

Technology Software Pricing in Cloud Computing Era

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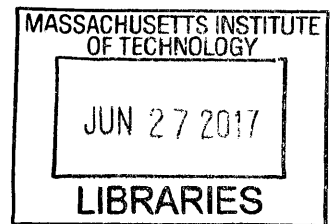
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Abstract

The Software Industry has been constantly growing and setting path-breaking trends over the years. Cloud Computing is one such innovation that has brought a sea of change in the way people build and use software. Businesses are shifting their perspective from a model based on 'software ownership' to a model based on 'software as a service'. This paradigm shift in the industry has forced established software vendors to reinvent their businesses by offering products in form of services. The change in 'software ownership' dynamics also warrants a change in the pricing strategy. A popular alternative to the traditional perpetual licensing model is a subscription pricing model. This involves the consumers paying a fixed amount periodically to get the software service, instead of paying a large amount upfront to own the software. The study is designed primarily to compare the effectiveness of the subscription model over the traditional perpetual licensing model, with the help of a case study of Adobe Systems Incorporated. The company is a good choice as it switched from the perpetual licensing model to subscription model in 2012.

The study concludes that, while no single model is entirely perfect on all grounds, a pricing strategy based on the subscription model could be an effective strategy for any organization to increase its revenue and maintain customer satisfaction at the same time. The strategy enables the organizations to get more revenue from their subscribers over a longer period of time. It also reduces the upfront cost paid by users, making it more affordable which would help increase the number of subscribers.

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Introduction

Cloud Computing has been one of the most groundbreaking trends in the software industry. It is a type of internet-based computing which relies on sharing resources such as servers, storage and applications, and uses them to create services that are provided to the customers over the internet. One of its main benefits is that it gives businesses flexibility in delivering optimal IT resources at the right time and place. Therefore, it is a profitable business proposition, which big companies like Amazon and Salesforce have successfully harnessed to help them offer better services to their clients.

One of the core components of Cloud Computing is the 'Software as a Service' (SaaS) model that is designed to deliver software to customers as a service. In the SaaS model, the organization builds, manages and deploys its software on a central server and makes it available to its customers through the internet. This has made it easy for customers to access software hence many people prefer to use the software online rather than buying it from vendors. In order to adapt to the changing customer needs, many companies have abandoned the traditional licensing model and replaced it with alternative pricing strategies that satisfies the customers' needs better, compliments SaaS, and maximizes revenue for the vendor. The subscription pricing model is one such alternative that has become popular among companies. In this model, users pay a fixed amount on a recurring basis to get the software service of their choice. Netflix, Salesforce, Amazon Web Services (AWS) are some examples of companies that use subscription pricing to offer their service to customers. The customers have embraced this change in pricing strategy. As a result, many organizations which were selling their software through perpetual licensing are now switching to the subscription pricing model.

Switching to the new model is not an easy task for any organization as it affects important aspects of the business such as product development strategy, marketing, sales, and revenue. Besides, it also affects other internal processes and functions such as deployment and release methodologies that deliver updates to the customers. It also affects how organizations carry out product promotions and motivate their sales representatives. Therefore, it requires careful planning and deliberation.

This study seeks to analyze the pricing architecture of the subscription model and understand its effects on an organization. It also seeks to answer the following fundamental questions that organizations face when deciding on whether to shift to the subscription model.

- Under what conditions does the subscription pricing model work best?
- What is the best pricing architecture for the subscription model?
- What are the challenges encountered when switching to a subscription strategy?
- How does it impact the revenue collection and other non-pricing concerns of the company such as product adoption, product usage, ownership experience, product development and product quality?

Research Methodology

This research focuses on answering the questions posted above by conducting an in-depth case study of Adobe Systems Inc. The company switched its pricing model a few years back, from perpetual licensing model to a subscription-only model. The study analyzes the old perpetual licensing model and the new subscription model used by Adobe, and compares the pricing strategy under both models. The comparisons were made along three different dimensions, namely; product packaging, pricing, and ownership experience. The aim of the research was to determine the effectiveness of the pricing strategy in question. The study also analyzes and documents salient features of both models and measures their impacts based on consumer perception. To do so, the study employed online resources such as blogs, discussion forums and online groups to get consumer reactions. The comparative analysis of the two models revealed some key elements that may be used as guidelines by the software industry at large while deciding on whether to shift to the new pricing model.

Adobe Systems Inc. was a good choice for the analysis as the company executed the switch in 2012, and a large amount of ex-post facto data was available online. This made the analysis more authentic and robust. Another reason for choosing Adobe was the fact that the company made a complete switch from perpetual licensing to subscription model and did not resort to a hybrid approach that offers both options. This helped isolate the factors impacting the outcome and correctly attribute them to either of the pricing strategies. Adobe's products are also mature and the demand was observed to be fairly steady. Being a big company, the business processes of the organization remain fairly stable. Adobe's product lineup did not experience any major change during this migration, except for a few minor changes. All these factors helped reduce the variability and created a natural control environment to isolate the

effects of a pricing model switch more clearly and easily, without worrying about confounding factors. I did not consider startups or smaller organizations due to the large variability in their businesses, which could have made comparison harder or complicated. Last but not the least, Adobe has a very large customer base, which made it easier to track customers' reactions to the changes in pricing, and develop an understanding of what worked well and what did not during the switch.

Data Gathering

The nature of the research constrained data gathering on two main areas. Firstly, collecting all the information available about the old and current pricing strategies for Adobe; and secondly, gathering data to analyze the impacts of individual pricing strategies on the consumers and the company.

The data about Adobe's current pricing strategy was mainly gathered from their website. Information about the product packaging, pricing, and customer segmentation was collected from 'Adobe Creative Cloud' web pages and the product buying page¹. Other details about the pricing strategy such as distribution of software licenses, ownership rights and terms of agreement were obtained from their software licensing agreement documents, as well as from the news and updates posted on the company's official website.

The search for Adobe's old pricing strategy was conducted by browsing through the archived versions of the company's website from different time periods, dating as far back as 1998. These archived websites were accessed using a tool called 'Wayback Machine'². Like the

¹"Creative Cloud pricing and membership plans | Adobe Creative Cloud."
<https://creative.adobe.com/plans>. Accessed 8 May. 2017.

²Internet Archive Wayback machine

current version, the product buying page, product detail page and other pages provided information about product packaging, pricing and customer segmentation used back then. News and updates from these archived versions also helped get more details about other aspects of the pricing strategy.

We collected information about the effectiveness of the licensing models and their pricing strategies using different resources. The most important resources were blogs, discussion forums, and online articles where customers and industry sources discussed their reactions to Adobe's new licensing model and the switch in the pricing strategy. (A list of these sources is provided in the Appendix). We examined information about the company's financials from sources such as 10K, 10Q, and investor presentation, to analyze the impact of the pricing strategy on organization's performance. In other cases, we used the information we collected to understand the reasoning behind certain customer decisions. Lastly, the study explored Adobe's pricing strategies and determined their effectiveness by comparing them with the academic information and leading research on the topic, along with the industry's best practices and other proven strategies.

Company Overview

Adobe Systems Inc., one of the leading providers of multimedia and creativity software products was founded in February 1982 by John Warnock and Charles Geschke³. It was initially established to develop and sell PostScript, a page description language that describes the appearance of printed page in a human readable form. Most of the multimedia and creativity products that form the company's major business focus were introduced in the late 80's and early 90's. Some of the notable introductions during this period were Photoshop, Adobe Premier, PageMaker, After Effects, and Adobe Acrobat.

Today, Adobe offers a broad range of products, services and solutions that cater to a wide range of customers' needs. All these can be categorized into three business segments as detailed below:

- **Digital Media:** This is the biggest business segment of the company in terms of revenue⁴. This segment caters to a wide variety of customers including individuals, small businesses, large enterprises and institutions. All Adobe's creative products fall under this segment, including the now archived Adobe Creative Suite and the more recent Adobe Creative Cloud, which have been studied as part of this thesis. Apart from creative and multimedia products, this segment also includes the Adobe Document Cloud which contains the document management software and solutions.
- **Digital Marketing:** This segment is the second in generating revenue for the company. It includes products and services that allow organizations to effectively manage and

³Adobe Systems - Wikipedia. "https://en.wikipedia.org/wiki/Adobe_Systems. Accessed 5 May. 2017.

⁴"Adobe 10K FY16 :pg 43" 20 Jan. 2017, <http://www.images.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE-10K-FY16-FINAL-CERTIFIED.PDF>. Accessed 5 May. 2017.

monitor their digital marketing campaigns, advertisements and sales through multiple channels.

- **Print and Publishing:** This segment consists of legacy solutions that cater to diverse market opportunities including e-learning, technical document publishing, and printing solutions. These solutions are licensed to Original Equipment Manufacturers (OEMs) such as printer manufacturers, and to enterprises that build graphics and publishing related software and hardware.

The present work focuses on studying the changes in pricing strategy for the Digital Media segment. In 2016, digital media contributed approximately 73.5%⁵ of the overall revenue collection for Adobe. Below, we discuss, in details, the various products under this segment.

Adobe Creative Products

Adobe Creative Software Products is the largest component of Adobe's Digital Media business segment. It's a set of software products and services for graphic design, image & video editing, as well as web development. It has over twenty products/apps. Some of the notable ones include Photoshop, InDesign, Illustrator, Lightroom, Premiere Pro, After Effects, and Spark. In the early years of Adobe, the creative line of products was advertised and sold separately. Starting 1999, Adobe began bundling these creative products together into software packages and started selling them on its website. One of the first bundled package from Adobe was the 'Adobe Graphics Studio' which contained four products that included Photoshop 5.0, Adobe Illustrator 8.0, Pagemaker 6.5, and InDesign. The package was priced at

⁵ "Adobe 10K FY16" 20 Jan. 2017, <http://www.images.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE-10K-FY16-FINAL-CERTIFIED.PDF>. Accessed 5 May. 2017.

\$999⁶. This package quickly gained popularity amongst Adobe's customers since the package offered significant discount over purchasing each product individually.

Following the success of this software package, Adobe realized that its customers had very complex workflows which required the use of multiple creative products simultaneously. To facilitate these workflows, Adobe decided to provide better integration among its products. In keeping up with this spirit, the company released new versions of the Adobe Creative products together to allow customers to upgrade the entire suite altogether.

