

## A proposed benchmark guide for customer engagement rating via YouTube channels

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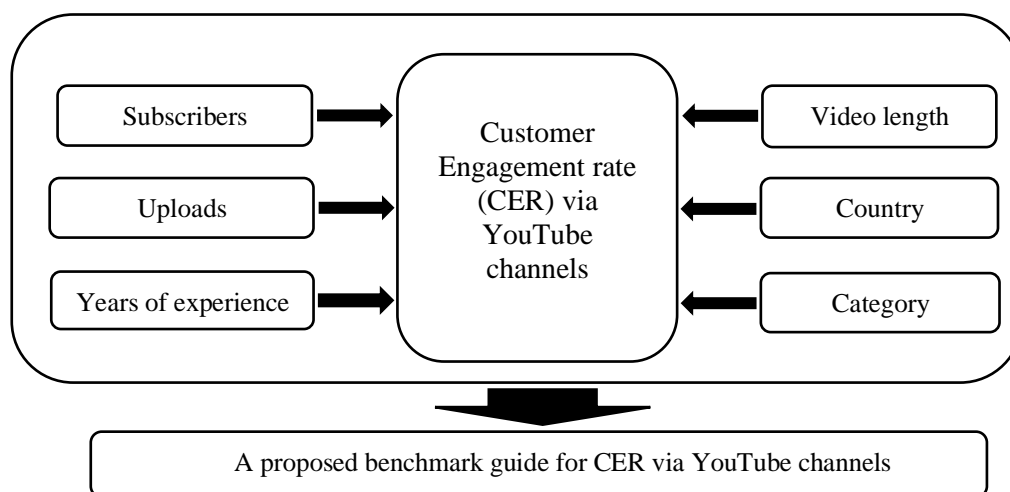
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**Abstract:** YouTube is the biggest video platform to promote contents on the largest scale, but this does not mean that it will be available to 2 billion active users of this platform, as well viewers may not engage positively with published content at times. Therefore, Marketers need an applicable benchmark to assess the extent of the customer engagement rate CER with the content they broadcast, more than just monitoring numbers of views, likes and comments. This study aims to provide a proposed benchmark guide for CER with contents published via YouTube channels. The methodology of current paper follows both quantitative and qualitative methods, through collecting and analysing real data for 240 videos, representing a total of 5 videos from each one of the top 3 channels from each one of the 16 categories on YouTube ( $5 \times 3 \times 16 = 240$ ). The result includes examine the differences in CER according to categories and countries. It also includes measuring how CER is impacted by video length, channel' experience years, and the numbers of subscribers and uploads. The article provides a set of recommendations that are expected to benefit academics and practitioners belong to marketing and social media in general, especially those interested in promoting content on the YouTube, and it suggests a group of future studies in this field.

