

SUBSCRIPTION-BASED MODELS AND ONLINE LEARNING PLATFORMS

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Abstract

Internet connectivity has increased over the years and consequently, new business opportunities have occurred. Online learning platforms represent one of such opportunities. A few online learning platforms have recorded significant growth, reaching tens of millions of users. These are the MOOC (massive online open courseware) platforms. The shift to the subscription economy is accelerating globally. The subscription-based model is transforming multiple industries such as manufacturing, media, journalism, transportation or enterprise software. However, is this business model a good fit for online learning platforms? In the current paper, we are examining the impact of the subscription economy on the online learning industry, especially on MOOC platforms. For this, we have performed a comparative analysis of the offers from the most important MOOC platforms and we have evaluated to which extent their business models have adapted to the subscription-based economy. The novelty of this paper consists in the examination of the online learning platforms through the lenses of a subscription-based model and the analysis of their recurring revenue sources.

Keywords: MOOC, e-learning, subscription-based model, online learning platforms

1. Introduction

Cloud Computing, credit card and payment technologies have enabled online businesses to find new opportunities to better monetize their products or digital services. Also, the pandemic has had a global impact on the demand for online learning services since it was safer to stay at home and continue learning. Online learning can be a cheap and accessible alternative to improve student learning or new skills acquisition. The organizations operating in the online learning segment can be non-profit and for-profit. Since access to capital may be easier for the ‘for-profit’ organizations, most of them have developed over time into major players in their segment. A few of them have reached billions of dollars in valuation after they become public. For example, Udemy (NASDAQ: UDMY) has reached over 2.2 billion USD in market capitalization in May 2022. Similarly, Coursera (NASDAQ: COUR) has reached 2.4 billion USD. The business models that the online platforms are implementing can have a major role in attracting and retaining students. One of these models is the subscription-based business model where the student pays a recurring fee typically

monthly or yearly to access and consume the training content associated most often with an automatic way to renew the subscription and make the payments. A significant number of companies from different industries such as media, retail or software (to name just a few) have adopted this model and have been able to improve significantly their financial performance. Netflix, Spotify, Amazon Prime or Salesforce.com are the most common examples. Some authors (Tzuo, Weisert, 2018) claim that the “subscription model is transforming every sector of the modern economy”. Tzuo, the CEO of Zuora (NYSE:ZUO), a company specialized in cloud-based subscription management software, has even coined the term “subscription economy” to highlight the shift from “product economy”. In the subscription economy, the customers are becoming subscribers. The focus of a company operating in subscription economy should be on building long-term loyalty, retaining existing subscribers, monitoring the usage of the product or service, managing the recurring revenues and finding new ways to deliver value. Baxter (2016) has stated that the subscription models can work for certain businesses but may not provide good results for others and has made an exercise to identify what differentiates successful companies from unsuccessful ones. McCarthy and Fader (2017) have examined how investors can evaluate subscription businesses and have proposed a new methodology for customer-based corporate valuation (CBCV).

The current paper includes a research methodology section where we have provided details regarding the methods we have used. In the results and discussions section, we have examined various implementations of the subscription-based model and we have illustrated the economic and financial performance of the analyzed platforms. The article concludes with the presentation of the main ideas regarding the analyzed platforms and a future research direction.

2. Research methodology

The authors have examined the business models from the main MOOC platforms based on the available public data from their websites, SEC filings and investor relations calls and have evaluated the course offerings in order to determine to which extent the MOOC platforms have adopted the subscription-based business model. We have reviewed the MOOC platforms that are more oriented to higher education classes such as Coursera or EdX, platforms that are oriented toward professional adults such as Udemy or LinkedIn Learning and MOOC platforms, which operate rather on a niche, such as Domestika - which targets the creatives community and DataCamp, which targets the data science community).

3. Results and discussion

3.1 The business model as a strategic construct

The business model concept is a popular in the management science and practice however there is not a widely accepted definition of it. We will use the definition from Wirtz, Pistoia, Ullrich, and Göttel (2016) “a simplified and aggregated representation of the relevant activities of a company” (p. 6). Choosing a business model represents a strategic decision that precedes tactical pricing and other decisions, and the optimal choice depends on contingency factors such as market contextual conditions (Casadesus-Masanell and Ricart, 2010). Traditionally, subscriptions have been offered

for products such as newspapers. In the past decade, subscription-based models have been adopted in multiple industries.

