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# The effect of investment in the brand value chain on profitability and market value of the firm: lesson of success taken from Amazon

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## Abstract

This study aims to contribute to the existing business strategy literature by exploring how brand-building activities contribute to the firm's value by analyzing the direct and indirect effect of investment in the brand value chain on brand resonance, profitability, and market value. This study is based on a random sample of 237 Certified European Financial Analysts and a questionnaire was employed. Harman's single-factor test was conducted to define the presence of common method bias. Hayes Process Macro Model 5 was used to check the multiple mediation processes and indirect effects between the study's variables. The study employs the financial statements of Amazon.com, Inc. from 2010 to 2021 which has been analyzed under the standard multiple regression model. The study results reveal that Harman's single-factor test extracts 10.397% of the total variance. On the other hand, there are significant positive relationships between the effect of investment in the brand value chain on brand resonance, profitability, and market value. The empirical evidence of this study provides an opportunity to learn about the effect of the investment in the brand value chain leads to increase brand equity which builds up in the customers' mindset and then transforms to market performance and profitability. The findings of this study can be a useful reference for future studies in academic research related to strategic thinking to maximize profitability and market value through the brand value chain.

**Keywords** Brand value chain, Profitability, Brand resonance, Market value

## Introduction

The primary goal of the investment process is to maximize firm profitability in the long term. From this standpoint, the firm's management must strive to achieve this goal by investing in projects with returns that are higher than the cost of capital [1]. The firm can increase its earnings per stock by increasing borrowing. However, more borrowing will not necessarily create more value for the shareholders. On the other hand, the interest in

investment decisions by the managers should be focused on facing the market performance by investment decisions to create value for the stakeholder. Accordingly, to maximize the profitability and market value of the firm there must be real development in the firm's business and financial fundamentals, such as working on sales growth, expanding in new markets, expanding the market share, investing in research and development, and launching new product lines [2, 3]. The market value of the firm depends on the ability of its tangible and intangible assets to achieve profits. Tangible assets are physical assets, such as cash, equipment, and buildings. Intangible assets do not exist in physical form, yet they have a monetary value such as patents and goodwill. The tangible assets also depend on the intangible assets to contribute to the

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profitability of the firm. As intangible assets improve the capability of tangible assets to gain [2].

While it is possible to create a brand nowadays with little effort, sustaining it for a long time isn't easy to maintain its position in the market [4]. The brand must have authority and a strong position in the market. The brand of the firm is not only a marketing-related concept. It has turned into a value for the facility that affects its financial structure and resources in terms of accounting and financing. High brand equity helps stable financial returns and decreases stock price volatility [5]. Successful brands are the primary sources of present and future value for a company and are often its most valuable assets. Therefore, managers recently have focused on influencing the customer's mindset (brand awareness, purchase intent, and customer satisfaction) through the impact of marketing activities on customers [4, 6, 7]. Hence the interest in the brand value chain emerged and its important impact on the performance firm.

Many studies (e.g., [2, 3, 8]) mention that the brand value chain is an organized way to estimate the sources and outcomes of brand value and how marketing activities bring brand value. Mousa et al. [9] indicate that Companies consider marketing costs as an investment and expect to return this investment to the company in the form of profit. In order to build a strong brand, a firm must know how customers think and what they feel about their products. Therefore, a strong brand must be built, for customers to have specific and positive thoughts, feelings, beliefs, opinions and perceptions about it [2]. Therefore, a firm success becomes mainly based on its brand value chain. Previous research (e.g., [2, 3, 9, 10]) focused on the role of branding as a marketing tool. Where the vast majority of these studies presented models that directly examine the relationship between the marketing variable and the stakeholder's scale. Although these results are essential for determining the importance of marketing value, their informative value is also limited to management. Thus, we need a deeper understanding of the relationships of investment in the brand value chain on brand resonance, firm profitability, and the firm's market value [10].

Considering the gap in the accounting literature related to investment in the brand value chain, this study introduces a conceptual framework to analyze the effect of investment in the brand value chain (BVCH) on brand resonance, firm profitability, and the firm's market value (MV). This study focuses on brand theory to understand the effect of investment in BVCH on brand resonance, firm profitability, and the firm's MV. To consider significant relationships between variables, this study is dependent on a

survey of a random sample of 237 European financial analysts and marketing experts. In addition, it relies on the financial statements of Amazon.com, Inc. for the period from 2010 to 2021 to test the study hypotheses. Harman's single-factor test was conducted to define the presence of common method bias. Hayes Process Macro Model 5 was used to check the multiple mediation processes and direct and indirect effects between the study's variables. In addition, standard multiple regression analysis was used to test the numerical longitudinal retrospective data of Amazon.com, Inc. from 2010 to 2019 has been analyzed under the standard multiple regression model.

The aim of this study is to investigate how the effect of investment in BVCH on brand resonance, profitability, and MV. Where, there is a need for understanding the effect of the investment activities of BVCH through financial variables which are advertising costs, research and development (R&D) costs, and brand value on the financial performance of the firm through MV and profitability. This study fills this gap.

The importance of this study is that it provides an opportunity for accounting, finance, and marketing executives to benefit from a better understanding of the role the BVCH plays in improving a firm's MV beyond the known customer and product market influences.

The result shows that the investment in BVCH has a significant positive brand resonance. Also, the investment in BVCH has a significant positive impact on the firm's profitability. In addition, the investment in BVCH has a significant positive effect on MV. In addition, the analysis results indicate that there is an indirect effect of the investment in BVCH on the firm's MV through brand resonance and profitability.

The study makes several contributions to the extant literature on investment in BVCH. First, in accordance with Rautet al. [2] and Alexander and Doherty [11] brand value has a major influence; the study of this paper contributes to the dearth of work on this topic by analyzing the direct and indirect effects of an investment in BVCH on brand resonance, firm profitability, and the firm's MV. This study is among the first to examine how investment in BVCH affects brand resonance, firm profitability and firm's MV by checking the multiple mediation processes between the study's variables. Second, this study calls for research on the role BVCH plays in improving a firm's MV beyond the known customer and product market effects. Third, this study can be a useful reference for future studies in academic research related to strategic thinking to maximize profitability and MV through the BVCH which has a powerful significance.