**Keyword:** social media, YouTube, customer engagement rate, benchmark, marketing KPIs.

### Graphical abstract:

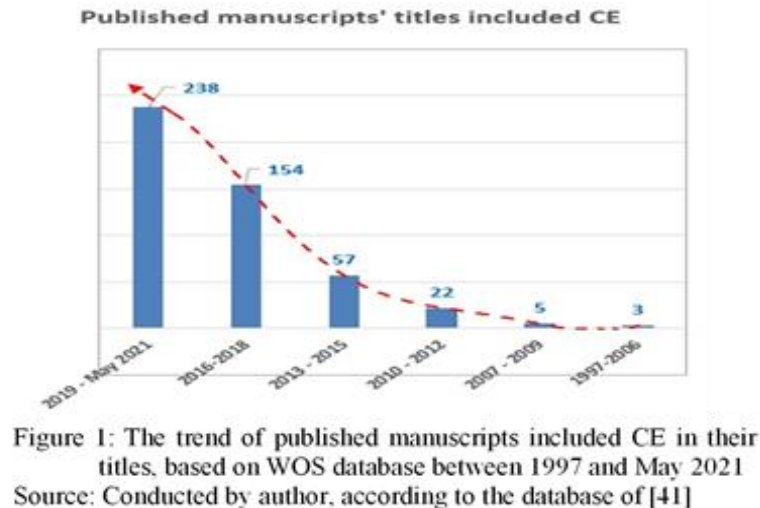


### 1. Introduction

The business administration of the pioneering organizations has moved from traditional activity-oriented to objectives-achievement-oriented. Likewise, contemporary successful companies have gradually shifted from transaction marketing to open relationship marketing, considering the virtual world that now includes more than 4.66 billion active users (4.28 billion of them access Internet through mobile) out of a total population of 7.8 billion [1] [2]. As well, the percentage of social media users is 90% of active internet users [3]. So, the strength of communication with customers is currently significant required, especially considering the intensity of competition that came because of the spread of great technological development in various fields, in parallel with the spread and intensity of the use of Internet and social media networks, which increased customer expectations [4] [5] [6] [7].

In the context of the wide spread of globalization practices in parallel with the increasing use of Internet and social media platforms, the interest of researchers and practitioners in the issue of communicating with customers has increased rapidly [8] [9]. YouTube is the largest platform for publishing videos, and it is one of the three largest

browsers on Internet in addition to Google and Facebook, with more than 2 billion active users around the world [2]. Therefore, individuals and organizations rely on YouTube to spread content globally, within 16 categories, through more than 42 million channels so far, with an average annual increase in the number of channels of approximately 25%, providing millions of clips that have achieving trillions of views [10] [11] [3]. Hence, the topic of customer engagement (CE) via YouTube has received considerable scholarly attention in recent years (as shown by Figure 1), which is defined as: a psychological state that occurs because of interactive customer experiences, in a way that strengthens the competitive advantage and the profitability of activity [12].



A recent Gallup study estimated that 23% of “engaged customers” lead to a 7% increase in revenues, whereas only 1% of “disengaged customers” resulted in drops of revenues by more than 13%, which indicates the critical and essential role of CE and the need to monitor and continuously improve it [5]. The subject of CE is a wide field that includes several dimensions and issues [13] (e.g., economic, social, political, and environmental), CE dimensions (e.g., trust, satisfaction, perception, emotions, cognition, behavior, loyalty, and consciousness) [14] [15] [16] [17] [18] [19], application environment (real and virtual) [4], type of interaction (anti-consumption and pro-consumption) [20], stages of engagement building (construct, antecedent, and consequences) [13], and other vital issues and topics that the literature still in need of more in-depth studies of them. One of these topics is the assess of customer engagement rate (CER) via YouTube channels, which is measured in several methods, one of the most popular methods for calculating CER is by dividing the sum of likes, dislikes, and comments by the number of views [21] [22]. However, there may still be a set of concerns about this formula, as it includes “dislikes” and “negative comments”, which may lead to what is called “de-marketing.” As well, most of the monitoring operations carrying out by channel administrations depend on the perspective of tracking the increasing of CER, in the absence of benchmarking, which is not commensurate with the contemporary shifts and rapid trends towards globalization and open virtual markets [5] [6].

This study raises the following set of questions, and aims to answer them:

RQ1: Does increasing the number of followers of the YouTube channel lead to an increase in CER? Or is it perhaps causes of preoccupation with managing of the channel and the lack of interest in its followers, which may lead to the opposite result?

RQ2: Is there significant difference between channels according to their category, or the countries from which these channels are broadcasted?

RQ3: What is the best applicable benchmark guide for CER via YouTube Channels?