The subscription-based model designates a business model in which a customer will pay a recurring price at regular intervals (weekly, monthly or yearly) in order to access a product or a service. In the case of online learning platforms, the product is the digital content produced and delivered by the platform itself or by the partners (universities, companies or individual instructors).

3.2 The online learning market

According with United Nations (UN), in the next 10 years over one billion people are projected to reach working age, which is between 15 – 64 (United Nations World Population Prospects 2019). This indicates a huge potential market opportunity for online learning platforms.

According with certain industry research (Reportlinker.com, 2022) the following factors may positively influence the growth of the e-learning market during 2020 - 2026:

- Growth of blended learning in education technology;
- Increasing Virtual Reality (VR) & Augmented Reality (AR) applications in e-learning;
- Need for strong workforce skills to boost e-learning market;
- Digital transformation in learning and training.

Based on Eurostat data from the annual survey on the use of information and communications technology (ICT) in households and by individuals, in European Union (EU) in the first quarter of 2021, 27% of people aged between 16 and 74 years have reported that they did an online course or used online learning material. This represents a 4-percentage points (pp) increase compared with the same results from the 2020 annual survey. The online course in this survey is defined as "a planned series of learning activities in a particular subject or topic offered entirely or partly online and resulting in a qualification or certificate of attendance". Online learning material has been defined as an "educational material (other than an online course) on any subject or topic available online or in a digital format for educational, professional or private purposes (e.g. audio-visual materials, online learning software, electronic textbooks, learning apps)" (EU, 2022). At the country level, the actual percentage has been illustrated in Figure 1 below.

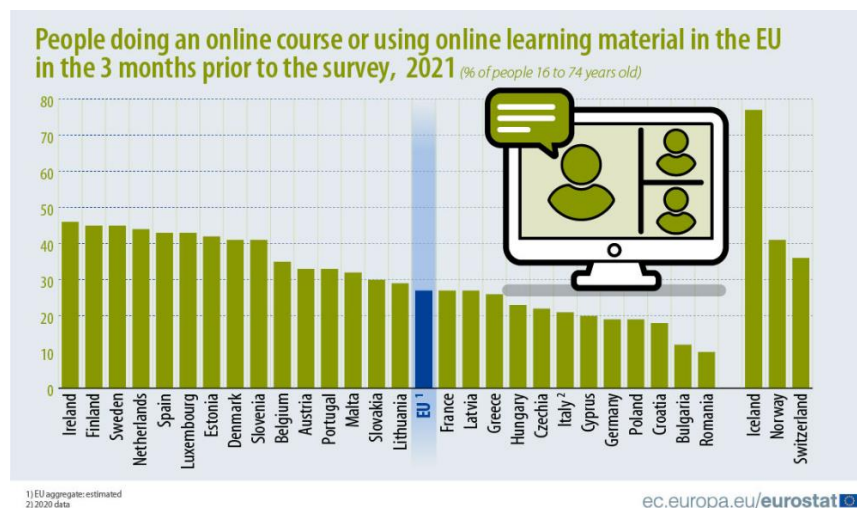


Figure no. 1 – The percentage of people involved in online learning in EU countries.
Source: Eurostat, 2022

Please note that the data for Italy were not been available and they have been estimated based on 2020 data. Also, at EU level, the aggregate percentage has been estimated (Eurostat, 2022).

As can be seen from the figure above, the top three countries with the highest percentages are Ireland (46%), Finland (45%), Sweden (45%) and Netherlands (44%). The top three countries with the lowest percentage of doing online courses or using online learning materials are Croatia (18%), Bulgaria (12%) and Romania (10%). Compared with the situation before COVID-19 pandemic, from the 2019 Eurostat survey, all EU countries have increased the percentage of people involved in online learning.

In the United Kingdom (UK), in a study performed by Censuswide for FutureLearn (FutureLearn, 2022) on a sample of 2000 UK adults, aged over 16 and over 500 employers, 33% of the respondents would choose online platforms to learn new skills.

3.3 The evolution of MOOC Platforms

The number of MOOC platforms has increased year by year. If the first MOOC platforms have provided free classes, now, we see a transition to “free to audit”. Furthermore, the number of learners has increased to approximately 19 400 online classes, reaching 220 million students (without counting the learners from China), 950 partner universities, 1670 micro-credentials and 70 online degrees. They were born without a business model and within a decade, these platforms have evolved from no revenue to making well over half a billion dollars annually (ClassCentral.com, 2022).