This study is organized as follows. In the next section, we provide a brief overview of the literature related to the research. Section three shows the theory and hypotheses development. Section four shows the research methodology. Section five shows the results. Section six shows a discussion of the study. Finally, the study's contributions and implications, limitations, and future research opportunities were concluded.

### Literature review

To get an idea about the current state of study on the effect of brand value on profitability and market value, a systematic literature search was conducted. This study relies on searches in five online libraries for publications such as ScienceDirect, IEEE Xplore Digital Library, Springer Open, and ACM Digital Library.

The brand value chain is an organized way to deal with estimating the sources and outcomes of brand value and the way by which marketing activities bring brand value. The brand value chain is rooted in brand equity, which has become increasingly used by practitioners and researchers alike. It is concerned with seizing the tangible economic value from the intangible brand value. Nevertheless, the brand value chain works as a good display of what are the fundamental dimensions of brand equity. While Johansson et al. [8] showed that a strong brand reduces the risk of volatility in the stock and betas through examination of how the brand strength to cope with financial crises during the fall 2008 stock market downturn in the U.S. market. While Mizik [12] cleared that the influence of the brand on the profits of the current year is limited by relying on the evaluation of the brand on customer's mindset metrics to determine the influence of the brand on the financial performance of the company. As Fischer and Himme [13] outlined finance executives need to study performance variables, including brand value, to fully examine the effects of their decisions on the firm's financial health using a simultaneous equation model that is inverted the interaction of marketing and finance-domain variables in the value creation process. As Osakwe et al. [3] outlined the profitability of SMEs is likely to depend on the brand's direction and market sensitivity as well as an enthusiastic workforce. In addition, it has been emphasized that it is more necessary than ever for this group of companies to develop some basic directions and/or capabilities of a business, especially those related to brand direction and market sensitivity [3].

In order to build a strong brand, a firm must know how customers think and what they feel about their products. Therefore, a strong brand must be built, for customers to have specific and positive thoughts, feelings, beliefs, opinions and perceptions about it [2]. Also, the brand

value can be increased by increasing interest in research and development activities as there is a positive relationship between the increase in research and development activities and the value of the brand [14]. Many studies show (e.g., [5, 15] that there is a relationship between customer mindset metrics and actual market performance where there is a positive impact of brand equity, customer satisfaction, and resonance of the brand [9]. outlined that increasing investment in marketing has a positive effect on the company's value valuation model. They also found that the ownership concentration variable reinforces the relationship between marketing investment and company value. They disclosed that it mitigates systemic risks consistent with the effect of monitoring for the controlling shareholders. While Hasan et al. [10] examined the relationship between brand equity and a stock price crash risk, they showed that brand equity is highly and negatively correlated with meltdown risk. They suggest that high levels of brand capital expose companies to investor and customer scrutiny, reducing opportunistic managerial behavior that may include the accumulation and concealment of negative information.

While Alexander and Doherty [11] asked the question: How can Benjamin's understanding of aura and its notions of artificial authenticity and existential authenticity be reconciled with the process of mass consumption and brand meaning? They have shown the concept of a brand aura addresses a fundamental tension at the core of our understanding of authenticity. In addition, they have shown the central role of consumers' persistent memory in achieving a brand's aura. They cleared the company's role is to facilitate ritual habituation, emotional investment, and experiential consumer engagement. In another study, [16] identified the dimensions of customer-based brand ownership (CBPBE) across three broad areas (a) Tourism Marketing; (B) studies about regional identity and (c) brand theories. In addition, the study integrates three isolated perspectives of place branding: regional identity, destination branding and investment attractiveness.

From the discussion of previous studies, it can be said that it did not address how the investment in BVCH contributed to the brand resonance and the profitability of the firm and its reflection on MV. Therefore, the current study works to bridge this gap. The present study contributes to the stream of prior studies, providing further empirical evidence about the direct and indirect effects of an investment in BVCH on brand resonance, profitability, and market value. Hayes Process Macro Model was used to check the multiple mediation processes and indirect effects between the study's variables. In addition, a sample consisting of the financial statements of Amazon.com, Inc. from 2010 to 2021 has been analyzed under the

standard multiple regression model. Thus, our framework for this study works to fill this gap. The study can contribute to the flow of accounting research about the brand value chain.

## **Theory and hypotheses development**

### **Theoretical framework**

As an asset, brand equity provides both short- and long-term value. But the question raised by many studies is when do brand investments affect company performance? Most previous studies (e.g., Bayer et al. [15], Raut et al. [2], Anselmsson and Bondesson [5]) focus on the relationship between marketing efforts and brand value to consumers and identifying short-term effects. While many researchers (e.g., [9, 10]) are interested in the long-term financial value of a company's brand value. Generally, follow two approaches, the first approach exploits the forward-looking nature of pricing in an efficient capital market. The company's valuation is seen as reflecting investors' expectations about future cash flows. The second approach will use acquisition coefficients to infer the long-term value of the brand's value. This study focuses on brand theory to understand the effect of the investment in the brand value chain on brand resonance, firm profitability, and the firm's market value. Brand theory refers to the strategic use of the brand not as individual tactics, but as a basis for the company's growth. It's about aligning messaging and positioning principles to support smart growth marketing [13].

### **Conceptual framework**

The conceptual framework given by this study has common features with prior provided BVCH models (e.g., [17]) In addition our BVCH model focuses on financial variables which are: Advertisement costs, R&D costs, and brand value. Consequently, how the investment in BVCH affects both the brand resonance and the profitability of the firm and its market value through these constructs are studied.

### **Advertisement costs**

Advertising is a marketing communication used to promote or sell a product. There is a consensus that advertising contributes significantly to brand equity, either by creating or improving the brand image in the minds of customers or by distinguishing between the firm's offers and competitors' offers [5]. The advertisement can also contribute to enhancing the perceived quality of products, whose quality cannot be determined before purchase. It also works on the image of the brand of the product in the mind of the customer easily.

