Investigating the impact of marketing audit on marketing effectiveness: An application on manufacturing companies in Egypt

Elsayed Mansour Elkafrawi [1]
Doctorate Researcher at Arab academy for science
Under supervision
Prof. **Ahmed Moussa ElSamadicy** [2], Professor in marketing, vice dean for education affairs college of management and technology Arab academy for science, technology, and maritime transport -Alexandria

Dr. **Hazem Rasheed Gaber** [3], Associate Professor in Marketing, College of Management and Technology, Arab Academy for Science, technology, and maritime transport (AASTMT)

Dr. **Karim Mohamed Solima** Associate Professor of Logistics and supply chain. college of international transport & Logistics, Arab Academy for Science, technology, and maritime transport (AASTMT)

Orientations: With the intense and tough competition that many Egyptian manufacturers in Egypt are facing, they are looking for new ways to enhance and improve marketing effectiveness.

Research purpose: This research investigates the impact of marketing audits on marketing effectiveness and applications in manufacturing companies in Egypt.

Motivation for the study: This research was conducted in response to several calls by academics and practitioners to better understand the impact of marketing audits on marketing effectiveness in manufacturing companies in Egypt.

Research approach/design and method: research approach is Deductive, and the philosophy is Positivism, it uses Mixed Method, questionnaires through the Internet and face to face developed based on an extensive literature review with a sample of 420 managers working in Egyptian manufacturing companies either very small, small, medium, and large companies, finally the time horizon is one shot (cross-sectional data).

Main findings: The findings showed that marketing audit in terms of (Marketing Strategy, Marketing Organizational issues, Marketing Systems in Use, Levels of Marketing Productivity, and Marketing Functions) has a positive impact on marketing effectiveness while auditing the marketing environment has no effect on marketing effectiveness from Egyptian manufacturers. Furthermore, in terms of company size, managers had a different perception of the impact of marketing audits on marketing effectiveness.

Practical/managerial implications: The study advised that it is essential for Egyptian manufacturing companies to adapt their marketing audit systems by which their marketing systems could be measured and monitored which will directly affect marketing effectiveness.

Contribution/value-add: This article contributes to research that it is one of the few studies which investigate the impact of marketing audit on marketing effectiveness inside a manufacturers company in a developing country like Egypt.

Abstract:

The aim of this research is to investigate the impact of marketing audit in terms of the marketing environment, current marketing strategy, marketing organizational issues, marketing systems in use, levels of marketing productivity, and marketing functions on marketing effectiveness, this will be in the context of manufacturing companies in Egypt. primary data was collected through a questionnaire distributed online and physically with the managers of the targeted sample of manufacturing companies in Egypt. Data collected has been validated and analyzed through validity tests, reliability tests, normality tests, correlation analysis, regression analysis, and descriptive statistics. the results found that there is no significant relationship between marketing environment and marketing effectiveness while found a positive relationship between (current marketing strategy, marketing organizational issues, marketing systems in use, levels of marketing productivity, and marketing functions) on marketing effectiveness. these results are consistent with the previous literature except for the first hypothesis - which is marketing environment audit – which is not consistent with the previous literature. this research will help the marketers and practitioners in Egypt to better understand of antecedents of (the marketing environment, current marketing strategy, marketing organizational issues, marketing systems in use, levels of marketing productivity, and marketing functions

which could help to upgrade the performance of marketing in the manufacturing companies and be more effective and competitive.

Keywords: marketing effectiveness, marketing audit, marketing environment, marketing strategy, marketing organizational issues, marketing systems in use, levels of marketing productivity, marketing functions

Introduction

The concept of the marketing audit and how it increases marketing effectiveness has attracted many practitioners in business management. Modern marketing could be defined as a holistic, agile, data-driven methodology that concern brands with ideal customers to achieve business targets. (Remove,2022) and it is the provision of goods or services to meet customer needs (John Westwood,2022), from that comes the importance of marketing audit as it is the examination of the company's marketing, specific marketing activities, and its marketing internal system (John Westwood,2022). For that marketing audit is a good tool for a strategic marketing process to evaluate an organization's strengths and weaknesses against opportunities and threats and it is a comprehensive, systematic examination, review, and analysis of marketing exercises, functions, processes, goals, objectives, practices on strategic, tactical, and operation levels (Richard Wilson et al,2005). By implementing a marketing audit, the company could investigate the way marketing is

arranged and seen, and how marketing activities and functions are performing compared with the goals of the original company marketing plan. Marketing audit should go effectively through three processes: first, pre-audit for who the auditor is, timing, goals, and methods; second, through an audit for data collection and analysis; and third, post audit for recommendation, sustainability system and result communication to drive the maximum benefit for the organization. (Wankhede,2020; Palav et al. ,2021; Piotr Hadrian,2020).

Marketing efficiency will directly impact effective management and could affect the total company activities value chain in exchange for the cost. (Fikrat Valı, 2022).The marketing audit process is very crucial to assess the marketing plan of the organization to derive maximum benefits. (Palav et al ,2021). Some of the proposed outcomes are that an effective marketing audit should be comprehensive, systematic, independent, and periodic and it should consist of two main sections: internal and external audit. (Nataliia Zamkova et al, 2020).

Based on [OECD](2021) report, Egyptian manufacturing is the continent's top manufacturer, its percentage is about 22% of the total continental manufacturing value added (MVA) and has the second-largest share (21%) in the middle east and north Africa (Mena) and comes in the second position after Saudi Arabia. For Egypt, manufacturing represents 16% of GDP, putting it on par with the OECD average, and above Africa's average of 11% and MENA of

10%, but lower than in southeast Asia (22%). The country's fast-growing economy has been increasingly attracting the attention of international investors. Moreover, as per World Bank Report (2021), Egypt is engaged with the world bank in a program guided by its Country Partnership Framework (CPF) 2015–19 and Performance and Learning Review (PLR), this engagement extended to 2021 and 2022. The framework focuses on three strategies, the first strategy is upgrading and improving governance which will make the decision more effective, the second strategy is improving the opportunity for private sector job creation which will make the economy more effective, and the third strategy is supporting social inclusion. Adding to that, the world bank stated that Egypt's macroeconomics has been resilient against the pandemic and its challenges. Egyptian macroeconomics stabilized in recent years as Real growth was 3.6% in FY2019/2020. Unemployment declined to 7.3% by Q4-FY2020/2021, and key foreign income sources are starting to improve, but pandemic-related challenges persist. Reserves were recorded at US$40.7 billion in end-August 2021 (covering just above 7 months of imports), and exports improved. The Government embarked on the "Egypt Takes Off" program (FY2018/2019 to FY2021/2022) and followed by the newly launched National Structural Reform Program (NSRP) (FY2021/2022- FY2023/2024), this happened to continue the "second wave" reforms, building on pre-pandemic stabilization reforms.

