ISSN 3006-4007 (Print)
ISSN 3006-4015 (Online)

JAARS

Journal of Advanced Academic Research and Studies

Vol. 1, No.9, September 2024

Published by

NLBA Eurasian Institute

Supported by

Journal of Advanced Academic Research and Studies (JAARS)

ISSN 3006-4007 (Print)
ISSN 3006-4015 (Online)

Aims

The Journal of Advanced Academic Research and Studies aims to Continuously promote meaningful and valuable outstanding academic achievements to serve the society, increase advanced academic knowledge for the world civilisation, and serve the progress of science and technology combined with human society.

Journal Title

The official title of the journal is "Journal of Advanced Academic Research and Studies (JAARS)" and the abbreviated title is "J. adv. acad. res. stud."

Year of Launching

Journal of Advanced Academic Research and Studies was launched in 2023.

Availability of the Full-Text in the Web

Full text is freely available from: www.nlbaeai.org

Fund Support

This journal was supported by the NLBA Eurasian Institute Limited.

Index in Database

The articles published in this journal are may index and/or abstracted in EBSCO.
ProQuest, Ex Libris, and Google Scholar.

Subscription Information

All correspondences regarding membership, subscriptions and changes of address should be sent to the society addressed as below: NLBA Eurasian Institute Limited (E-Mail: edubscon@outlook.com , Homepage: www.nlbaeai.org). The annual subscription fees are free of charge.

Submission

The NLBA Eurasian Institute Limited operates an on-line submission system. Details of how to submit online and full author instructions can be found at:www.nlbaeai.org. Manuscripts should be submitted to the on-line submission system at:www.nlbaeai.org following all prompts on the screen. Other correspondences can be sent by e-mail to the editor at edubscon@outlook.com Peer review under responsibility of the NLBA Eurasian Institute Limited.

Journal of Advanced Academic Research and Studies Volume 1, Number 9

Published 1 September 2024

Publisher (Editorial Office)

E-Mail: edubscon@outlook.com, Homepage: www.nlbaeai.org
Hooijdonkseweg 3, 4823 ZD Breda, Nederland

Journal of Advanced Academic Research and Studies

Vol.1, No.9 September, 2024

1 An Empirical Study on the Impact of Corporate Green Marketing on Consumers' Green Purchase Intention

Qian Liu

67 Research on the Technological and Economic Adaptability of Air Source Heat Pumps in Multi-Span Greenhouses: A Case Study of Shiling Town, Suqian

Xiaole Sheng

82 BUC World Best Value Universities & Colleges Rankings

Published by

NLBA Eurasian Institute

Journal of Advanced Academic Research and Studies 高等学术研究期刊
Vol. 1, No.9, September 2024 (pp. 1-66)
http://www.nlbaeai.org/

ISSN 3006-4007 (Print)
ISSN 3006-4015 (Online)

An Empirical Study on the Impact of Corporate Green Marketing on Consumers' Green Purchase Intention

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Received 07 March 2024, Revised 03 June 2024, Accepted 01 September 2024

Abstract

Purpose – Modern society, while enjoying the convenience brought by rapid economic development and technological progress, also faces many challenges such as environmental degradation and ecological balance damage. With the end of COVID-19, green transformation and inclusive development have gradually become the focus of global recovery policies. In this context, green marketing, as an emerging marketing strategy, has received increasing attention from businesses and consumers in recent years. Enterprises are beginning to realize that implementing green marketing is an important measure for them to achieve more economic and social benefits.

Design/Methodology/Approach – This article constructs a conceptual model based on previous research experience and innovation by reviewing literature on green marketing characteristics, green marketing perception, green purchase intention, and brand image. The study used a questionnaire survey to conduct empirical analysis on the collected and organized 787 valid survey data. Using SPSS 27.0 and AMOS 28.0 software for data analysis and hypothesis model validation.

Findings – green marketing has a positive impact on consumers' willingness to make green purchases. brand image plays a positive moderating role between green marketing and consumer green purchase intention.brand image plays a positive regulatory role between green marketing and green marketing perception.corporate green marketing has a positive impact on the perception of green marketing.the perception of green marketing has a positive impact on their willingness to make green purchases. green marketing perception plays a mediating role between green marketing and consumer green purchase intention.

Research Implications – But in fact, what is the ultimate effect of implementing green marketing in enterprises? What is the mechanism of action? Can consumer perception of green marketing arouse their willingness to make green purchases? There is relatively little research accumulation on these issues in the academic community.

Keywords: Green Marketing,Consumers' Green Purchase Intention,Green Purchase Intention
JEL Classifications: M31,Q50,D12

此文为作者刘谦韩国信韩大学工商管理博士毕业论文，《기업 그린 마케팅이 소비자의 그린 구매의도에 미치는 영향에 관한 연구》中文翻译版，获 2024 年韩国信韩大学优秀博士生奖

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I. 绪论

现代社会的确在享受经济快速发展和科技进步带来的便利的同时，也面临着环境退化和生态平衡受损等诸多挑战。随着 COVID-19 的结束，绿色转型与包容性发展逐渐成为全球复苏政策焦点，生态文明的构建与绿色发展的理念紧密相连，它主张在经济、政治、文化以及社会各个领域及其发展全程中全面融入环境保护的理念。随着生态文明建设的推进和绿色发展理念的普及，越来越多的人开始重视绿色产品。绿色产品因其对环境影响小、可持续性强等特点，逐渐成为市场的新宠。这种转变不仅体现在消费者行为的改变上，更是反映了公众对健康生活方式和可持续发展的高度认识。在这样的背景下，绿色营销作为一种新兴的营销策略，近年来受到越来越多企业和消费者的关注。企业开始认识到实施绿色营销是企业取得更多经济效益和社会效益的重要措施。但事实上，企业实施绿色营销的最终效果如何？其中的作用机制如何？消费者绿色营销感知能否引起消费者的绿色购买意愿？这些问题在学术界的研究积累相对较少，本研究通过把企业的绿色营销划分为生态观、环保性、社会责任性和匹配度四个维度，让消费者感知到绿色营销，从而影响消费者的绿色购买意愿。具体研究问题包括：企业绿色营销对消费者绿色购买意愿的影响；绿色营销感知对消费者绿色购买意愿的影响；企业绿色营销对绿色营销感知的影响；绿色营销感知在绿色营销与消费者的绿色购买意愿之间的中介作用；品牌形象在绿色营销和消费者绿色购买意愿之间的调节 作用；品牌形象在绿色营销和绿色营销感知之间的调节作用；

本文通过对绿色营销特征、绿色营销感知、绿色购买意愿、品牌形象的文献梳理，根据前人研究经验和创新对概念模型进行了构建。研究采用问卷调查的形式，对所收集整理后的 787 份有效调研数据进行实证分析。运用 SPSS27.0 及 AMOS28.0 软件进行数据分析与假设模型验证，得出研究结论如下：

绿色营销对消费者绿色购买意愿具有正向影响。企业绿色营销的生态观和社会责任性对消费者绿色购买意愿具有显著的正向影响，绿色营销环保性和匹配度对消费者企业动机感知影响不显著。

品牌形象在绿色营销和消费者绿色购买意愿之间起到正向调节作用。

品牌形象在绿色营销和绿色营销感知之间起到正向调节作用。本文研究设定把绿色营销感知划分为企业动机感知和企业道德感知两个维度，品牌形象在绿色营销和企业动机感知没有起到正向调节作用，品牌形象在绿色营销和企业道德感知之间起到正向调节作用。

企业绿色营销对绿色营销感知具有正向影响。其中企业绿色营销的环保性和匹配性对企业动机感知具有正向影响，绿色营销的生态观和社会责任对企业动机感知没有正向影响；绿色营销的生态观、环保性和匹配性对企业道德感知具有正向影响，绿色营销的社会责任对企业道德感知没有正向影响。

绿色营销感知对其绿色购买意愿具有正向影响。本研究设定绿色营销感知包含企业动机感知和企业道德感知两个维度，其中绿色营销感知的企业动机感知和企业道德感知对其绿色购买意愿都具有正向影响。

绿色营销感知在绿色营销与消费者的绿色购买意愿之间起到中介作用。其中绿色营销感知中，消费者对企业的动机感知和道德感知对其与消费者的绿色购买意愿之间都起到中介作用。

本文研究具有如下创新点：

实证研究：论文采用了实证分析的研究方法。目前有关绿色营销的文献大多数是综述类文章，一些文章也采用了案例分析法对绿色营销进行研究，但是很少有关于绿色营销带给消费者绿色购买意愿的实证研究。实证研究可以通过计量工具将复杂的问题通过模型进行回归分析，比较适合目前急速变化的大环境，许多管理学方面的研究都采用了实证研究的方法。要想实现对绿色营销研究质上的飞跃，最好的方法之一就是采用实证研究。本文通过文献分析和问卷调查的方法，基于现实数据来分析企业绿色营销策略的有效性，这种实证研究方法能够提供更加具体和可靠的结论。

多维度分析法：绿色营销与对消费者绿色购买意愿的影响结合，这是研究绿色意愿的新角度。利

用了多维度分析法，通过文献查阅的方法综合考虑了企业绿色营销的四个方面（生态观、环保性、社会责任、匹配性），把消费者感知反应划分为企业的动机感知和企业道德感知两个维度作为中介变量，研究了这些不同方面如何单独或共同影响消费者的绿色购买意愿，有助于我们更全面地了解绿色营销的影响因素、作用后果，从而帮助我们更好地利用绿色营销实现企业的经济价值和社会价值。

3. 跨学科研究：本研究结合了营销学、环境科学、心理学、消费者行为学等多个学科领域的理论和方法，这种跨学科的研究方法有助于为绿色营销提供更全面的理解，同时也为绿色营销和消费者行为的研究提供了一个跨学科的视角。

1. 研究背景

绿色营销作为一种新兴的营销策略，近年来受到越来越多企业和消费者的关注。它强调的是在商业活动中积极促进环保、可持续发展和社会责任，旨在通过产品、服务或营销手段来传递环保理念，引导消费者做出更环保、可持续的购买决策。选择绿色营销进行研究具有重要的背景意义，本文从现实背景与理论背景两个方面来阐述。