MOOC Platforms from the United States are as follows: Coursera, EdX, Udemy, LinkedIn Learning, DataCamp, Domestika, and Kadenze.

MOOC Platforms from Europe & United Kingdom: FutureLearn (United Kingdom), France Université Numérique (FUN) (France), Miríadax (Spain), EduOpen (Italy), Federica Web Learning (Italy), OpenHPI (Germany), iversity (Germany), MOOC.fi (Finland), Prometheus (Ukraine).

MOOC Platforms from the Middle East and Asia-Pacific: SWAYAM (India), NPTEL (India), JMOOC (Japan), acco (Japan), Fisdom (Japan), OpenLearning (Japan), K-MOOC (Korea), ThaiMOOC (Thailand), IndonesiaX (Indonesia), Edraak (Arabic) (Jordan), Campus-II (Israel) Chinese Language MOOC Platforms: XuetaoX, Chinese University MOOC, Zhihuishu, CNMOOC, Xue Yin Online.

3.4 Monetizing the digital content from online learning platforms

During the introduction phase, the initial promise of most online learning platforms was to provide free access to online education. Since then, their purpose has evolved and we see a transition from free to “freemium” model and beyond. The platforms have identified various ways to monetize their content. Among them, we can see ad-sponsored content offerings, one-time payment classes, fees for issuing certificates or subscription-based offerings. The adoption or the transition to a subscription model may be challenging since the costs may go up and revenues may drop, but after the transformation to a subscription model is complete, the costs will go down and revenues increases again (Lah and Wood, 2016). Despite its many advantages such as convenience, flexibility, diverse content, and relatively low cost, online learning is experiencing high dropout rates among students, which adversely influence the pedagogical and financial goal outcomes. In order to reduce student dropouts, online learning platforms can use predictive analytics tools in order to get further insights into the probability to drop a class. Certain authors (Coussement et. al., 2020) have proposed a logic leaf model to predict student dropout accurately in a subscription-based online learning context. Online learning platforms can use such models in order to improve their visibility on student dropout rates. The relationship that the online platforms build and maintain with their customers represents the essential engine for the growth of the subscription-based model. An important distinction that needs to be made is concerning subscribers versus users. A subscriber is not equal to a user. A subscriber is defined as an individual or an organization that owns one or more subscriptions and has a billing relationship with the online learning platform, with an obligation to pay for the subscribed services.

The economics of a MOOC course

In order to create a MOOC course, from a human resources perspective it is necessary for the joint work of the instructional design specialists, technical staff and functional experts.

Based on a previous estimation from certain authors (Pomerol et.al, 2015) it is necessary \$200,000-\$300,000 in consolidated costs to produce a course on a MOOC platform. Assuming that the software and hardware platforms are at the organization’s disposal, the same authors estimate the cost of a MOOC is from \$30,000 and \$60,000 depending on the complexity.

Coursera

Coursera offers a subscription offering – Coursera Plus- that gives students access to over 7,000 courses, Guided Projects, Specializations, and Professional Certificates on Coursera for a monthly or annual fee. The company offers a seven-day trial period. In April 2022, Coursera has crossed 100 million registered learners, as illustrated in Figure 2.