From the above background and the Egyptian economic landscape, the Egyptian government has initiatives to support the manufacturing sectors either private or public as a strong arm to accelerate the economy, hence the importance and objectives come for this paper are to study the marketing audit and its application on the Egyptian manufacturer companies and provide an applied model for marketing audit and effectiveness. The core of this paper is to define the marketing audit effectiveness and process and how it will impact the manufacturing companies in Egypt to improve their positions. The expected output will also improve their quality and their progress could be understood, explained, and adopted, which will contribute to Egyptian reform economy initiatives.

Literature review

Marketing Audit (MA), Definition and Importance

M.R. Palav et al. (2021) defined Marketing audit (MA) as a comprehensive analysis of marketing activities. It will state what will be the right process and what will not be. Marketing Audit (MA) originated in an American management association report 'Marketing Audits' in Theory and Practice'' and was defined for the first time as a systematic, critical, and impartial review of the total marketing operation, (AMA, 1959) .Kotler et al. (1977), Capella et al. (1978), Rothe et al. (1997); and Mokwa (1986) also said that Marketing Audit (MA) implementation suffered because of a lack of qualified auditor, weak management cooperation, and

available information, and bad communication. AMA (2006) updated its definition of marketing accountability: "The responsibility for the systematic management of marketing resources and processes to achieve measurable gains in return on marketing investment and increased marketing efficiency while maintaining quality and increasing the value of the corporation". Abdullah Al Fahad et al (2015) created new definitions for Marketing Audit (MA) that it could be considered that it is like "a marketing mirror" to an audited company.

Zamkova et al. (2020), had said that auditing marketing activities are made to evaluate and formulate steps for removing the obstacles in the internal marketing system. They mentioned that the audit consists of two main sections: internal and external audits. External audit for examining the macro environment and its tasks, while internal audit examines all aspects of the entrepreneur's activities. Hanna et al. (2020), stated that in the context of globalization, increased tough market competition is highly needed to apply Marketing Audit (MA) for more business effectiveness, Marketing Audit (MA) will consider the strengths, weaknesses, and changes in the external and internal environment. Hadrian (2020) discusses the problem of marketing control and how a Marketing Audit (MA) presents various conceptual, structural, or process models and could be used as an effective marketing control tool.

Kitchenko et al (2019) revealed that without marketing effectiveness no enterprise could succeed in the market and a Marketing Audit (MA) is a necessary tool that could be used as a communication tool for enterprise effectiveness. Berry (1991) constructed a table for marketing audit literature, definition, contribution, measurement tools, and service emphasis that explained the validated and reliable models for questionnaires and instrument tool starting from year 1959 up to year 1988, they stated that there are many validated questionnaire templates.Antonio Pimenta et al. (2020) argues that there are many, but usually imperfect, ways to measure and audit marketing. Yezid Cancino et al. (2019) adopted MA variables
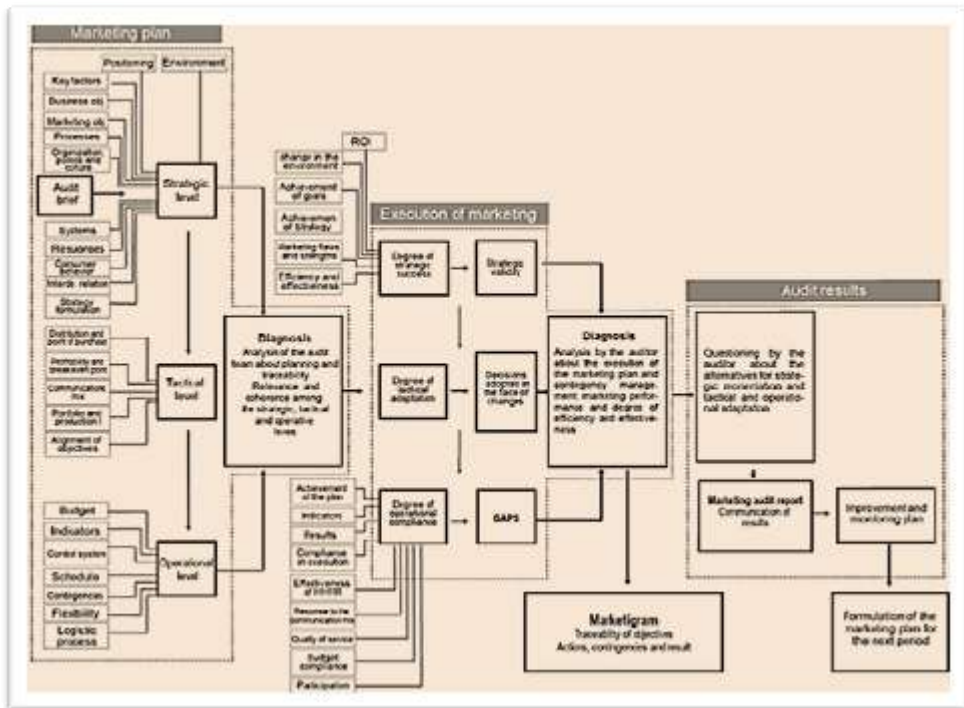
and constructed a structure in fig 1

Figure 1: Model for Marketing audit

Marketing Audit (MA) Challenges

Kotler (2005) said that there must be more orderly ways to audit and evaluate the marketing operations, and environment to cope with the continuously changing environment which creates threats and opportunities in the current marketing practices, moreover, he described some characteristics that a Marketing Audit (MA) should cover as Marketing Audit (MA) is an examination of the organization's micro-and macro-environment, marketing

objectives, and strategies and it must cover all the major activities of the company, not only those that generate problems.

Wen-Kuei Wu et al (2015) stated that few types of research investigate the impact of industrial factors, like internal/external environmental factors on Marketing Audit (MA). In addition, little evidence exists for empirical validation of its effectiveness on marketing performance and found that implementation of Marketing Audit (MA) can enhance marketing performance in the context of Taiwanese industries.Piotr Hadrian (2020) stated that general marketing as a social and management conception, issue that the control has taken relatively not much space, because of a long period in which most of the opinions prevailed that it was very difficult, almost impossible, to measure the efficiency and effectiveness of marketing. The aspects related to marketing are often hard to catch, incidental and dynamic character and the ways of control are imperfect (declarative, intuitive) which has caused difficulties in defining the marketing effects. Jan Brinckmann et al (2002) argued that business planning and hence marketing functions and audits will be impacted by the newness of the firms, cultural environment. The process itself could be subjected to the questions, is the organization following planning school in developing its plan and process or is it subjected to learning school or by another means just storm the castle by rallying resources together, orchestrating an immediate offering, and hustling for a first customer.