1.1. 现实背景

现代社会在享有物质空前繁盛、经济飞速发展成果的同时，也产生了诸如资源匮乏、污染严重、水土流失、温室效应等环境问题。COVID–19 的出现更是引发了人类对自身行为的反思。

随着全球对经济可持续发展和环境的高度重视，企业可持续性发展开始逐渐受到世界各个国家的关注，绿色营销已经成为促进企业可持续发展的关键因素之一（贾翔宇，2023）。随着 COVID–19 疫情的结束，绿色转型与包容性发展逐渐成为全球复苏政策焦点，“绿色与包容”复苏的政策目标包括经济可持续增长、创造绿色与包容性就业、绿色低碳助力零碳未来、营造公平与包容的社会环境。要解决当前面临的资源和环境困境，既要转变消费者的消费方式，更要改变企业的生产方式。因此推进企业绿色营销行为成为转变消费者消费方式和企业生产方式的重要举措（季恒，2021）。各国政府正在采取绿色增长政策，并实施新的法规以促进可持续发展。韩国制定的“低碳绿色增长”框架侧重于实施有效应对气候变化和能源问题并促进可持续发展的措施，同时通过发展绿色技术和绿色产业，建立经济与环境协调的绿色增长体系（클라우디아，2012）。同样，根据 2021 年中国国务院发布的《关于加快建立健全绿色低碳循环发展经济体系的指导意见》，政府对企业的绿色工作原则、主要目标、绿色低碳循环发展的生产体系、流通体系、消费体系、基础设施绿色升级、市场导向的绿色技术创新体系以及法律法规政策等方面作出了明确规定，这促使许多企业必须转向绿色低碳发展。对于新兴消费者来说，他们的消费观念和行为与以前的消费者完全不同（LIU QIAN,2020）。消费者日益重视绿色理念，因此他们要求企业生产和销售对环境影响最小的绿色产品。客户认为绿色营销是有价值的，需要为持续的绿色营销创造社会氛围和营销力度（조수현，2018）。为了应对消费者的环保需求，绿色营销作为一种以环保为核心理念的营销策略在企业与消费者之间形成，成为企业获取竞争优势、树立良好品牌形象的重要手段之一。绿色营销是企业在满足全球市场对生态环境保护要求和消费者“绿色”意识提升的背景下发展的一种新型营销模式。它也代表着企业所面临的环境法规和不断增长的绿色消费者需求所带来的挑战，同时也是企业在新时代发展中的新营销机遇。우승희和김원겸（2023）经过对各个领域的绿色营销研究，得出了结论：自 2018 年以来，绿色营销研究的显著增加似乎部分是由于全球变暖导致的快速气候变化和 COVID–19 的破坏性影响；在国家公布研究频率方面，中国是进行绿色营销相关研究最多的国家，其次是美国和印度，这是因为中国政府最近加强了环境法规和企业环境的变化，强调绿色营销的重要性，并正在进行相关研究。

研究绿色营销对消费意愿的影响，有助于企业深入了解消费者对环保产品的态度和购买行为。通过了解消费者对绿色环保产品的偏好和需求，企业可以制定更具针对性的营销策略，提高产品的市场竞争力。同时，绿色营销的研究也有助于推动绿色产品在市场中的普及和推广，促进绿色消费的发展。

1.2 理论背景

事实上，随着人们对于生态环保观念的认知和加强，也促使人们改变原有的消费观念，许多人已经自愿拒绝非绿色产品，这些人心甘情愿地站在绿色消费立场上，心甘情愿地为人类社会的可持续发展买单，具有高度的前瞻性。而对于营销学，尤其是消费者行为学而言，聚焦消费者视角下的企业环境行为，深入剖析消费者对企业环境行为的心理决策与判断过程对增强绿色营销活动的有效性，提升消费者响应更是具有重要意义（龚思羽，2021）。研究绿色营销对绿色购买意愿的影响是一个具有重要研究价值的课题，对企业、消费者和整个社会都有着重要的影响和意义。随着社交媒体的普及，消费者在购买决策过程中越来越重视绿色产品。

理论化的绿色发展已经得到全球的认可，越来越多的国家出台了绿色环保相关政策，很多国家甚至出台了相关法律来实行绿色环保政策，由此也可以看出绿色营销的发展前景十分明朗。김준희（2011）认为，在韩国，绿色营销只有在缺乏环境基础设施建设和目标以及企业营销策略的情况下才被视为一种社会效益，因此它没有正确把握确保公司潜在市场的适销性；因此为了有效地执行公司的绿色营销策略，有必要了解消费者对公司绿色营销策略的看法以及它如何影响购买。绿色营销综合了市场营销、生态营销的相关内容，把市场环境和自身资源相结合在考虑股东经济利益的同时也考虑了利益相关者的相关利益，在当前世界尤其是中国可持续发展战略的大背景下，已经成为企业最重要的营销途径。

首先，对企业而言，绿色营销不仅是一种市场策略，更是一种社会责任和可持续发展的体现。通过深入研究绿色营销对消费意愿的影响，企业可以更好地了解消费者的环保需求和偏好，从而调整产品设计、营销策略和沟通方式，提升产品的市场竞争力和品牌声誉。同时，积极推动绿色产品的研发和推广，不仅可以满足消费者对环保产品的需求，还可以促进产业结构的升级和转型，推动企业向着可持续发展的方向迈进。其次，对消费者而言，绿色营销的研究有助于提升消费者的环保意识和责任感。消费者通过购买绿色产品，可以积极参与到环保事业中来，推动企业生产更多环保产品，促进绿色消费的普及和发展。同时，消费者对绿色产品的认可和支持也能够激励更多企业投入绿色营销中，形成一个良性循环，推动整个社会朝着更加环保和可持续的方向发展。

根据美国心理学家 Jean Piaget 在 20 世纪中叶提出的认知理论，消费者的购买意愿受到其对产品或服务的认知程度和态度的影响。绿色营销通过传播环保信息和强调产品的环保特性，可以提升消费者对绿色产品的认知水平和积极态度，进而影响其购买意愿；根据美国社会心理学家亨利・塔季费尔德（Henry Tajfel）和约翰・特纳（John Turner）等人提出的社会认同理论认为，消费者的购买决策受到社会群体的认同和影响。通过绿色营销传播企业的环保承诺和实践，可以塑造企业的环保形象，吸引那些具有环保意识和价值观的消费者，提升其购买意愿；根据英国哲学家、经济学家和社会改革者杰里米・边沁（Jeremy Bentham）和约翰・斯图亚特・密尔（John Stuart Mill）提出的利他主义理论认为，消费者在购买决策中会考虑到社会责任和环保因素。绿色营销强调产品的环保特性和企业的社会责任，可以激发消费者的利他主义情感，提升其购买意愿，从而促进绿色产品的市场推广和销售。

2. 研究目的与研究意义

2.1 研究目的

本论文具体研究目的如下：

通过深入的文献整理和广泛的调研，对企业绿色营销在未来社会发展中的关键价值进行探讨，旨在深入了解绿色营销对企业和社会可持续发展的重要性。这一研究旨在揭示企业实施绿色营销所带来的影响，探讨其在推动环保意识、塑造企业形象以及满足消费者需求方面的作用，从而为未来的社会发展提供理论和实践层面的重要参考。

讨论了企业进行绿色营销时对于消费者绿色购买意愿的影响模式，并通过企业的绿色营销的四个维度，生态观， 环保性，社会责任，匹配性来确定对消费者绿色购买意愿的影响，根据调查数据分析显示，企业施行绿色营销对消费者的绿色购买意愿有积极影响。其中，绿色营销的生态观和社会责任对消费者的绿色购买意愿有着显著的直接影响。绿色营销的环保性和匹配性对消费者绿色购买意愿显著影响较小。

在考虑品牌形象作为调节变量时，研究确定了品牌形象对消费者绿色购买意愿的影响程度随着品牌形象的提升而逐渐增强的关系。这意味着随着品牌形象水平的提高，消费者的绿色购买意愿呈现出更为显著的正向影响。这一发现对于深入理解品牌形象在消费者绿色购买意愿中的作用具有重要意义，为进一步探讨品牌形象的影响机制提供了有益参考。

确定当绿色营销感知作为中介变量时对消费者购买意图的影响。通过考察企业绿色营销的产品对消费者绿色购买意愿的影响机制，把绿色营销感知分为两个维度，分别探讨消费者对企业的动机感知和企业的道德感知在其中的中介作用，从而深入了解绿色营销感知在影响消费者购买意图中的作用机制。

由企业进行绿色营销对消费者的绿色购买意愿产生积极影响的研究表明，企业实施绿色营销活动可以显著增强消费者的绿色购买意愿。这一发现对于深入理解企业绿色营销对消费者行为的影响机制具有重要意义，为推动绿色消费和可持续发展提供了有益参考。

2.2 理论意义

企业绿色营销对消费者绿色购买意愿的影响在理论上具有重要意义，主要体现在以下几个方面：

消费心理学研究：消费者态度和行为动机，研究企业绿色营销对消费者绿色购买意愿的影响可以帮助揭示消费者对环保产品的态度和行为动机。了解消费者对环保产品的偏好和购买决策背后的心理过程，有助于深入理解消费者的行为模式和消费决策。

社会认知和社会影响：通过研究企业绿色营销如何影响消费者的绿色购买意愿，可以探讨社会认知对消费行为的影响。消费者可能会受到他人或社会环境的影响而选择购买环保产品，这涉及社会认同和社会影响力的研究领域。

社会认同理论研究：身份认同与购买行为，研究企业绿色营销对消费者的绿色购买意愿的影响也有助于拓展社会认同理论的应用。消费者可能会因为购买环保产品而强化自己的社会认同，将环保作为一种身份认同的表达，这对于理解消费者行为背后的社会认同动机具有重要意义。

可持续发展研究：环保意识与可持续消费，研究企业绿色营销对消费者的绿色购买意愿的影响有助于探讨可持续发展理论在消费领域的应用。消费者购买环保产品不仅可以满足个人需求，同时也符合可持续发展的理念，有助于推动社会朝着更环保和可持续的方向发展。

