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Research Article

Analyzing the Profitability of Large E-commerce Companies through Revenue and Earnings from 2020-2025

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Abstract

This study investigates the trend analysis of the e-commerce companies over the 5-year period, the number of companies by country, the effect of revenue and earnings for the top 3 leading e-commerce companies, and measures the profitability of the companies based on the net profit margin (%). Data were obtained from a reputable source, Companiesmarketcap.com, where revenue and earnings data were collected from the year 2020 to 2025 and analyzed using appropriate statistical software. Results show a higher mean revenue and earnings for Amazon, Jingdong Mall, and Alibaba, while earnings for only Amazon and Alibaba are shown. There is a significant effect was found for revenue for both Amazon and Jingdong Mall companies, while there is no significant influence was found across the years for the revenue and earnings for Alibaba. However, the measures of profitability indicate that PDD Holdings (Pinduoduo) dominates among all e-commerce companies with the highest net profit margin of 25.02%, reflecting the strategic marketing that aligns with a competitive market. In conclusion, the outcomes of this study analyze its profitability, which can be useful for future marketing plans for business owners. Future studies are also needed in this study by incorporating other non-financial indicators (user growth, repurchase rate), segmented industries (cross-border, e-commerce, fresh e-commerce), or adopting qualitative research such as interviewing corporate financial leaders, which allows more deeper analysis in terms of investigating the profitability of e-commerce companies.

Introduction

The rise of e-commerce (electronic commerce) in today's digital world has revolutionized the retail industry and business landscape. E-commerce has become an indispensable part of global retail. Like many other industries, buying and selling goods has undergone a substantial transformation following the advent of the internet, and thanks to the ongoing digitalization of modern life, consumers all over the world now profit from the perks of online transactions. As global internet access and adoption rapidly increase, with over five billion internet users worldwide, the number of people making purchases online is ever-increasing. In 2025, retail e-commerce sales are estimated to exceed 4.3 trillion U.S. dollars worldwide, and this figure is expected to reach new heights in the coming years [1].

This transformation is due to accelerating advancements in technology, the adoption of mobile devices as well, and shifts in consumer behavior toward online platforms. Additionally, redefining traditional methods of buying and selling to very accessible and easy-to-use platforms influences the rise of consumers who shift online rather than traditional ones. According to the study of [2], the advent of the internet has revolutionized consumer buying behavior, significantly altering traditional consumption patterns. The convenience brought by online shopping platforms has not only simplified the purchasing process but has also enhanced the decision-making experience for consumers. By leveraging big data analytics, these platforms can predict consumer preferences with remarkable accuracy, offering personalized recommendations that drive higher engagement and increased sales. This is because of improved inventory management, distribution, and logistics contributing to customer satisfaction [3], and customer services making it less hassle-free for users.

On the other hand, the increasing number of small and medium enterprises worldwide is mostly seen in popular platforms such as Amazon, Etsy, Shopify, etc., which also

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contributes to the overall efficiency of the platforms themselves. Hence, more users generate more profit. For instance, the study of [4] states that Amazon's third-quarter net sales increased 13% to $143.1 billion, compared to $127.1 billion in 2022. This profitable business model has sparked interest from small businesses, who want to emulate it by allowing online stores to sell products on Amazon's platform. While eBay is an online trading platform that enables third-party sellers to list their products, offering tools like payment integration and return management, and recommending approved logistics partners.

This study investigates the trend analysis of the e-commerce companies over the 5-year period, the number of companies by country, the effect of revenue and earnings for the top 3 leading e-commerce companies, and measures the profitability of the companies based on the net profit margin (%). Results of this study serve as a guide for researchers who want to explore the e-commerce industry by determining profitability, which is also used as an indicator for informed decision-making when building e-commerce, particularly small medium medium-sized enterprises. Future studies are also needed in this study by incorporating other non-financial indicators (user growth, repurchase rate), segmented industries (cross-border, e-commerce, fresh e-commerce), or adopting qualitative research such as interviewing corporate financial leaders, which allows more deeper analysis in terms of investigating the profitability of e-commerce companies.