Marketing Audit (MA) Process and Marketing Effectiveness (ME)

Anna krizanova et al. (2019) stated Measuring Marketing Effectiveness (ME) is a challenging process, while Kukartsev et al. (2020) argued that measuring marketing effectiveness could be the process of quantitative determination of the effectiveness and return of the performed action, one of the techniques for evaluation is using a balanced scorecard (BSC) for assessment, moreover, the author adopted a model to measure effectiveness based on 7 evaluation appointment (forecasting the future, future assessment, top-down cascaded metrics, indicators summarizing from bottom to top, comparison rates, motivating indicators, reward indicators). Wu Jun et al. (2021) used the modified AISAS model and used the analytic hierarchy process (AHP) for evaluating the precision marketing effectiveness of the e-commerce platform. Frantisek et al. (2015) stated that measuring marketing effectiveness will help companies to prioritize their efforts and improve the quality and precision of the marketing resources demanded by the sales force and they argue that we could measure the effectiveness by two main indexes profit index and customer index those indexes have multiple KPI metrics while Alina et al. (2020) stated that because of using Marketing Audit (MA) the sales value increased from 32 % to 45 % in some years.

Mindaugas et al. (2020), Kotler and Keller (2009), and Gao (2010) stated that marketing effectiveness is a complex process and could depend on many factors like consumer philosophy, integrated marketing communication systems, strategic orientation, operative strategy, organizational imperatives, etc., they introduced a Model for

Measuring Marketing Performance (MMMP). They mentioned also that we could measure marketing efficiency and effectiveness by measuring financial indicators (turnover, profit, ROI, ROE, and ROMI-return on marketing investment-etc.), market measures (market share, etc.), consumer behavior (loyalty, no of new customers, etc..), brand image (customer satisfaction, brand recognition, etc.)

Yazid et al.(2019) continued to identify the importance of Marketing Audit (MA) and its relations with marketing effectiveness (ME) by comparing all audit areas, they mentioned that using accounting audit is to comply with legal responsibilities, to agree with the general acceptance accounting principles and assure reliability of financial data while The use of quality audit like have certifications in total quality system (ISO 9001,14001,45001) is also to comply with the documents, quality, environment and safety rules and regulations. With the same importance and maybe more the management audit which includes Marketing Audit (MA) should be in place to comply with the organization's objectives, and goals on a strategic, tactical, and operational level and will be a guide for company alignment. They proposed analysis of marketing data that could state test the quality of process, and accuracy of decisions and enable measuring the marketing efficiency and effectiveness. They invented a tool named MARKETINGRAM that could visualize Marketing performance and effectiveness was visualized. The tool is shown in Fig 2 below.
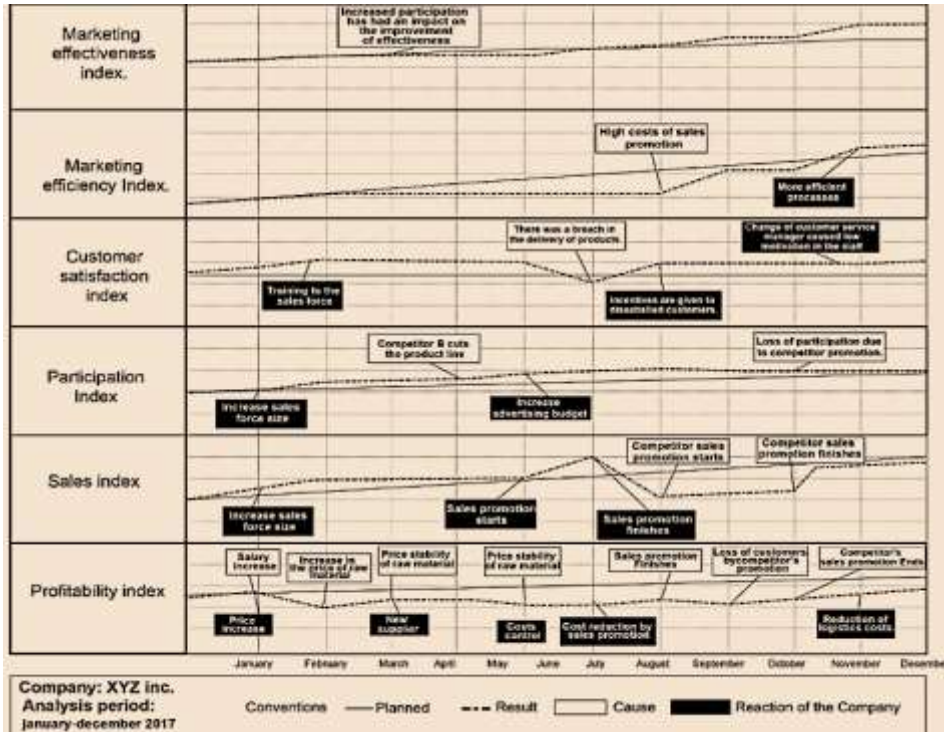
Figure 2: Marketingram for Marketing Audit

Neil Morgan et al. (2002) argued that Marketing Audit (MA) is a part of a broader picture which is marketing performance, and some researchers consider that marketing performance assessment (MPA) has two approaches to marketing productivity analysis (an ''efficiency'' approach) and Marketing Audit (MA) which is (an ''effectiveness'' approach) whereas David Parmerlee(2000), who brought the term Marketing Management Audit, considered that it is a state of a

stage of marketing planning which plays the role to answer three fundamentals' concerns:

- Organization's vision and its approach in respect of the market on which it operates.
- Value of offered products.
- The efficiency of actions taken on the market of its products.

Showkat Imran (2012) argued that There is no single set of procedures, or we could say that there are rare standard procedures that work best for all marketing audits in all organizations, at all points of time and space and Richard Wilson et al (2005) Also stated that Marketing Audit (MA) has no single format for the audit, but the process could take six dimensions:

1. The Marketing Environment (External environment, Internal environment)
2. The Current Marketing Strategy (Vision, Mission, Objectives, Goals, Current Strategy, Formal Structure, Functional Efficiency, and Interface or other relationship Efficiency).
3. The Marketing Organizational issues (Competitor, Consumer, Dealers, and distributors, Public, and Facilities and marketing firms)
4. The Marketing Systems in Use (Marketing Information Systems, Marketing Planning Systems, Marketing Control Systems)
5. Levels of Marketing Productivity (Profitability analysis, Cost-effectiveness analysis)