2.3 现实意义

在环保问题日益严峻的背景下，绿色发展已成为时代的主旋律。公司将更加关注绿色发展之路，同时内部也在深入思考如何更加合理地推进绿色经营，以实现环境保护、消费者权益和公司效益的协调统一。在实施绿色营销方面，中小企业存在一些缺陷，比如对绿色营销策略的不当运用，甚至出现了＂伪绿＂、＂漂绿＂等绿色营销的特殊情况。此外，消费者对绿色营销的认知模糊，社会认可度不高，对企业的能力、动机和道德缺乏清晰地了解，导致诚信缺失、情感反馈不足、绿色购买动力不足，甚至出现负面评价。在绿色营销愈发受到企业重视的时候，企业如何进行绿色营销，充分发挥绿色营销的优势也就更有现实意义。

所以，本研究通过从消费者绿色购买意愿的角度，构建了绿色营销与消费者营销感知、消费者绿色购买意愿之间的关联，并且增加了品牌形象作为其调节变量的因素。

本研究通过大量文献整理和调研，帮助企业全面地了解在绿色营销经济发展中所面临的市场环境，全面阐述了绿色营销在企业绿色发展中的重要意义。通过对企业绿色经营四个维度的划分，企业应关注其自身的生态观和社会责任性，实施改革创新，满足消费者对生态环境保护的需求，积极推动绿色创新，减少产品在全寿命周期内的资源消耗，节约能源，降低环境影响，提升企业在生态环境中的社会责任，并推动公司实现可持续发展。

在研究方法上，探讨绿色营销与消费者绿色购买意愿之间的关系，通过实证研究方法分析绿色营销对消费者绿色购买意愿的影响程度，为企业制定营销策略提供数据支持。

研究指出企业进行绿色营销时对于消费者的绿色购买意愿之间具有积极的影响。在以往文献研究中，较少关注企业的绿色营销与消费者购买意愿之间的关联，因此本研究结果有助于企业坚定地选择绿色营销政策。建议未来的绿色营销研究不仅要考虑企业自身影响，还应关注消费者的需求和想法，此外，品牌形象在整个绿色营销中起到的调节作用也不容忽略。企业可以从满足消费者需求出发，推动消费者响应升级，引领更多消费者走向生态化、绿色化的消费路径，进一步拓展潜在市场。这对于企业如何开展和有效实施绿色营销具有重要的现实意义。

本研究强调企业开展绿色营销的主要目的是促进消费者进行绿色消费。本研究揭示了企业的动机感知和消费感知中对消费者购买意愿的中介作用，这些发现为“企业应当如何实施绿色营销，以便消费者能够有效地做出购买决策”的问题提出了建议。企业的绿色营销措施有助于增强消费者信心、促进消费者自我提高，进而激励更多消费者进行绿色消费，提高企业的绿色经营效果。同时，本研究为企业如何进行绿色营销进行了深入探讨，在绿色营销感知方面的影响提供了指导，帮助消费者更好地认识企业的动机和道德，也为以后企业推动绿色营销管理提供了必要的借鉴和支持。

3. 研究方法与研究内容

3.1 研究方法

（1）文献资料法

本研究主要以韩国RISS网站、中国知网(CNKI)数据库、EBSCOhost 数据库、Web of Science 等数据库，以及各种网站等为检索平台，对主要从绿色营销相关研究、消费者感知、品牌形象和消费者的绿色购买意愿相关文献资料进行收集与整理。本文通过检索 CNKI 数据库里 2018—2023 里发表的 856 篇文献为研究对象，利用关键词分析方法，对中韩两国及国外近年来有关绿色营销的基本发展动态、热点领域进行分析。 总结归纳现有研究的不足，展望未来绿色营销的研究前景，为后续研究活动提供清晰的

方向和思路。通过对国内外相关研究成果的梳理与述评，了解相关信息的研究现状与存在的问题，并以此思考研究思路，确定论文选题，提出研究假设，构建相应模型。通过检索、整理以往绿色营销和消费者绿色购买意愿的相关研究，对前人研究的思路形成系统化的认知，进而分析已有文献中存在的不足和局限性，借此指出本文的研究问题。本文综合运用文献梳理，用实证分析来研究绿色营销对于绿色消费意愿的影响机制。

（2）问卷调查法

本文采用随机抽样的方式发放问卷，本人通过研究设计了一份问卷，探讨了绿色营销对消费者的绿色购买意愿的影响，并详细阐述了各变量之间的影响关系。根据文献综述和理论分析的基础上，再根据所研究问题中前人研究中使用过的成熟量表、前人的研究成果和访谈资料，明确研究问题和待验证的假设，再借鉴国内外研究文献中的成熟量表，结合自身研究情况修改成本研究的测量量表，先构建初始调查问题。再通过小规模问卷调查获取了初步调查结果，并进行了可靠性的模拟测试，进行了描述性统计分析、共同方法偏差检验、信度检验和探索性因子分析，同时对问卷内容进行了修改，为正式调查奠定了基础。并基于此量表设计和随机发放调查问卷，正式调查采用了在线和线下两种形式，线上主要通过 QQ、微信、问卷星等方式收集，以获取本研究所涉及变量的一手数据材料，为模型与假设提供合理可靠的数据支持。

（3）数理统计法

针对本文收集到的数据内容，分别使用 SPSS 27.0 和 AMOS28.0 等统计分析软件，进行描述性统计，信效度分析以及线性回归分析以对模型的假设检验。第一，描述性统计分析。本文的描述性统计方法主要运用于对调研样本的人口统计学特征和调查题项的频数特征分析等，可以直观表明样本的人口统计学特征的合理性和量表的题项是否符合正态分布等。统计软件对样本数据进行初步的信效度检验，结合调查对象的建议和反馈，对量表问项进行修正使之表述更为合理，最终形成适用于本研究的正式量表。调查环节均采用在线方式进行调查问卷的发放与收集，同时依据一定原则对问卷进行有效性筛选。随后，本文通过 SPSS 27.0 统计软件对收获的有效样本数据依次进行描述性统计分析和信度分析，使用 AMOS28.0 进行验证性因子分析（CFA）以验证本文正式调查问卷的效度。同时，本文使用 SPSS 27.0 统计软件对调查问卷收集的数据进行多重线性回归分析来验证模型和数据的拟合程度。最终，通过统计分析得到的模型验证结果得出本研究中的研究假设是否成立，结合数据研究结果进行总结探讨。

3.2 研究内容

全文共分为 6 个章节，各章节主要内容如下：

第 1 章绪论，主要理论的提出和研究目的的阐述，以及阐述文中使用的研究方法及构成。第 2 章主要是理论基础与文献综述，通过整理国内外相关文献和相关实证研究对文中相关概念进行整理并划分其特征与维度；第 3 章研究模型进行假设的设定；第 4 章进行选定量表进行预调研，以及对预调研数据的分析；第 5 章是对正式调研的数据结果进行验证性分析，通过回归分析的方式验证了模型的拟合度，得出了模型假设的验证结果；第 6 章是对本文研究的主题进行归纳总结，并提出相对应的管理建议，同时指出本研究存在的不足和未来研究展望。

3.3 创新点

该研究重点探讨了企业绿色营销对于消费者绿色购买意愿之间的影响，并以绿色营销感知作为其中介变量、以品牌形象作为其调节变量，该研究的创新点大致有如下方向：

1. 实证研究：论文采用了实证分析的研究方法。目前有关绿色营销的文献大多数是综述类文章，

一些文章也采用了案例分析法对绿色营销进行研究，但是很少有关于绿色营销带给消费者绿色购买意愿的实证研究。实证研究可以通过计量工具将复杂的问题通过模型进行回归分析，比较适合目前急速变化的大环境，许多管理学方面的研究都采用了实证研究的方法。要想实现绿色营销研究质上的飞跃，最好的方法之一就是采用实证研究。本文通过文献分析和问卷调查的方法，基于现实数据来分析企业绿色营销策略的有效性，这种实证研究方法能够提供更加具体和可靠的结论。

2. 多维度分析法：绿色营销与对消费者绿色购买意愿的影响结合，这是研究绿色意愿的新角度。利用了多维度分析法，通过文献查阅的方法综合考虑了企业绿色营销的四个方面（生态观、环保性、社会责任、匹配性），把消费者感知反应划分为企业的动机感知和企业道德感知两个维度作为中介变量，研究了这些不同方面如何单独或共同影响消费者的绿色购买意愿，有助于我们更全面地了解绿色营销的影响因素、作用后果，从而帮助我们更好地利用绿色营销实现企业的经济价值和社会价值。

3. 跨学科研究：本研究结合了营销学、环境科学、心理学、消费者行为学等多个学科领域的理论和方法，这种跨学科的研究方法有助于为绿色营销提供更全面的理解，同时也为绿色营销和消费者行为的研究提供了一个跨学科的视角。

II. 文献综述

1. 绿色营销

1.1 绿色营销的发展

随着工业化的不断发展，自然环境受到破坏，企业需考虑如何平衡发展、环保与公众利益之间的关系。菲利普·科特勒在《营销管理》中首先提出了“社会营销”的概念，强调企业应综合考虑公司利益、消费者满意度和社会效益。通过满足消费者需求、保护消费者利益和增加社会福利来制定市场营销策略，以更有效地满足目标消费人群的生活需求。

"绿色营销"理论是在"社会营销"概念基础上发展而来，进一步深化和提升了"社会营销"概念，也进一步深化和完善了经济营销概念。在加强人类对自然生态保护意识的过程中，各类企业积极实施绿色市场营销活动，作为学术研究的主体，探索各类企业为实现企业可持续发展战略目标而不断采用的各种市场营销服务活动的基本理论和实践方法。绿色营销跨越了市场营销、环境经济学、可持续发展理论、消费行为研究等多个理论领域，形成了一个综合体。这一综合体致力于推动企业开发和推广环保产品和服务，促进消费者对可持续消费的认知和行为改变，从而实现经济增长与环保可持续发展的平衡。

绿色营销一词在 20 世纪 80 年代末和 90 年代初开始流行（Katrandjiev, Hristo，2016）。绿色营销的概念由英国学者 Ken Peattie 在 20 世纪 90 年代《绿色营销—化危机为商机的经营趋势》书中提出，认为绿色营销是以有利润和环境可持续的方式来认知、预期和迎合消费群体的社会需求的管理过程。