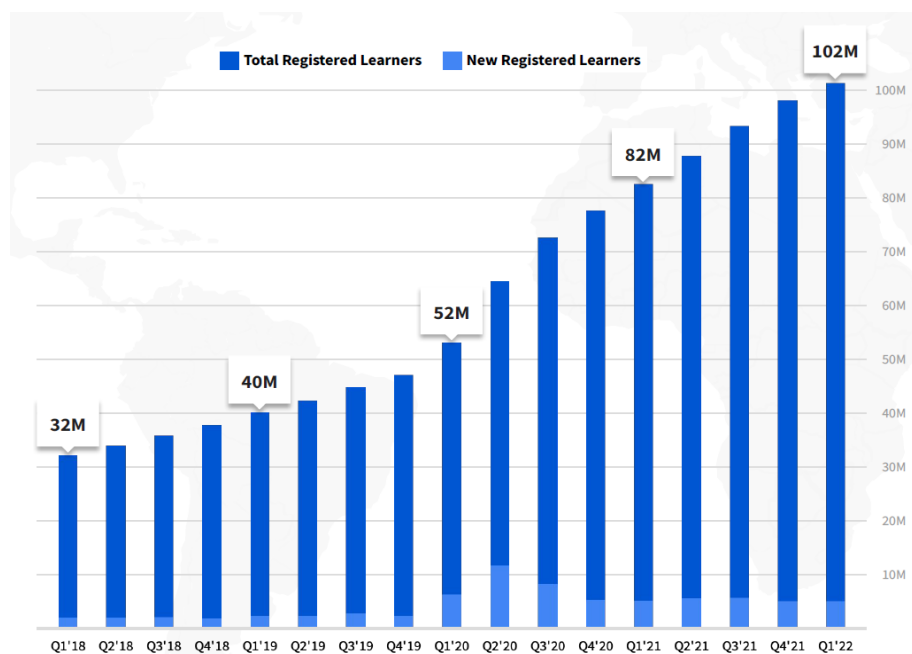


Figure no. 2 - Coursera Total Registered and New Registered Learners.

Source: Coursera data, as of March 31, 2022

The market capitalization has reached 2.7 billion dollars. 49% of revenues from 2021 come from outside the United States. What is more, approximately 66% of revenues from individual learners come from the users recorded before 2021. The gross margin is 60% compared with 53% one year ago. The top five countries based on the students: United States — 18.1 million, India — 14.9 million, Mexico — 5.0 million, Brazil — 3.9 million and China — 3.4 million (ClassCentral, 2022). The latest financial results of Coursera are illustrated in Figure 3.



Figure no. 3 – Coursera Financial Data in the last fiscal quarters.

Source: Yahoo Finance, 2022

EdX

EdX platform has been created in May 2012 by scientists from the Massachusetts Institute of Technology (MIT) and from Harvard. This platform has been acquired on November 16, 2021 by 2U Inc. (NASDAQ: TWOU), an American educational technology company (2U Inc, 10-K Report, 2021). As of 31 March 2022, the company had 4000 offerings with over 44 million registered learners and over 1.4 million issued certificates. EdX offers a subscription for individuals and for organizations. If the subscription from individuals and small organizations starts from 349 USD per year, for large organizations there is a personalized price. The latest financial results of 2U are illustrated in Figure 4.

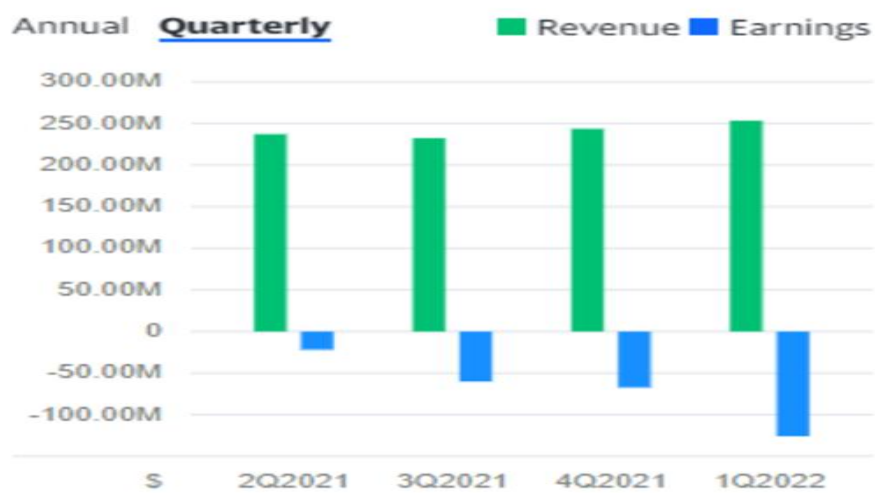


Figure no. 4 – EdX Financial Data in the last fiscal quarters.

Source: Yahoo Finance, 2022

Udemy

Udemy was founded in 2010 and it became a global marketplace for online classes. On 29th October 2021, the company completed its initial public offering ("IPO") of common stock, in which it sold 14,500,000 shares. The main company segments are 1) individuals and 2) enterprises. The company generates revenue by selling access to course content on the Udemy platform directly to individual learners. The company's revenues from this segment consist of revenues from single course purchases and from consumer subscriptions. At Udemy, the individual learners are billed in advance and require payment prior to accessing the course content.

Udemy platform offers an individual subscription plan (Udemy Personal Plan) that gives access to more than 5000 courses and starts from 26.99 GBP/month. The company offers a 7-day free trial prior to charging the customers for a subscription. In addition to that, there is a subscription available for businesses. For teams with up to 20 users, the subscription starts from 260 USD/ year per user. The platform Udemy offers a broad collection of courses in over 75 different languages.