Problem statement

Despite the numerous studies about the profitability of a business, there is limited research and studies on the profitability of those large-scale e-commerce businesses around the world. Most studies that can be seen online today are tackling small to medium-sized enterprises. This study includes the business itself, where small medium medium-sized entrepreneurs are mostly popular. Studying the profitability of these businesses allows a comprehensive review of whether their current marketing strategies actually create profits. A lot are wondering if these businesses are profitable. Thus, this study fills the gap in the existing study by examining the profitability of the selected e-commerce companies around the world with the use of mean revenue and earnings. Moreover, this study also investigates the effect of revenue and earnings across the years as well as the trend analysis of whether these e-commerce show an increasing or decreasing trend using the data from the year 2020-2025.

Hypothesis

- H_0 (Null): There is no significant effect of revenue and earnings across the years
- H_1 (Alternative): There is a significant effect of revenue and earnings across the years.

Conceptual framework

Figure 1 above shows the conceptual framework of this study. Using the obtained data for each E-commerce company, such as their earnings and revenue. Moreover, it analyses the

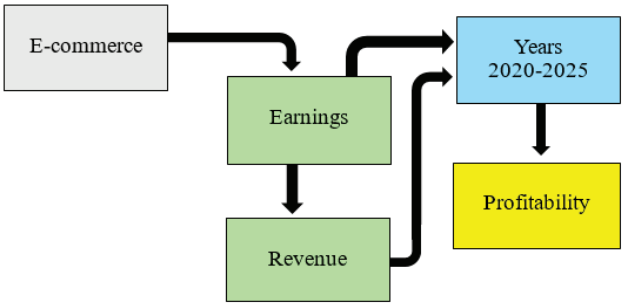

Figure 1: Conceptual Framework of the study.

revenue and earnings trend from the year 2020-2025. Lastly, after determining the mean revenue and earnings per company, it is used as an indicator to assess the effect or relationship across the years (2020-2025) and also measure whether these selected large e-commerce companies are actually generating profits using the profitability range according to Chu [5].

Literature review

The need for intervention in investigating the profitability of large e-commerce companies has not yet been fully explored. There were no specific studies in the literature before the e-commerce profitability, particularly in the field of large e-commerce in the world. However, studies during the rise of COVID-19 highlight how e-commerce plays a crucial role, especially since countries strictly implemented lockdowns, and with the use of the internet and online shopping, global purchases increased. Study of [6] shows that the coronavirus disease 2019 (COVID-19) pandemic accelerated e-commerce and digital transformation, pushing businesses online and highlighting the importance of technological infrastructure. The business-to-business (B2B) marketplace also experienced substantial growth.

During the year 2019-2020, global retail sales gave a boost to a steady 8% growth in retail e-commerce sales worldwide forecast through 2024, showing an increase in online retail sales as a result of the paradigm shift the COVID-19 disruptions have brought to business. Online global consumers could not stop purchasing from their favorite websites (44% of global digital purchases) and online marketplaces (47% of global digital purchases [7]. COVID-19 posed a more extraordinarily significant aspect in consumer behavior, thus leading to increased application of e-commerce platforms thereby leads thereby leads to a change in consumer behavior as they switched online, and online shopping significantly increased [8]. However, some studies also state that accelerated revenue does not uniformly transform into sustained profitability due to simultaneous increases in fulfillment, in acquiring customers, and even working capital costs [9]. These studies find that the pandemic has produced a large one-off uplift in demand but may be exposed to heterogeneity across worldwide firms, especially in how that demand can be converted into profits.

This study only focuses on identifying the profitability for large e-commerce companies with use of revenue and earnings as key financial performance indicators. Still, a lot

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of studies across various journals highlight the significance of these two financial indicators as primary measures of firm performance. For instance, the study on China e-commerce performance (JD.com) using revenue, net profit on sales, which in turn, earnings, to determine resiliency and efficiency during the pandemic [10]. In another study, [11] used revenue growth to determine the effect on its Business-to-Business e-commerce (B2B). Additionally, B2B, also called Business-to-Business, is a form of transaction between businesses, such as a manufacturer and wholesaler or a wholesaler and a retailer. Business-to-business refers to commerce that's conducted between companies rather than between companies and individual consumers [2]. Industry reports also support this perspective; a study by [12] at Business Times states that in Southeast Asia's digital economy, while revenue can be seen increasing, the profitability itself is the basis for identifying whether there is a significant increase as a strategic focus for firms and investors.