绿色营销的发展阶段大概可分为三个：

自 20 世纪 60 年代，生态性绿色营销阶段，西方学者开始以社会公众利益为视角思考企业营销活动对自然环境的影响。在高污染高能耗的生产模式下，特别是环境敏感型企业在进行生产活动时不可避免地对资源和生物多样性造成了巨大损害。社会公众也逐渐开始意识到了生态环境的脆弱性和无法修复性。营销学者基于此形成了“生态营销”的概念（Fisk，1973）。在生态性绿色营销阶段，学者们普遍认为企业活动应以环境利益和社会利益为核心，在获取经济利益的同时也应承担相应的环境保护责任，企业也开始意识到开发绿色市场的重要性（Shrivastava，1995）。需要强调的是，在生态性营

销阶段，企业营销策略朝向绿色化转变主要受社会公众的压力影响，而非消费者的产品需求或其他营销压力。

20世纪80年代，开始兴起环境性绿色营销的概念，随着工业经济的持续繁荣，自然环境的恶化加剧。与此同时，社会公众对环境污染、能源枯竭、资源浪费等环境问题的担忧也日益增加。在环境性绿色营销阶段，满足消费者的环境保护需求，设计并开发绿色产品成为了企业践行环境可持续理念、赢得绿色竞争优势的重要战略选择（Gowri，2004）。

20世纪90年代，学者们开始探讨绿色营销的理论内涵，将其从环境和可持续性需求两个维度进行发展，使环境性绿色营销逐渐演变为可持续性绿色营销。从生态性绿色营销到可持续性绿色营销的发展历程表明，支撑经济社会发展的环境资源是有限且不可再生的，如何使人类需求得到持续性满足，如何促进经济可持续发展是全社会所面临的重要问题，而绿色营销战略可从宏观与微观两个层面使上述问题得到有效的解决（Grant，2010）。

这表明绿色营销理念的发展是一个渐进的过程，随着经济、社会和环境可持续理念的深入发展，绿色营销的内涵变得更加丰富。从最初强调的“生态要素”逐步演变为强调的“可持续要素”，从最初关注的“产品核心论”逐步转变为“发展核心论”。这种演变反映了绿色营销在适应社会发展和环境变化方面持续努力并取得的进步。

우승희和김원겸（2023）以SCOPUS为中心进行绿色营销研究趋势的文献计量分析表明，与绿色市场相关的文献持续增长。2012年共发表了64篇论文，但绿色营销相关研究活动持续增加。2016年达到117篇，2018年达到145篇，2022年更是飙升至263篇。这表明随着时间的推移，绿色营销在未来的学术界开始变得越来越重要。정규엽和오석윤（1999）通过对酒店绿色营销策略的概念和趋势研究得出，韩国豪华酒店希望逐步实施绿色营销策略，考虑酒店客人对环境问题和选定因素的相对接受程度，即与环境变量相关的相似属性集。마야샤오（2024）认为，社会和人们对环境的兴趣和重要性逐渐增加，消费者的需求和购买行为也朝着环保的方向转变。随着这些变化在世界各地发生，酒店业正在制定和实施具有环境和社会意识的绿色营销策略，同时满足消费者的需求。최준서，김필수和이상현等人（2023）通过研究专业运动队制定和实施绿色营销策略，分析MZ一代的环保价值观如何影响消费者的购买意愿，最终验证了职业体育组织制定和实施绿色营销策略的重要性，以及绿色营销对职业体育迷的消费意愿产生积极影响。宋均錫，李秀馥（1997）认为，绿色营销策略意味着公司将资源集中在绿色消费者身上，为了使绿色营销有效，营销人员应明确绿色消费者的特征，以成功实施绿色营销策略。배석덕（1999）通过对化妆品企业绿色营销策略研究指出并得出结论，为了加强市场竞争力，公司的所有成员，包括高层管理人员、营销人员和其他员工，都应该意识到绿色营销的重要性，并在环境绩效方面采取积极的措施，绿色营销的最终目标，也是提高生活质量的方式，符合帮助公司和消费者，进一步促进人与自然和谐共处的方式。

1.2 绿色营销的概念

近年来，随着各种环境问题的凸显，企业需要建立环境管理体系并引入绿色营销，以便能够有效地管理自然资源，并将新面临的环境问题转化为竞争优势（김형길，김정희，2013）。“绿色营销”一词是用来描述营销人员试图制定针对“绿色消费者”的策略的尝试（宋均錫，李秀馥，1997）。绿色营销是指将绿色发展，保护生态环境，推动可持续发展作为企业的战略思想，从绿色消费出发，最终也回归到绿色消费中去的一种新型的营销理念（李文静，马欣，2022）。这意味着改进产品或服务以使其更环保，消除生产过程中的反环境因素，将包装变得环保，环保概念常常被称为环境营销（environment marketing）或生态营销（ecological marketing）。因此，绿色营销的概念并不是刻板狭隘的，而是从广阔的视角包含了多种含义（이재형，2010）。绿色营销（Green Marketing）或称为可

持续营销（Sustainable Marketing）、环境营销（Environmental Marketing）、低碳营销（Low-carbon Marketing）、生态营销（Ecological Marketing）（Henion，1979；Fuller，1994；Kumar，2013；林黎明，2018）。过去，绿色营销活动始于对政府法律法规的回应，但最近，绿色公司已成为一种强有力的战略，已将自己与竞争对手区分开来或提供良好的企业形象（클라우디아，2012）。绿色营销是一种新的营销理念，它强调企业的环境责任，并将环境问题视为企业发展的机会（배석덕，1999）。相较于传统营销，绿色营销是营销领域的一个新事物，它是多种营销理念碰撞融合的新产物（张天月，2020）。绿色营销可以定义为基于公司产品的环境友好性或从道德角度开展的社会活动，在业务或常规营销活动中适当添加环境因素的活动（박명섭和박우진，2007）。绿色市场营销策略是指企业在产品开发、生产、销售和推广过程中，以环境保护和可持续发展为核心，采取一系列措施来满足消费者对环保产品的需求，并强调企业对环境的责任和义务（慕青，2024）。企业将绿色营销作为企业发展战略的高度，是在企业利益、绿色生产技术、经济发展、自然资源、可持续发展中找到平衡点的一种企业发展模式（Kilbourne，1998）。谢蓉俊（2023）认为：在绿色发展愈受重视的今天，越来越多的企业选择通过绿色营销来改善自己的行业形象，提升自己的行业竞争力。绿色营销不仅仅要求企业考虑自身的发展，更要求企业考虑相关者的利益，在企业运营时，将利益相关者的利益和自身利益相结合（戚依南，毛志刚，2020）。有些学者认为，绿色营销将企业自身效益、消费者效益与生态环境效益结合起来，是三者的有机统一（杨静，高斌，王建华，黎瑶，2012），以此为中心，对产品和服务进行构思、设计、销售和制造。在农产品营销中，许多策略都是从消费者导向的理念出发的，绿色营销就是其中之一，绿色营销注重食品安全、健康商品和环境保护（김호，2004）。绿色营销是企业认识和应对环境问题的有效营销方法，企业正努力通过绿色营销来激发消费者对环境保护的意识和兴趣，并据此诱导消费行为（임혜원，2023）。

本篇文章把绿色营销定义为：企业在产品的研发、制定和实施市场营销战略过程中，满足顾客对社会环境保护的需求，同时又能兼具企业自身经济效益的一种营销模式。

1.3 绿色营销特征及维度

조윤아（1999）认为在如今消费者意识到环境这些问题非常严重时，一些公司自愿对环境问题采取行动，但其他公司则部分参与销售商品并促进其利益，这导致了绿色营销将是具体的、细分的和不断增加的。

（1）生态观

绿色营销的生态观是指在营销活动中，企业应以生态和可持续发展为核心理念，以促进社会、环境和经济的和谐发展为目标。这一理念突出了企业在营销实践中应承担的环境和社会责任，要求企业在产品设计、生产、推广和销售中积极考虑生态因素，以减少资源消耗和环境污染，同时倡导环保理念，鼓励消费者参与可持续发展和环保行动。绿色营销形式和策略中呈现出不同的特征。培育消费者生态价值观，启动消费者个人感知相关性，对中国消费者积极践行绿色消费行为具有重要意义（盛光华，龚思羽和解芳，2019）。绿色营销的产品或服务其自身在生产或功能属性上是满足了绿色发展的需求，是落实生态文明建设过程中消费者形成的生态观的需求（宋林，2015）。绿色营销不仅契合了中国可持续发展的理念，还有助于促进消费者绿色消费，提高企业的经营绩效（匡芮，2020）。传统文化生态理念中的哲学生态观与生态元素价值内涵作为品牌生态性塑造的核心，能够对品牌人格形象、生态关系、生态文化甚至是生态价值观塑造产生深刻影响（陈立彬，武琪和张永，2019）。在绿色营销开展的过程中，杨晓燕和周懿瑾（2006）研究得出，伴随生态环境备受关注，企业和消费者均开始重视生态价值，这种价值是人与自然的关系重新定位，是对经过一系列努力达到生态环境改善的能力的认同。由此可见该理念追求企业经济效益与环保目标的双赢，体现了企业应在商业活动中注重生态平衡和可

持续发展的理念。

（2）环保性

随着全球环境问题日益凸显，人们对环保意识的重视不断提升，消费者开始更加关注产品的环保性能和企业的环保承诺。从消费者购买的产品因素来看，产品的内部线索被认为是影响消费者购买决策的最为直接的因素。产品的内部线索是指产品本身的固有特征，如产品的性能、质量、价值等（高键，2016）。从产品内部线索来看，企业实施绿色营销时为消费者所提供的产品是应具备绿色特征。祝荣（2003）认为环境质量管理评价对企业绿色营销有重要作用，应对企业进行全面的环境质量管理评价。如果企业的产品达到相关环境质量管理标准，则获得相应环境标志，企业拥有了环境标志，代表着其产品是环保绿色的，其生产过程所使用的能源、原辅材料是符合环保要求的，更能够得到地方政府、环保部门的大力支持，在这种经营管理下也能够得到消费者的充分信任。임혜원（2023）认为消费者倾向于通过环保管理来评估公司的环保意识和品牌形象，并购买更具可持续性的产品。绿色营销的重要特征之一是产品品质，如果企业的产品达到相关环境质量管理标准，获得相应的环境标志，这代表着其产品是环保绿色的。这意味着其生产过程所使用的能源、原辅材料符合环保要求。此外，拥有环境标志的企业更容易获得地方政府和环保部门的大力支持，也更能够赢得消费者的充分信任。김호和이나라（2011）认为，绿色营销策略对消费者行为最重要的影响是产品。而环保性的产品是绿色营销的重要特征之一，能够保障企业顺利实施绿色营销活动并实现绿色营销的目标。