## 2. Literature Review

### 2.1 The power of YouTube platform

The YouTube platform has been one of Google's main and ever-growing sources of revenue since it bought it in 2006. As it is expected that YouTube advertising revenues will reach 241 billion dollars by the end of 2021, with a growth rate of 118% compared to 2018 (with an average annual representation of escalating from the total revenue of Google around 10%) [2] [3]. YouTube is not only the largest platform for publishing videos, but it is also characterized by ease of use for different ages, languages, activity categories, and at the lowest cost compared to

other traditional means of promotion. This huge platform includes tens of millions of channels that generate trillions of views for their videos annually, which leads marketers and advertisers to use them to promote content [2] [3] [10] [11]. There are four main stages that marketing thought went through from the beginning of the term marketing for the first time in 1905 until today, in the early third decade of the 21st century [23]. This stage can be divided in the following order: face-to-face marketing, unified marketing directed at segmented/non-segmented market, and access to mass marketing that depends on market segmentation at the same time, at the time in which YouTube is one of its most important tools for contemporary marketing.

## 2.2 Customer engagement rate (CER)

Customer engagement is an intertwined concept that includes several different dimensions [13]. Therefore, previous studies discussed this topic from several perspectives, including describing the marketer's role, classifying customer reactions, analyzing the return on activity, the field of interaction (e.g., the brand, products, brand name) [24] [25], type of interaction (positive, negative) [26] [20] [27], scope of influence (attitudinal, behavioral) [28], interaction environment (real, virtual online), interaction indicators. The common denominator among all these perspectives and others, in general and simplified, can be summarized in the following four dimensions: First, the main concept focuses on CE with marketing activities, and their different levels of reactions [29]. Second, communication through social media platforms is one of the main pillars of the contemporary era for tracking the level of CE in a way that cannot be ignored, through their direct or indirect forms of interaction. Third, there are varying levels of interaction between customers, as well as several indicators to measure this interaction, commensurate with each level [26] [20] [27]. Fourth, despite the importance of dividing the interaction into positive and negative, what is described as negative interaction is the participation of customers that provides improvement suggestions to the marketer in a direct or indirect manner, and it also helps to evaluate the materials published through these negative comments or dislikes.

Since the beginning of the last century, the Aida model (Attention, Interest, Desire, Action) has been considered as one of the basic tools for studying human behavior and its scientific and professional applications, including the field of marketing and customer behavior [30] [31]. The four elements of this model are divided into two groups, an attitudinal group (attention, interest, desire) and a behavioral group (action), and there are many previous studies report a significant positive impact of the first group on the second [32]. Hence, it becomes clear why marketers and advertisers focus on increasing the number of views on their accounts of social media platforms over the Internet. The importance of tracking CER is increasing rapidly due to a set of factors that have led to a narrowing of the gap among competitors or their competitive advantages, including technological developing and increasing levels of social communicating via the Internet in all over the world [33] [34]. YouTube is one of the largest social media platforms that customers easily use of all ages, education, income, and purposes. However, the number of views alone is not sufficient as a single indicator to follow CE on channels, and it may give a misleading result sometimes. One of the most popular current KPIs for evaluating CER via YouTube channels is calculated using the following formula [21] [22]:

$$\text{Customer engagement rate CER} = \frac{\text{Likes} + \text{Dislikes} + \text{Comments}}{\text{Total of views}}$$

Some additional analyzes are taken into consideration to identify the relative weight of “likes” only (plus the total of positive comments, if possible). As there are sometimes views that represent negative attitudes of viewers towards the published material, and the behaviors that follow against the marketing objectives are expressed in word-of-mouth (WOM) or electronic word-of-mouth (e-WOM) [25]. Hence the importance of having various indicators to determine the direction of CE (positive and negative) and measure its strength, which will be covered in the next sub-section.

## 2.3 Why benchmark of CER is required?

Benchmarking is the process of measuring the performance of an entity compared to the performance of another entity considered the best in the same industry, also known as “best in class”. Also, benchmark is defined as a standard of excellence and achievement by which others may be measured or judged. Benchmarking is a major and necessary tool considering the accelerating trends towards globalization and open markets, for various social activities, not just for profit. Therefore, although comparing the current performance of a YouTube channel with its previous performance is a useful and important indicator, benchmarking against the highest category is also indispensable. Influencers of youtubers have achieved social and profitable successes, which motivate individuals,

small and giant enterprises, but also governments of countries or international organizations as well, to manage their own YouTube channels to achieve some of their social, marketing or profit/non-profit goals [35] [12]. The essence of the contemporary concept of marketing is summed up in answering the question: How are you and what you offer acceptable to others? Which means that marketing serves individuals, organizations, and countries, for all areas of life, not just profit, with a range of renewable activities beyond mere selling, distribution, and advertising [9]. How it is no longer limited to the marketing of goods and services but extended to include ideas and marketing for people and countries as well [23]. The above mentioned, is one of the strengths of YouTube, whose channels vary, as shown in Table 1.