The company launched a new package under the 'Adobe Creative Suite' (CS) brand name towards the end of 2003⁷. For the first time, 'Adobe Creative Suite' also offered customers the option to buy upgrades at a discounted price. Earlier, this option was available only on individual products. Over the next ten years (2002-2012), Adobe released seven major versions of the CS brand, with each version coming at an interval of about one and a half to two years. After acquiring other companies, Adobe would always add new products to the Creative Suite. A major addition to the Creative Suite came when Adobe bought Macromedia. Most of the products from Macromedia were re-branded and offered as part of the Creative Suite product line, such as Dreamweaver, Flash Builder, and Fireworks.

In April 2010, following the release of Creative Suite 5.5, Adobe, for the first time, offered the Creative Suite with subscription pricing model in addition to the perpetual licensing model that existed earlier.

Adobe released their last Creative Suite, version 6.0 in April 2012. As was the case with

⁶ "Adobe GraphicStudio," 21-Apr-1999:
<https://web.archive.org/web/19990421011639/http://www1.adobe.com/prodindex/graphicstudio/main.html> Accessed: 14-Mar-2017

⁷"Adobe Creative Suite - Wikipedia - ConceptMap.io."
http://conceptmap.cfapps.io/wikipage?lang=en&name=Creative_Suite_3. Accessed 5 May. 2017.

previous releases, this version also provided additional features to the customers using existing software. The biggest change however, was the subscription pricing model. The Creative Suite was rebranded to 'Creative Cloud' and its products were slightly differentiated from the regular CS6.0 products. This new suite had a few new features such as cloud storage and collaboration tools for teams. The new features on the Creative Cloud were a way to incentivize customers to switch from the perpetual licensing model to the subscription licensing model. The launch of Creative Cloud, alongside CS6.0 marked a transition in Adobe's strategy to embrace the subscription pricing model. Adobe offered both CS6.0 and Creative Cloud together until May of 2013, after which, it decided to end the Creative Suite brand. However, customer could still buy CS6.0 but couldn't get any new features except minor upgrades and bug fixes. All new products and features were reserved for the Creative Cloud. Adobe also stopped marketing CS6 and instead, started advertising its Creative Cloud package on the official page for CS6.0. It also made it harder for customers to buy CS6.0 online and later removed it completely from the website such that customers could only buy it by calling customer support. Eventually in 2016, it was discontinued.

After launching the Creative Cloud in 2013, Adobe put a lot of effort in marketing it, unlike the Creative Suite, which was never promoted at all. Adobe used various online and offline channels to advertise its products across the globe. They also created promotions for existing users, offering them significant discounts to switch to the Cloud packages. Despite some hiccups during the initial stages, the adoption of the Creative Cloud products has steadily grown over time and the number of subscriptions is at an all-time high⁸.

⁸"Adobe Investor Presentation - January, 2017."
<https://www.images2.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE-Investor-Presentation-January2017.pdf>. Accessed 5 May. 2017.

Creative Suite (Perpetual License Model)

In Sept 2002, Adobe launched Creative Suite which bundled Adobe's creative products and sold it to customers as a package, at a discounted price over the combined price of the individual products. There were seven versions of the Creative Suite, from CS1 to CS6. CS5.5 was the only version that did not have integer version number. The versions were released on an average interval of one and a half years. CS1 only offered two product packages, 'Design Standard' and 'Design Premium'. In the next versions, Adobe added more packages to the Creative Suite line such that CS2 to CS4 had six product packages. The Web Standard package was, however, discontinued from CS5 onwards since most of its products overlapped with the Design Standard package. Adobe had created the different product packages in an attempt to target customers with different use cases, for example the Web development packages targeted web developers and UI engineers. This package included software development tools such as Dreamweaver, Flash and the now-discontinued Contribute, and Fireworks. The design package, on the other hand, had tools for editing graphics and desktop publishing such as Photoshop, Illustrator and InDesign. This package was targeted more towards graphic designers & photography professionals.

The table below shows the package for Adobe CS3 and CS4, along with a list of products under each package.

Table 1: Lists creative suite packages along with the products that were part of each package. Web Standard package highlighted in red was discontinued after CS5.

Software Development tools	Design Package		Web Development Package		Production Premium	Master Collection
	Standard	Premium	Standard	Premium		
Photoshop	X					
Photoshop Extended		X		X	X	X
Illustrator	X	X		X	X	X
InDesign	X	X				X
Acrobat 8 Pro	X	X		X		X
Flash Professional		X	X	X	X	X
Dreamweaver		X	X	X		X
Fireworks		X	X	X		X
Contribute			X	X		X
Soundbooth					X	X
After Effects Professional					X	X
Premiere Pro					X	X
OnLocation					X	X
Encore					X	X
Shared Application						
Bridge	X	X	X	X	X	X
Device Central	X	X	X	X	X	X
Stock Photos	X	X	X	X	X	X
Version Cue	X	X	X	X		X

Adobe primarily catered to three different types of customer segments namely; individuals, businesses and institutions. It offered the product packages above to its customer segments, with few additional bells and whistles for each customer segment. For example, the business

and institution customers got a license manager application, which as the name suggests, helps in allocating and managing user licenses within an organization.

Under the perpetual licensing model, the price of the creative suite package was a bit high. Customers had to shell out a large amount of money upfront to purchase the packages. The basic, ‘Design standard’ package had 4 core apps only and cost \$1300⁹ (shown in table 1). The “Master Collection” which had all the apps, cost \$2600¹⁰. The buying price of the packages remained relatively steady between different versions.

The cost of upgrading a package was comparatively lower than the buying price to incentivize users to upgrade to the newer versions. Adobe experimented with different prices and therefore they changed this cost frequently. Adobe also changed the structure of upgradation plan. In the earlier version, the cost of upgrading was determined by the product package being upgraded. Therefore, a user upgrading ‘Design Standard’ paid a different amount from a user upgrading ‘Master Collection’. However, starting from CS5.5, the cost of upgrading was determined by the base version and the target version of the package being upgraded. All the product packages had the same upgrade price. A user who wanted to upgrade from CS1 to CS6 had to pay more compared to the user who wanted to upgrade from CS5 to CS6. The table below shows the prices of the various packages under different versions released over the years.

⁹ Price quoted based on CS 6.0

¹⁰ Price quoted based on CS 6.0

Table 2: Price of different versions of the creative suite packages¹¹ released over the years.

Version	Release Date	Package Name	Buy Price	Upgrade Price
CS 1	Sep, 2003	Standard	\$999	\$549
		Premium	\$1,229	\$749
CS 2	Apr, 2005	Standard	\$899	\$349
		Premium	\$1,199	\$159
CS 3	Mar, 2007	Design Standard	\$1,199	\$399
		Design Premium	\$1,799	\$599
		Web Standard	\$999	\$399
		Web Premium	\$1,599	\$499
		Production Premier	\$1,699	\$799
		Master Collection	\$2,499	\$1,399
CS 4	Sep, 2008	Design Standard	\$1,399	\$499
		Design Premium	\$1,799	\$599
		Web Standard	\$999	\$399
		Web Premium	\$1,699	\$599
		Production Premier	\$1,699	\$599
		Master Collection	\$2,499	\$899
CS 5	Apr, 2010	Design Standard	\$1,299	\$499
		Design Premium	\$1,899	\$599
		Web Premium	\$1,799	\$599
		Production Premier	\$1,699	\$599
		Master Collection	\$2,599	\$899
CS 5.5	Apr, 2011	Design Standard	\$1,299	\$299 (CS5) , \$499 (CS4),

¹¹ The prices have been collected from the archived version of Adobe's official websites

				\$699 (CS3 & 2 & 1)
		Design Premium	\$1,899	\$399 (CS5) , \$649 (CS4), \$949 (CS3 & 2 & 1)
		Web Premium	\$1,799	\$399 (CS5), \$649 (CS4), \$949 (CS3 & 2 & 1)
		Production Premier	\$1,699	\$399 (CS5), \$649 (CS4), \$949 (CS3 & 2 & 1)
		Master Collection	\$2,599	\$549 (CS5), \$949 (CS4), \$1399 (CS3 & 2 & 1)
CS 6	Mar, 2012	Design Standard	\$1,299	\$375 (CS5.5), \$749 (CS5), \$949 (CS4 & 3)
		Design Premium	\$1,899	\$375 (CS5.5), \$749 (CS5), \$949 (CS4 & 3)
		Web Premium	\$1,899	\$375 (CS5.5), \$749 (CS5), \$949 (CS4 & 3)
		Production Premier	\$1,899	\$375 (CS5.5), \$749 (CS5), \$949 (CS4 & 3)
		Master Collection	\$2,599	\$375 (CS5.5), \$749 (CS5), \$949(CS4 & 3)

The plans for upgrading provided flexibility for the customers as they could choose when to upgrade and to which version. Users were not forced to upgrade, as is the case with the subscription pricing. To incentivize users to upgrade, Adobe restricted new features to the latest versions only, while the old versions would only receive minor upgrades and bug fixes.

Adobe used a price discrimination strategy, employing both second and third order price discrimination. First, it differentiated customers by their use cases (photography, web design,

graphics design etc.). Second, it differentiated customers by their customer segment (individual, small businesses, enterprise, government and institutions) and lastly, it differentiated customers through discounting.

The discussion in the following sections focuses on the analysis of the perpetual licensing model based on three different assessment criteria; product packaging, pricing and ownership experience. This will help us to understand the pricing strategy in terms of advantages and disadvantages of each criterion.

Product Packages

Advantages

Creative suite, as mentioned earlier, had quite a few product packages for its customers depending on their use-cases. This allowed Adobe to extract different reservation prices for different customers, which helped reduce the overall consumer surplus and improve the revenue for the company. The pricing strategy allowed users to self-select a particular segment by choosing the package that best catered to their needs. The self-selection ensured that users were happy with their selection and what they were paying for it. It, therefore, helped prevent any resentment or anger that consumers might otherwise have, if they considered segmentation as unfair. Therefore, the package option was a good strategy for Adobe since customers got what they needed and Adobe got more revenue as a result; a win-win situation for both. The company saw a 9% increase in revenue for the Creative Suite after increasing the number of packages in its product line from two to six¹².