社会责任

企业要在经营和营销中承担一定的社会责任，目前来说企业的社会责任没有统一的定义，但同意来看都是对社会做出一定贡献的，是在谋求自己的发展时，强调对于顾客利益和社会利益做出的责任感和贡献。将企业社会责任定义为一个以利益相关方为导向、跨组织的责任，它受到组织经营活动的伦理责任意识驱动，便于寻求社会对组织合法性的认可（胡兵，2020）。企业的社会责任是指企业在创造利润，对股东利益负责之外，主动承担的对企业员工、消费者、环境和社区的责任（刘谋升，2012）。企业社会责任行为属于亲社会行为范畴，绿色营销、慈善事业、保护环境、社区福利以及保护和改善社会福利的行为（Luo&Bhattacharya，2009）。Kim 和 Lee（2009）提出绿色营销旨在保障人类和环境的新价值取向，明确了各个层级上应承担的社会责任，增强企业 形象和销售量，加大其公益程度，采取切实可行的行动。要有效开展企业绿色营销活动，应支持社会责任（김형길，김정희，2013）。郤可心（2023）认为，现如今消费者的环保意识也在不断增强，越来越多的消费者表示更愿意为可持续产品买单，这就要求服装品牌要树立绿色创新意识、加大对绿色环保的投入，履行环境保护的社会责任。企业绿色营销的社会责任体现在多个方面。首先，企业在产品设计、生产和推广过程中应该注重生态平衡和可持续性，尽量减少对环境的负面影响，积极推动资源的有效利用和循环利用。其次，企业应该承担社会责任，通过营销活动倡导环保理念，鼓励消费者参与环保行动，以实现经济效益和环保目标的双赢局面。此外，企业还应承担信息披露的责任，向消费者提供真实、准确的环保信息，确保消费者能够作出明智的购买决策。本文中的企业在绿色营销中的社会责任表现为对环境、社会和消费者的关注和尊重，追求经济效益与可持续发展目标的协调统一。

（4）匹配性

企业绿色营销的匹配性是指企业在制定营销策略和实施营销活动时，将环保理念与企业核心价值观和目标相协调统一的能力。郑勇（2020）认为许多学者也通过实证研究指出，匹配度对消费者的影响并不是如此单一和明确的。Enrique（2011）通过研究指出，功能型匹配的产品有利于形成消费者对企业责任感的认可，而形象型匹配使消费者对企业的善意营销动机产生怀疑，影响消费者的购买。绿色营销传达的生态价值观、绿色价值观，与所承诺承担的社会责任和生产的产品之间应匹配。樊建锋和田志龙（2010）对营销与企业的匹配度研究中认为消费者所感知的匹配度与营销效果是正相关的，但匹配度本身也是复杂的，受到产品功能、消费者个人特征等因素影响。随着匹配性在营销领域中的

作用已经日渐凸显，许多学者发现较高水平的匹配性可以对消费者的品牌态度、产品绿色购买意愿、捐赠意愿等产生积极影响（Lafferty，2007）。但是，也有学者却发现，匹配性与企业的声誉、品牌相关，有些声誉较差的企业，企业社会责任匹配性越高，则消费者对企业的评估就越差（Forehand&Grier，2003）。

不同学者从不同视角对绿色营销进行了研究，目前学术界未形成统一的意见。借鉴以往相关研究，提出了绿色营销呈现的四个特征作为研究维度，如表 1–1 所示。

表 2.1 绿色营销特征含义

	特征	含义
绿色营销的特征	生态观	在营销活动中，企业应以生态和可持续发展为核心理念，以促进社会、环境和经济的和谐发展为目标
	环保性	对产品的全面的环境质量的评价
	社会责任	对环境、社会和消费者的关注和尊重，追求经济效益与可持续发展目标的协调统一
	匹配性	与企业的产品、品牌、形象、目标市场的一致匹配度

资料来源：根据研究结果作者自行整理得出

2. 消费者绿色营销感知

消费者感知理论属于消费者心理学的研究范畴。感知主要表现为心理历程的延续性。消费者感知是消费者根据其对产品的使用目的和需求状况，在综合分析市场上各种正式或非正式途径获取的相关信息后所形成的一种抽象的主观评价。这种评价不仅受到产品本身的特征和性能影响，还受到消费者个人经验、偏好、文化背景以及社会环境等因素的综合作用。消费者感知的形成是一个复杂的认知与情感加工过程，涉及消费者对产品外观、功能、品质、价格等多方面因素的综合评估，最终构成了消费者对产品或服务的整体认知和态度。

企业绿色营销是一种营销行为，行为主体为企业，消费者是客体。作为营销主体的企业具有目的性、主动性与创新性的特性；而作为营销客体的客户相对于营销主体则具有效用性、可塑性、易变性及外在性的特性；在营销过程中，营销主体与营销客体之间存在着相互作用的关系（王海燕和任生，2005）。Sheth（1991）研究得出了消费者根据产品属性或价值开展购买决策。Blackwell et al.（1999）认为，产品价值是消费者购买行为的最初的参考，并得出了顾客感知价值是影响顾客重购意愿的决定性因素。Sweeney 和 Soutar 在 2001 年的相关研究中发现，情感、社会、质量、价格等 4 个维度的顾客感知价值是消费者购买行为和决策的重要影响因素。Jackie et al.（2004）通过研究认为，消费者感知价值是影响购买行为的显著因素。许凝（2013）认为，消费者感知便是消费者按照自己对产品的使用目的和需求状况，综合分析市场上各种正式或非正式途径获得的相关信息，对一种产品或服务所做出的抽象的主观评价。祖明等（2020）以亲环境的个人规范为调节环节，开展了新能源汽车的相关研究，认为企业的人道主义利他主义价值观将对消费者的绿色购买意愿起到决定性作用。可雯心（2023）研究结论为：在生态文明建设和实现 " 双碳 " 目标的大背景，体育企业履行环境责任是顺应可持续发展潮流的必然选择，是提高体育企业社会辐射力和影响力，抢占绿色体育市场先机的必要选择。龚翔（2013）研究得出了绿色购买动机形成是源于消费者感觉到绿色价值的存在。高键等（2016）得出了消费者形成绿色消费意图的直接因素是消费者绿色感知价值，消费者创新性则是受到了顾客绿色感知价值对绿

色消费意图影响。在研究绿色产品购买意愿时开发了绿色感知价值作为一种新的维度。

消费者绿色营销感知的定义涵盖了消费者对企业推出的绿色产品或服务所产生的认知、态度和行为。这种感知不仅限于对产品本身的环保特性的了解，还包括消费者对企业参与绿色营销背后动机的认知和理解，以及消费者对企业道德行为和价值观的认知和理解。通过对绿色产品或服务的认知和情感体验，消费者形成对企业所生产的产品是绿色环保的认知，进而影响其绿色购买意愿和行为。在当今社会，消费者对绿色产品和企业的环保行为越来越关注，因此对消费者绿色营销感知的研究对于企业制定绿色营销策略、提升品牌形象具有重要意义。

2.1 消费者绿色营销感知维度

载瑟摩尔认为顾客感知价值就是顾客在消费某产品时获得的总体利益与付出的总体成本差感知价值包含在购物过程中影响购物的各个维度：如质量、时间、服务、体验等（魏加兴，张婷婷，2024）。国内一些学者从顾客感知价值角度，对绿色购买意愿开展了绿色相关研究。本文选取两个消费者绿色营销感知维度进行。

（1）企业动机感知

企业是绿色营销主体，消费者是客体。相对于客体来说，主体（企业）的目的性很强，企业有着其特殊的要求，且非常主观，动机又十分明确，并指导着企业经营管理，具有一定的规范和选择功能，这种目的性明确了企业经营行为的方向性和秩序性（王海燕和任生，2005）。同时有学者认为，企业绿色营销动机离不开压力和动力，徐大佑和韩德昌（2007）认为企业绿色营销面临着四方面力量，即双重压力和双重动力，双重压力一是市场竞争压力，二是非政府组织（NGO）压力；双重动力指政府推动力和消费需求拉动力；绿色营销健康发展依赖于这四种力量的动态均衡，企业营销自由程度下降，不可避免受限制，营销从依靠自律走向自律和他律相结合。从绿色产品的本身属性来看，消费者购买绿色产品与他人和社会利益密切相关。购买绿色产品可以被理解为利他，因为绿色产品比普通产品成本更高，但是绿色产品有益于环境（Griskevicius V，2010）。

本文将企业动机感知定义为消费者对企业参与环保活动或绿色营销背后动机的认知和理解。消费者的动机感知直接影响他们对企业环保形象和绿色营销活动的态度和信任度。如果消费者感知企业参与环保活动是出于真诚的环保使命和责任感，他们通常会对企业产生积极的认同感和支持态度。这种认知可以加强消费者与企业之间的情感联系，提高消费者对企业的忠诚度和绿色购买意愿。另一方面，如果消费者感知到企业参与环保活动仅仅是出于营销目的或形象塑造的表面行为，缺乏真诚和长期承诺，他们可能会对企业的动机产生怀疑和质疑。这种负面感知可能导致消费者对企业的信任度下降，甚至影响其购买决策，从而对企业形象和市场表现造成负面影响。

（2）企业道德感知

企业道德感知是指企业对于道德标准、原则和价值观的感知和认识，以及在实际经营活动中对道德问题的关注和处理能力。对绿色营销的研究中，将经济学理论、伦理学理论等应用其中。从社会学视角看，企业实施绿色营销不仅是经济行为，更体现了道德层面的责任与担当。