**Table 1:**  
The percentage of views for each category of YouTube channels

#	Category	%
1	Entertainment	25%
2	Music	20%
3	People & Blogs	19%
4	Film	7%
5	Gaming	7%
6	Autos & Vehicles	22%
7	Comedy	
8	Education	
9	Science & Technology	
10	Shows	
11	How To & Style	
12	News & Politics	
13	Nonprofit & Activism	
14	Pets & Animals	
15	Sports	
16	Travel	
Total		100%

Source: [3]

There are several performance indicators for YouTube channels, including: likes, dislikes, comments, type of comments, shares, number of views, views average, uploads, video length, subscribers, average viewing periods, click-through rate, frequency rate, and many other miscellaneous indicators. Some of these indicators are available to all viewers of the channel, and others are available only to channel owners, provided by YouTube or Google so that they have the authority to show or hide them on the channel, while others are available only through large database management companies such as STAISTA [3], ALEXA [11], and SOCIALBALDE [36]. These companies provide samples of this data is on their websites as free services, while offering the right to use the rest of the data for a subscription fee. However, there is still a need to create a benchmark that includes some of the inferred rates from all these sources, and one of the most important indicators is CER for each category of YouTube channels.

## 2.4 Research hypotheses

Based on the theoretical framework and previous studies that were reviewed, and the analysis of the scientific gap in the literature belonging to the subject of the research, the current study aims to test the following research hypotheses:

H<sub>1</sub>: There are significant differences among YouTube categories in CER.

H<sub>2</sub>: There are significant differences among countries of YouTube channels in CER.

H<sub>3</sub>: The CER of YouTube channels is impacted by the number of uploads.

H<sub>4</sub>: The CER of YouTube channels is impacted by the number of subscribers.

H<sub>5</sub>: The CER of YouTube channels is impacted by the years number of channels' experience.

H<sub>6</sub>: The CER of YouTube channels is impacted by the lengths of videos.

### 3. Methodology

#### 3.1 The stages of sequential studies

The methodology of this research is based on five consecutive sub-studies, through a set of qualitative and quantitative research methods, to ensure the highest possible level of accuracy of the results reached and the degree of reliability of the generalization. The first sub-study, a meta-analysis of all published scientific manuscripts that included in their titles the term CE within the WOS database, was conducted, and the results reached for the number of 485 manuscripts, the continuous increase in their publication rates was indicated by Figure 1. The second sub-study, an in-depth and accurate reading of the articles that were reached within the results of the first study, with a focus on the studies that discussed the issue of CE on YouTube channels among the issues of social networking platforms via the Internet. Through the second study, the intellectual framework for research terms was built, the research gaps were identified in the related literature, and then the questions, objectives and hypotheses of the current study were identified.

The third sub-study, collecting the basic data necessary to study CER via YouTube channels, and all categories, based on the large database of (SOCIALBALDE) [36], in addition to some other required data from the databases of both (STAISTA) [3] and (ALEXA) [11]. The data covered the most viewed YouTube channels and included: date of creation, number of followers, number of downloads, country from which it is broadcast, number of total views, activity category, global ranking. The fourth sub-study, the data of the research sample was self-collected by the author directly from the observed measures under the published videos. The fifth sub-study, registering and analyzing data using the SPSSV21 application, which ended with testing hypotheses and another set of results related to the research objectives.