The advertisement also increases the consumption of products through the brand that has certain characteristics in the minds of customers [13].

### **R&D costs**

Research and development costs are those that are incurred to develop and introduce new products to the market or to improve existing products. Although the costs of research and development may lead to a reduction in current profits, they also positively affect the future profits of the company when new products developed as a result of the research become profitable by themselves [14]. Therefore, many researchers and practitioners believe that a high percentage of sales revenue allocated to research and development is a positive sign related to the possibility of increasing the company's profit and future share price. Thus, it can be said that advertising costs are not only the only factor in building strong brand equity but also investments in improving and developing products to meet customer needs contribute significantly to building a strong brand.

### **Brand value**

A brand is an intangible asset that increases a firm's value through the added financial value that occurs to a branded product. A brand is internally generated or purchased through mergers and acquisitions. Brand value can be helpful in making many decisions regarding measuring and evaluating the performance of companies, tax planning and forecasting of share prices, etc. [2, 10].

There are some organizations that evaluate the values of brands, such as Interbrand, Brand Finance and Millward Brown by relying on a financial measurement that reflects the expected revenues from this brand and the marketing measurement, which reflects the dimensions of growth and safety of the brand.

### **Profitability**

Profitability is a primary goal of financial management in all firms where through it the survival of the firm continues. It is a general measure of management efficiency to use the resources available to the firm. Profitability is the ultimate result of several policies and decisions that the firm makes [18]. The achieved profit is considered one of the good profitability measures in the firm. It is used to measure performance. It is also used to assess the firm's stock and forecast its sustainability by forecasting profits and cash flows [13].

**Market value**

Market value is the stock price during trading in financial markets, which is subject to the conditions of supply and demand in those markets. It is the value that it deals with in the financial market or the stock market. Market value is fast-changing and volatile as it is affected by the financial position of the firm and the conditions of supply and demand and is determined under the market conditions and the firm’s performance. Consequently, it can be said that the market value is the value that reflects the financial and economic position of the firm and determines its competitive position. Profit is one of the most important variables that affect the firm’s market value [19]. When investors expect that there will be an increase in profit, they will invest. Therefore, it can be said that profitability has a significant effect on the market value of the firm. The stakeholders are an important indicator for decision-making regarding firm stock investment [20]. This study explores how investment in the brand value chain effect brand resonance, market value and firm profitability. The following figure shows the developing conceptual framework (Fig. 1).

**Research hypotheses**

Based on the research purpose, research framework, and relevant literature review, this study proposes the research hypotheses, as shown below.

Brand resonance plays a vital role in customer relationship management and enterprise business sustainability through its brand. Brand resonance is located at the top of the brand equity pyramid and is the hardest and most appealing level to accomplish. According to Keller and Brexendorf [21], the brand equity model has

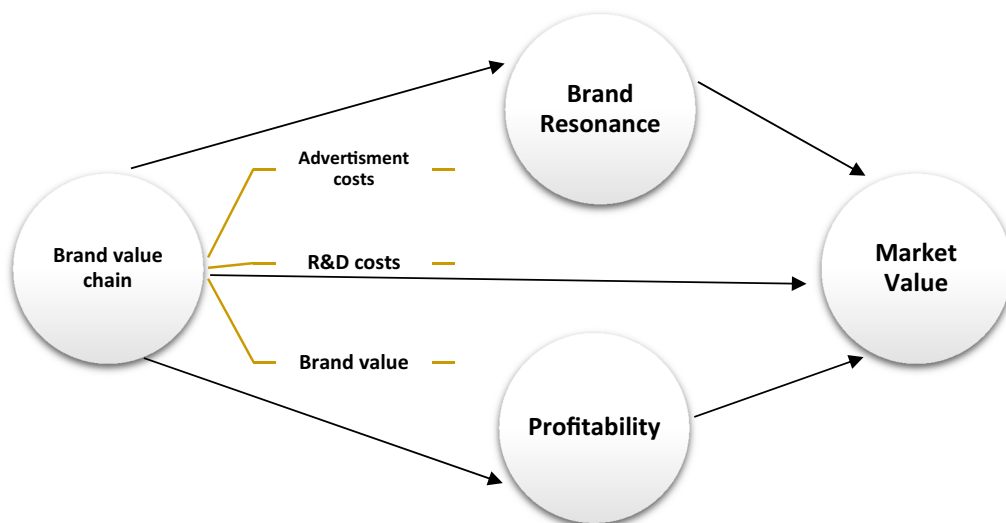
four stages. The first stage is the salience of the brand setting a strong relationship with the brand is creating awareness in the mindset of customers. The second stage is brand performance and imagery. It is achieved by meeting the social and psychological needs of customers. The third stage, the brand response, is to evoke positive customer responses to the brand. The last stage is the brand’s resonance that customers develop through the successful completion of the previous stages. Brand resonance is the long-term relationship that consumers build with a brand. Accordingly, establishments aiming to obtain a greater market share want to achieve high levels of brand resonance [21]. Brand resonance refers to “the nature of the relationship that links customers to a brand [22]. Consequently, this study proposes the following hypothesis:

- *H1: Investment in the brand value chain significantly positively affects brand resonance.*

Loyalty to the brand and linking it in the minds of customers leads to achieving marketing goals at the lowest possible cost [7, 13, 19]. Therefore, it can be said that reducing investments in the brand value chain can lead to cash savings and cost reductions in the short term. However, it negatively affects the firm’s market share Thus, this study proposes the following hypothesis:

- *H2: Investment in the brand value chain significantly positively affects the firm’s profitability.*

Market value is subject to supply and demand conditions in financial markets. It is determined under the



**Fig. 1** Conceptual framework

market conditions and the firm's performance. Consequently, it can be said that building a strong brand is an important component of the firm's marketing strategy. Consequently, firms are interested in their brand because of its great impact on their market position. The brand's positive image enhances customer confidence in the firm, which is reflected in its competitive advantage [20]. Therefore, the following hypothesis can be derived.