消费者对企业道德支持程度是指企业的道德活动是否能够带来积极的消费者支持行为，它可以显著提高消费者对企业声誉的评价，是消费者对企业道德响应的关键调节变量（Bhattacharya, 2001；周延风，肖文建和罗文恩，2007）。企业道德支持程度较高的消费者在评价企业声誉及履行自身购买行为时，更容易受到企业是否承担道德责任的影响，他们会对企业道德的多个方面呈现出积极的支持；反之，则会漠视企业的道德活动（Mohr & Webb, 2005）。不难理解，更具有企业道德的有良企业（通过环保和慈善方面的道德贡献来体现）会提高消费者购买该企业的产品的意愿；而企业的无良或非道德行为将引发消费者对公司产品的抵制，极大地降低消费者的购买意愿（Murray & Vogel, 1997; Lafferty &

Goldsmith, 1999）。

由于我国绿色品牌发展还处于探索起步阶段，绿色品牌营销方式不合理、绿色品牌评价标准不一、品牌“漂绿”等问题十分突出，严重削弱了消费者绿色品牌消费热情和信任度（张启尧，2019）。如果消费者感知企业在业务运营中保持着高度的道德标准，如诚实守信、尊重员工和社会责任感等，通常会对企业产生积极的认同感和支持态度，打消对于其品牌“漂绿”等怀疑。这种认知有助于建立消费者与企业之间的信任和情感联系，提升消费者对企业的忠诚度，促进品牌形象的塑造和市场竞争力的提升。另一方面，如果消费者感知到企业存在道德上的缺失，如不诚实宣传、不尊重员工权益或不履行社会责任等行为，消费者可能会对企业的道德价值产生负面的认知和质疑。这种负面感知可能导致消费者对企业的信任度下降，甚至影响其购买决策，对企业形象和市场表现带来负面影响。消费者对企业的道德感知直接影响其对企业的绿色购买意愿。

本文中的企业道德感知被定义为消费者对企业道德行为和价值观的认知和理解。根据参考前人研究结果的基础上，以消费者因绿色营销对企业动机感知和企业道德感知两个维度为研究对象，本研究将消费者对绿色营销感知划分为：企业动机感知、企业道德感知两个维度，如表 3.1 所示。

表 2.2 消费者感知的维度

	维度	维度定义
消费者感知	企业动机感知	消费者对企业的绿色营销背后动机的认知和理解。
	企业道德感知	消费者对企业道德行为和价值观的认知和理解

资料来源：根据研究结果后自行整理

3. 品牌形象

20 世纪 90 年代以来，品牌作为企业有价值的稀缺资源，在市场营销和企业战略中被确定为企业实现持续竞争优势的关键源泉（E. E. F. Schmitt,1995）。김규대（2011）认为，企业的竞争战略大致可以分为成本优势战略、夹缝战略和差异化战略，企业选择其中一种战略作为竞争工具，而其中差异化战略的一个关键因素就是品牌。绿色营销被认为对环境安全的产品营销，利用消费者对品牌态度发生变化的营销活动（吴健文 ,2023)。

自 20 世纪 60 年代大卫·奥格威提出品牌形象这一概念以来，许多学者对品牌形象的内涵、维度构成、测量模型等方面进行研究。郭向东和曾坚韧（2024）认为，企业的品牌形象对其销售、市场都起着至关重要的作用，与消费者的购买意愿也紧密相关。根据自我一致性理论，产品与个人特质一致性程度能够反映消费者对绿色农产品的态度，只有当产品形象与自我认知形象一致性程度较高时，消费者才会对该产品绿色营销对于提升企业品牌形象、促使消费者采纳绿色购买意愿具有重要意义（吴恒，曹靖，2021）。根据自我一致性理论，当产品理念与自我观念相一致时，消费者会感知到产品与自身相符，会增强对该产品的购买意愿（崔登峰 , 陈咪咪，2023)。

目前来说，消费者可以在购买路径的任何环节产生交易行为，对于企业而言，品牌形象已经替代曝光量，成为影响营销效果的最关键因素，更是企业用来对应新市场的秘密武器。

如今，在 21 世纪之交，大多数消费品已经进入成熟阶段，由于技术进步的积累，企业之间的技术竞争优势已经消失，品牌占据了比其他任何话题都大的营销比例。（서정욱，2015）。서정욱（2015）认为，生活在全球化时代的消费者通过各种方式接触到众多品牌，因此他们往往更依赖表达个性和价值的品牌，而不是出于必要而购买产品。因此，企业需要新的优势来满足客户的价值，而绿色营销的出现恰

恰是为他们制定了多样化的策略来满足客户的高端生活方式。王瑞琦（2024）认为，如今的品牌的价值已经不再局限于商业价值，而是更加深入至社会层面的价值表现，品牌进行形象塑造应该站在更长远的角度，既要对自身品牌负责，从各方面助力品牌形象的提升，也要承担起社会责任。이선영（2009）认为，在瞬息万变的消费社会中，企业之间的竞争一直很激烈，每个企业都全心全意地投入到营销战略规划的制定中，以区分自己的品牌，特别是最近的消费者正在做一种以品牌为导向的购买行为，即购买品牌形象而不是购买产品或服务，因此随着时间的推移，品牌的重要性也在增加。이재록（2013）在绿色购买行为与影响变量的结构关系研究中得出，企业绿色形象对绿色购买行为有直接正向影响。

4. 绿色购买意愿

4.1 绿色购买意愿的概念

购买意愿即消费者愿意采取特定购买行为的概率高低。消费者对于产品或品牌的态度．加上外在因素的作用．构成消费者的购买意愿（杜喻东，朱思维，赵舒文，刘洪深，2017)。基于计划行为理论，绿色营销学者提出了一种新的变量——绿色购买意愿，被认为是预测消费者购买行为最可靠的因素。绿色购买 fGreen Purchase) 也叫“亲环境购买”(Prc—enviromental Purchasing)、“环境友好购买”(Envi．romentally Friendly Purchasing)（杜喻东，朱思维，赵舒文，刘洪深，2017)。绿色购买是消费者在购买中对考虑产品的环境友好程度及其购买活动（Mainieri T, Barnett EG, Valdero TR 等，1997）。刘元（2023）认为相比传统的消费模式，绿色消费不但可以实现自我消费，还对其他人以及后人的利益有所关注，并且重视质量以及可持续发展。随着消费者对绿色知识的积累，将感知绿色产品的独特品牌属性以及对社会、环境所做的贡献，消费者掌握绿色知识能改变自身的消费行为（吴健文，2023)。

消费者行为研究来看，购买意愿是预测购买行为的一个广泛使用的工具，而绿色购买意愿是对消费者做出绿色消费行为预测（黄世政，周菀桦，2024,)。在对绿色消费行为的研究中，绿色产品购买意向是绿色消费行为的重要预测变量。绿色产品购买意向越是强烈，则发生实际绿色消费行为的可能性就越大（高键，盛光华，2017)。

Srivastava（2007）认为所谓绿色购买意愿，就是消费者在做出购买决策之前，充分思考自身的购买决策行为是否会对环境，资源和社会造成潜在的不利影响，并由此做出有利于社会绿色发展的购买选择的可能性。高键和盛光华认为（2017）提出消费者对于绿色产品可能产生的一种购买心理就是绿色购买意愿。Su L 和 Swanson SR（2017）认为，绿色购买意愿能够驱使消费者进行主动购买，并帮助绿色营销者预测出消费者们的真实购买情况。黄世政和周菀桦（2024）认为，当消费者的环境关注程度提高时，会有意识地规范自身绿色行为，并在消费过程中受到自身的绿色购买意愿支配。本文所定义的绿色购买意愿是消费者对绿色产品的购买行为的倾向性和积极性。侯海青和尹丽（2022）认为，绿色购买意愿是指消费者在其购买考虑范围内，主动选择具有生态环保属性的产品而非传统产品的可能性。随着消费者对环境关注的增强，消费者的环保意识会影响其思维方式，进而影响环保消费者的购买意愿。

本研究的绿色购买意愿指的是，消费者在做决定时愿意选择那些对环境友好、可持续发展并符合社会责任的产品或服务的倾向，采取绿色购买行为的概率高低。其中，购买意愿包括消费者关注企业的绿色营销产品、购买绿色营销产品的行为，以及向身边的人推荐等。消费者在考虑购买决策时，会考虑产品或服务的生态性、环保性、社会责任、匹配性，以及企业动机感知和企业的社会责任表现等因素。本文中的绿色购买意愿体现在消费者对环保意识的关注，他们愿意通过购买支持环保和可持续发展的产品来实现个人的价值观和责任感。这种趋势也在推动企业转向更环保可持续的生产方式，以满足消费者对绿色产品和服务的需求。

4.2 购买意愿的影响因素

企业各种经营活动的向导就是消费者，消费者的购买意愿是绿色购买意愿的基础，可以用来预测消费者的行为。基于消费者理性决策的购买行为可以分为需求识别、信息收集、选择评估、购买决策、购后评价五个阶段。国内外的学者基本一致地认为购买意愿处于消费者购买行为五阶段中的购买决策阶段，此时消费者心中已有品牌偏好，通过收集信息和比较评估产生购买意愿，此时若没有其他情况出现，消费者就会采取购买行为。

关吟（2020）在绿色营销视角下古丈毛尖茶消费者购买行为影响因素研究结果中表明，消费者的收入水平、环保意识、绿色产品认知水平以及绿色茶产品价格等是影响消费者购买绿色产品的主要因素，部分消费者比较注重质量问题；杨震（2023）在绿色广告诉求对消费者绿色产品购买意愿的影响中结果表明：（1）绿色广告诉求和自我超越价值观的交互作用对绿色产品购买意愿的影响显著；（2）绿色广告在不同消费者的认知风格作用下，利己诉求和利他诉求对消费者购买意愿发生显著不同的影响；（3）不同人口统计变量的群体自我超越价值观和认知风格分布不均且不同认知风格个体的绿色产品购买意愿会受到年龄、学历的影响。张琪和刘萍（2024) 对消费者购买牡丹籽油的影响因素进行实证分析，结果显示：消费者收入水平、对牡丹籽油的价值认知、对营养功效的信任度、尝试新产品的意愿、对象身份地位的重视、对身体健康的重视及宣传等影响因素正向影响牡丹籽油购买意愿；而消费者性别和牡丹籽油价格则负向影响牡丹籽油购买意愿。周延，常亮（2023）在社会化电商平台用户推荐对消费者绿色产品购买意愿的影响中研究结果表明：社会化电商平台用户绿色产品购买意愿会受到来自推荐者专业性、推荐信息详尽性和视觉性及潜在消费者信任倾向的影响。