¹² Adobe 10-K for year 2007 Pg.50
<https://web.archive.org/web/20080229073530/http://www.adobe.com/aboutadobe/invrelations/pdfs>

Having multiple product packages had another advantage as it provided a nice test bed for Adobe to run controlled price experiments on a small subset of their customers. The strategy allowed them to understand the market and the user's buying behaviors, analyze price elasticity for their products, and identify cyclical or seasonal trends. The data collected from these experiments was useful in making future pricing decisions. There is also some evidence that Adobe engaged in the price experimentation on their Creative Suite products. The company changed the prices of various packages multiple times over the years when these products were offered. Their Design Standard Package changed its upgrade price with each subsequent version until the CS5 version. The buying price in general increased with each subsequent version, for instance 'Design premium' cost \$1299 in CS1 and \$1899 in CS6. Adobe also conducted experiments on the upgrade prices on its website. The earlier versions had a high upgrade price, in contrast to the later versions which had a more affordable upgrade price for customers, for example 'Design Premium' cost about \$800 to upgrade in CS1, but cost \$375 in the last version CS6. In addition to the change in prices, Adobe also changed the upgrade plans. From CS1 to CS5, Adobe charged different upgrade prices for different packages. Therefore, if you were upgrading 'Design Standard' you would pay a different price from upgrading 'Master Collection' or 'Design Premium'. However, starting CS5.5 and CS6, Adobe changed this pricing policy such that, the price was no longer determined by the package you were upgrading to, but rather by the version you were upgrading from. Therefore, if you were upgrading from CS4 to CS6, you would pay a different price compared to upgrading from CS2 to CS6. These regular experiments with different price points helped Adobe collect a lot of useful data about customers, and monitor their reactions. It also helped

them understand the strategies that worked best with their customers, and shape their approach accordingly.

So far, we have discussed the advantages of having multiple packages as part of the pricing architecture. Now, we take a look at some of the notable features regarding how it was implemented. On the product buying page, Adobe showed the prices of all the packages side by side. Since all the packages are priced on the higher range, it helped anchor the customers to the higher price point. The buying page also has a table that lists the prices for the individual products that were offered as part of the packages. The page also displayed the value that the customers could expect to get if they choose to buy the Creative Suite packages rather than buying individual products. These subtle indications helped convince the users that the prices were fair and offered great value.

Figure 1: Adobe Creative Suite Buying Page¹³

	Design Premium	Design Standard	Web Premium	Web Standard	Production Premium	Master Collection
	US\$1,799	US\$1,399	US\$1,699	US\$999	US\$1,699	US\$2,499
	Total Value	Total Value	Total Value	Total Value	Total Value	Total Value
	US\$4,143	US\$2,446	US\$3,842	US\$1,596	US\$4,294	US\$6,339
COMPONENTS						
Adobe® InDesign® CS4	•	•				• US\$699
Adobe Photoshop® CS4 Extended	•		•		•	• US\$999
Adobe Photoshop CS4		•				• US\$699
Adobe Illustrator® CS4	•	•	•		•	• US\$599
Adobe Acrobat® 9 Pro	•	•	•			• US\$449
Adobe Flash® CS4 Professional	•		•	•	•	• US\$699
Adobe Dreamweaver® CS4	•		•	•		• US\$399
Adobe Fireworks® CS4	•		•	•		• US\$299
Adobe Contribute® CS4			•	•		• US\$199
Adobe After Effects® CS4					•	• US\$999
Adobe Premiere® Pro CS4*					•	• US\$799
Adobe Soundbooth® CS4			•		•	• US\$199
Adobe OnLocation™ CS4*					•	•
Adobe Encore® CS4*					•	•
SHARED FEATURES, SERVICES, AND APPLICATIONS						
Adobe Bridge CS4	•	•	•	•	•	•
Adobe Device Central CS4	•	•	•	•	•	•
Adobe Dynamic Link					•	•
Adobe Version Cue® CS4	•	•	•	•		•

Disadvantages

Having a large number of packages also has its challenges. Studies have shown that customers prefer simpler pricing options that allow them to make the right buying decisions quickly^{14 15}.

With so many different packages and pricing options to choose from, customers found it harder to decide on the package to buy. Some packages were almost identical which made

¹³ Adobe Website (Archived 2009):

<http://web.archive.org/web/20091221230517/http://www.adobe.com/products/creativesuite/compare/?promoid=DRHWP>

¹⁴ "Pricing Experiments You Might Not Know, But Can Learn From."

<https://conversionxl.com/pricing-experiments-you-might-not-know-but-can-learn-from/>. Accessed 17 Apr. 2017.

¹⁵ "My experiments in lean pricing - Venture Hacks." 16 Feb. 2010,

<http://venturehacks.com/articles/pricing-experiments>. Accessed 18 Apr. 2017.

the choice between such options hard. To make matters worse, there wasn't an obvious bad choice, which customers could eliminate right away. For example, the 'Design Standard' and 'Design Premium' packages have only three additional software products (Fireworks, Flash Professional and Dreamweaver) in the Premium version, compared to the standard version. The price difference between the two products is about \$300-\$700 depending on the version. This is a reasonable difference considering that each additional product in the premium package costs around \$200-\$500 per product. Therefore, there is no obvious bad choice and customers would find it hard to choose between the two options. As a result, Adobe had to provide a selector tool that gave customers recommendations based on their requirement and budget. There were also a number of blog posts to help prospective users choose the best option for them. Some of these are mentioned in the Appendix Section.

Pricing

Advantages

In the case of the price of packages, the perpetual licensing model has very few advantages. The upfront cost of buying the software in this model was significantly higher than the cost to upgrading it. Therefore, the lifetime value (LTV) of customers who use the product for a longer time period and upgrade frequently is not different from customers who only buy and use the product for a short period of time. The only advantage of this model was the fact that the company gets a huge chunk of the customer lifetime value (CLTV) upfront. This means that Adobe was able to get a lot of money from customers who only use the software for a short period of time.

This is a rather small advantage, since the creative products have a fairly high learning curve and users generally tend to stick with the product they learnt to use. Therefore, the number of customers who use the product for a very short time is fairly low.

Disadvantages

On the other hand, perpetual license pricing model has several disadvantages. The high upfront cost of buying deters a lot of customers from buying the product. Customers who have the money to buy the packages are also reluctant to buy due to the high price point. They spend more time analyzing all the options to figure out the difference between the packages before they can choose the package to purchase. There is a research which suggests that, offering multiple similar options can make it harder for the customers to take a decision, which can result in fewer purchases¹⁶. Therefore, multiple options eventually lead to loss customers in the purchase funnel.

To incentivize customers to buy these packages, Adobe provided discounts on its website for its enterprise and institutional customers on volume purchases. They reasoned that organizations do not like to pay large amounts of money upfront for the software because of increased capital expenditure. The discounting strategy resulted in a huge loss of revenue from sales. This was a big blow to the company and led Adobe and other companies to selling maintenance and support contracts to their business customers and providing other value added services to supplement the loss in revenue. This problem is not experienced in the subscription pricing model, since organizations do not pay large amount of money upfront to own the product. Organizations can manage to comfortably pay full subscription price per period since the amount is relatively small and companies can report it as an operating

¹⁶"To Keep Your Customers, Keep It Simple - Harvard Business Review."
<https://hbr.org/2012/05/to-keep-your-customers-keep-it-simple>. Accessed 12 May. 2017.

expense and get tax incentives.

Ownership Experience

Advantages

This was one of the strengths of the perpetual licensing model. It provided a lot of flexibility for customers, therefore, making it more desirable. One of the biggest flexibilities provided by the perpetual licensing model was in the allocation of software licenses. Businesses and institutional customers could easily allocate or reallocate software licenses on either a per-computer basis or on a per-user basis or a combination of both, depending on their business needs. This provided more options in allocating software and helped in reducing the ownership costs by using a tailored software deployment strategy. For example, schools and colleges could install software on computers in classrooms or labs, so that all the students get access through the shared computers. At the same time, they could also issue individual licenses for staff and faculty members who own multiple computers and want to access it through different devices. This flexibility for the customers made the product more desirable, and since Adobe does not incur any overhead costs in implementation, it was a win-win situation for the company and the customers. The importance of this flexibility was highlighted when customers started complaining after migrating to the new subscription model. Businesses and Institutions complained about the substantial increase in their costs because the subscription model only allowed per user license¹⁷. This meant that for shared computers, the customers had to buy a license for everyone instead of just buying a single

¹⁷ "Adobe pricing plan raises concerns - Inside Higher Ed." 22 May. 2013, <https://www.insidehighered.com/news/2013/05/22/adobe-pricing-plan-raises-concerns>. Accessed 28 Apr. 2017.

license for the shared machine. This was such a big concern, that Adobe had to make changes to its subscription model to allow per-computer license. However, even with this change, the model is still less flexible compared to the older model. Customers have to buy different types of licenses upfront, and do not have the flexibility to convert from one to the other depending on their changing business needs. As a result, customers are more likely to be conservative in making their buying decisions (due to the dynamic nature of their needs), and this can hurt product sales.

Perpetual licensing model was more flexible in upgrading to different versions as customers could choose if and when they wanted to upgrade. It meant that customers could optimize their buying decision to minimize their ownership costs. This allowed the company to target new customers that were not able to buy the latest versions which were more expensive. It added another dimension for segmenting the customers. Although there was some loss of revenue because of cannibalization, it was not a huge concern since less price sensitive customers were incentivized to choose newer versions of the product that had better features, and were faster compared to older versions. Older versions of the software did not get any new features apart from small bug fixes and security patches. Research also suggests that this type of second degree price discrimination based on segmentation could lead to higher profits for the company (Bhargava and Choudhary, 2001¹⁸; Jiang, Dewan and Seidmann, 2000¹⁹; Jones and Mendelson, 1998²⁰; Varia and Shapiro, 1998²¹).

¹⁸"Information Goods and Vertical Differentiation: Journal of Management" 9 Jan. 2015, <http://www.tandfonline.com/doi/abs/10.1080/07421222.2001.11045681>. Accessed 12 May. 2017.