- *H3: Investment in the brand value chain significantly positively affects a firm's market value.*

Prior studies (e.g., [20–22]) show that the market value of the firm is affected by many factors such as profitability and brand association in the minds of customers. Therefore, the current study assumes that investment in the brand value chain mediates and indirectly affects the firm's market value through mediator variables are brand resonance and profitability. Therefore, the following hypotheses can be derived.

- *H4: brand resonance moderates the relationship between Investment in the brand value chain and a firm's market value*
- *H5: a firm's profitability moderates the relationship between Investment in the brand value chain and a firm's market value.*

## Research methodology

### Sampling and data collection

The sample for this study consists of 250 respondents of financial analysts and marketing experts who are included in the List of EFFAS Certified European Financial Analyst (CEFA) holders whose names and country published on the EFFAS website. The survey is a random sample that targets the population of Certified European Financial Analyst (CEFA) holders. Respondents were contacted by email to clarify the purpose of the research. If they agreed to participate, the questionnaire was sent to them via e-mail. Data were collected from 250 respondents for final analysis, out of which 23 responses were discarded due to incomplete data. Therefore, 237 respondents were taken as the sample size for the final data analysis. The survey is conducted from 2020 to 2021.

This study relied on Amazon.com, Inc. as a successful business model to show the effect of investment in BVCH on firm profitability and MV. According to Brand Finance, it is at the forefront of the brand's highest value in 2020 and 2021. Brand Finance has

calculated the brand value of the Amazon brand 16 times between 2007 and 2022. According to the Brand Finance report, the Amazon brand is the most vital and valuable Retail brand, the biggest US brand, and the best Global brand. The financial data was obtained from the annual reports published on the company's website.

### Data analysis

Data were collected between May 2020 and December 2021. The Statistical Package for Social Science (SPSS) version 24.0 was employed to analyze the data. Various statistical methods were applied to the questionnaire. First, Harman's single-factor test was conducted to define the presence of common method bias (CMB). Second, alpha cronbach to assess the validity and reliability of measurement scales. Third, descriptive statistics including mean, and standard deviation, help display data more clearly and easier to understand. Fourth, to check the multiple mediation processes, Hayes Process Macro Model was used. Finally, standard multiple regression analysis was used to predict the relationship between the dependent and the independent variables depending on the numerical longitudinal retrospective data of Amazon.com, Inc. The study employed a sample consisting of the financial statements of Amazon.com, Inc. from 2010 to 2021 has been analyzed under the standard multiple regression model. Statistical significance was specified by considering the respective *p*-values, where a *p*-value below 0.01 indicates statistical significance at a 99% level.

## Results

### Common method bias

It is essential to account for common method bias for studies based on surveys. So, Harman's single-factor test was conducted to define the presence of common method bias. Harman's single-factor test explains that common method bias is existing in the data set when a single factor appears, or one factor accounts for more than fifty per cent of the variance of the items in the factor analysis (i.e., unrotated matrix) [23]. The result of Harman's single-factor test is extracting 10.397 per cent of the total variance. Therefore, it is so far less than 50 per cent where it showed that no factor accounted for more than fifty per cent of the variance. Thus, it can be concluded that common method bias was not a threat in the current data set.

### Validity and reliability analysis

The validity and reliability analysis of the study reflects what extent a measurement of a phenomenon provides

**Table 1** Descriptive statistics of the brand value chain's variables. Source: Author's calculations using SPSS

ID	Statements	Disagree		Neutral		Agree		Strongly agree		Mean	Std. Deviation
		Freq	%	Freq	%	Freq	%	Freq	%		
Q1	Advertising spending is a key factor in supporting in the brand value chain	16	6.8	24	10.1	144	60.8	53	22.4	3.9873	.77285
Q2	Advertising spending contributes effectively to the growth of the brand	16	6.8	24	10.1	144	60.8	53	22.4	3.9873	.77285
Q3	Advertising spending contributes to increasing brand equity	4	1.7	42	17.7	158	66.7	33	13.9	3.9283	.61679
Q4	R&D activities are a major factor to enhance the brand value chain	5	2.1	35	14.8	160	67.5	37	15.6	3.9451	.67109
Q5	R&D activities contribute effectively to the growth of the brand	16	6.8	24	10.1	144	60.8	53	22.4	3.9873	.77285
Q6	R&D activities contribute to increasing brand equity	5	2.1	21	8.9	178	75.1	33	13.9	4.0084	.55990
Q7	The brand value is an important major factor in the brand value chain	5	2.1	21	8.9	178	75.1	33	13.9	4.0084	.55990
Q8	The brand value contributes to increasing brand equity	6	2.5	27	11.4	163	68.8	41	17.3	4.0084	.62431
	Overall average									3.9404	.33342

stable and consistent results. Accordingly, the questionnaires were valid for statistical analysis (237). Alpha Cronbach was used as a method to test the validity and reliability of the study's questionnaire. Alpha Factor Cronbach's for variables of study is (0.80), which means it is valid and highly reliable.

### Descriptive analysis

The questionnaire was separated into four groups. The first group addressed questions to the respondents concerning the brand value chain. This group included eight-questions to outline the factors of the brand value chain. The second group addressed five questions to the respondent regarding brand resonance. The third group addressed five questions to the respondent regarding profitability. Finally, the fourth group addressed four questions to the respondents concerning the firm's market value. The respondents were asked to express their views on these questions by selecting one of the items presented within the Likert pentagram. Tables 1, 2, 3 and 4 show the descriptive analysis of study variables for these groups.

From Table 1, it is clear that; eighty-two per cent of the respondents believe that advertising spending is a key factor in supporting the brand value chain. Only 10 per cent of the respondents are neutral about this statement. As well as Eighty-two per cent of the respondents believe that advertising spending contributes effectively to the growth of the brand. While most of the respondents (80.6 per cent) believe that advertising spending contributes to increasing brand equity. Only 17.7 per cent of the respondents are neutral about this statement. Most respondents believe that R&D activities are a major factor to enhance BVCH. Only 14.8 per cent of the respondents are Neutral to this statement. Also, most respondents believe that R&D activities contribute effectively to the growth of the brand and contribute to increasing brand equity. Most of the respondents (89 per cent) believe that brand value is an important major factor in BVCH and contributes to increasing brand equity. Almost 2 per cent of the respondents are Neutral to this statement. The second group of questions were posed to the respondents regarding respondents' views on brand resonance; their responses are indicated in Table 2.