The Company’s subscription contracts with enterprise customers generally have annual or multi-year contractual terms and consist of a fixed quantity of seat licenses, which allows each seat to access an unlimited number of course enrollments during the contract term (Udemy SEC Filings, 10-K Report 2022).

Based on the company data on 31 March 2022, Udemy has reached 52 million learners globally and it had over 32 million unique visitors per month. Over 60% of Udemy revenue is generated outside the United States. Besides the individual learners’ segment (B2C), the company has been active in the business segment (B2B) that has recorded significant growth. Only in 2021, the B2B segment recorded 80% growth compared with the previous year.

The latest financial results of Udemy are illustrated in Figure 5.



Figure no. 5 – Udemy Financial Data in the last fiscal quarters. Source: Yahoo Finance, 2022
Source: Yahoo Finance

FutureLearn

FutureLearn is a British MOOC platform that has been launched in December 2012. The platform is owned by The Open University and SEEK Ltd. The financial data pertaining to this platform is not publicly available. FutureLearn offers a learning subscription, micro-credentials and online degree. The ExpertTracks is the FutureLearn subscription model and is delivered at a cost of 39 USD / month with a seven-day free trial before purchasing the subscription (FutureLearn, 2022).

Datacamp

Datacamp is a private company founded in 2013 and delivers data science plus R, Python, SQL & Spark courses. Currently, the company is in Series B investing (Crunchbase, 2022).

Datacamp platform offers the following access levels: Basic, Premium, Teams and Enterprise. The Basic access is free; the Premium access is a subscription model for individual students for their learning content at a cost of 25 USD/ month, billed annually. This offers access to more than 380

courses and over 10,400 exercises. The platform offers the possibility to pause the subscription for 1 to 3 months. In addition to this, the platform offers a negotiated subscription model for the enterprise segment (DataCamp.com, 2022).

LinkedIn Learning

LinkedIn Learning started as Lynda.com in 1995 and it has been acquired by LinkedIn in 2015. Later on, in 2016, Microsoft acquired LinkedIn. In 2017, Lynda.com has been rebranded as LinkedIn Learning. The platform offers access to thousands of courses – available with a subscription. There is a subscription plan for individuals, which is billed at 29.99 EUR/ month, paid annually with one-month trial period. The platform has offered the possibility to pay monthly, with a subscription fee of 39.99 EUR/month. As well as individual plans, the platform offers personalized pricing plans for their business/enterprise segment.

Domestika

Headquartered in Berkeley, California, Domestika is an online platform that offers courses for the communities of creative people (design, fashion, photography & video, music & audio, etc.). It offers an annual subscription called Domestika Pro for a single payment of 83.88 USD or a monthly payment of 9.99 USD. This subscription provides access to over 100 courses every year and access to exclusive content.

4. Limitations and future research

This research has some limitations that can be valuable for future studies. We have focused on a limited number of MOOC platforms from the US and Europe and the financial data was available for US-based platforms only. We did not conduct interviews with companies that run these online learning platforms, nor with their customers. As the utilization of this business model is growing and more subscribers are joining the MOOC platforms, future research may be conducted to assess the impact of subscribers’ revenue streams on the financial valuation of the online learning platforms.

5. Conclusions

The available financial data from SEC filings or IPO prospects for Udemy, Coursera and 2U. Inc gave us an opportunity to learn more about these companies. All of the analyzed platforms have implemented the subscription-based model under different forms.

Despite significant growth on different market segments, none of the publicly traded MOOC platforms is currently profitable. This does not mean that the subscription-based model was not implemented successfully. It may indicate that they are in a growing phase in which significant development investments are needed.

The subscription-based model that is currently applied to online learning offerings from MOOC platforms does not create any barriers for customers to unsubscribe.

As many online learning platforms offer a combination of free and paid (one-time or subscription-based) classes, the platform should factor in the costs of running free classes that are supported by paying users.

The MOOC platforms have looked beyond universities to generate and run courses. If the main customer was initially the individual learner who takes classes for a potential career benefit, the platforms have entered new market segments such as corporations or government agencies. On the analyzed platforms, this business segment has recorded significant growth.

The subscription-based model does not have a standard way to be implemented. The platforms should experiment and identify those combinations of offerings that ensure the optimum attraction and retention of subscribers.

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