6. Marketing Functions (Product, Price, Place, Promotion, People, Physical Layout, Process)

Wen-Kuei et al. (2015) adopted another Model from the Proposed Analytic Hierarchy Process (AHP) model for MA implementation as the following Fig 3
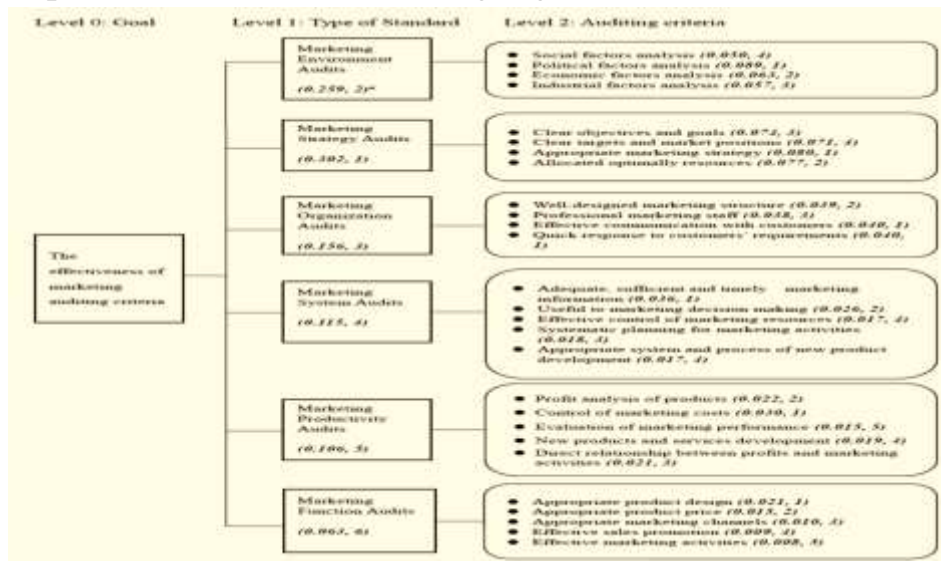
Figure 3: Proposed AHP model for MA implementation

Green Marketing Audit (GMA) and Agile Marketing Audit (AMA)

Hui-Chiao Chen et al. (2019) stated that another trend upcoming now is how to apply a multiple-criteria decision-making approach to establishing green Marketing Audit (MA) criteria. They argue that green marketing now becoming a sustainable business operation goal, and the companies must adopt Green Marketing Audit (GMA) is to be an effective measurement tool., They implemented Multiple Criteria Decision Analysis (MCDA) to

combine the Analytic hierarchy process (AHP) and Decision-Making Trial and Evaluation Laboratory (DEMATEL) techniques and they proposed a model that provides a new practical architecture of GMA and shows that link between the green marketing activities and firm performance contributes to the development of green marketing strategy management.

Moreover, Miclea et al. (2016) defines the concept of "Agile marketing audit" that it is an integration of agile concepts within the steps of the Marketing Audit (MA) tool, with repercussions on the entire business activity because marketing is an integrative function of the enterprise.
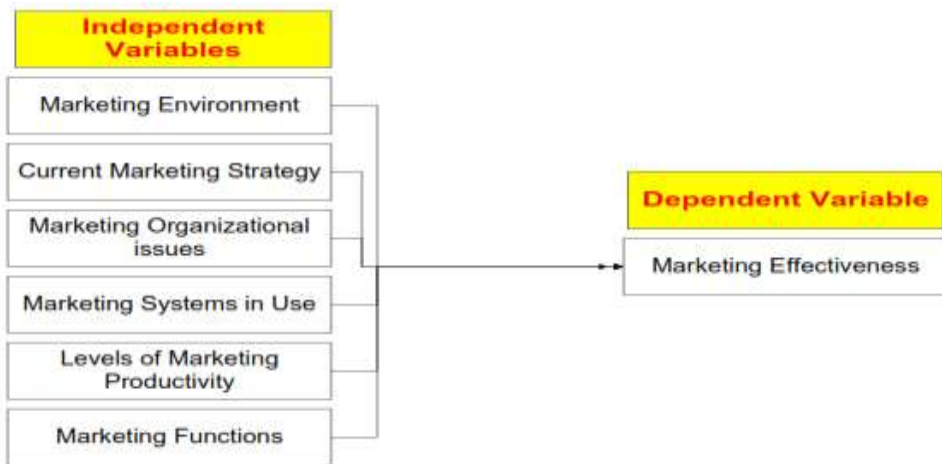
The proposed framework conceptual model : Fig 4

Figure 4: Framework for the research

Methodology

In this article, a mixed-method research design was adopted to collect and analyze the empirical data. Mixed methods research (MMR) is one of the multimethod where both qualitative and quantitative methods are used in a single study, and it is mixing two forms of data and integrating them to generate new insights. (Tatiana ,2022) The questionnaire method was used to collect data from managers who work in Egyptian manufacturers in Egypt. The data analysis was performed using SPSS v.26. Time horizon for the study is one shot (cross-sectional data). The questionnaire was distributed through the internet, face-to-face, and developed based on previously validated scales from previous studies' literature. The questionnaire consisted of eight sections. The first section contained general information, while the next precedent 6 sections contained a group of questions that aimed to capture the hypotheses information, Finally, the last part contained a group of questions that aimed to capture the marketing effectiveness information.

Validity and reliability

Validity and reliability have been used in testing the goodness of data and examining if the data collected is enough to test the research hypotheses or not. The study used Cronbach's alpha value which is the most often used measure of reliability. The range of the Alpha coefficient is 0 to 1, with a higher value indicating more dependability. Hair et al., (2012) mentioned that Cronbach's alpha should be smaller than 0.7, indicating an

acceptable level of reliability. Hereunder the Cronbach's alpha table 1 testing for the questionnaire and all questions related to the variables with 420 samples. For validity, the research uses two tests of validity, content, and construct validity. The first test uses content validity by presenting a research questionnaire to experts and for that, the survey has been presented to 10 experts and professors to check the content of the questionnaire. The second test is constructing validity, construct validity uses convergent validity and discriminant validity, this study uses Convergent validity and will measure it based on composite reliability (CR) with acceptable values and average variance extracted (AVE) (Alarcón et al., 2015). This research uses a factor analysis approach (FL) which could be used to calculate factor loading, and identify average variance extracted (AVE). The average variance of each latent component is calculated using the (AVE) method. (AVE) should be larger than 50% to have appropriate validity (Hair et al., 2012). Sekaran and Bougie, (2016) mentioned if (FL) is at least 0.4 that is mean the validity is adequate. Moreover, if data show Kaiser-Meyer-Olkin (KMO) greater than 0.5, that is mean it is Factor Analysis and has been excellent. Hereunder table 1 explained the validity and reliability test.

Table 1: Table of Validity and Reliability Test

Variable	KMO	AVE	Cronbach's Alpha	Factor Loading
H1 - Auditing Marketing Environment	0.847	56.04%	0.863	0.861
				0.795
				0.705
				0.833
				0.648
				0.576
				0.537
				0.849
				0.804
H2 - Auditing Marketing Strategy	0.809	70.84%	0.720	0.833
				0.811
				0.993
				0.796
				0.743
				0.871
				0.822
H3 - Auditing Marketing Organizational issues	0.722	72.89%	0.747	0.882
				0.875
				0.805
				0.880
				0.666
				0.982
H4 - Auditing Marketing Systems in Use	0.849	65.33%	0.899	0.909
				0.538
				0.894
				0.709
				0.881
				0.852

				0.900
H5 - Auditing Levels of Marketing Productivity	0.793	76.28%	0.821	0.961
				0.889
				0.788
				0.819
			0.874	0.815
H6 - Auditing Marketing Functions	0.840	63.83%		0.806
				0.896
				0.647
				0.765
				0.842
				0.929
				0.659
				0.997
Marketing effectiveness	0.878	69.58%	0.831	0.779
				0.779
				0.799
				0.853

Table 1, (Cronbach's Alpha) shows that all variables are greater than 0.5, average variance extracted (AVE) shows that all variables are larger than 50%, Factor loading (FL) shows that all variables are more than 0.4, Kaiser-Meyer-Olkin (KMO) shows that all variables are more than 50%, that is mean data shows good reliability and validity.