From Table 2, it is clear that; ninety per cent of the respondents believe that the investment in BVCH leads to a growth in brand resonance. Only 8.9 per cent of the respondents are neutral about this statement. As well as Eighty-two 85 per cent of the respondents believe that the investment in BVCH will increase brand engagement in the minds of customers. As well as most of the

respondents (81 per cent) believe that the investment in BVCH will increase customer awareness of the firm's products. Only 16.5 per cent of the respondents are neutral about this statement.

The majority of respondents believe (more than 90%) that investment in BVCH will increase customer loyalty to the firm's products. Only 7.6 per cent of the respondents are neutral and 1.7 disagree with this statement. Also, the majority of respondents believe that investment in BVCH differentiates the firm products from competitors' products. The third group of questions were posed to the respondents regarding respondents' views on profitability; their responses are indicated in Table 3.

From Table 3, it is clear that; eighty-two per cent of the respondents believe that the investment in BVCH leads to an increase in the firm's portion of the market. Only 16 per cent of the respondents are neutral and 2.1 per cent disagree with this statement. As well as Eighty-two per cent of the respondents believe that investment in BVCH activities increases the firm's ability to cope with competitive conditions. As well as most of the respondents (81 per cent) believe that the investment in BVCH activities works to counter potential competitors. Only 7.6 per cent of the respondents are neutral about this statement.

Many respondents believe (more than 89%) that the investment in the activities of BVCH increases the quality of products and links them in the minds of customers, which leads to increased sales. Only 10 per cent of the respondents are neutral and 0.8 disagree with this statement. Also, most respondents believe that investment in BVCH leads to an increase in firm profitability. The fourth group of questions were posed to the respondents regarding respondents' views about the firm's MV; their responses are indicated in Table 4.

From Table 4, it is clear that; more than ninety-five per cent of the respondents believe that the investment in BVCH leads to an increase in future sales of the firm. Only 4.6 per cent of the respondents are neutral about this statement. As well as ninety-one per cent of the respondents believe that the investment in BVCH activities leads to stabilizing the sales of the firm. As well as most of the respondents (more than 93%) believe that the investment in BVCH leads to an increase in the stock price. Only 6.8 per cent of the respondents are neutral about this statement. Most respondents believe (92%) that the investment in the investment in BVCH will increase the market value of the firm. Only 8 per cent of the respondents are neutral about this statement.



**Table 2** Descriptive statistics of the brand resonance's variables. Source: Author's calculations using SPSS

ID	Statements	Disagree		Neutral		Agree		Strongly agree		Mean	SD
		Freq	%	Freq	%	Freq	%	Freq	%		
Q9	The investment in a brand value chain leads to a growth in brand resonance	3	1.3	21	8.9	164	69.2	49	20.7	4.0084	.71894
Q.10	The investment in a brand value chain will increase brand engagement in the minds of customers	2	.8	24	10.1	193	81.4	18	7.6	3.8143	.68219
Q.11	The investment in the brand value chain will increase customer awareness of the firm's products	5	2.1	39	16.5	156	65.8	37	15.6	3.8312	.78451
Q.12	The investment in the brand value chain will increase customer loyalty to the firm's products	4	1.7	18	7.6	189	79.7	26	11.0	3.9831	.53652
Q.13	The investment in the brand value chain differentiates firm products from competitors' products	5	2.1	21	8.9	176	74.3	35	14.8	3.9747	.63729
	Overall average									3.9224	37.963

**Table 3** Descriptive statistics of the profitability variables. Source: Author's calculations using SPSS

ID	Statements	Disagree		Neutral		Agree		Strongly agree		Mean	SD
		Freq	%	Freq	%	Freq	%	Freq	%		
Q14	The investment in the brand value chain leads to an increase in the firm portion of the market	5	2.1	38	16.0	163	68.8	31	13.1	3.9283	.60988
Q15	The investment in brand value chain activities increases the firm's ability to cope with competitive conditions	5	2.1	38	16.0	163	68.8	31	13.1	3.9283	.60988
Q16	The investment in brand value chain activities works to counter potential competitors	4	1.7	18	7.6	189	79.7	26	11.0	3.9831	.53652
Q17	The investment in the activities of the brand value chain increases the quality of products and links them in the minds of customers, which leads to increased sales	2	.8	24	10.1	193	81.4	18	7.6	3.8143	.68219
Q18	The investment in the brand value chain leads to an increase in the firm profitability	1	.4	40	11.0	162	68.4	34	11.2	3.8819	.56258
	Overall average									3.9080	.39635

## Testing the study hypotheses

### The standard multiple regression analysis

As outlined previously, the investment in BVCH depends on advertisement cost, R&D activities and brand value as independent variables. Therefore, this study applies the Standard multiple regression analysis to predict the relationship between the dependent and the independent variables depending on numerical longitudinal retrospective data of Amazon.com, Inc. The primary purpose of this analysis is to predict the probability of the effect of investment in BVCH on the level of a firm's profitability and its market value. Therefore, we need to specify two equations, one for each dependent variable which presents in Table 5.

Amazon.com, Inc. data were relied on the periods from 2010 to 2021, which shows the following Table 6.

As Fig. 2 shows that the relationship between variable profitability and the Investment in BVCH follows the normal distribution (Mean = 2.55, Std. Dev. = 0.816). In addition, the relationship between the MV and the Investment in BVCH follows the normal distribution (Mean = 1.07E-15, Std. Dev. = 0.816). For the intent of brevity, the specifications of the regression models are presented in Table 7.