Trend analysis across studies, both from academia and industry, highlights a shift in business mix as a driver for profitability differences across various large e-commerce firms. For instance, the study of [13] evaluates the trend analysis of profitability ratios in selected firms. While industry report such as Amazon 2025 firm where investor analyze how companies diversified into higher-margin services where cloud computing, platform advertising (retail media), and Amazons' financial services saw meaningful margin improvement once those lines scaled, also when firms remains heavily weighted under low-margin retail showed slower or negative earnings recovery even the company's revenue is increasing, this means that still profitability trend analysis over the years is important to determine if the firm actually generates profit. These studies emphasize the segmented level decomposition of revenue, especially when linking growth to profits.

This study offers valuable insights into how revenue and earnings obtained from the companies actually generate profit. With the use of these financial indicators, it measures profitability using a range. The results of this study also serve as a guide for researchers, businesses, and investors, which will help them assess it and create better decision-making, especially in the highly competitive market where e-commerce businesses are rampant nowadays.

Methodology

Data collection

Data in this study were obtained from a reputable source. Financial performance, such as revenue and earnings, country was retrieved from CompaniesMarketCap.com (*https://companiesmarketcap.com/e-commerce/largest-e-commerce-companies-by-market-cap/*), a publicly accessible source that compiles financial information for large e-commerce companies around the world. Revenue and earnings data are collected from the year 2020 to 2025, consisting of 17 companies used in this study. Net profit margin is calculated as an indicator to determine whether the companies are profitable or not.

Statistical analysis

This study used JAMOVI software version 2.6.17 to analyze the data. The mean and standard deviation are used to determine the mean revenue and earnings for each company. A line graph was also used to determine trends for mean revenue and earnings across the 5 years. Before employing linear regression, researchers assess the assumptions of normality (Shapiro-Wilk) and the collinearity test to determine whether to use linear regression or not. In case the normality did not pass, an alternative analysis was conducted to assess the effect or relationship, which is a non-parametric Spearman's rho correlation test. In addition, bar graphs are used to analyze the number of companies by country. To assess the effect of revenue and earnings across the years, a linear regression is used, and to measure profitability, the indicator of [5] is utilized for each company, allowing a comprehensive analysis of profitability.

Results and discussions

This study aims to identify which among those large e-commerce companies from the Companies Market Cap website are best generating revenues and earnings from 2020-2025. As a result, annual data for revenue and earnings were used in this study. This will involve mean, standard deviation, Trend Analysis, and Linear Regression Analysis.

Trend analysis of which companies are generating revenue and earnings over the 5 years

Table 1 shows the generated revenue and earnings of the large e-commerce companies in the world using Mean and Standard Deviations. Based on the table, the top 3 e-commerce companies with the highest mean revenue are Amazon by ($\bar{x}$ = $542,000,000,000), which can vary by $107,000,000,000 (SD) followed by Jingdong Mall with a mean revenue of ($\bar{x}$ = $150,000,000,000), varied by $22,300,000,000 (SD) and Alibaba who have a mean of ($\bar{x}$ = $125,000,000,000) which vary by $16,000,000,000 (SD), the company with the lowest mean annual revenue is Big Commerce ($\bar{x}$ =$265,000,000) varied by $72,000,000 (SD).

On the other hand, in terms of earnings, the e-commerce company with the highest mean earnings is still Amazon ($\bar{x}$ = $43,100,000,000), which can vary $31,800,000,000 (SD), followed by Alibaba with mean earnings of ($\bar{x}$ = 19,600,000,000) varied by $4,930,000,000 (SD). Lowest mean earnings are Big Commerce with a decline in earnings of ($\bar{x}$ = $-0.0000000102) varied by $153,000,000 (SD).