¹⁹"Adoption of Internet-Based Product Customization and Pricing Strategies." 9 Jan. 2015, <http://www.tandfonline.com/doi/abs/10.1080/07421222.2000.11045644>. Accessed 12 May. 2017.

²⁰Jones, R. and H. Mendelson, "Product and Price Competition for Information Goods," Working Paper, Graduate School of Business, Stanford University, Stanford, CA, 1998.

²¹"Information Rules: A Strategic Guide to the Network ... - Google Books." https://books.google.com/books/about/Information_Rules.html?id=aE_J4lv_PVEC. Accessed 12

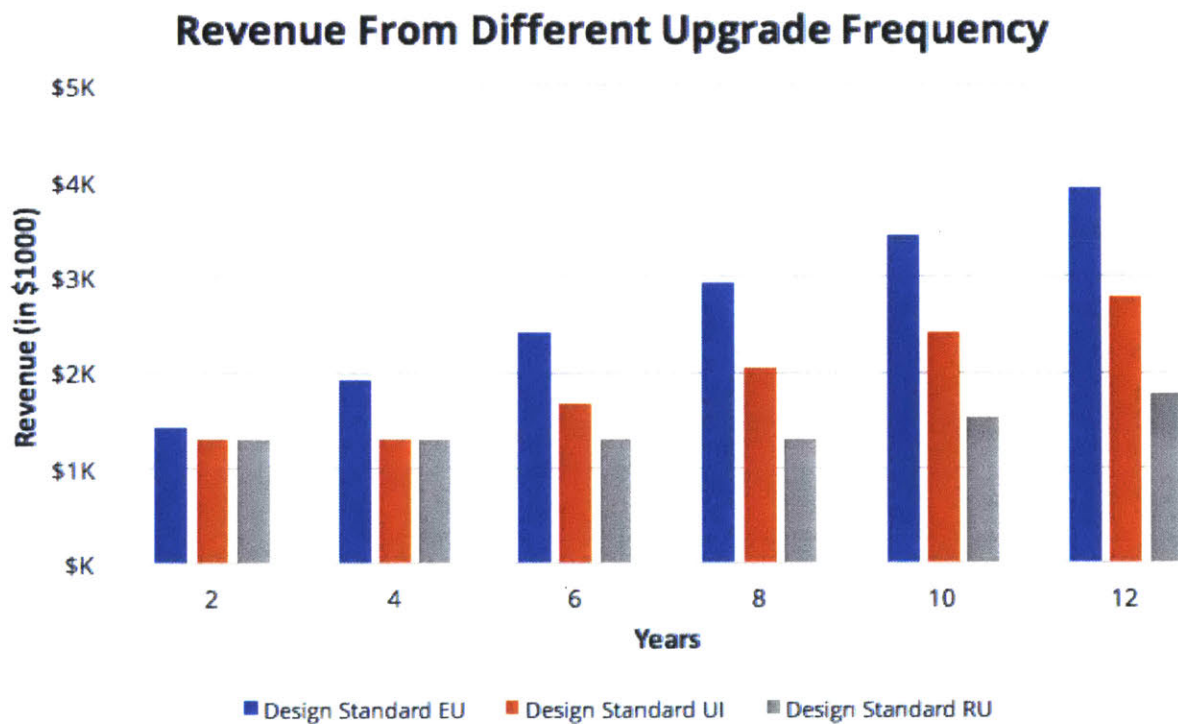
Not adding the new features to the older versions of the software could also be an advantage in disguise for the customers as it ensured that the quality of the given software version would remain stable or improve over time. This stability meant that customers were more confident when making the buying decisions, knowing that software quality will not be an issue in the future. This surety is, especially, valuable for the businesses and institutional customers whose entire operations rely on the stability of the software used. Therefore, this ownership flexibility provided unique advantages for both the vendor and the customer.

Disadvantages

The ownership flexibility given by the perpetual model also had some downsides. It created unnecessary pressure for Adobe to entice its customers to upgrade to newer versions. This pressure forced Adobe to charge a lower upgrade price from its customers which was usually a fraction of the price of buying a new product. Although this price cut prompted customers to upgrade to the new version, it proved troublesome for the company as it undermined the consumer surplus. Customers gain more value from the Adobe products after using them for some time. These customers have a higher reservation price and, therefore, lowering the prices hurt the company's revenues. The shortfall in revenue is highlighted in the figure below, which shows the potential revenue that Adobe could expect based on the different upgrade frequency of its different customers. From the figure, it is clear that the revenue from both the cheap and the expensive products declines drastically if users upgrade less often. Adobe understood the problem and tried to address it by changing its upgrade plan for CS5.5 and CS6 versions. The upgrade cost in these versions is determined by the current and the target version. Therefore, customers upgrading from CS1 to CS6 ended up paying more than the customers who upgraded from CS5 or CS5.5 to CS6. Although this incentive was a

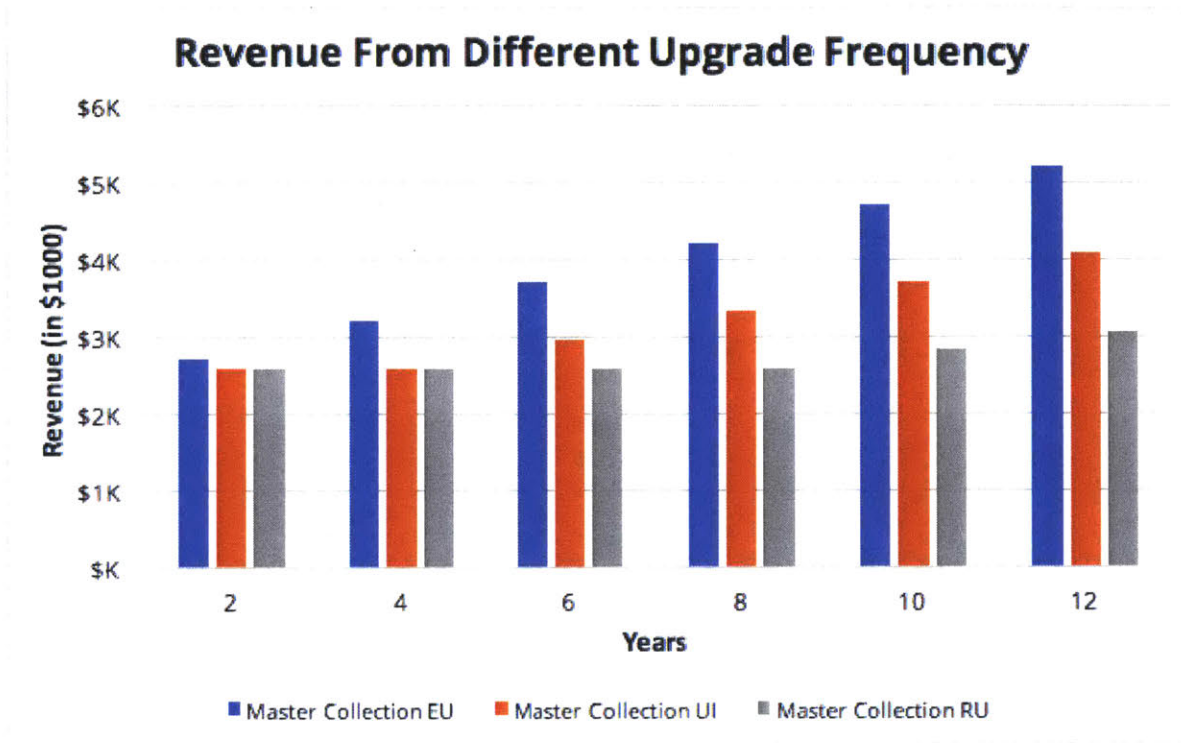
step up from the previous strategies, it was not completely effective as some customers would rarely upgrade as a result (This is highlighted in the diagram below). Another negative outcome brought about by this measure was that customers got accustomed to price cuts, making it hard for the company to hike the prices in future and potentially making the overall market unviable and unprofitable.

Figure 2: Expected Revenue from users of Design Standard who are upgrading with different frequencies



Note: The figure 2 above shows the revenue expected from users that upgrade to Design Standard with different upgrade frequencies. EU represents the users who upgrade with every new version (roughly every 1.5 years) UI represents users who upgrade intermittently (every 4 years). RU represents users who rarely upgrade (every 8 years).

Figure 3: Potential Revenue from users of Master Collection who are upgrading with different frequencies.



Note: The figure 3 above shows the revenue expected from users that upgrade to Master Collection with different upgrade frequencies. EU represents the users who upgrade with every new version (roughly every 1.5 years) UI represents the users who upgrade intermittently (every 4 years). RU represents users who rarely upgrade (every 8 years).

The ownership flexibility in the perpetual model also had another major concern for Adobe. In giving flexibility to consumers for the upgrade, Adobe made its business riskier and more uncertain. If the new version of Creative Suite was of poor quality, customers would not buy it, and this would lead to a huge loss of revenue for the company. On the other hand, if the software's quality was good, Adobe would not gain anything extra.

Besides creating more options for customers by offering multiple packages, the perpetual license also created logistical and operational challenges. Adobe had to provide support for

the old versions thereby increasing the overhead costs for the company. They needed to allocate resources for technical support, bug fixes, and they had to ensure continued compatibility with the latest hardware and software available in the market. These overhead costs increased the marginal cost of supporting multiple versions and minimized the revenue potential. Furthermore, since the human capital available for the company is finite, supporting these overhead costs usually means cutting resources that would otherwise help in developing new product features and functionality. This, therefore, slows down the pace of innovation in the company.

Important Implications Drawn from the Study

The perpetual licensing model implemented by Adobe gave us a few insights which are applicable to other organizations and could be effective in improving the pricing strategy of the organizations. One of the highlights was the effectiveness of customer segmentation strategies that relied on customer use-cases. Allowing customers to self-select into different segments based on their product requirements showed that segmentation could be very effective. One of the biggest challenges of segmentation, however, is creating unique value for each segment so that users are happy with their segment. Adobe's strategy showed how to effectively address the challenge by allowing self-selection, which helps minimize customer dissatisfaction. Adobe's strategy also highlighted various ways of creating distinctive value proposition for different customer segments to convince them to pay premium for expensive products.