Based on studying and analyzing the previous Table 7, the investment in the brand value chain, with its three dimensions, has a significant positive effect on the firm's profitability ( $R = 0.98$ ,  $p > 0.01$ ). The Regression equation is:

$$\text{Profitability} = -6540.88 - .389 \text{ AdCos} + 0.176 \text{ R\&DCos} + 0.135 \text{ BV}$$

In addition, the Investment in the brand value chain, with its three dimensions, has a significant positive effect on the firm's market value ( $R = 0.998$ ,  $p > 0.01$ ). The Regression equation is:

$$\text{Market Value} = -152129.1 + 42.058 \text{ AdCos} + 4.639 \text{ R\&DCos} + 0.781 \text{ BV}$$

### Statistical mediation analysis

Mediation Analysis is used when the researcher seeks to test hypotheses about or better understand how X affects Y. To check the multiple mediation processes between the study's variables, Hayes Process Macro Model 5 was used. This study examines whether there are direct and indirect effects of the investment in BVCH on MV of the firm by influencing brand resonance and the firm's profitability (Fig. 3).

**Direct effect** This study examines whether the relationship between the independent and dependent variables is direct and not mediated by a third variable. The

results in Table 8 show that there is a direct effect of the investment in the brand value chain on brand resonance was 0.6282 with a  $t$  value of 12.0324,  $p < 0.001$ . Thus, the hypothesis that Investment in the brand value chain significantly positively affects brand resonance is accepted.

The results in Table 9 show that there is a direct effect of BVCH on the profitability of the firm was 0.7565 with a  $t$  value of 17.5225,  $p < 0.001$ . This is path a2. The output of profitability is indicated in Table 9. Thus, the hypothesis that investment in the brand value chain significantly positively affects the firm's profitability is accepted.

The investment in BVCH has a significant impact on MV was 0.2185, with a  $t$  value of 3.7102,  $p < 0.001$ . Here this is a Direct effect (c). Brand resonance was found to have a significant impact on MV was 0.2937, with a  $t$  value of 6.1559,  $p < 0.001$ . This is path b1. The profitability of the firm was also found to have a significant impact on Market Value was 0.1916 with a  $t$  value of 3.7055,  $p < 0.001$ . This is path b2.

R-Sq change was also found significant ( $p = 0.0764/2$ ) (1-tailed). The output of market value is indicated in Table 10.

**Indirect effect** Mediation points to the transmission of the effect of an independent variable on a dependent variable through one or more other variables. These variables are called mediator variables. Mediation can be either complete or partial. With complete mediation, an inde-

pendent variable's entire (or total) effect on a dependent variable is transmitted through one or more mediator variables. Thus, the independent variable does not directly affect the dependent variable; its entire effect is indirect

[24].

With partial mediation, an independent variable has both direct and indirect effects on a dependent variable. The direct effect is not mediated, whereas the indirect effect is transmitted through one or more mediator variables [24].

In path analysis, mediation matches an indirect effect of an independent variable BVCH on a dependent variable MV that passes through one or more mediating variables. The indirect effect is calculated by multiplying the pathways that make up the effect. The indirect effect magnitude points out the amount of mediation by the relevant mediator variables.

**Table 4** Descriptive statistics of the market value's variables. Source: Author's calculations using SPSS

ID	Statements	Disagree		Neutral		Agree		Strongly agree		Mean	SD
		Freq	%	Freq	%	Freq	%	Freq	%		
Q19	The investment in the brand value chain leads to increase in future sales of the firm	0	0	11	4.6	211	89.0	15	6.3	4.0169	.33149
Q20	The investment in brand value chain activities leads to stabilize the sales of the firm	0	0	20	8.4	189	79.7	28	11.8	4.0338	.44972
Q21	The investment in the brand value chain leads to an increase in the stock price	0	0	16	6.8	207	87.3	14	5.9	3.9916	.35644
Q22	The investment in the brand value chain will increase the market value of the firm	0	0	19	8.0	188	79.3	30	12.7	4.0464	.45328
	Overall average									4.0222	.23080

**Table 5** Model specification. Source: Author

Hypotheses	Dependent variable	Predictor variables and error terms
H2	Profitability	$\alpha + \beta_1 \text{ AdCos} + \beta_2 \text{ R\&DCos} + \beta_3 \text{ BV} + e$
H3	Market Value	$\alpha + \beta_1 \text{ AdCos} + \beta_2 \text{ R\&DCos} + \beta_3 \text{ BV} + e$

AdCos is advertisement cost, R&DCos is R&D activities costs and BV is brand value

The result of the mediation analysis shows that the indirect effect of investment in the brand value chain on the market value of the firm is transmitted through both brand resonance and profitability.

- Indirect Effect 1 ( $a_1 \times b_1$ ):

The investment in the brand value chain—> brand resonance—>the market value of the firm. $a_1 (0.6282) \times b_1 (0.2937) = 0.1845$

The effect is positive. Thus, the hypothesis that brand resonance moderates the relationship between Investment in the brand value chain and a firm’s market value is accepted.

- Indirect Effect 2 ( $a_2 \times b_2$ ):

The investment in the brand value chain—>profitability—>the market value of the firm. $a_2 (0.7565) \times b_2 (0.1916) = 0.1449$

The effect is positive. Thus, the hypothesis that a firm’s profitability moderates the relationship between

Investment in the brand value chain and a firm’s market value is accepted.

Hence, there is mediation and indirect effects are significant. BVCH has both direct and indirect effects on MV. The direct effect is not mediated, whereas the indirect effect is transmitted through one or more mediator variables so there is partial mediation. The effects are positive and so complimentary.

**Discussion**

Most previous studies (e.g., [2, 5, 15] focus on the relationship between marketing efforts and brand value to consumers and identifying short-term effects. While many researchers (e.g., [9, 10] are interested in the long-term financial value of a company’s brand value. Where as an asset, brand equity provides both short- and long-term value. However, the question raised by many studies is when do brand investments affect company performance? Generally, previous studies follow two approaches, the first approach exploits the forward-looking nature of pricing in an efficient capital market. Where the firm’s valuation is seen as reflecting investors’ expectations about future cash flows. The second approach will use acquisition coefficients to infer the long-term value of the brand’s value. This study focuses on brand theory to understand the effect of the investment in the brand value chain on brand resonance, firm profitability, and the firm’s market value. This study develops a conceptual framework to analyze the effect of investment in BVCH on brand resonance, firm profitability, and the firm’s MV.