The graph in Figure 2 above shows the trend of each e-commerce company's average revenue from 2020-2025. According to the data gathered and the graph above, the Amazon company is on a rising trend. This means that over time, the revenue of Amazon is increasing and is forecasted to increase again in the year 2026. Other companies such as Alibaba, Jingdong Mall, and PDD Holdings (Pinduoduo). In addition, other companies show a nearly straight line from 2020-2025, meaning that their revenues in the 5 years are nearly identical.

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Table 1: Mean and Standard Deviation of the Annual Revenue and Earnings of the E-commerce companies from 2020-2025.

COMPANY	REVENUE	STD. DEV.	EARNINGS.	STD. DEV.
Alibaba	125,000,000,000	16,000,000,000	19,600,000,000	4,930,000,000
Allegro.eu	2,050,000,000	728,000,000	283,000,000	268,000,000
Amazon	542,000,000,000	107,000,000,000	43,100,000,000	31,800,000,000
Big Commerce	265,000,000	72,000,000	-0.0000000102	153,000,000
Coupang	23,000,000,000	7,610,000,000	40,700,000	898,000,000
Etsy	5,830,000,000	8,340,000,000	187,000,000	427,000,000
Groupon	740,000,000	375,000,000	21,700,000	166,000,000
Jingdong Mall	150,000,000,000	22,300,000,000	4,840,000,000	3,230,000,000
Lightspeed POS	727,000,000	358,000,000	-0.0000000415	411,000,000
Mercado Libre	13,600,000,000	7,850,000,000	1,300,000,000	1,110,000,000
PDD Holdings (Pinduoduo)	31,500,000,000	20,700,000,000	7,880,000,000	7,040,000,000
Revolve	988,000,000	223,000,000	66,400,000	20,700,000
Sea limited	12,700,000,000	5,260,000,000	-0.0000000235	1,360,000,000
Shopify	6,510,000,000	2,670,000,000	790,000,000	2,490,000,000
Vipshop	15,700,000,000	1,280,000,000	1,190,000,000	199,000,000
Wayfair	12,600,000,000	1,000,000,000	-0.0000000417	568,000,000
Westwing group	492,000,000	55,600,000	15,900,000	15,600,000
eBay	10,100,000,000	354,000,000	1,990,000,000	2,140,000,000
Momo.com Inc.	3,230,000,000	472,000,000	125,000,000	22,400,000

Furthermore, Figure 3 shows the trend of the e-commerce company's average earnings from 2020-2025. Based on the graph shows that Amazon is still among the leading companies with the highest mean earnings during the 5 years. This means that employees, especially in the finance team, play a crucial role in maintaining efficient cost management and strategic investment decisions to sustain this profitability. It also means that the company is able to respond to market fluctuations, optimize revenue streams, and maintain its competitive advantage around the world. Other companies with nearly straight lines during the 5 years are identical.

Number of companies by country

Figure 4 above shows the number of companies by country category. Based on the data acquired, 35.29% of the companies are from the U.S.A., highlighting the country's strong representation in the global e-commerce market. This is due to their very well-established infrastructure as one of the developed countries. The electronic commerce industry in the U.S has grown rapidly over the past 10 years as consumers are more aware of online sales and are tempted by the convenience of comparing, buying products and services online [14]. Companies from the U.S.A. are Amazon, Coupang, eBay, Wayfair, Etsy, Groupon, BigCommerce, and Revolve. Following this, China is the second most represented country, accounting for a 23.53% share of e-commerce companies in the study. This also highlights China's fast-growing global digital economy supported by its high technology and innovative platforms. Chinese companies are PDD Holdings (Pinduoduo), Alibaba, Jingdong Mall, and Vipshop. In addition, Canada is the third country accounting for 11.76% share in this study. For instance, Shopify has established itself by contributing to