Adobe's old pricing strategy also highlighted the importance of ownership flexibility in increasing product adoption and creating a positive network externality effect. This might be

beneficial for some companies that are looking to increase their customer base. The research on Adobe's perpetual licensing model also revealed that such models tend to increase the upfront ownership costs and, thereby, create a barrier for many potential customers who wish to buy the products. The strategy's payment plan is also not convenient for customers and businesses since it requires high capital investment to purchase the products.

Creative Cloud (Subscription Model)

Adobe launched the Creative Cloud in April 2012,²² along with the last Creative Suite version CS6. Initially, customers could choose between the subscription and the perpetual licensing model, but eventually, Adobe gradually removed the option of buying the product with a perpetual license. In the new subscription model branded as Adobe Creative Cloud, users choose between two main packages: a 'Single App' at \$19.99 per month or they can subscribe to all the products in the Adobe creative line (which has more than twenty products) for the price of \$49.99 per month. Both of these prices are consumer/individual prices. Apart from the two packages, Creative Cloud also has some additional packages which are very similar to the two base packages, with only slight variations.

Adobe offers these products to three main customer segments; individuals, enterprises and institutions. Adobe, therefore, engages in third degree price discrimination, based on these customer categories. Each category has the same two options (subscribe to one app or all of the apps), but the prices are different. Adobe charges corporate customers the highest price, whereas institutional customers pay the lowest price. Unlike in the Creative Suite, Adobe does not publicize on the official website any discounts for volume purchases.

Table 3: Creative Cloud product for different customers segments²³

Customer Type	Purchase Type	Price
Individual	Photography	\$9.99

²²"Adobe Creative Suite - Wikipedia." https://en.wikipedia.org/wiki/Adobe_Creative_Suite. Accessed 7 May. 2017.

²³ All the prices are based on annual subscription cost with the option of paying monthly.

	Single App	\$19.99
	All Apps	\$49.99
	All Apps + Adobe Stock	\$79.99
Students and Teachers	Photography	\$9.99
	All Apps	\$19.99
Business	All Apps	\$69.99/per license
	Single App	\$29.99/per license
	All Apps + Adobe Stock	\$99.98/per license
Schools and Universities	All Apps	\$34.99/per license
	Single App	\$14.99/per license
	All Apps + Adobe Stock	\$64.98/per license
	All Apps	\$299.88/device per yr
	Single App	\$155.88/device per yr

The additional packages offered by Adobe vary with the customer segment. For example, Individual consumers have an option to subscribe to a photography package which has two software apps (Photoshop and Lightroom) at \$9.99 per month. This plan is not available for any other type of customer. Another plan offers free Adobe Stock images along with the ‘All Apps’ package, to all the customer segments including Individuals.

Since adopting the subscription model, users have always paid a fixed amount every period. The company gives its customers two options for subscription; an annual subscription or a monthly subscription. For the annual subscription, customers pay a lesser amount compared the sum of a 12-months monthly subscription. For the ‘All Apps’ package, users pay \$49.99 for

annual subscription compared to a sum of \$74.99 for monthly subscription²⁴. Annual subscription also has some flexibility regarding payments as users can either pay on a monthly basis or they can pay upfront for the entire year. In the subscription model, once the users are subscribed to a plan, they have to pay the entire amount for that period even if they decide to cancel the subscription midway through a payment period. Once subscribed, users also get all software upgrades without having to pay. The model allows customers to decide when to upgrade as they can choose to postpone the update for sometime. However, they have to change a few settings for the software to disable automatic updates. The updates are more frequent, with major updates coming semi-annually, compared to Creative Suite that launched a new version every one and half years. Under the new subscription model, the software is sold on a per license basis, with only an exception for institutions that can buy it on a per computer basis.

In discussion below, we will analyze the Adobe Creative Cloud software using three different assessment criteria, which include product packaging, pricing and ownership experience as we did earlier in the case of perpetual licensing model.

Product Packages

Advantages

Adobe offers Creative Suite in two main packages, a 'Single App' package and an 'All Apps' package. As a result, customers upgrading from old Creative Suite packages will likely prefer 'All Apps' over 'Single App' package. All the packages under Creative Suite consisted of four

²⁴"Creative Cloud pricing and membership plans | Adobe Creative Cloud."
<https://creative.adobe.com/plans>. Accessed 7 May. 2017.

or more applications, therefore, customers who used these packages will choose to upgrade to 'All Apps' package to get the same value from the creative cloud software. This is good news for Adobe, since these customers who were previously using lower priced packages such as 'Design Standard' or 'Design Premium', will end up paying more. For example, the 'Design Standard' customers who were using the product for six years and upgrading it each time a new version came, were paying an average of \$2424²⁵ to Adobe. Under the new Creative Cloud subscription model, however, these customers would end up paying \$3600²⁶ based on the current subscription pricing. Customers who were using other packages with more apps will also end up paying more though the percentage change in revenue from these customers will be less. The figure below compares the prices that customers can expect to pay under Creative Suite and Creative Cloud for various packages. A perusal of the figure reveals that all customers end up paying more, except for the customers that used Master Collection. This increase in prices would have attracted discontent among customers but Adobe deftly handled this by making direct comparisons more difficult for the consumers. On its website, Adobe only publishes monthly subscription costs²⁷; hence users look at this price and subconsciously compare it with the upfront costs of buying Creative Suite products, and thus, think that there is a discount. This strategy is helpful, but a few smart customers see through this plan and realize the difference in price they have to pay, and consequently feel discontented and unhappy. When Adobe switched to the subscription model, some customers realized that they would be paying more than they used to in the previous model. They were

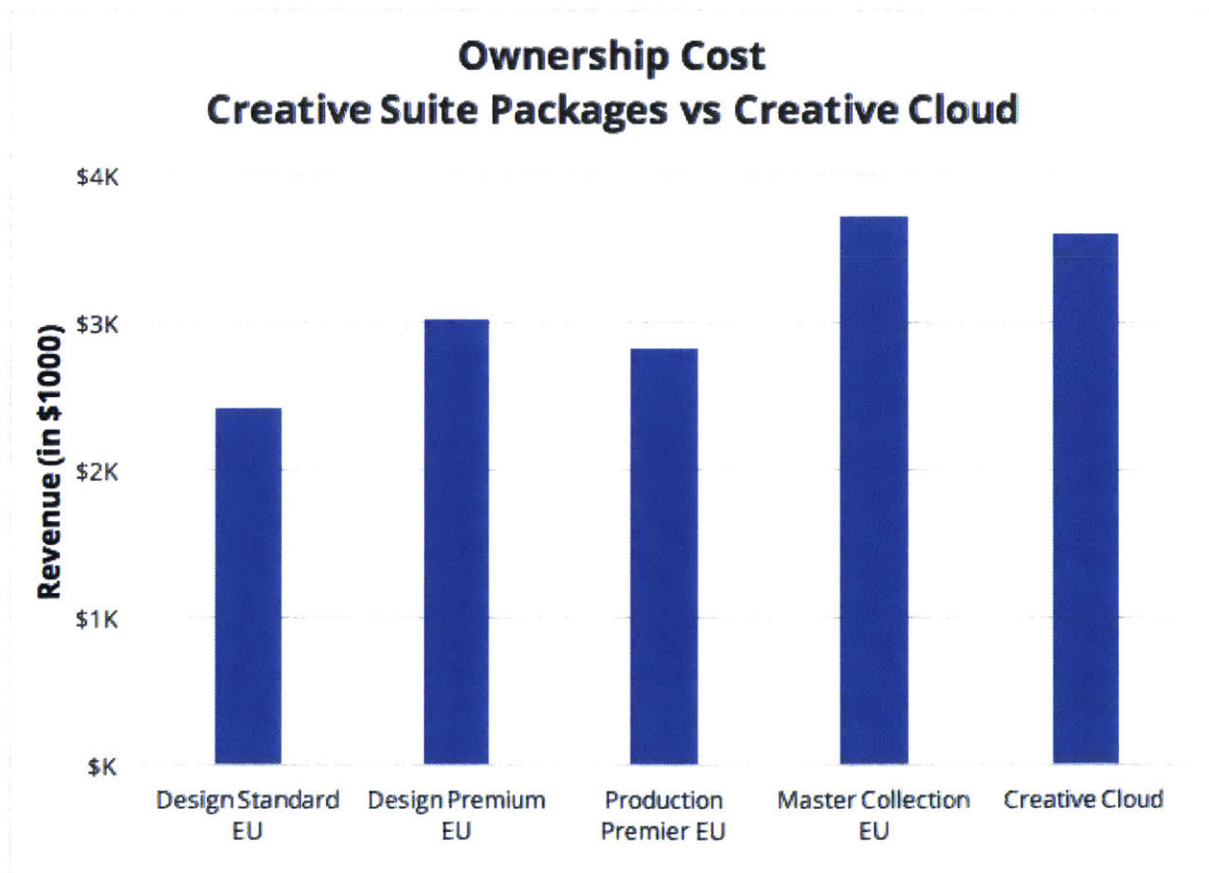
²⁵ The buy and upgrade prices of the products were used from Creative Suite 6.0. In the calculations I also assumed that a new version of the software launches every two years, which is close enough considering Adobe launched 6 versions

²⁶Based on current Creative Cloud pricing for Individual All Apps package.

²⁷"Creative Cloud pricing and membership plans | Adobe Creative Cloud."
<https://creative.adobe.com/plans>. Accessed 7 May. 2017.

unhappy and some went ahead to raise their concerns online. This discontent with Adobe's policies soon spread to other customers as well and created a lot of negative publicity for the company. Consequently, Adobe was forced to take measures to control the growing negative sentiment. Therefore, they offered discounts to the existing customers in an attempt to please them. The company offered free one year subscription to all the Creative Suite customers with version CS3 to CS6. Eventually, people seem to have forgotten about the price hike which is demonstrated by the steady increase in subscription²⁸.

Figure 4: Comparison between the ownership cost of CS and CC packages after six years of usage and getting all the upgrades.



²⁸"Adobe Investor Presentation - January, 2017." <https://www.images2.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE-Investor-Presentation-January2017.pdf>. Accessed 3 May, 2017.