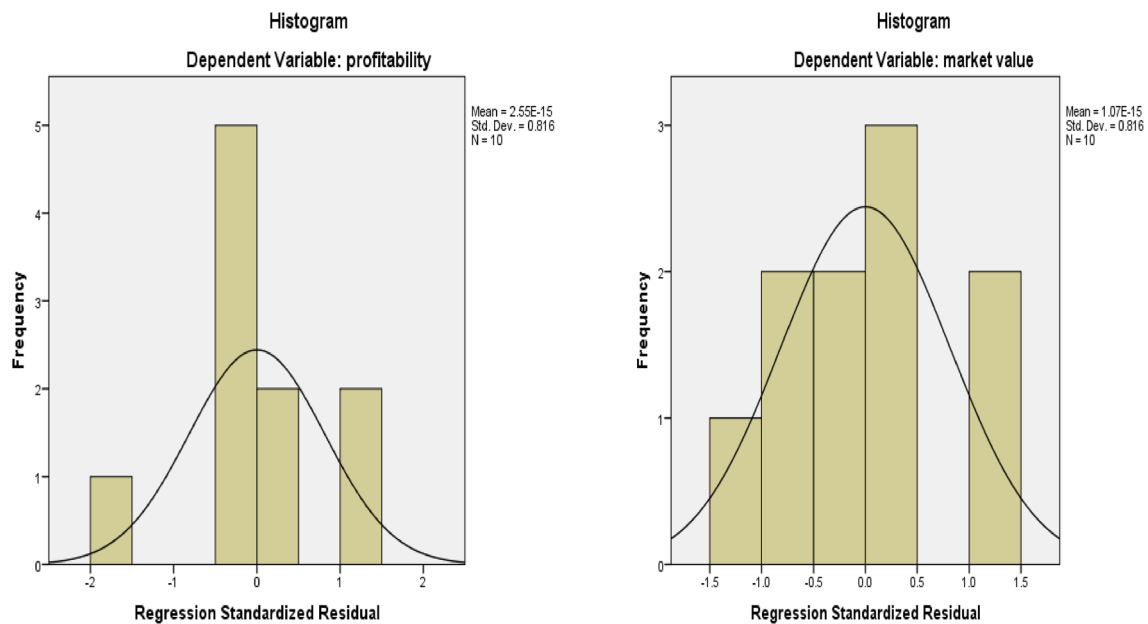
This study focuses on brand theory to understand the effect of the investment in BVCH on brand resonance, firm profitability, and the firm’s MV. The study examines whether there are direct and indirect effects of the investment in BVCH on the MV of the firm by influencing brand resonance and the profitability of the firm. The results consider both the direct and indirect effects and are evaluated at sample means for the respective equation. The focus is on long-term effects in the discussion.

The result of Harman’s single-factor test showed that no factor accounted for more than fifty per cent of the variance. Thus, it can be concluded that common method bias was not a threat in the current data set. Mediation analysis using Hayes Process Macro Model 5 showed that the investment in BVCH has a significant positive brand resonance. Also, the investment in BVCH has a significant positive impact on the firm’s profitability. In addition, the investment in the brand value chain has a significant positive effect on MV.

Brand resonance was found to have a significant positive impact on MV. The profitability of the firm was also found to have a significant impact on MV. Therefore,

**Table 6** Amazon.com, Inc. data. Source: Amazon.com, Inc

Item (millions of US\$) Year	AdCos	R&DCos	BV	Net profit	Market value
2010	1,029.00	1,734	13,339.54	1,152.00	54,961.69
2011	1,630.00	2,909	17,779.61	631	64,132.36
2012	2,408.00	4,564	28,664.84	- 39	94,398.22
2013	3,133.00	6,565	36,788	274	97,370.9
2014	4,332.00	9,275	45,146.77	- 241	126,399.57
2015	5,254.00	12,540	56,124.06	596	139,745.68
2016	7,233.00	16,085	69,642.27	2,371.00	235,008.41
2017	10,069.00	22,620	106,396.4	3,033.00	366,718.8
2018	13,814.00	28,837	150,810.9	10,073.00	558,890.87
2019	18,878.00	35,931	187,905.2	11,588.00	803,028.56
2020	22,008	42,740	220,790.75	21,331	813,278.83
2021	32,551	56,052	254,187.6	33,364	1,627,195.03



**Fig. 2** Normality of distribution for profitability and market value. Source: Author's calculations using SPSS

there is an Indirect Effect of the investment in the brand value chain on the market value of the firm through brand resonance and profitability. So, the brand of the firm is not only a marketing-related concept. The brand must have authority and a strong position in the market. Where it has turned into a value for the facility that affects its financial structure and resources in terms of accounting and financing where high brand equity helps stable financial returns and decreases stock price volatility [5]. Therefore, managers recently have focused on influencing the customer's mindset (brand awareness, purchase intent, and customer satisfaction) through the impact of marketing activities on customers.