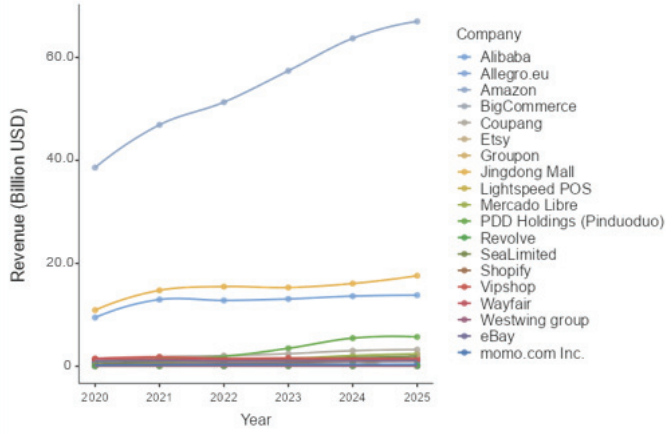

Figure 2: Line graph showing the Mean Revenue of the E-commerce. Companies from 2020-2025.

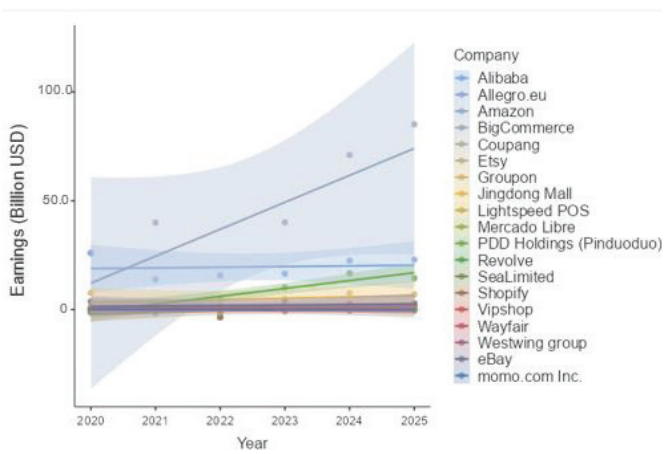

Figure 3: Line graph showing the Mean Revenue of the E-commerce. Companies from 2020-2025.

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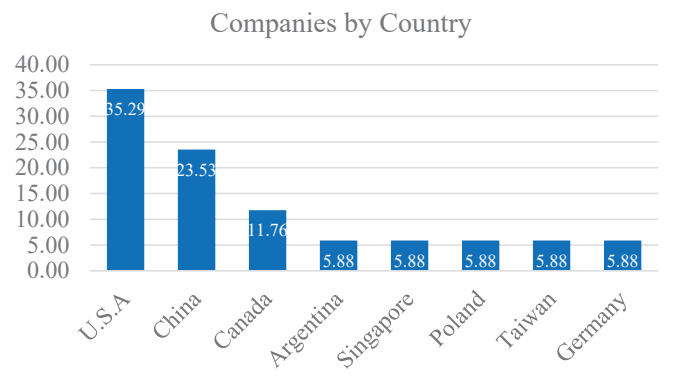

Figure 4: E-comMercer companies by country.

small and medium-sized enterprises worldwide, as well as its share in the industry. Other companies for Canada in this study are Lightspeed POS. Remaining companies from Argentina (Mercado Libre), Singapore (Sea Limited), Poland (Allegro.eu), Taiwan (Momo.com Inc.), and Germany (Westwing Group) contribute a 5.88% share in this study.

Effect of revenue and earnings on years for the top 3 leading e-commerce companies

The top 3 leading e-commerce companies based on the results in the previous chapter are Amazon with a mean revenue of ($\bar{x}$ = $542,000,000,000), Jingdong Mall ($\bar{x}$ = $150,000,000,000), and Alibaba with a mean revenue of ($\bar{x}$ = $125,000,000,000). The earnings for each company are also considered regardless of the amount attained. To better validate whether this study uses this analysis in determining the effect between years and financial indicators such as revenue and earnings, the researcher assesses the normality assumptions (Shapiro-Wilk) as well as collinearity to decide whether to use linear regression or not. Otherwise, Spearman correlation, a non-parametric test, was used if the normality did not pass as an alternative analysis for linear regression.