Descriptive Analysis for Research Variables

Table 2 shows the mean and standard deviation for the research dependent and independent variables. The mean values of the research variables clearly showed that responses fall within satisfactory values as Environment, Strategy, issues,

Systems, Productivity, Function, and effectiveness are 3.6619, 3.6272, 3.4944, 3.6873, 3.9290, 3.7929, 3.5204 respectively.

Table 2: Table of Variables Descriptive Analysis

Statistics		Environment	Strategy	issues	Systems	Productivity	Function	effectiveness
N	Valid	420	420	420	420	420	420	420
	Missing	0	0	0	0	0	0	0
Mean		3.6619	3.6272	3.4944	3.6873	3.9290	3.7929	3.5204
Std. Deviation		.69053	.63597	.58644	.79949	.72528	.74728	.66767
Skewness		.042	-.179	-.425	-.422	-.379	-.421	-.130
Std. Error of Skewness		.119	.119	.119	.119	.119	.119	.119
Kurtosis		-.030	-.286	-.032	.401	.189	.397	.197
Std. Error of Kurtosis		.238	.238	.238	.238	.238	.238	.238
Range		3.33	3.14	2.83	4.00	4.00	4.00	3.86
Minimum		1.67	1.86	1.67	1.00	1.00	1.00	1.14
Maximum		5.00	5.00	4.50	5.00	5.00	5.00	5.00

Also, Table 3 describes - the whole sample- which is 420 samples and the respondent's profile which got it from the survey.

Table 3: sample description

Item	Category	Frequency	Percent
Manufacturing Company	Yes	420	100
	No	0	0
Company Production	Engineering	75	17.9
	Chemical	138	32.9
	Food	58	13.8
	Medical	9	2.1
	Other	140	33.3
Respondents Position	Business owner	235	56.0
	Marketing	185	44.0
Company Nationality	Egyptian only	303	72.1
	Partner with multinationals or foreigners	72	17.1
	Foreigners only	45	10.7
Company Ownership	Corporate	166	39.5
	Limited Liability	31	7.4
	Partnership	86	20.5
	Sole company	76	18.1
	Simple Limited Partnership	61	14.5
Company Size	Very Small Company	18	4.3
	Small	88	21.0
	Medium company	197	46.9
	Large	117	27.9
Company Customers	Our customers are companies also	278	66.2
	Our customers are Individuals	83	19.8
	Our customers are governmental companies	32	7.6
	Other	27	6.4

Normality Test for Variables

Table 4 mentioned P-values are all larger than 0.05, so it is obvious that the Research variables are normally distributed.

Table 4: Normality test

Tests of Normality			
	Kolmogorov-Smirnova		
	Statistic	df	Sig.
Environment	.062	420	.001
Strategy	.078	420	.000
issues	.109	420	.000
Systems	.095	420	.000
Productivity	.087	420	.000
Function	.088	420	.000
effectiveness	.078	420	.000
a. Lilliefors Significance Correction			

Testing Autocorrelation

The Durbin-Watson test shows all values below in Table 5 are almost equal to 2, which means that the null hypothesis of no autocorrelation is supported. This implies that there is no problem with autocorrelation.

Table 5: autocorrelations test

Company Size		Durbin-Watson
Very Small Company	1	1.975
Small company	1	
	2	1.847
Medium company	1	
	2	
	3	
	4	
	5	1.668
Large Company	1	
	2	1.517

Testing Std. Error and Adjusted R2

As shown in table 6, R^2 and the least standard error of the estimates model was used to check the significant variables, it shows as well that for very small companies there is only one significant variable which is functions (SE = 0.27845, R^2 = 0.904), for small companies the significant variables are issues, Productivity (SE = 0.41385, R^2 = 0.489), for medium companies the significant variables are issues, Strategy, Productivity, Systems (SE = 0.33176, R^2 = 0.691), for large companies the significant variables are Systems, Function (SE = 0.36888, R^2 = 0.745)

Table 6: Std. Error and Adjusted R^2

Size	Model	R	R^2	Adjusted R^2	Std. Error
Model Summary					
Very Small	1	0.959a	0.920	0.904	0.27845
Small	1	0.667c	0.445	0.428	0.43790
Small	2	0.721d	0.519	0.489	0.41385
Medium	1	0.761c	0.579	0.573	0.39009
Medium	2	0.800e	0.640	0.630	0.36296
Medium	3	0.831f	0.691	0.678	0.33867
Medium	4	0.841g	0.708	0.691	0.33176
Medium	5	0.835h	0.698	0.685	0.33507
Large	1	0.851i	0.724	0.717	0.38883
Large	2	0.870j	0.758	0.745	0.36888

Testing ANOVA model

ANOVA model analysis was used to test for differences among the means of the population by using ANOVA, hereunder table 7 examines the amount of variation within each sample, relative to the amount of variation between the samples. In the below table, it shows that sig. is almost 0 i.e., less than 5 % and that is mean all options mentioned have significance on the dependent variables.

Table 7: Testing ANOVA

Size	Model		Sum of Squares	df	Mean Square	F	Sig.
ANOVAa							
Very Small	1	Regression	4.446	1	4.446	57.345	0.001b
		Residual	0.388	5	0.078		
		Total	4.834	6			
Small	1	Regression	5.074	1	5.074	26.459	0.000c
		Residual	6.328	33	0.192		
		Total	11.402	34			
	2	Regression	5.921	2	2.961	17.285	0.000d
		Residual	5.481	32	0.171		
		Total	11.402	34			
Medium	1	Regression	15.467	1	15.467	101.643	0.000c
		Residual	11.260	74	0.152		
		Total	26.727	75			
	2	Regression	17.110	2	8.555	64.937	0.000e
		Residual	9.617	73	0.132		
		Total	26.727	75			
	3	Regression	18.469	3	6.156	53.674	0.000f
		Residual	8.258	72	0.115		
		Total	26.727	75			
	4	Regression	18.912	4	4.728	42.957	0.000g
		Residual	7.815	71	0.110		
		Total	26.727	75			
	5	Regression	18.644	3	6.215	55.353	0.000h
		Residual	8.084	72	0.112		
		Total	26.727	75			
Large Company	1	Regression	15.840	1	15.840	104.771	0.000i
		Residual	6.047	40	0.151		
		Total	21.887	41			
	2	Regression	16.581	2	8.290	60.927	0.000j
		Residual	5.307	39	0.136		
		Total	21.887	41			