## Conclusions

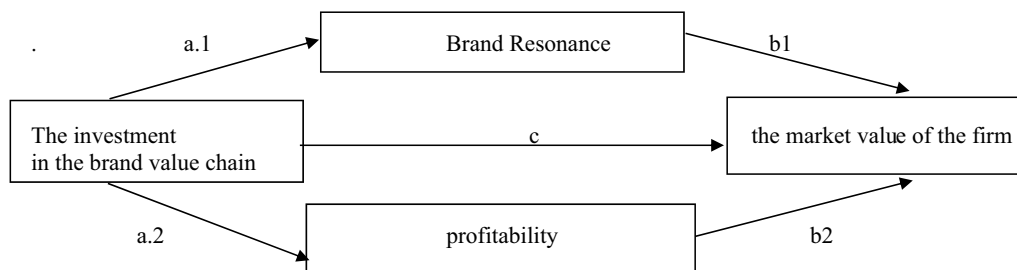
This study aims to investigate how investment in BVCH effect brand resonance, profitability, and the market value of the firm. There is a need to understand the effect of the investment activities of BVCH through financial variables such as advertising costs, R&D costs, and brand value on the firm's financial performance through market value and profitability. To achieve these aims, the empirical study has depended on a survey of a random sample of 237 European financial analysts and marketing experts. In addition, it relies on the financial statements of Amazon.com, Inc. for the period from 2010 to 2021 to test the study hypotheses. The Statistical Package for Social Science (SPSS) version 24.0 was employed to analyze the

data. Harman's single-factor test was conducted to define the presence of common method bias. Hayes Process Macro Model 5 was used to check the multiple mediation processes and direct and indirect effects between the study's variables. In addition, standard multiple regression analysis was used to test the depending on numerical longitudinal retrospective data of Amazon.com, Inc.

The study results are in line with the study of Qi [14], Although the costs of research and development may lead to a reduction in current profits, they also positively affect the future profits of the company when new products are developed as a result of the research become profitable by themselves. Also, the results of this study support the results from Bayer, Srinivasan, Riedl and Skiera [15], Anselmsson and Bondesson [5], Cheng et al. [7], and Mehar [1] that there is a relationship between customer mindset metrics and actual market performance. This support the results from Zhang [6] and Yue and Guo [4] that the brand of the firm is not only a marketing-related concept. It has turned into a value for the facility that affects its financial structure and resources in terms of accounting and financing where high brand equity helps stable financial returns and decreases stock price volatility. Our results support the findings from Mousa, Nosratabadi, Sagi and Mosavi [9] that increasing investment in marketing has a positive effect on the company's value valuation model.

**Table 7** The standard multiple regression analysis results. Source: Author’s calculations using SPSS

Hypotheses	Dependent variables	Independent variables	Standardized $\beta$ i-coefficient	Constant	F-Cal	p value	R	R2
H2	Profitability	AdCos	− .389	− 6540.88	54.39	0.00	0.982	0.965
		R&DCos	0.176					
		BV	0.135					
H3	Market value	AdCos	42.058	− 152,129.1	1023.95	0.00	0.998	0.998
		R&DCos	4.639					
		BV	0.781					



**Fig. 3** Conceptual diagram for mediation processes between the study’s variables

**Table 8** The output of brand resonance. Source: Author’s calculations using Hayes Process Macro Model 5

Model summary							
	R	R <sup>2</sup>	MSE	F	df1	df2	p
	.5540	.2642	1.3305	121.7107	1.0000	335.0000	.0000
Model							
	Coeff	SE	t	p	LLCI	ULCI	
Constant	5.1526	.0626	81.4401	.0000	5.0339	5.2799	
BVCh	.6282	.0488	12.0324	.0000	.4423	.6342	

**Table 9** The output of profitability. Source: Author’s calculations using Hayes Process Macro Model 5

Outcome variable							
Profitability							
Model summary							
	R	R <sup>2</sup>	MSE	F	df1	df2	p
	.6896	.4765	1.1707	307.3875	1.0000	339.0000	.0000
Model							
	Coeff	SE	t	p	LLCI	ULCI	
Constant	3.1122	.3141	9.9082	.0000	2.4934	3.7310	
BVCh	.7565	.0798	17.5225	.0226	.0259	.3405	

The major substantive conclusion of this study is that the investment in BVCH has a significant positive brand resonance. Also, the investment in BVCH has a significant positive impact on the firm’s profitability. In

addition, the investment in BVCH has a significant positive effect on MV. In addition, the analysis results indicate that there is an indirect effect of the investment in BVCH on the firm’s MV through brand resonance and

**Table 10** The output of market value. Source: Author's calculations using Hayes Process Macro Model 5

Outcome variable							
MV							
Model summary							
	<i>R</i>	<i>R</i> <sup>2</sup>	MSE	<i>F</i>	df1	df2	<i>p</i>
	.6808	.4635	.9298	57.8759	3.0000	335.0000	.0000
Model							
	Coeff	SE	<i>t</i>	<i>p</i>	LLCI	ULCI	
Constant	2.6811	.2992	9.1276	.0000	2.1965	3.4053	
BVCh	.2185	.0587	3.7102	.0002	.1027	.3944	
BR	.2937	.0485	6.1558	.0000	.1997	.3886	
Profit	.1916	.0518	3.8277	.0000	.0936	.2914	

profitability. Therefore, the investment in BVCH leads to increase brand equity which builds up in the customers' mindset and then transforms to market performance and profitability. The Investment in BVCH does not necessarily give in the effect of short-term sales but builds equity in the customers' mindset in the long term, causing more stabilized sales and market performances. It can be said that reducing investments in the brand value chain can lead to cash savings and cost reductions in the short term. However, it negatively affects the firm's market share and long-term profitability. The results of this study offer several implications that should be of interest to managers and researchers.

Despite the study's contribution, it does contain some limitations that provide promising opportunities for future research. First, the data were taken from one firm. Second, some issues related to the opinions of clients and shareholders were not captured. Third, the effect of investments in the brand value chain on profitability and market value was addressed but the effect of this on the Cumulative abnormal return was not addressed. Finally, there is a need to know the effect of disclosure of the value of investments in the brand value chain and the prediction of the stock price. These issues need further exploration in future research.

#### Abbreviations

R&D	Research and development
SPSS	The Statistical Package for Social Science
BVCH	Brand value chain
AdCos	Advertisement cost
R&DCos	R&D activities costs
BV	Brand value
MV	The market value of the firm

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#### Author contributions

I am the only author of this manuscript. The author read and approved the final manuscript.

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The datasets for the present study are available electronically and publicly.

#### Declarations

#### Ethics approval and consent to participate

Not applicable.

#### Consent for publication

I am hereby giving acceptance for publication of my manuscript.

#### Competing interests

There are no competing interests.

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