Table 2 above shows the linear regression results between years as the independent variable and revenue and earnings as the dependent variable for the Amazon company. To assess whether to utilize linear regression or not, the assumptions were checked. Results show for revenue that Shapiro-Wilk (p = 0.282) tests yield greater p - values at 5% threshold. Thus, conclude that the assumption of normality can be treated as normally distributed. Also, collinearity tests (VIF = 1.00, Tolerance = 1.00) mean that 1 indicates no multicollinearity at all, so use linear regression. For earnings, the normality test did not satisfy at yielding a p -value of 0.029, which is less than 0.05; therefore, use Spearman.

Based on the data gathered, the model above explains 98.9% of the revenues and 53.2% of the earnings across the years. At 1% level of significance, it shows that the year has a significant effect on the company's revenue ($p < .001$). Results from the previous chapter also state that the company's revenue has increased over the past 5 years. On the other side, the Years indicates a positive coefficient (β = *56,700,000,000*), meaning that for every additional year, Amazon's revenue increases by approximately $56,700,000,000. Therefore, there is enough evidence to reject the null hypothesis and indicate that, as years progress, the company's revenue grows significantly.

Furthermore, since the normality assumption did not pass for Amazon's earnings. An alternative analysis was used (Spearman's rho). Results show that there is a high positive relationship between year and earnings. However, the p-value of 0.058 is greater than or nearly at the 5% level of significance, indicating that the relationship between the increase in years and the increase in earnings is not real.

Table 3 above shows the regression results between revenue, earnings, and years for the Jingdong Mall company. To assess whether to utilize linear regression or not, the assumptions were checked. Results show for revenue that Shapiro-Wilk (p = 0.779) tests yield greater p-values at 5% threshold. Thus, conclude that the assumption of normality can be treated as normally distributed. Also, collinearity tests (VIF = 1.00, Tolerance = 1.00) mean that 1 indicates no multicollinearity at all, so use linear regression. For earnings, the normality test is also normally distributed (p = 0.996) at 5% level of significance. Collinearity tests (VIF = 1.00, Tolerance = 1.00) mean that there is no multicollinearity associated. Therefore, use linear regression for both revenue and earnings.

Based on the data gathered, the model above explains 79.1% revenue and only 13.5% earnings across the years. The p-value for revenue ($p = 0.018$) is less than at 5% threshold. As a result, it is significant and there is sufficient evidence to reject the null hypothesis, indicating that revenue affects years. Additionally, the coefficient is (β = *510,600,000,000*) positive, meaning that every year, the revenue for Jingdong Mall company increases by $510,600,000,000, further validated by the significant value.

Nevertheless, the p-value for earnings ($p = 0.473$) is higher than the 5% level of significance. Thus, it is insignificant and fails to reject the null hypothesis, demonstrating no meaningful

Table 2: Effect on revenue and earnings across the years for the Amazon company.

PREDICTOR	Coefficient β or Spearman's rho (ρ)	p - VALUE	IMPLICATION
Revenue	56,700,000,000	<.001	Highly significant
Year (Amazon)			
R-squared	0.989		
Earnings	0.829	0.058	Not significant
Year (Amazon)			
R-squared	0.532		

Legend: p < 0.05(Significant), p < 0.01(Highly Significant); (±)0-0.30 = little if any, 0.30-0.50 low positive, 0.50-0.70 moderate, 0.70-0.90 high, 0.90-1.00 very high.

Table 3: Effect on revenue and earnings across the years for Jingdong Mall Company.

PREDICTOR	Coefficient β or Spearman's rho (ρ)	p - VALUE	IMPLICATION
Revenue	510,600,000,000	0.018	Significant
Year (Jingdong Mall)			
R-squared	0.791		
Earnings	636,000,000	0.473	Not significant
Year (Jingdong Mall)			
R-squared	0.135		

Legend: p < 0.05(Significant), p < 0.01(Highly Significant); (±)0-0.30 = little if any, 0.30-0.50 low positive, 0.50-0.70 moderate, 0.70-0.90 high, 0.90-1.00 very high.