Testing Research Hypotheses

From the above data and analysis techniques to examine the model, the paper could explain the relationship between the independent's variables and dependent variable as supporting means there is a significant and positive relationship between dependent and independent while not supported means there is no significance between dependent and independent as below table 8,

Table 8: Hypothesis Test

Hypotheses	Company Size			
	Very Small	Small	Medium	Large
H1	not supported	not supported	not supported	not supported
H2	not supported	not supported	supported	not supported
H3	not supported	supported	supported	not supported
H4	not supported	not supported	supported	supported
H5	not supported	supported	supported	not supported
H6	supported	not supported	not supported	supported

Discussion

For H1,H2,H3,H4,H5,H6 and its criteria and from all previous literatures as Richard et al, (2005) stated that Marketing Audit (MA) has no single format for the audit, but the process could take six dimensions: The Marketing Environment (External environment, Internal environment) , The Current Marketing Strategy (Vision, Mission, Objectives, Goals, Current Strategy, Formal Structure, Functional Efficiency, and Interface or other relationship Efficiency) , The Marketing Organizational issues (Competitor, Consumer, Dealers and distributors, Public, and Facilities and marketing firms) , The Marketing Systems in Use (Marketing Information Systems, Marketing Planning Systems, Marketing Control Systems) ,Levels of Marketing Productivity (Profitability analysis, Cost-effectiveness analysis) , Marketing Functions (Product, Price, Place, Promotion, People, Physical Layout, Process), Yazid et al , (2019) identify the importance of Marketing Audit (MA) and its relations with the marketing effectiveness (ME) by comparing between all audit areas, Mindaugas et al (2020) ;Kotler and Keller ,(2009) and Gao's (2010) had stated that marketing effectiveness is a complex process and could depend on many factors like consumer philosophy, integrated marketing communication systems, strategic orientation, operative strategy, organizational imperatives, etc., they introduced a Model for Measuring Marketing Performance (MMMP), Wen-Kuei et al,(2015)

adopted another Model from Proposed Analytic Hierarchy Process (AHP) model for MA implementation, Iryna et al (2008) mentioned that Marketing Audit (MA) is complicated task of strategic marketing, and they proposed formation and stages of it . From all the above, we could collectively state the following:

From the data collected either physically or online, and analysis of data collections using SPSS, it appears that all samples know marketing audits but most of them by another name like effectiveness or efficiency, or performance, also it depends on the company size. The results - stratified by company size – are demonstrating the marketing audit as a complex process, and the results differ from one hypothesis to another and differ from one organization to another because of company philosophy, strategic orientation, ownership, maturity life cycle, and its maturity. There is no signal format for the audit or for its name. Most of the manufacturing companies in Egypt do not consider macro conditions formally, just talking about them but not formally identifying them which is a reactive approach.

Most of the respondent believes that auditing the environment is not the way to measure or affect marketing effectiveness, this result is inconsistent with the previous literature but that is because of the Egyptian context which is informal and depends mainly on sales. Some of the manufacturing companies in Egypt are confused about sales concepts and marketing concepts and which functions belong to them.

Medium manufacturing companies give interested in audit marketing strategy and they think that auditing strategy will impact their growth and marketing effectiveness, they use forms to state their VMOST, they think they are market challengers and that was force them to have an eye on their structure, to their resource allocations which enable them to grow, have a good market footprint, and can compete versus the market leaders, they give interest to audit marketing structure, marketing staff, Competitor, Consumer, communication with customers, quick response to customers give interest to marketing information system which consistent with their business life cycle as the companies most probably have computerized information system that enables them to discover the gap and control the marketing functions and let them develop new products, give interest for product profitability as a part from company efficiency more than marketing effectiveness.

The very small and small manufacturing companies still working from the perspective of sales instead of organized marketing processes and functions, surely they did not interest in the environmental audit which makes that because of company size, they struggle to focus on sales because of cost reduction and perception that they can spend one pound to increase sales is better than upgrade marketing functions, especially in the current tough conditions, they still far from a marketing perspective and focus on operation. Small and very small companies lack information systems and have no clear marketing functions, so

they do not implement marketing planning and control even for new products most of them work on commodity products and do not care about the new products in their preliminary life cycle. small companies care about product profit and cost but under the umbrella of a sales approach with less interest to audit the marketing mix while without a marketing mix definition, The very small companies audit continuously the marketing mix but informally and out of marketing concept, just the sales concept

Large companies already have their VMOST and marketing staff and they do not focus on auditing it, they consider it as fact and consider themself as big companies, leading the market with an already existing competition map so no need for auditing Marketing Organizational issues, plus the focus to increase their sales to the existing customer base make them give interest to a marketing information system which normally computerized one, this marketing information system is consistent with their mature business life cycle and enables them to discover the gap and control the marketing functions, to develop new products with continuously audit continuously audit their tactical level which is marketing mix for them.

The research from the above discussion helps to provide a comprehensive review and framework of marketing audit found in the Egyptian manufacturers in Egypt and how they implement it.

Also, from the respondent profile, which is either business owners or marketing, we found the responsible for implementation differs based on the company size.

Contribution

This article contributes practically and theoretically with the following points.

- ✓ The research will investigate the significance of those mentioned independent variables and the marketing effectiveness and which one is the most significant on it in the Egyptian manufacturing context.
- ✓ The research will develop a guideline and model to be used by the academic staff and test it in another context like the service
- ✓ As there are few studies addressing the research topic in Egypt context especially in a manufacturing environment and could be examined in developing countries
- ✓ The research will provide the professionals with a comprehensive tool testing its marketing landscape and how it affects their marketing and business effectiveness.

Limitations, recommendations, and directions of future research

Most empirical studies have some limitations, have recommendations and further research which may affect the research results as the following:

- ✓ First limitation is the sample size studied in this research as the data collected is 420 samples, we recommend further research

with more sample size and stratified by regions and sectors to test the result for each segment like chemical sectors, engineering sectors, food sectors, textile sectors, medical sectors, service and the possibility of having different information based on sectors and regions, this could explain more the behavior of manufacturers in Egypt to generalize the model.

✓ Second limitation, the research considers the size of the industry but not the manufacturing methods like volume-variety matrix, as with different industries' nature like (mass manufacturing, intermittent manufacturing, batch manufacturing, repetitive manufacturing, and mass customization manufacturing). we recommend further research considering the industry volume-variety matrix as it will affect the marketing functions and the result may differ.

✓ Third limitation is the research considered Egypt only while do not consider other countries either developed or developing countries and developing and developed countries. we recommend further research testing the same concept but in different countries either developing or developed countries which may provide a different result

✓ Fourth limitation is the ownership legality of the companies, the research has been conducted without considering the ownership legality as it could make a difference because the family and personal business are acting differently than corporate businesses, and the organization's culture,

behavior, and their attitude toward marketing systems and structure are different. So, we recommend further research but taking into consideration the ownership legality as it could provide other recommendations and results.