通过对购买意愿的影响因素可以归纳为表 2.3 中的五类（冯建英，穆维松，傅泽田，2006）。

表 2.3 购买意愿的影响因素表五类

类型	内容
消费者个性特征	消费者的个体特征不同，那么其受到刺激时的反应也会有所差别。一般考虑消费者的性别、年龄、收入、教育水平等因素，其他因素则根据研究内容进行取舍。
产品内部线索	产品的使用价值是消费者采取购买行为最主要的动力（Babin et al.,1994）。消费者在购买产品时，主要是为了满足自身的需求，因此产品自身的价值、质量特性等因素会直接影响消费者的购买意愿。
产品外部线索	由于存在信息不对称，消费者不可能完全掌握产品的内部线索，因此产品的外部线索如售后保证和品牌可以帮助消费者识别产品的品质，进而影响购买意愿（王丽芳，2005）。价格是产品最主要的外部线索，一般认为价格越高，那么产品的质量也越高，在消费者可支配收入允许的情况下，高价格使消费者感知产品质量提高，进而增加其购买意愿。
消费情境因素	消费者的购买决策还会受到情境因素的影响。商店的氛围会影响消费者的情绪进而影响其购买行为（Sherman et al，1997）。在网络环境中，消费者依然会受到环境的影响，如网站的知识性、经济性、互动性和视觉性会通过影响消费者的情绪进而影响其冲动性购买行为（赵宇娜，2010）。
社会经济因素	著名经济学家指出当居民对于住房、社会保险、教育支出等未来支出有较高的预期时，购买意愿的水平会下降。

资料来源：冯建英，穆维松，傅泽田，2006

III. 理论基础与研究假设

1. 研究模型及假设的设定

1.1 企业绿色营销和消费者绿色购买意愿

随着生态文明建设的不断深入，绿色发展理念深入人心，绿色产品日益受到广大消费者的青睐。在环境可持续性日益成为全球关注焦点的背景下，绿色购买意愿作为衡量消费者对环保产品或服务偏好的重要指标，引起了经济学和环境科学领域学者的广泛关注。当消费者意识到他们可以做些改善环境的事情时，他们将考虑社会影响并对购买绿色产品产生积极的态度和意愿（孙莹， 2020）。在这样的背景下，企业越来越重视绿色发展，更加深刻认识到实施绿色营销是企业取得更多经济效益和社会效益的重要举措（郑勇，2020）。吴健文，龙华和鲜于映洲（2023）等人认为，随着消费者的环保意识日益增长，绿色营销成为影响消费者购买意愿的重要因素。万佳璐（2024）通过对中国国内外现状进行了梳理，发现企业绿色营销可能会对消费者购买意愿产生影响。이지환和김태형（2018）通过分析职业运动队绿色营销活动对球队形象和购买意愿的影响得出结论：绿色营销活动对购买意愿有正向影响。黄世政和周莞（2024）的研究表明，绿色营销是企业绿色转型的关键过程，绿色营销对绿色购买意愿有显著正向影响。随着消费者环保意识的增强，环境义务或是否参与环保管理活动是影响消费者购买决策的一个因素（마야샤오，2024）。

本研究旨在深入探讨企业绿色营销时对绿色购买意愿的影响概念框架，分析其影响因素，并评估绿色产品市场的发展潜力。通过借鉴与研究前人的理论得出绿色营销的生态性、环保性、社会责任、匹配性四个维度对消费者的绿色购买意愿有影响，所以本文提出如下假设：

H1：绿色营销对消费者绿色购买意愿具有正向影响。

H1a：绿色营销的生态性对消费者绿色购买意愿具有正向影响。

H1b：绿色营销的环保性对消费者绿色购买意愿具有正向影响。

H1c：绿色营销的社会责任对消费者绿色购买意愿具有正向影响。

H1d：绿色营销的匹配度对消费者绿色购买意愿具有正向影响。

1.2 品牌形象的调节作用

从理论与实践的视角出发，品牌形象与绿色营销之间存在密切联系，品牌形象能够大幅提升绿色营销策略的实施，从而增强消费者对企业绿色营销的绿色购买信心与信任感。此外，品牌形象还能作为一种区别化战略，帮助企业在不断加剧的市场竞争环境下突显其特色，实现绿色营销品牌价值的最大程度地增加。品牌形象是消费者购买过程中，影响其购买的重要因素之一（Liu Qian, Dai Xulong，2023）。LIU QIAN（2023）在 KOL 的营销对消费者购买意向影响的实证研究中表明，在影响消费者决策各个因素中，品牌起着重要作用发挥着关键影响。慕青（2024）研究指出，绿色市场营销策略可以提升企业的品牌形象，通过采取绿色市场营销策略，绿色市场营销策略可以使企业获得媒体和公众的关注和认可，这有助于提升企业的品牌声誉和知名度，进一步巩固企业的品牌形象。李雪白（2022）认为，绿色品牌形象作为消费者对实行绿色营销策略企业的品牌认知已成为影响消费者购买意愿的一个重要因素 ；同时李雪白（2022）通过绿色品牌形象对消费者购买意愿的影响研究得出结论，绿色品牌形象正向影响消费者购买意愿。李倩茹和赵佳研究指出（2021）消费者在购买产品时对绿色品牌的满意度最终会影响其购买行为并决定其是否与品牌建立相互信赖的关系；王燕（2022）通过对日照绿茶区域品牌形象对消费者购买意愿的影响研究，结果表明产品或服务形象、使用者形象与区域产业形象均对

消费者购买意愿有着显著的正向影响。通过深入研究绿色营销与品牌形象之间的作用，企业不仅能更有效地响应市场和消费者的需求，还能在竞争激烈的市场环境中巩固及扩增市场份额。因此，绿色营销策略的研究与执行中添加品牌形象作为其调节变量，对于企业实现经济与社会价值的双重提升具有深远意义。故提出如下假设：

当消费者具有高品牌形象时，绿色营销对其绿色购买意愿的影响越强；当消费者具有低品牌形象时，绿色营销对其绿色购买意愿的影响越弱。

当消费者具有高绿色营销时，绿色营销对其绿色营销感知反应的影响越强；当消费者具有低绿色营销时，绿色营销对其绿色营销感知反应的影响越弱。

H2：品牌形象在绿色营销和消费者绿色购买意愿之间起到正向调节作用。

品牌形象驱动品牌资产，在面临经济全球化的大背景下，提升品牌形象不仅能够增强企业竞争力而且还能影响消费者品牌关系（吴琼，2020）。周国君（2024）通过对中宁枸杞品牌形象对消费者购买意愿影响分析得出:（1）中宁枸杞农产品品牌形象对感知价值和消费者购买意愿均具有显著正向影响。（2）感知价值能够正向影响消费者购买意愿；（3）农产品品牌形象不仅可以直接影响消费者购买意愿，还可以通过感知价值间接影响消费者购买意愿。绿色营销的品牌形象策略的成功执行是具有挑战性的，它要求企业的品牌形象在整个价值链中实施环保原则，包括产品设计、生产过程到营销传播等各个环节都要显示对环境的关注。此外，企业还需要通过品牌形象与消费者进行不断的交流与互动，深化消费者对于其绿色营销的目的和理解，以满足消费者的需求与期望，以此来优化并调整绿色营销策略。当消费者具有高品牌形象时，绿色营销对企业动机感知的影响越强；当消费者具有低品牌形象时，绿色营销对企业动机感知的影响越弱。当消费者具有高品牌形象时，绿色营销对其企业道德感知的影响越强；当消费者具有低品牌形象时，绿色营销对其企业道德感知的影响越弱。

H3：品牌形象在绿色营销和绿色营销感知之间起到正向调节作用。

H3a：品牌形象在绿色营销和企业动机感知起到正向调节作用。

H3b：品牌形象在绿色营销和企业道德感知之间起到正向调节作用。

1.3 绿色营销和绿色营销感知

在当前全球环境问题日益严峻的背景下，绿色营销作为企业营销策略的重要组成部分，不仅体现了企业对环境保护的责任感，也影响着消费者对企业的动机和道德感知。Mostafa M M（2013）提出，从消费者角度来看，如果他们有强烈的信念感知，那么就会正面对待绿色产品。张磊涛（2022）在绿色产品营销感知要素对消费者绿色决策的影响研究中得出结论，绿色产品营销感知要素中有三个维度对因变量消费者绿色决策均具有显著的正向影响。根据许凝（2013）的观点，在消费者越来越追求可持续生活方式的趋势下，越来越多企业采取绿色营销策略与消费者进行沟通，并通过研究服装品牌的绿色营销对消费者认知的影响，发现绿色营销和非绿色营销在消费者认知上存在显著差异。

本文通过系统地提出和检验一系列假设（H4–H4h）：绿色营销的各个维度均对消费者的绿色营销感知产生了显著的正向影响，从而强调了绿色营销在当代企业营销战略中的重要性。旨在深入探讨绿色营销对绿色营销感知的正向影响及其内在机制。

H4：绿色营销对绿色营销感知具有正向影响。

H4a：绿色营销的生态观对企业动机感知具有正向影响。

H4b：绿色营销环保性对企业动机感知具有正向影响。

H4c：绿色营销的社会责任对企业动机感知具有正向影响。

H4d：绿色营销的匹配性对企业动机感知具有正向影响。

H4e：绿色营销的生态观对企业道德感知具有正向影响。
H4f：绿色营销的环保性对企业道德感知具有正向影响。
H4g：绿色营销的社会责任对企业道德感知具有正向影响。
H4h：绿色营销的匹配性对企业道德感知具有正向影响。

