CCP. Further, regulations seem to increase primarily for big tech companies within healthcare and financial services. When you put it like that, JD seem to be a reasonable "target" for additional regulations.

Summary and Valuation

What is interesting with JD right now is that the story seems to be changing. They are digitizing their logistics network and standardizing the interfaces. JD is arguably currently valued solely as a retailer which the market does not expect any margins from, judging by the current multiples. I think it's reasonable to believe that this narrative most likely will change in parallel to JD becoming a service provider and increases its B2B operations. Digitization is a huge benefit for the logistics network, which keeps getting more efficient by the minute.

My thesis assumes that JD has created the two most complex, expensive, and time-consuming elements for building long-term competitive advantages. 1) A well-known and trustworthy brand for a wide audience and 2) an extremely extensive and sophisticated logistics network. It should be much more difficult and cost much more capital to go from e-commerce to logistics networks than the other way around.

Furthermore, I believe that JD should be able to add one or more high-margin verticals on top of this, and that the market underestimates JD's competitive advantages. It's only a few players in the world that really can compete within this area given its capital intensity and dependency on scale. Usually, it is around two to three companies for every continent that becomes dominant within the ecommerce/logistics cohort.

I think that JD will manage to perform a ~20 CAGR, or slightly below, for the coming five years. Also, given the trend of the increased efficiency of the logistic system and the communication regarding the inflection point that external logistics volume now contributing to the bottom line, I have no reason to doubt that the steady state margin will be around 10%. If these assumptions get incorporated, JD is currently trading around EV/S 0.2x and EV/EBIT 2x 2026E. In other words, the stock could 5x in five years and still be valued at EV/S 1x and EV/EBIT 10x. Note that JD doesn't have to succeed in any of the options or other bets to be a good investment. The current valuation arguably only reflects the core 1p sales business. Therefore, I consider everything beyond that as "free" right now. That said, I do believe that risk/reward is attractive at today's levels. Downside should be even more limited if we add that the last six months in China has been a perfect storm regarding CCP and regulations.

Retail peer table (2021-12-21):

	AMZN	MELI	SE	CPNG	JD	BABA	PDD	WMT	COST
EV/Sales	3,7	9,5	13,1	2,8	0,5	1,7	5,5	0,7	1,2
EV/GP	9	22,5	34,9	20,8	3,7	4,3	9,1	2,88	9,1
EV/EBIT	60	151,4	-73	-43,6	88	15,7	-250	26,2	34

JD looks cheap on sales and gross profit but expensive on EBIT. However, I think that EBIT is misleading today since the company has a strategy based of profitless growth as aforementioned. They are clear about prioritizing growth over profitability and have just turned to positive margins. Further, the fastest growing businesses are segments with higher margins.

By looking at the sales multiple we get a good understanding of that the market expects JD to have virtually non-existent profitability. In part I believe this stems from the narrative of logistics being a business with very weak margins (which it is today). Some of my hypotheses is that the revenue/employees metric will keep getting stronger, costs will start shifting from CAPEX to R&D and that JD will keep initiating B2B operations with stronger marginal structures. For example, WMS (warehouse management services), where they are selling their software and logistics technology to other companies (imagine the switching cost on this one). The increased activity within B2B operations will also increase JD's network effects (both by increasing 3p retail sales but also through logistics). All these metrics are vital inflection points.

To me, JD's valuation appears to be a result of a misunderstanding of the underlying profitability. Not much different than the scrutiny Amazon faced for most of its existence prior to AWS becoming a meaningful part of the business. I believe JD will experience plenty more demand from international investors once they better understand JD's model and underlying profitability, and when the regulatory storm has calmed down.

When approaching valuation, one strategy is the expectations investing which is a technique for understanding what expectations that are priced in on the current stock price. The expectations investing approach assumes stock prices as the most reliable signal of the market's expectations about a company's future financial performance. Seen in this light, stock priced could be viewed as gifts of information waiting to be used.

Based on my projections, I estimate the market is implying JD's competitive advantage period will only last a couple of years. Generally, dominant tech companies will trade with implied competitive advantage periods for more than 10-15 years. Also, more CAPEX demanding businesses usually have longer periods of sustainable competitive advantages, according to McKinsey. This means that JD only have to produce a few years of solid results to generate satisfactory returns as an investment.

What will JD have to do to change the consensus opinion then?

The most obvious factors here should be to bring fast moving consumer goods (FMCG), 3p logistics and international operations to larger scale. As for logistics, before 2018 capacity growth roughly mirrored GMV growth. But since JD accelerated its fulfillment footprint by selling its logistics operations B2B this dynamic has changed. As JD Logistics begins to absorb warehouse capacity and

utilization rates increase, JD's consolidated profitability should improve, and JD Logistics' business model should become clearer to the market.

Further, some high-profile investors estimate that transporting products from the warehouses to local delivery hubs and last-mile delivery together accounts for 60-70% of the total costs for the logistics operations. This is also where delivery drones have the most obvious potential to be implemented, besides drones inside the warehouses. Both the government support for drones and the potential cost savings strengthens the assumption of drones as an option for increased margins.

Besides this, I think the market wants to see evidence of continued market share gains against Alibaba in tier 1-2 cities. Even if most of the growth probably will occur from lower tire cities going forward. I do believe increased market share in tier 1-2 cities implies that JD in fact is on the right track by investing in quality.

DCF

Usually, I only perform relative valuations based on multiples. However, I consider JD as DCF compatible, and this model gives us a sense of what the intrinsic value might be with restrictive assumptions. By making a simple version of a DCF, using a discount rate reflecting the political/geographical risks associated with China at 10%, and conservative revenue growth of 15% CAGR until 2025 as well as an increasing margin which reaches 9% 2025 (remember that management believes that the margin mid to long-term will be around 10%). I consider this as a restrictive scenario and yet it leaves us with 15% upside for the stock.

Discounted Free Cash Flow Valuation

		2020	2021	2022E	2023E	2024E	2025E	Terminal Value
Free Cash Flow		-$2340	-$4500	$3289	$5674	$10874	$22510	$307637
Discount Factor				1,1	1,21	1,33	1,46	1,46
PV of Future Cash Flow				$2990	$4689	$8176	$15418	$210710
Required Return	10,00%							
Perpetual Growth	2,50%							
Today's Value	$241,983,000,000							
Shares Out	3,106,344,000							
Value per share	**$77,9**							

Main questions

- Can JD go from being a direct sales company to a service company, and ultimately to an ecosystem?
- How well will superior scale, supply chain management and logistics serve as moats in the long run?

Investment Case

- Strong underlying structural trends
- Growth like an ecommerce company but valued as a physical retailer
- Clear market leader and arguably even a global leader within logistics
- Strongest position towards CCP among its peers
- Great company culture and history of long-term decision-making
- Strong moats that are easy to understand
- Long growth runway
- Opportunities for further optionality
- Many catalysts for margin expansion
- Story seems to be changing which should be able to contribute to multiple expansion
- Valuation support

Investment Risks

- You never seem to know when and what the CCP might do
- Tough competition from many different competitors. Predominantly this entails a risk for the margins both short and long-term
- Already high ecommerce penetration in China which means less room for growth. JD has however started its internationalization strong in both Thailand and Indonesia
- Heavily dependent on Tencent

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