#### 3.2 Data sampling

Sample is represented in the top 3 highest viewed channels, for each one of the 16th YouTube categories. Then randomly choosing 5 videos published via each channel (provided that the video was published 30 days prior to data collection). Thus, the total of the videos under research is 240 videos collected from 48 channels representing all 16 categories of YouTube channels, where the sample size was determined based on appropriate and reliable academic methods [37]. Table 2 shows the research data description.

### 4. Results and discussion

#### 4.1 The benchmark of CER (by countries)

Table 2 shows the benchmark of CER values for the top 9 countries, ranked in descending order by the total number of videos. The data indicates that the highest number of video viewings in the sample is for American channels, with more than 2.8 trillion views. In addition, videos from Russian channels recorded the highest engagement rate on YouTube channels, at 6%.

**Table 2:**

The benchmark of CER for the top 9 countries (ranked in descending order by the total number of videos)

#	Country <sup>(a)</sup>	Videos		Views				CER (%) <sup>(b)</sup>	
		Number	%	Total number	%	Mean	SD	Mean	SD
1	<b>USA</b>	130	54.2	<b>2,822,849,114,135</b>	53	21,714,223,955	24,089,306,969	2.96	2.35
2	India	35	14.6	1,564,688,216,800	29.4	44,705,377,623	52,759,530,909	1.54	1.06
3	UAE	15	6.3	303,208,807,215	5.7	20,213,920,481	15,702,158,457	2.01	1.74
4	Turkey	5	2.1	216,314,024,050	4.1	43,262,804,810	51,202,904,360	4.21	4.03
5	<b>Russia</b>	10	4.2	148,321,444,150	2.8	14,832,144,415	14,397,363,831	<b>6.43</b>	6.11
6	UK	20	8.3	115,629,054,915	2.2	5,781,452,746	7,340,107,544	2.86	1.96
7	Brazil	5	2.1	96,948,524,255	1.8	19,389,704,851	18,290,314,641	0.74	0.11
8	Canada	15	6.3	52,906,336,255	1.0	3,527,089,084	1,341,596,476	4.64	2.09
9	Korea	8	2.1	9888,033,180	0.2	1,977,606,636	1,968,504,423	1.38	0.59
Total		240	100	5,330,753,554,955	100	22,211,473,146	29,582,125,378	2.88	2.60

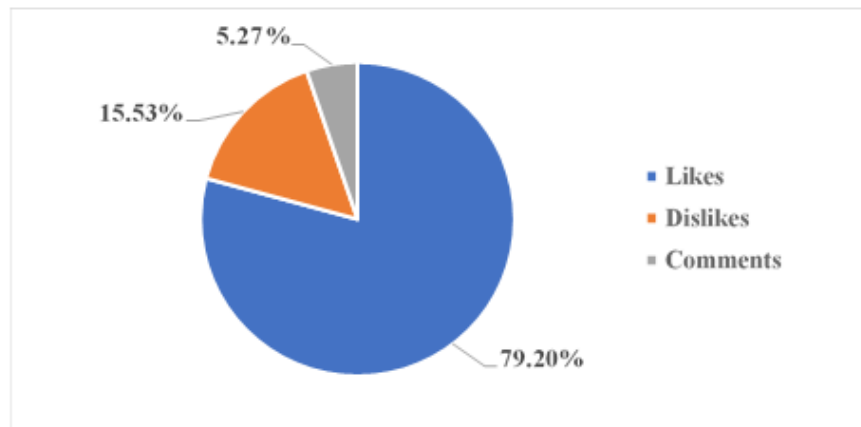
Source: Conducted by the author based on the processing and analysis of real data observed for channel videos, and the databases of [36].

<sup>(a)</sup>: The countries were ranked according to the total numbers of views for the 240 videos.

<sup>(b)</sup>: CER = (Likes + Dislikes + Comments) / views

#### 4.2 The benchmark of CER components

Figure 2 shows the benchmark of CER components, according to the real data of 240 videos which were collected from the most viewed channels in the various YouTube categories. It indicated that the likes component is key item of the CER calculating with 29.20%, While the weight of dislikes and comments, respectively, were 15.53% and 5.27%.