✓ Fifth limitation is the nationality of the business, as the research has been conducted without considering in the analysis the nationality of the business either Egyptian or multinational or mixed between them, so we recommend further research considering the business nationality to test the data validity

✓ Sixth limitation is the research timing as it was held in current economic crises, economy downturns, war, and recessions in the world and Egypt, which might interfere and show different results than the upturn cycle of the economy. Therefore, we recommend future research be held in upturn conditions or longitudinal which could show if the same results are obtained

✓ Seventh limitation is the effect of other parameters, the company life cycle and the establishment year of the manufacturer may affect the results either individually or collectively with the other factors so we recommend further research considering the life cycle and establishment year of the business that will test and validate the data.

✓ Another recommendation , From point of empirical view, marketers could create a standard format for marketing audit process based on previous models and modified to suit the Egyptian companies and could be designed into pyramid

shape levels, three levels as standard levels with gradually details while level four customized based on the nature of the manufacturer that will enable to standardize the process and make a benchmarking between companies , Marketers could create marketing effectiveness and audit model like Marketingram which mentioned in literature but adopted to Egyptian manufacturer on levels as mentioned before , Marketers and marketing institutions should establish a culture among manufacturers for the marketing audit importance and should create certificates like ISO certificate for marketing audits and focus on spreading the marketing audit concept, these certificates should go for audit process for where, who, when, what and how to make it, this will help to improve the manufacturers performance and provide more control as well as financial and quality audit.

✓

Acknowledgments

Ethical considerations

This article followed all ethical standards for research without direct contact with human or animal subjects.

Funding information

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Data availability

Data is available within the article or its supplementary materials, and other data is available on request.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

References

1. V.M. Wankhede (2020) Study Of Issues Related To Application Of Marketing Audit By Mncs, Vidyabharati International Interdiscplinary Research Journal , ,Issn 2319-4979 , Sep.2020

2. M.R. Palav And Satish Jagtap (2021). Marketing Audit: Process And Importance, Vidyabharati International Interdisciplinary Research Journal 13(1).

3. Piotr Hadrian, (2020). The Various Models Of Marketing Audit, Marketing Of Scientific And Research Organizations, 2020, Vol. 37, Issue 3, P. 51–72

4. Fikrat Valı Guliyev (2022) , Marketing Audit In Efficiency Of Marketing In The Food Industry , Marketing And Mangamnt Of Innovations , Issue 2 ,Issn 2218-4511 , 2022

5. Nataliia Zamkova And Valerii Bondarenko (2020). Implementation Of

Marketing Audit into The Sphere of Electronic Entrepreneurship. International Journal Of Management (Ijm) Volume 11, Issue 6, June 2020, Pp. 1773-1780, Article Id: Ijm_11_06_162.

6. [OECD] the organization for economic co-operation and development. (2021). Production transformation policy review of Egypt embracing change, achieving prosperity: OECD publishing.

7. World Bank Report, 2021, (https://www.worldbank.org/en/country/egypt,2021)

8. Cenetral Bank of egypt reprot , Volume 62 ,2022

9. Chemical chamber in Egypt report ,2019

10. Guliyev, Fikrat Valı (2022). Marketing audits an efficiency of marketing in the food industry, marketing and management of innovations, issue 2, ISSN 2218-4511, 2022

11. Ama management report no. 32. Analyzing and improving marketing performance. New york: American management association, 1959.

12. Shuchman, A., Sessions, R., Oxenfeldt, A., & Crisp, R. (1959). The marketing audit: Its nature, purposes, and problems (American Management Association Report No 32). New York, NY: American Management Association.

13. Kotler P. From sales obsession to marketing effectiveness. Harv Bus Rev 1977;55:67– 75 (Nov–Dec).

14. Capella I, Seckely W. The marketing audit: methods, problems and perspectives. Akron Bus Econ Rev 1978;37–41

15. Rothe JT, Harvey MG, Jackson CE. The marketing audit: five decades later. J Mark Theory Pract 1997;5(3):1 – 16.

16. Mokwa, m. (1986). The strategic marketing audit: an adoption/utilization perspective. Journal of business strategy, 6(4), 88–95.

17. Ama management report no. 32. Analyzing and improving marketing performance. New york: American management association, 1959.

18. Abdullah al fahad, abdulrahman al mahmud, robel miah, ummay hani islam , (2015). Marketing audit: a systematic and comprehensive marketing examination. International journal of scientific & technology research volume 4, iss.07, 2015

19. Morgan, n. A., clark, b. H., & gooner, r. (2002). Marketing productivity, marketing audits, and system for marketing performance assessment: integrating multiple perspectives. Journal of business research, 55, 363e375.

20. Mehdi taghian and robin n.shaw   (2008). The marketing aduit and organization performance : an emprical profiling. Journal of marketing theory and practice fall 2008,16,4, pp. 341

21. Lipnick Denisa, Ď. J. (2013). Marketing Audit and Factors Influencing Its Use in Practice in Companies. Journal of Competitiveness, 5 (4), 26-27.

22. Hanna chmil and hanna verzilova (2020). Heoretical aspects of marketing audit organization at the trading enterprise. International scientific journal. Issue 1. 2020, the institute of accounting, control and analysis in the globalization circumstances

23. Kitchenko, kuchina, s. (2019). Enterprise commnication policy indicators analysisi as a part of marketing aduit , report on research projects .(http://creativecommons.org/license/by/4.0)

24. Antonio pimenta da gamait (2020), "how good is the marketing method? Measuring the process and the outcomes", journal of business strategy, vol. 41 no. 6 2020, pp. 57-67,

25. Yezid Cancino Gómez , Jairo Palacios Rozo , César Manjarrez Leytón,(2019) , Marketing Audit Model Oriented To The Traceability Of The Objectives And Strategies , AGLALA ISNN 2215-7360 2019; 10 (1): 1-22

26. Philip Kotler ,Gary Armstrong, John Saunders , Veronica Wong (1999).Principle of Marketing .Prentice hall Europe ,ISBN 0-13-262254-8

27. Philip Kotler, Gary Armstrong, John Saunders, Veronica Wong (1999). Principle of Marketing. Prentice hall Europe, ISBN 0-13-262254-8

28. Richard M.S. Wilson, Colin Gilligan. (2005). Strategic Marketing Management. Elsevier Butterworth-Heinemann. ISBN 0 7506 5938 6

29. Jan Brinckmann, Dietmar Grichnik , Diana Kapsa. (2002). should entrepreneurs plan or just storm the castle? A meta-analysis on contextual factors impacting the business planning–performance relationship in small firms. Journal of Business Venturing 25 (2010) 24–40

30. Berry, Conant, Parasuraman (1991) A framework for conducting a service marketing audit , Journal of the academy of marketing science ,volume 19 , number 3 ,pages 255-268 ,Issn 0092-0703, 1991