The package options in Creative Cloud are very distinct from one another hence making it easier for customers to choose their preferred package. There are only four options for the customers to choose from, but business and institutional customers have fewer options. The 'Single App' option targets customers who have one specific use for the software such as photo editing, video processing, graphics creation etc. On the other hand, customers with more complex needs that require more than one software choose the 'All Apps' package. This simple distinction between the two main product packages makes it easy to choose an option. Besides, the prices for the packages also make it easy to choose, as users select the one that best fits their budget. Adobe employs several pricing cues to nudge the customers to buy certain packages. This is quite a contrast from the older Creative Suite pricing which had complex options and fewer pricing cues. In the new model, the prices of certain packages create a decoy effect for certain types of customers. For example, the price of the photography suite which contains two apps is \$9.99 per month, but there is also an option to subscribe to a 'Single App' for \$19.99 per month. Anyone who wants to buy the Adobe products for photo editing would unanimously choose the photography suite which provides more value (two apps instead of one) and costs less than a 'Single App' subscription. Another example is the 'All Apps' Package, which lies between the 'Single App' and the 'All Apps + Adobe Stock'. Having the three prices helps customers make quick comparisons. The cost per app that the customer is paying for the 'All Apps' package is significantly lower than what he/she is paying for the 'Single App' package. Moreover, it also provides more value than the 'All Apps + Adobe Stock' package which only provides one additional feature on top of the 'All Apps' package for an added cost of \$20 per month. Adobe also used strategic pricing cues for the 'All Apps' package to highlight its value by tagging it with 'Most Popular' keyword and creating a different background for this option (figure shown below). These subtle cues

reinforce the value of this subscription package and hence prompt the user to choose the option.

Figure 5: Shows the Subscription packages available for Individuals on Creative Cloud²⁹

The screenshot displays the Adobe Creative Cloud subscription interface for 'Individuals'. At the top, there are navigation tabs for 'Individuals', 'Business', 'Students and Teachers', and 'Schools and Universities'. Below these is a banner for 'Buying for a team?' with a link to 'See all business plans >'. The main content area features four subscription packages, each with a 'BUY NOW' button:

- Photography:** Annual plan, paid monthly. Price: ~~US\$ 9.99~~ /mo. Features include Lightroom CC and Photoshop CC, essentials for organizing and editing photos, and a portfolio website.
- Single App:** Choose an app. Price: ~~US\$ 19.99~~ /mo. Features include a choice of one creative desktop app (like Photoshop CC or Illustrator CC), a portfolio website, premium fonts, and 20 GB of cloud storage.
- All Apps (Most Popular):** Annual plan, paid monthly. Price: ~~US\$ 49.99~~ /mo. Features include the entire collection of 20+ creative desktop and mobile apps, a portfolio website, premium fonts, and 20 GB of cloud storage.
- All Apps + Adobe Stock:** Annual plan, paid monthly. Price: ~~US\$ 79.98~~ /mo. Features include the entire collection of 20+ creative desktop and mobile apps, 10 free Adobe Stock images per month, and a cancel risk-free guarantee.

At the bottom, there is a phone icon with the number 800-585-0774 and a chat icon with the text 'Questions? Let's chat.'

²⁹ The image is taken from Adobe's Website

<https://creative.adobe.com/plans?promoid=NV3KR7S1&mv=other> Accessed 03 May. 2017

Figure 6: Shows the Subscription packages available for Businesses on Creative Cloud

Compare Creative Cloud for:	Individuals	Teams
Easy collaboration		
Sync, store and share assets	•	•
Adobe Portfolio website	•	•
Slack integration	•	•
Shared Adobe Stock plans		•
Streamlined management		
Ability to reassign licenses		•
Web-based Admin Console		•
Centralized deployment		•
Flexible purchase options		
Volume discounts for 10+ seats		•
Consolidated billing		•
Purchase orders		•

Disadvantages

The Creative Cloud package options have drawbacks too. Due to the limited number of packages offered under Creative Cloud, Adobe is not able to segment its customers into different categories based on their use cases, like it did with the Creative Suite. As a result, the company is unable to get the reservation price for different customers who do not fall into any particular segment. Failing to target these customer segments leaves out a significant potential market.

The fewer package choices might also dissuade some users from buying the Creative Cloud. As mentioned earlier, some customers such as the ones that were previously buying the 'Design Standard' and 'Design Premium' versions have to pay substantially more under the new pricing scheme. This huge price difference forces some price sensitive customers to look for alternatives that fall within their budget, elsewhere. In 2013 when the subscription pricing

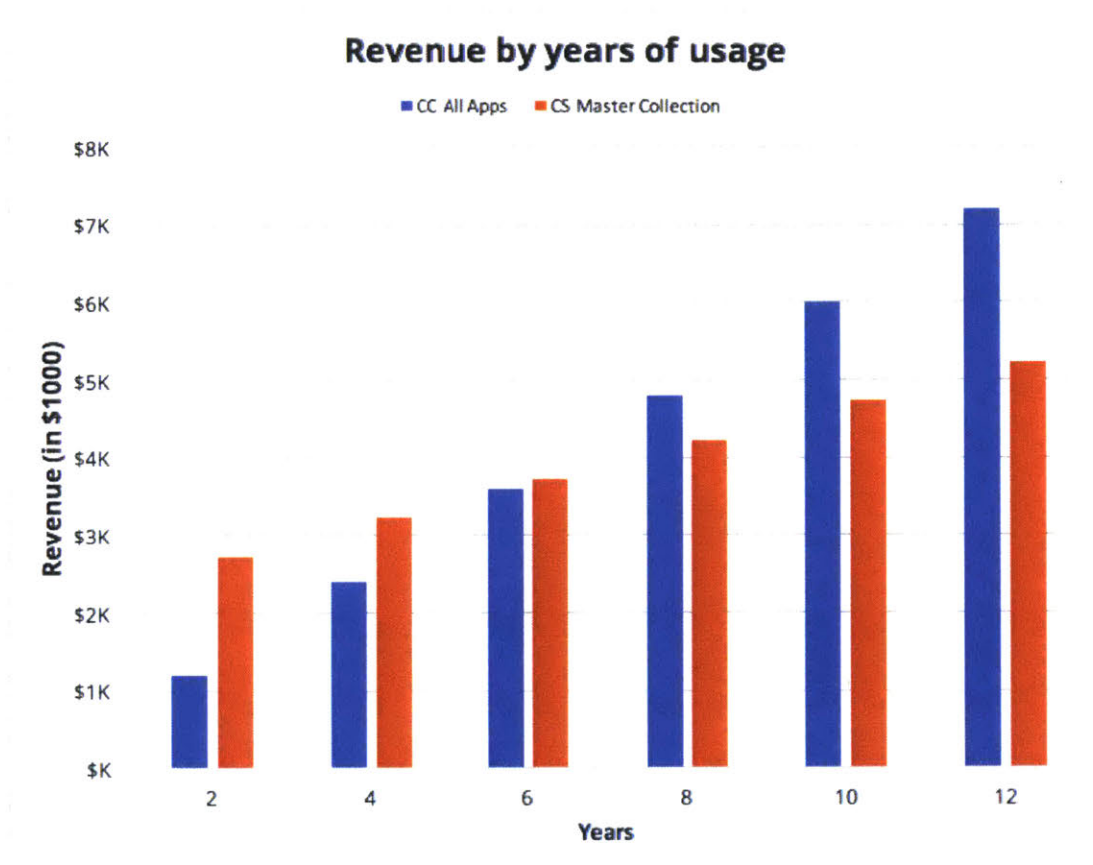
model was put into effect, several customers resented the switch and cited higher prices as one of their concerns. As a result, number of subscribers and revenues for Adobe reduced significantly. Later, Adobe was able to win some of these customers back by offering them huge discounts and free upgrades to Creative Cloud for a year.

Pricing

Advantages

Most of the products offered as part of Adobe's creative product line are similar to instruments and tools used by professionals. Just like tools and instruments, these products have a high learning curve for anyone to start using them productively. As people learn how to use them, they become more productive and as a result the value derived from these products increases over a period of time. Once they have learnt how to use them, they don't like to switch to other products since they have to invest a lot of time in learning how to use the new tool. The subscription model allows Adobe to take advantage of the value that customers get from the software over a period of time. Such customers, having derived more and more value over time do not feel the pressure of paying extra for the services. Therefore, this approach helps extract more of the customer's reservation price. A cursory look at the figure below reveals that the total price the customer pays for the product over a longer period of time is more in the subscription model as compared to the traditional buy and upgrade model.

Figure 7: Cost of ownership of CC All Apps and CS Master Collection Package by years³⁰



The subscription pricing also reduces some of the barriers of adoption for new customers by having negligible upfront payment. The small initial payment incentivizes the new customers to try out the service. In addition, Adobe provides discounts to first time users and hence encourages new customers to try out the service. Therefore, Adobe is able to make money in the long run, if the customers decide to keep the service. Adobe's subscription trends seem to corroborate this argument as the subscriptions have been growing at a steady pace since Creative Cloud was launched in 2012. In 2016, Adobe saw a 35% increase in the cumulative

³⁰Based on current price of All Apps Creative Cloud package for Individuals.

number of subscribers for Creative Cloud³¹. During the same time, Adobe has also witnessed an increase in revenue from Creative Cloud subscriptions. In 2017, the Annualized Recurring Revenue (ARR) from subscriptions was up by 29% from last year³². These trends show that the new subscription pricing is increasing the customer base for creative products, and that these customers continue to use the products for some time.

Another advantage of the subscription model is free upgrades for the latest features. This is very significant especially for business and institutional customers. Users and buyers within these organizations are different entities, thus, if the user wants an upgraded version of the software for his work, he/she has to submit a formal request to IT teams and get their approval. As such, upgrading software becomes a tedious thing for the IT team since the procurement process in many organizations is complex. Therefore, the entire process of upgrading the software takes a lot of time and costs the organizations a lot of money. Subscription pricing model addresses these concerns by providing free upgrades, which enables users to have access to the latest version, always.