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relationship between earnings and years. The coefficient is (β = *636,000,000*) positive, meaning that every additional year, the earnings for Jingdong Mall increase by $636,000,000. However, this relationship is rejected as indicated by its higher p-value.

Table 4 above shows the linear regression results between revenue, earnings, and years for Alibaba Company. To assess whether to utilize linear regression or not, the assumptions were checked. Results show for revenue that Shapiro-Wilk (*p* = 0.987) tests yield greater *p* - values at 5% threshold. Thus, conclude that the assumption of normality can be treated as normally distributed. Also, collinearity tests (VIF = 1.00, Tolerance = 1.00) mean that 1 indicates no multicollinearity at all, so use linear regression. For earnings, the normality test is also normally distributed (*p* = 0.417) at 5% level of significance, and the null hypothesis is rejected. Collinearity tests (VIF = 1.00, Tolerance = 1.00) mean that there is no multicollinearity associated. Therefore, use linear regression for both revenue and earnings.

Based on the data collected, the model explains 64.6 of % revenue and 1.38 of % very low earnings across the years. At 5% level of significance, the p-value for revenue (*p = 0.054*) did not reach the conventional threshold and was nearly at 0.050. Consequently, it is not significant and fails to reject the null hypothesis, meaning that revenue has no significant effect on years. Although the positive coefficient of (β = *6,870,000,000*) indicates an increase of $6,870,000,0000, it is not statistically significant. Similarly, the earnings also had a greater p-value of (*p = 0.825*), showing no relationship between earnings and years. A positive coefficient of (β = *309,000,000*) demonstrates that for every additional year, there is an increase of $309,000,000, but not statistically meaningful as indicated by its higher *p* - value. Further studies are recommended for this study involving other financial or non-financial indicators, as well as other types of research, to dig deeper and acquire more reliable and exact results.

Measure the Profitability of Large E-commerce Companies through Fundamental Analysis using Net Profit Margin from Mean Revenue and Earnings

To measure the profitability of the e-commerce companies. The mean annual revenue and earnings are utilized to determine the Net Profit Margin using the Formula. Results for Net profit margin are used as an indicator to measure if the company is generating profit. The formula for NPM is the following:

$$Net\ Profit\ Margin(\%) = \frac{Net\ Income\ /\ Earnings}{Revenue} \times 100$$

Where Net Income/Earnings is the mean earnings, and the Revenue is the mean revenue from the previous chapter. According to [15], the term earnings refers to a company's profit of its bottom line. They highlight its profitability compared to analyst estimates, along with the company's historical performance, which can be done relative to its competitors and industry peers. This metric is the profit a company earned for a period, usually a quarter or fiscal year. You can find it listed as net income on the income statement. When investors refer to a company's profit, they typically refer to net income or the profit for the period. Similarly, income is considered synonymous with net income or profit.

Table 5 above shows the net profit margin of the companies as a basis to determine whether or not it is profitable based on Chu's indicator. According to the table above, PDD Holding (Pinduoduo) stands out with the highest net profit margin of 25.02% indicating that it is one of the most profitable companies. According to [16], PDD Holdings reported higher income even as revenue growth wasn't as strong as expected. U.S.-listed shares of PDD Holdings (PDD) rose Thursday after the parent of the Temu shopping app posted a higher quarterly profit even though it missed sales estimates as Chinese consumers pulled back spending and it faced higher costs. This reflects the well-strategic management of the company, contributing to its economic growth. Furthermore, Alibaba,

Table 4: Effect on revenue and earnings across the years for the Alibaba company.

PREDICTOR	Coefficient *β* or Spearman's rho (*ρ*)	*p* - VALUE	IMPLICATION
Revenue	6,870,000,000	0.054	Not Significant
Year (Alibaba)			
R-squared	0.646		
Earnings	309,000,000	0.825	Not significant
Year (Alibaba)			
R-squared	0.0138		

Legend: p - value is >0.001=Not significant, p - value is <.001=Highly significant, p - value is <0.05 = Significant, Standard error on parentheses

Table 5: Net profit margin of the E-commerce companies to show that the Company is Profitable.