31. Hannah Snyder (2019) literature review as a research methodology: an overview and guidelines, Journal of business research ,volume 104, 333-339, 2019

32. Mimansha Patel et, Nitin Patel (2019) , Exploring Research Methodology: Review Article , International Journal of Research and Review , E-ISSN: 2349-9788; P-ISSN: 2454-2237

33. Shanti Bhushan Mishra and Shashi Alok (2019) , Handbook of Research Methodology , EDUCREATION PUBLISHING ISBN: 978-1-5457-0340-3

34. Shanti Bhushan Mishra and Shashi Alok (2019) , Handbook of Research Methodology , EDUCREATION PUBLISHING ISBN: 978-1-5457-0340-3

35. Hussein Muhaise, Annabella Habinka Ejiri, Johnie Wycliffe Frank Muwanga-Zake, Margaret Kareyo (2022) , The Research Philosophy Dilemma for Postgraduate Student Researchers , International Journal of Research and Scientific Innovation (IJRSI) | Volume VII, Issue IV, April 2020 | ISSN 2321–2705

36. Malhotra, A., Mathews, J.D. and Urbina, J., 2007. Multi-static,

common volume radar observations of meteors at Jicamarca. Geophysical research letters, 34(24).

37. Creswell, J.W. and Plano Clark, V.L. (2011) Designing and Conducting Mixed Methods Research, 2nd edition, Sage, Thousand Oaks, CA

38. Dilley, P. (2004). Interviews and the Philosophy of Qualitative Research. The Journal of Higher Education, 75(1), 127-132. Retrieved from http://www.jstor.org/stable/3838692

39. Ketokivi, M. and Mantere, S. (2010) 'Two strategies for inductive reasoning in organizational research', Academy of Management Review, Vol. 35, No. 2, pp. 315–33.

40. Sekaran, U. and Bougie, R., 2016. Research methods for business: A skill building approach. John Wiley & Sons.

41. Mark Saunders, Philip Lewis and Adrian Thornhill (2016). Understanding research philosophies and approaches: Accessed 20/3/2020 from : https://www.researchgate.net/publication/309102603

42. Basden, A., 2011. Enabling a Kleinian integration of interpretivist and socio critical IS research: The contribution of Dooyeweerd's philosophy. European Journal of Information Systems, 20(4), pp.477-489

43. McAnulla, S., 2006. Challenging the new interpretivist approach: Towards a critical realist alternative. British politics, 1(1), pp.113-138.

44. Bhaskar, R., 1975. Forms of realism. Philosophica, 15(1): 99–127.

45. Bhaskar, R., 1979. The possibility of naturalism. Atlantic Highlands.

46. Bhaskar, R., 2014. The possibility of naturalism: A philosophical critique of the contemporary human sciences. Routledge.

47. Van Maanen, J., Sørensen, J.B. and Mitchell, T.R. (2007) 'The interplay between theory and method', Academy of Management Review, Vol. 32, No. 4, pp. 1145–54.

48. Salmon M. (1992) Introduction to the Philosophy of Science. New York. Prentice Hall.

49. Watson, T. (2011) 'Ethnography, reality, and truth: The vital need for studies of "how things work" in organizations and management', Journal of Management Studies, Vol. 48, No. 1, pp. 202–17.

50. Bell, E. and Bryman, A., 2007. The ethics of management research: an exploratory content analysis. British journal of management, 18(1), pp.63-77.

51. Sekaran, U. and Bougie, R., 2016. Research methods for business: A skill building approach. John Wiley & Sons.

52. Saunders, M., Lewis, P. and Thornhill, A., 2016. Research methods for business students (Seventh). Nueva York: Pearson Education

53. Boru, T., 2018. Chapter five research design and Methodology 5.1. Introduction. Erişim adresi: https://www.research gate.net/publication/329715052_chapter_five_research _desıgn_and_methodology_51_ıntroduction.

54. Creswell, J.W. and Clark, V.L.P., 2017. Designing and conducting mixed methods research. Sage publications.

55. Tatiana V. Ryba, Gareth Wiltshire, Julian North & Noora J. Ronkainen (2022) Developing mixed methods research in sport and exercise psychology: potential contributions of a critical realist perspective, International Journal of Sport, and Exercise Psychology, 20:1, 147-167, DOI: 10.1080/1612197X.2020.1827002

56. Wyllie, T.M., 2019. Qualitative And Quantitative Research Approaches. pp. 1–10

57. Bryman, A. and Becker, S., 2012. The nature of quantitative and qualitative research Understanding research for social policy and social work: Themes, methods and approaches, pp.120-126

58. Queirós, A., Faria, D. and Almeida, F., 2017. Strengths and limitations of qualitative and quantitative research methods. European Journal of Education Studies. 3(9), 369-387.

59. Zikmund, W.G., Carr, J.C. and Griffin, M., 2013. Business Research

Methods (Book Only). Cengage Learning.

60. Saunders, M., Lewis, P.H.I.L.I.P. and Thornhill, A.D.R.I.A.N., 2007. Research methods. Business Students 4th edition Pearson Education Limited, England.

61. Zikmund, W.G., Carr, J.C. and Griffin, M., 2013. Business Research Methods (Book Only). Cengage Learning.

62. Sedgwick, P., 2014. Cross-sectional studies: advantages and disadvantages. Bmj, 348. 348,1–2

63. Uma Sekaran, 2003.Research methods for business a skill building approach fourth edition, 2003 John Wiley & Sons, Inc.

64. Hair, J.F., Ringle, C.M. and Sarstedt, M., 2012. Partial least squares: the better approach to structural equation modeling. Long Range Planning, 45(5-6), pp.312-319.

65. Uma Sekaran, Roger Bougie (2016), Research Methods for Business: A Skill-Building Approach, John Wiley And Sons publishing, ISBN: 111994225XISBN13: 9781119942252

66. Alarcón, D., Sánchez, J.A. and De Olavide, U., 2015, October. Assessing convergent and discriminant validity in the ADHD-R IV rating scale: User-written commands for Average Variance Extracted (AVE), Composite Reliability (CR), and Heterotrait-Monotrait ratio of correlations (HTMT). In Spanish STATA meeting (Vol. 39). Universidad Pablo de Olavide

67. George & Mallery, ,2010, SPSS for Windows Step-by-Step: A Simple Guide and Reference, 14.0 update (7th Edition)

68. Hair, J., Black, W.C., Babin, B. J., & Anderson, R.E. (2010). Multivariate Data Analysis (7th Edition). NJ: Prentice-Hall Publication.

69. Raimova Muborak (2022). Modern marketing concept, International scientific research journal, ISSN :2776-0979, Volume 3, issue 8 ,Aug. 2022

70. John westwood . (2022). How to write a marketing plan, ISBN 9781398605701.seventh edition, Kogan page limited.