Moreover, all the prices shown on the Adobe's website are monthly prices. This helps to create an illusion that the customers are getting a discount³³. Customers also subconsciously compare this per month subscription price with the old upfront price, hence heightening the price illusion. This is evident from several online blogs and discussion forums where people

³¹ "Adobe Investor Presentation" Jan 2017

<https://www.images2.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE-Investor-Presentation-January2017.pdf>

³² "Adobe 10Q" 2017 Pg 31

<https://www.images2.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE-10Q-Q117-FINAL-CERTIFIED.pdf>

³³"Pricing Psychology: A Gigantic List of Strategies - Nick Kolenda." 20 Sep. 2016, <https://www.nickkolenda.com/psychological-pricing-strategies/>. Accessed 20 Apr. 2017.

compare the monthly prices with the upfront costs. More information related to this is available in the Appendix.

Disadvantages

The subscription pricing model has some disadvantages as well. In the subscription model, the price conscious customers have very limited options to choose from. In the perpetual licensing model, such customers would buy older versions of the software which were less expensive; this model does not have such options. Online blogs and discussion forums revealed that people were not happy with this loss of flexibility as they relied on it earlier to keep finding cheaper options. However, there is evidence that lower monthly payments countered some of this resentment. Since customers pay a small monthly payment, they have no pressure paying the amount, hence are convinced to buy the product package³⁴.

Ownership Experience

Advantages

The Subscription pricing model gives customers several options for payment and allows them to choose when and how to make the payments. They have an option to pay upfront for an entire year or they can pay per month during the subscription period. This is a huge advantage especially for small and medium size businesses that don't have a lot of working capital to afford a huge upfront payment. The monthly payment option also makes the expensive software more affordable for the customers. From the company's perspective, this

³⁴"Pricing Psychology: A Gigantic List of Strategies - Nick Kolenda."20 Sep. 2016, <https://www.nickkolenda.com/psychological-pricing-strategies/>. Accessed 20 Apr. 2017.

is an added advantage as they get additional revenue from the extra sales. In addition, the new customers are more likely to maintain their subscription for a long time, thereby increasing the company's revenue.

With the subscription model, customers always have the latest version of the software. This creates a unique advantage especially for business customers. These businesses generally have cumbersome approval processes for buying and upgrading software. This creates a problem for development teams as sometimes they need the updated version of the software to do their work and the lack thereof hampers their ability to deliver products and features quickly. The subscription model avoids such a problem since the IT teams always have the latest version of the software. It also removes certain restrictions on vendors like Adobe, allowing them to be more agile in releasing new features. In the perpetual licensing model, vendors would withhold the release of upgrades until the new version was launched in order to create upgrade incentives for the users. In the subscription model, however, they don't face the same compulsion which makes them more agile in releasing new features. This helps them to compete proactively and make new innovative features available quickly.

Furthermore, the inclusion of the upgrade as part of the subscription package helps ensure that all the customers use the same version. This means that the vendor would only need to support fewer versions of the software at any given time, which translates to less overhead costs in maintaining various software versions. Besides reducing distractions in the businesses, this strategy saves human resource which can be diverted towards developing new product features, improving product differentiation and increasing the value of the product for the customers. This is evident in Adobe's case. After switching over to subscription pricing, Adobe has been releasing major product upgrades once every two years. It also releases minor updates with security patches and bug fixes every few months. This marks a huge

improvement over the older model, in which new versions were only introduced once every few years.

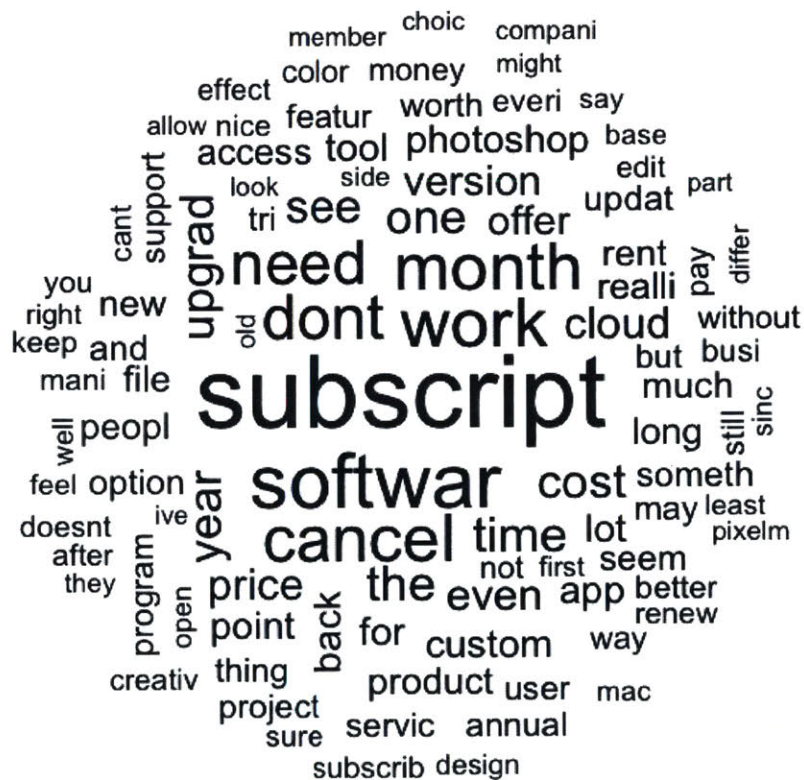
Another advantage that comes with the subscription model is the pay-per-use facility in the model. The model allows customers to only pay for the months during which they use the product. If for a few months, a customer is not using the product, he or she can cancel the subscription for those months and save money. However, we discovered that this is not a significant advantage for the customers as promised by the vendors. This is because most of the customers end up buying the annual subscription because of the lower costs, but they don't have the option of stopping it for a few months during an active subscription cycle. The only way they can benefit from the offer is if they enroll for the monthly subscription which is quite expensive compared to the yearly subscription, and therefore, is not a viable proposition for many customers. In addition to this inherent restriction imposed by the subscription plan, the process of deactivating subscription is also complicated and not very user friendly. Subscriptions are set to auto-upgrade and users have to disable this option manually. However, it's not easy as it can only be done by calling the Adobe customer care. This makes the whole exercise quite tedious. Therefore, the pay-per-use benefit that the company advertises is more of a marketing gimmick than an actual advantage.

Disadvantages

One of the biggest drawbacks of switching to the subscription model was that customers lost access to their content when they cancelled their subscriptions and it caused a huge stir when Creative Cloud was released. The company had claimed that customers would continue to have access to all their files. Although this was technically true, it was not possible since

customers needed Adobe software to open such files which were in company's proprietary format. This meant that the files would be of no value to the owners after the expiry of their subscriptions. People raised this complaint via online forums, while some customers filed a petition³⁵ against the subscription model citing these complains as the biggest concern. More than fifty thousand users signed the petition to dissuade Adobe from offering Creative Cloud and others vowed never to upgrade to the new cloud offerings. Since then, however, the issue has settled down, but it still continues to be one of the biggest concerns that potential customers have when deciding on whether to buy the new subscription package.

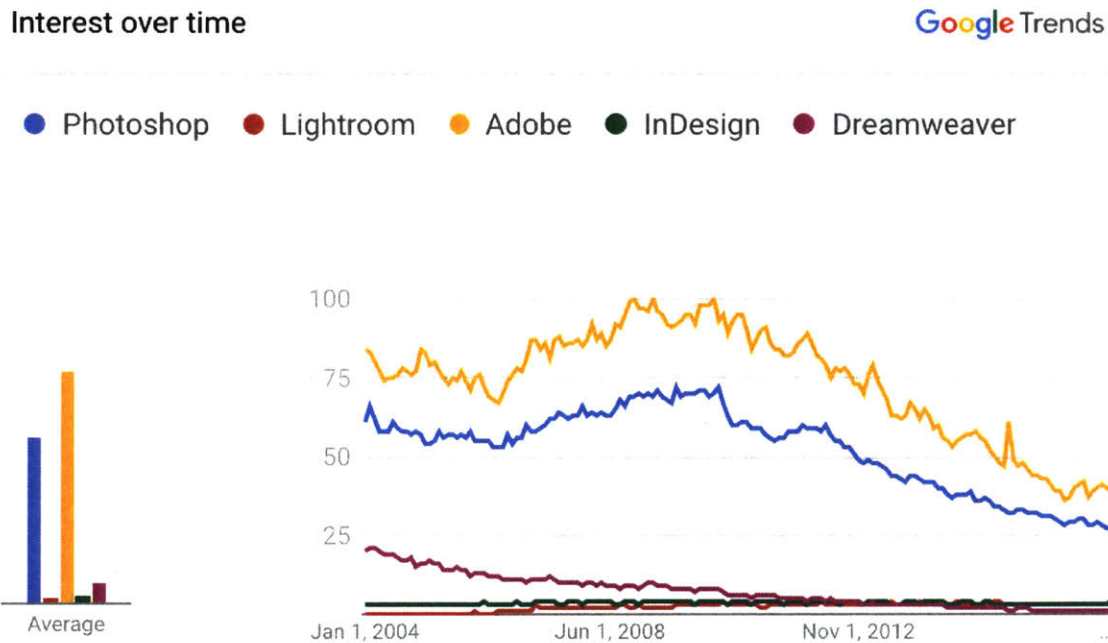
Figure 8: Word Cloud of Customer reactions on Creative Cloud ownership experience



³⁵"Eliminate the mandatory "creative cloud" subscription ... - Change.org." <https://www.change.org/p/adobe-systems-incorporated-eliminate-the-mandatory-creative-cloud-subscription-model>. Accessed 29 Apr. 2017.

The subscription model with bundled upgrades had another drawback; removing the various versions of the product prevented the price sensitive customers from buying the older and cheaper versions of the product. This reduced the number of customers buying the software, which eventually led to a drop in the expected revenue. This reduction in the number of customers also had a negative impact on the network externality of Adobe products which otherwise would have improved the popularity of the products. This observation was based on the analysis of search trends for the company and its products. The search frequency of certain keywords such as Adobe, Photoshop, Lightroom, and InDesign has dwindled after the subscription pricing model was released.

Figure 8: Google Trends report of Adobe and some of its most popular products from 2004 to 2017³⁶



Worldwide. 1/1/04 - 5/7/17.

The subscription pricing model creates another unique challenge. Since customers pay subscription charges periodically, they expect better quality services and technical support. Moreover, paying frequently for a service is not a positive experience, and therefore, customers get angry quickly in case of poor quality service. This also gives them some leverage to be more vocal with their concerns. The company, therefore, has to put in more effort than before to satisfy the same customers which leads to additional costs.