COMPANY	REVENUE	EARNINGS	NET PROFIT MARGIN (%)	Indicator based on Chu (2025)
Alibaba	125,000,000,000	19,600,000,000	15.68	Healthy
Allegro.eu	2,050,000,000	283,000,000	13.80	Healthy
Amazon	542,000,000,000	43,100,000,000	7.95	Good
Big Commerce	265,000,000	-0.0000000102	-3.85	Low
Coupang	23,000,000,000	40,700,000	0.18	Low
Etsy	5,830,000,000	187,000,000	3.21	Low
Groupon	740,000,000	21,700,000	2.93	Low
Jingdong Mall	150,000,000,000	4,840,000,000	3.23	Low
Lightspeed POS	727,000,000	-0.0000000415	-5.71	Low
Mercado Libre	13,600,000,000	1,300,000,000	9.56	Good
PDD Holdings (Pinduoduo)	31,500,000,000	7,880,000,000	25.02	Very Good
Revolve	988,000,000	66,400,000	6.72	Good
Sea limited	12,700,000,000	-0.0000000235	-1.85	Low
Shopify	6,510,000,000	790,000,000	12.14	Healthy
Vipshop	15,700,000,000	1,190,000,000	7.58	Good
Wayfair	12,600,000,000	-0.0000000417	-3.31	Low
Westwing group	492,000,000	15,900,000	3.23	Low
eBay	10,100,000,000	1,990,000,000	19.70	Healthy
Momo.com Inc.	3,230,000,000	125,000,000	3.87	Low

Legend: Less than 5% is Low, above 5% is Good, 10% above is Healthy, 20% or more is very profitable, 40% - 50% Excellent [5].

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Allegro.EU, Shopify, and eBay also demonstrate a healthy net profit margin. Meanwhile, Amazon, Mercado Libre, Revolve, and Vipshop show moderate profitability, maintaining stable returns. Otherwise, the remaining companies exhibit relatively low profit generation, highlighting challenges in retaining at least a good profit [17,18].

Conclusion and recommendation

The study investigates the effect of revenue and earnings on the years and measures the profitability for each selected large e-commerce company. Results show that the top 3 companies with the highest mean revenue are Amazon, Jingdong Mall, and Alibaba, while for earnings are only Amazon and Alibaba are listed. These results reflect the competitive advantage for each company in the market, maintaining sustainability while leaving their brand in the minds of consumers. This platform allows millions of people around the world, including investors, small and medium business enterprises, personal brands and etc. by creating opportunities for to venture in the market as well. Aside from this, most large-scale e-commerce companies are mostly seen in the U.S.A., China, and Canada.

Linear regression results show the effect of revenue and earnings for the top 3 leading e-commerce companies, namely Amazon, Jingdong Mall, and Alibaba. Results show that revenue has a significant effect across the years, while earnings have no significant relationship by years, as indicated using non-parametric Spearman rho's alternative analysis for linear regression due to normality violation. Consequently, for Jingdong Mall's revenue has a significant effect across the years was found, similar to Amazon, no significant effect was found for earnings across the years, and for the Alibaba company, both variables did not significantly influence by years. Measures of profitability show that PDD Holdings (Pinduoduo) dominates among all e-commerce companies listed with the highest net profit margin (25.02%), followed by eBay (19.70%), Alibaba (15.68%), Allegro.eu (13.80%), and Shopify (12.14%), where they are interpreted as Healthy profit. Following this, Mercado Libre (9.56%), Amazon (7.95%), Vipshop (7.58%), and Revolve (6.72%) maintain a good profit in the competitive market, while other companies make low profits. Researchers in this study recommend further conducting studies by incorporating other non-financial indicators (user growth, repurchase rate), segmented industries (cross-border, e-commerce, fresh e-commerce), or adopting qualitative research such as interviewing corporate financial leaders, which allows more deeper analysis in terms of investigating the profitability of e-commerce companies.

Data availability statement

The data that support the findings in this study can be accessed in this Google Drive file: https://drive.google.com/drive/folders/12mUad5p5N3pWN7YZe5b-k4-mf8di5UwO?usp=drive_link

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