**Fig. 2:** The benchmark of CER components for the most viewed channels via YouTube.

Source: Conducted by author, according to the data base of [36] and the real data of the mentioned channels on YouTube [10].

#### 4.3 The benchmark of the major indicators

Table 3 shows the benchmark of the major indicators of YouTube channels, which include likes, dislikes, comments, video-lengths, uploads, subscribers, views, years of channels experiences, and the calculated values of CER.

**Table 3:**

The benchmark of the major indicators of YouTube channels.

Item	Major data	Total	Mean	SD	Minimum <sup>(e)</sup>	Maximum
videos <sup>(a)</sup>	Likes	18,910,127	78,792	181,506	0	1,800,000
	Dislikes	3,712,197	78,792	181,506	0	858,000
	Comments	1,257,184	5,238	14,496	0	105,875
	Lengths <sup>(b)</sup>	3,996	16.65	6.37	0.15	659
	Views	5,330,753,554,955	22,211,473,146	29,582,125,378	237	23,0571,442
	CER		2.88	2.60	0.35	14.6
Channels	Views	5,330,753,554,955	22,211,473,146	29,582,125,378	27,467,378	154,323,312,032
	Subscribers	8,064,939,500	33,603,914	36,312,547	59,200	183,000,000
	Number	240				
	Uploads <sup>(c)</sup>	4,123,585	17,181	41,372	25	200,994
	Experience <sup>(d)</sup>	2,620	8.5	4.6	4	20

Source: Conducted by author, according to the database of (Social BLADE, 2021) and the sites of selected channels.

<sup>(a)</sup>: 30 days at least before data collecting in May 2021, <sup>(b)</sup>: by minutes, <sup>(c)</sup>: by videos, and <sup>(d)</sup>: by years, <sup>(e)</sup>: Some channels turn off (liking, disliking, or commenting) optional, and sometimes mandatory under the regulation for the kids-protection via YouTube channels.

#### 4.4 The results of hypotheses test

According to the research methodology described in detail in section 3, the required data were collected and analyzed via the statical application of SPSSV21. Table 4 shows the test results of research hypotheses with referring to the used tests of statistical analyses. All research hypotheses were supported according to the statistical analysis. The results of testing H1 and H2 indicate significant differences among CER of the channels according to "Category" and "Country". While the results of testing the hypothesis (H3, H4, H5, and H6) indicated the existence of significant inverse correlation between CER average and each of "Uploads", "Subscribers", "Experience years", and "Video length".

**Table 4:**  
The test results of research hypotheses

Hypotheses	Factor → ER	Statistical tests	Sig. levels <sup>(a)</sup>	Test results
H <sub>1</sub>	Category	Eta (.563) One-way ANOVA	*** ***	Supported
H <sub>2</sub>	Country	Eta (.424) One-way ANOVA	*** ***	Supported
H <sub>3</sub>	Uploads	Pearson (-.088) Spearman (-.194) Kendall's tau-b (-.121)	** ** **	Supported
H <sub>4</sub>	Subscribers	Pearson (-.102) Spearman (-.144) Kendall's tau-b (-.102)	** ** **	Supported
H <sub>5</sub>	Experience years	Pearson (-.101) Spearman (-.045) Kendall's tau-b (-.032)	* * *	Supported
H <sub>6</sub>	Video length	Pearson (-.067) Spearman (-.073) Kendall's tau-b (-.112)	* * *	Supported

<sup>(a)</sup>: Significance level, (\*)  $p < .05$ , (\*\*)  $p < .01$ , and (\*\*\*)  $p < .001$ .

#### 4.5 The benchmark of leading channels

Table 5 shows the benchmark of leading channels via YouTube ranked in descending order by the total number of views, with regarding to the benchmark values of each YouTube category. American channels are at the forefront of the most watched channels, and the music category is the most attractive to YouTube channel viewers.