³⁶ The data is taken sourced from Google Trends

<https://trends.google.com/trends/> Accessed on May, 08 2017

Important Implications Drawn from the Study

The research on Adobe's subscription pricing provides several insights into the subscription pricing model and discusses other strategies to improve product sales. Most notably, it helps to show the inherent benefit of the subscription strategy in getting more revenue from customers who use the product for a longer duration of time. Therefore, businesses that provide continued value to their users can benefit from the subscription strategy. The study supports that the model removes barriers to adoption by reducing upfront costs, and it also provides more payment options. Therefore, it could be particularly valuable in cases where other strategies might require huge upfront costs. However, the model also has some drawbacks with the main being the reduced ownership flexibility for customers, which could pose great challenges for vendors as has been observed in the case of Adobe. Therefore, while adopting the subscription model, businesses should be cognizant about the flexibility or the features that they intend to take away from their customers. In case the new model affects the things that customers value deeply, the company should figure out an effective way to handle the resultant problem efficiently to strike the right balance between customers' needs and the interests of the business.

Simple pricing choices and price cues were some of the other notable points that were discovered during this case study. These strategies proved to be very effective at enabling customers to make quick decisions leading to improved revenue from the sales funnel.

Conclusion

It is an interesting time in the software industry as cloud computing and SaaS are changing the way individuals and businesses think about accessing software. Consequently, software manufacturers are embracing this change by shifting from the perpetual pricing model to the subscription model. To facilitate this change, this study sought to gather the necessary facts and evidence by conducting a case study of Adobe Systems Inc., which will enable businesses to make smooth, safe and swift transition. The qualitative analysis reveals that the new model could be beneficial for any company if executed properly. The subscription model allows vendors to collect more revenue from the customers based on their usage. The customers who intend to use the product for a longer duration would need to pay more and vice versa. This ensures that consumer surplus is reduced and profits for the company increases. During the research, we found out that this strategy works effectively for companies that provide a long-term value proposition that remains consistent or improves overtime. This strategy might not work well with companies that only deliver short-term value to their customers since in such cases customers will not find it worth to pay for the service over a period of time due to the diminishing value. Evidence also shows that the subscription model helps make the products more affordable by spreading payments over a larger period of time rather than having the customers pay a huge amount upfront. A pricing switch from perpetual to subscription can also potentially attract new customers who would otherwise not be able to afford the high upfront payments. All this could help improve revenues as was the case of Adobe which was able to successfully employ the subscription model to improve its Digital Media revenue by approximately 7.74% from \$3128.5M³⁷ in 2012

³⁷ Adobe 10K 2012

to \$3370.8M³⁸ in 2016. The study also revealed that the subscription pricing model can be used to gain strategic advantage by reducing the cost for businesses. Companies can reduce the number of software versions they have to maintain by offering upgrades as part of the subscription. This allows them to reduce development and support costs that they would otherwise incur to maintain different versions.

The study also highlights some drawbacks of the subscription pricing model, especially while transitioning from a more traditional software ownership model. Any organization planning to adopt this strategy must carefully assess their business and see how this model might affect the product consumption by the customers. If the subscription model limits the use of certain features that users like and have grown accustomed to, then it might create serious problems for the business, and could even tarnish their reputation. The present study showed how Adobe had to face a lot of criticism and resentment from its customers when the company limited their ability to effectively use the data files once their subscription was over. Subsequently, the company had to spend a lot of time, effort and money in trying to address this issue.

The study also revealed that customer segmentation could be an effective strategy for businesses. By creating different segments, businesses can charge different prices for the different segments based on the value that each customer segment derives. This can help maximize the company's revenue. The more the number of segments the better it is for the business. Therefore, it would be beneficial for organizations to have segmentation at multiple

http://www.images.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE_10K_FY12_FIN_AL_CERTIFIED.pdf, Accessed 30 Apr, 2017

³⁸ Adobe 10K 2016

<http://www.images.adobe.com/content/dam/Adobe/en/investor-relations/PDFs/ADBE-10K-FY16-FINAL-CERTIFIED.PDF>, Accessed 30 Apr, 2017

levels. For example, Adobe's old pricing strategy segmented customers based on their profile, and within each profile, customers were further segmented based on usage. As a result, Adobe was able to get a lot of consumer surplus which increased their revenue and sales. Although this strategy was applied in the old perpetual licensing model, it could be applied to the subscription model just as effectively. Pricing cue is another effective strategy that can complement a subscription model and help generate more revenue for the company. In our study, we observed that Adobe influenced consumer behavior through pricing cues. Similarly, companies can use such pricing cues strategically to demonstrate product value and influence buying decisions.

In this study, I have only covered points that are related to the pricing strategy. There are other considerations that should also be properly addressed before adopting the subscription model. There are functions within an organization that can have significant impact on the successful execution of the subscription pricing model, and businesses should be cognizant of these. For example, product development methodology has a huge impact on the execution of the subscription pricing model and variables which influence favorable outcomes. Sales and marketing processes may also need some adjustments to accommodate the subscription model. These changes are sometimes not feasible for an organization because of the structure, scale of the operations, or dependence on other parties. Therefore, I can confidently conclude that having an understanding of all these aspects is important before committing to the subscription pricing strategy in entirety.

Appendix

User Blogs and Discussion Forums

List of prominent Blogs and discussion forums used in the thesis:

1. Adobe Official Forums <https://forums.adobe.com/>
2. Reddit <https://www.reddit.com/r/>
3. Hitfilm <https://hitfilm.com/forum/>
4. Creativecow <https://forums.creativecow.net/adobepremierepro>

Apart from this there were other sources that were used, which have been referenced wherever they are used.

User Complains- Content Ownership after cancelling subscription

When Adobe first launched its Creative Cloud offering, there was a huge outcry in the user community. People were scared that they will lose their work once they stop their subscriptions. To this date, this is one of the biggest reason preventing purchase of Adobe products. Below are a list of posts and blogs where people talked about this issue.

Posts

<https://forums.adobe.com/thread/1232088>

“The real unfairness comes through the demand for regular and “perpetual” payments. Previously, I could upgrade to a new version when I had the money allocated to pay for it -- more importantly, I could chose NOT to buy the update when I didn’t have the money to spend on software.”

“I have three issues with CC:

1. I want to be able to EDIT my work when I don't have income. The desktop model supported this. The cloud model does not, and that is unacceptable.

2. Adobe can keep raising the price, because they will be holding us all hostage. Sure at some point a percentage of CC users would drop off, but all that means is that Adobe can milk the absolute most from us using this model. It's not a vehicle for innovation, it's a vehicle for exploitation.

3. F--- the cloud. I'll be keeping my work on my laptop, thank you very much”

<https://forums.adobe.com/message/4046445#4046445>

“I am prepared to upgrade every 2 or 3 versions, but it's too expensive to upgrade every time. Even a tiered upgrade price - making it fairly expensive to upgrade 2 versions ago - would mean I wouldn't upgrade. It's just too expensive for most amateurs (and probably some self-employed professionals I know).”

<https://forums.adobe.com/message/5294985#5294985>

“Right now I'm really doubting Adobe and wondering whether to continue with their products.

I'm concerned about a company failing to continue support its products, about proprietary file formats and being locked into increasingly expensive subscriptions (far more costly than upgrading!), about being able to use the product while travelling but offline, etc.

Adobe, you are causing me to mistrust your organization.”

<https://forums.adobe.com/message/5301242#5301242>

“They have a single use subscription for \$20/mo. Similar to upgrading extended version every 1.5 years.

2) WHAT if I created projects like 2 months ago and I didn't use Photoshop for a full month. Who assures us that with the CC series the projects are opened with the old CS ones?Or don't use it every day?

Same problem if you own it. If upgrade price is \$400 every 1.5 year that is same as \$16/month. You can choose not to update and version will be same as when you last used it.

3) WHAT if I don't use Adobe 24/7? and 5) Making an day-based subscription?? Same problem if you own it. If upgrade price is \$400 every 1.5 year that is same as \$16/month.”

https://www.reddit.com/r/web_design/comments/1qpeeu/adobe_creative_cloudis_it_worth_it/

“If you work as a designer and make a living at it, I can see no good reason to not use it. It has a significantly lower up front cost (\$50 vs. \$1000's) and updates are included. So, for a minimal cost, you can have the most powerful, industry standard and up-to-date tools. Also, the costs should be a write-off. I really hope more designers get to using it so I don't have to deal with files made in cs4 (or some hacked version) anymore. I've seen fewer old files lately, so i think it is catching on.”

“\$50 a month for access to their ENTIRE suite of software.

This is so cheap it's almost a negative for anyone actually making a living in a digital only business. Those high cost seats of software made excellent business expense deductions.”

https://www.reddit.com/r/photography/comments/4a2lcp/adobe_and_why_the_subscription_model_is_great/

“I've been subscribed to various versions of the CC subscription since it was introduced. I'd much rather pay \$10-30/mo versus \$2000 all at once. I also like the idea that new features are added every few months, not every few years.”

Blogs

<http://www.graphics.com/article-old/creative-cloud-chronicles-freeing-captive-consumer>

In this blog the user has compiled the views presented by vocal users in the community. The common thread among these options is the concern about the loss of access to one's content.

<http://silverpoint.ca/2013/06/adobe-creative-cloud/>

The author mentions the cons of the adobe creative cloud, one of them being the loss of access.

<https://www.royaldiscount.com/blog/adobe-cloud-good-for-investors-or-consumers/>

The author mentions that the new pricing is cheaper than the older one.

Posts related to Buying Decisions

Below are some of the blog posts that talked about the difficulty of choosing between products and provided suggestions to help customers make the buying decision.

- <http://web.archive.org/web/20100530103106/http://www.adobe.com/products/creativesuite/suiteselector/>
- <http://www.brighthub.com/internet/web-development/articles/14389.aspx>
- <http://www.htmlgoodies.com/beyond/webmaster/toolbox/which-adobe-creative-suite-is-right-for-you.html>
- <http://www.steves-digicams.com/knowledge-center/how-tos/photo-software/what-version-of-photoshop-is-best-for-an-amateur-photographer.html#b>