**Table 5:**

The benchmark of leading channels in terms of the highest views, in various categories on YouTube (descending)

#	Channel name	Category	Country	Experience years	Uploads	Total views	Subscribers	CER <sup>(a)</sup>	
								L <sup>(b)</sup>	LDC <sup>(c)</sup>
1	T-Series	Music	India	15	15,431	154,323,312,032	183,000,000	1.33	1.41
2	Cocomelon - Nursery Rhymes	Education	USA	15	638	101,103,532,746	111,000,000	0.53	0.90
3	SET India	Entertainment	India	15	56,819	87,502,666,512	104,000,000	1.71	2.07
4	WWE	Sports	USA	14	55,018	58,808,487,352	77,400,000	2.96	3.36
5	Movieclips	Film	USA	15	37,223	51,443,713,904	52,400,000	0.44	0.54
6	PewDiePie	Gaming	USA	11	4,336	27,312,108,038	110,000,000	8.75	9.12
7	Katy Perry	News & Politics	USA	13	107	21,911,098,933	40,700,000	7.27	8.21
8	5-Minute Crafts	How To & Style	USA	15	4,711	20,262,902,903	72,300,000	1.44	1.68
9	BuzzFeedVideo	People & Blogs	USA	10	7,114	17,354,493,335	20,300,000	2.52	3.68
10	The tonight show with jimmy fallon	Comedy	USA	15	6,740	14,710,242,670	27,600,000	1.21	1.40
11	TEDx Talks	Nonprofit & Activism	USA	12	166,981	5,624,257,283	31,200,000	3.23	3.61
12	The Dodo	Pets & Animals	USA	7	6,003	5,491,694,708	9,540,000	6.64	7.02
13	Linus Tech Tips	Science & Technology	Canada	13	5,354	4,786,741,064	13,400,000	4.60	4.85
14	MBC1	Travel	UAE	6	24,388	3,724,696,376	5,660,000	6.71	7.18
15	Top Gear	Autos & Vehicles	UK	15	1,428	3,259,950,517	7,970,000	1.59	1.84
16	Sony Pictures Home Entertainment	Shows	USA	12	519	56,617,111	776,000	0.69	0.73

Source: Conducted by author, according to the data base of [36] and the real data of the mentioned channels [10].

<sup>(a)</sup>: Customer engagement rate, <sup>(b)</sup>: CER = (likes without dislikes or comments / views), <sup>(c)</sup>: CER = (likes + dislikes + comments) / views.



## 5. Conclusion and major contributions

The main added value of this study is to provide a proposed benchmark guide for all categories of YouTube channels, and countries from which they are broadcast. According to previous studies, the current article is considered as the first study to test the correlation between CER and each of: number of subscribers, uploads, years of experience, number of views. In addition, the results reported that this relationship is inverse, and not as some YouTube channel owners might think.

The current study depended on the equation formula of CER measuring used by many previous studies (e.g., [21] [4]), considering the critical studies that call for caution against relying on insufficient indicators to measure the CER (e.g., [26] [20] [27]). This study also agreed with [38] [16] [13] [18] in the intertwining and complexity of the interaction process which includes several dimensions. This article supports what studies of [5] [39] [6] indicated regarding the importance of CER following up and tracking, to keep pace with the rapidly increasing trend towards globalization, which confirms the requirement of paying attention to YouTube platforms at the level of individuals [29] [15], institutions [33] [34] [25] [32], or even governments and countries) as indicated by Studies [30] [35].

This article sheds light on a set of topics that can be discussed in future studies, including the reasons behind the inverse relationship that was referred to in the results of the study, and testing whether it is due to the preoccupation of channel owners from paying attention to followers after the expansion of the volume of activity. Furthermore, exploring the impact of demographic characteristics of both youtubers and users. One more topic need to be studies future research, testing the hypothesis of YouTube's intervention to keep American YouTube channels always at the forefront of the most watched channels by a large margin.

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