1.4 绿色营销感知和绿色购买意愿

在环境保护成为全球共识的今天，绿色营销作为一种推广可持续消费行为的重要手段，其效果如何转化为消费者的绿色购买意愿，成为了市场营销研究领域中的热点议题。李雪岩，翟得芳和杨凤仙（2022）在对横州茉莉花茶顾客感知价值对购买意愿的影响研究中发现，顾客感知价值是影响顾客购买意愿的主要因素；王丹蕾（2022）通过研究表明，绿色感知价值与企业社会责任感知能够显著正向影响绿色购买意愿，其中企业社会责任感知与诚意动机感知的交互项随着诚意动机感知高低的不同对绿色信任以及绿色购买意愿的影响是存在差异的；林笑智（2014）在消费者感知的企业道德对购买意愿的作用机制研究中表明，企业道德行为能够正向影响消费者购买意愿，但也存在一定的条件性，例如消费者的价值观、企业行业特性等都会影响这一效应的大小。为探索绿色营销感知如何通过不同的认知路径影响绿色购买意愿，选取企业动机和企业道德感知在其中所起的正向影响作用，从而提出如下假设：

H5：绿色营销感知对其绿色购买意愿具有正向影响。
H5a：绿色营销感知的企业动机感知对其绿色购买意愿具有正向影响。
H5b：绿色营销感知的企业道德感知对其绿色购买意愿具有正向影响。

1.5 绿色营销感知在绿色营销与绿色购买意愿之间的中介作用

伴随环境保护意识的提升，绿色营销已逐渐融入企业战略的核心，目的在于促进可持续消费行为的普及。尽管绿色营销的概念被广泛接受，其如何转化为消费者的实际购买行为仍存在多元解释。本文基于绿色营销感知的角度，探讨其作为绿色营销策略实施效果与消费者绿色购买意愿之间的中介角色。田丙强和徐井龙，胡守忠等人（2019）在绿色营销策略对消费者服装购买决策的影响研究中得出，消费者感知在绿色设计、绿色生产、绿色处理和绿色理念正向影响消费者购买决策中起部分中介效应。杨淑荔（2020）在企业绿色营销行为对消费者绿色消费意愿的影响研究中得出，消费者效果感知在企业绿色营销行为对消费者绿色消费意愿的影响中起部分中介作用。杜瑛瑛（2022）通过研究产品绿色属性信息对消费者绿色购买意愿影响，发现感知绿色真实性在产品绿色属性信息对购买意愿的影响中起中介作用。徐杨（2020）选择从消费者绿色感知价值视角研究绿色酒店消费意向的影响因素，寻求推动绿色酒店发展的方法，徐杨（2020）通过分析绿色感知价值对绿色酒店消费意向的影响研究结果表明：（1）功能价值、情感价值、社会价值、绿色价值和经济价值均对绿色酒店消费意向具有显著的正向影响；（2）功能价值、情感价值、社会价值、绿色价值和经济价值均对绿色信任具有显著的正向影响；（3）绿色信任对绿色酒店消费意向具有显著的正向影响；（4）绿色信任在功能价值、情感价值、社会价值、绿色价值、经济价值与绿色酒店消费意向之间产生部分中介作用。孙承文（2023）在绿色广告诉求对有机农产品购买意愿的影响机制研究中得出结论，绿色感知价值在广告诉求与自我建构的交互效应中发挥部分中介传导机制，此交互效应可以通过感知价值间接作用于有机农产品购买意愿。消费者通过绿色营销感知的中介作用去理解和评价一个企业所进行的绿色营销，以及理解和评价如何影响其对绿色产品的购买决策。企业的动机感知是消费者对于企业绿色营销的功能价值和情感价值的体现，而企业道德感知则是消费者对于社会价值和绿色价值的体验。当消费者感知到企业在绿色营销

方面的绿色环保动机和企业所承担的社会道德责任感时，他们会形成对企业积极的环保印象，从而增强对其绿色产品的认知和好感，进而提高了购买意愿。由此提出的主要假设为：

H6：绿色营销感知在绿色营销与消费者的绿色购买意愿之间起到中介作用。

H6a：企业动机感知在绿色营销与消费者的绿色购买意愿之间起到中介作用。

H6b：企业道德感知在绿色营销与消费者的绿色购买意愿之间起到中介作用。

2. 模型研究

本文提出的概念模型如图 3.1 所示，旨在探索绿色营销对消费者绿色购买意愿的影响机制。绿色营销影响消费者绿色购买意愿为主效应，其影响路径是通过绿色营销感知反应，品牌形象在绿色营销与消费者绿色购买意愿之间和绿色营销与绿色营销感知之间起到调节作用。

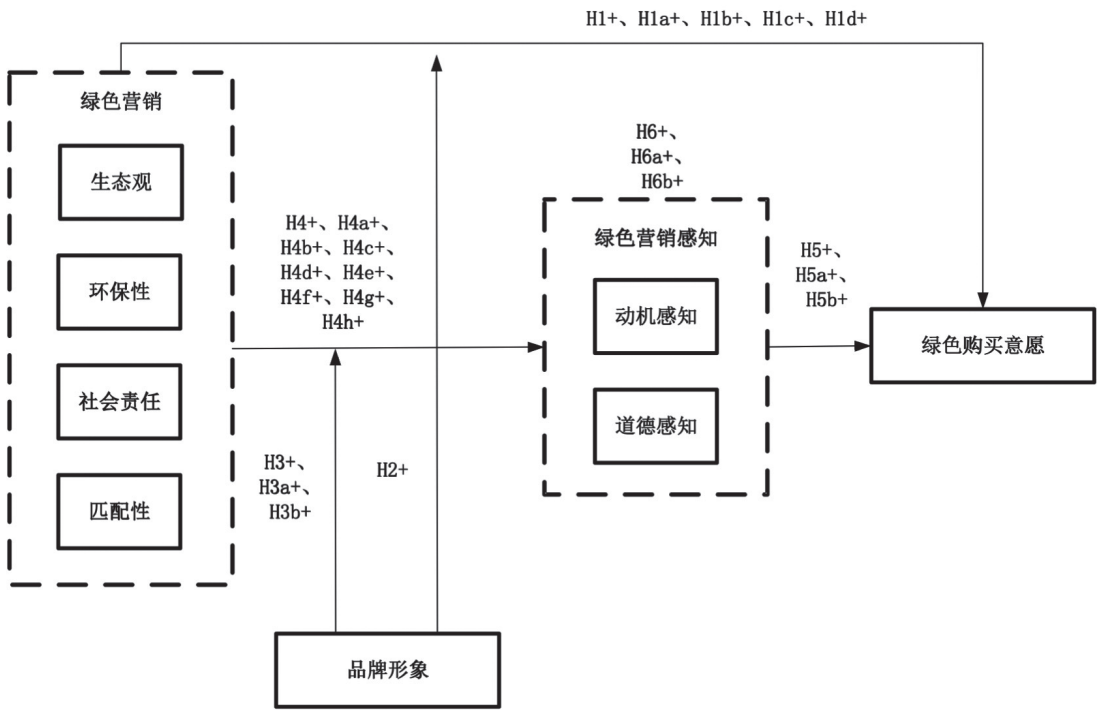

图 3.1 模型假设

IV. 实证分析

1. 量表选取

本研究采用问卷调查法，问卷分为三部分。第一部分是询问消费者是否有被绿色营销推荐产品的经历，通常会在哪个平台被推荐，还有是否发现有印象深刻的绿色营销广告，问题的主要目的是筛选目标人群和引导消费者进行回忆。如果没有看过则直接填答人口统计学变量部分结束回答。第二部分

是变量测量量表，量表采用前人的成熟量表。第三部分是人口统计信息，包括性别、年龄、学历和收入。

（1）生态观

人、环境之间是互相影响的，因此人们逐渐关注生态环境领域，尤其是企业逐渐树立起的生态观。多数学者认为生态观的规范能促进企业实施绿色营销。本研究借鉴宋林（2015），匡芮（2020），陈立彬，武琪和张永（2019）等学者的研究，提出绿色营销生态观的测量题项：1. 企业在其营销活动中将生态和可持续发展作为核心理念很有重要性；2. 企业的绿色营销产品或服务，其生产和功能属性是满足绿色发展需求的；3. 企业培育消费者的生态价值观对于促进绿色消费行为的影响重大；4. 愿意为拥有生态观的企业所生产的绿色产品或服务而支付额外费用。

题项内容如表 4–1 所示。

表 4.1 生态观测量题项

生态观	我认为企业在其营销活动中将生态和可持续发展作为核心理念很有重要性。	宋林，2015 匡芮，2020 陈立彬，武琪和张永，2019
	这个企业的绿色营销产品或服务，其生产和功能属性是满足绿色发展需求的	
	企业培育消费者的生态价值观对于促进绿色消费行为的影响重大	
	企业的生态观是我选择购买产品的重要考量因素	
	我愿意为拥有生态观的企业所生产的绿色产品或服务而支付额外费用	

（2）环保性

2023 后 5 至 15 年将是中国经济结构调整的重要阶段，而自然资源浪费和环境污染日益严重，大大限制了中国经济社会的高质量发展（刘丽凤，2023）。绿色营销的环保性作为一个对产品的全面的环境质量的评价维度，因此本研究的量表参考祝荣（2003）임혜원（2023），김호和이나라（2011），高键（2016）的研究，提出如表 4.2 所见相关题项：

表 4.2 环保性测量题项

环保性	我对拥有环保标志的企业更加信任其产品	祝荣，2003 임혜원，2023， 김호，이나라，2011，高键，2016
	我认为企业的环保性与其产品的好坏有着密切相关性	
	我会选择购买具备环保性特征的产品	
	我关注这个企业的环保政策和实践	
	我了解这个企业的环保性对环境保护的意义	
	我会为拥有环保性的企业产出的绿色产品或服务支付额外费用	

（3）社会责任

全球化要求企业超越纯粹的经济问题，关注环境和社会问题，强调经济、环境、社会和谐发展的可持续发展理念应运而生，企业间的合作与协调有助于企业开展环境保护和社会责任活动，对企业的可持续发展至关重要（孔军军，2023）。企业在市场营销中承担社会责任的对策主要是制定承担社会责任的营销战略，成立承担社会责任的内部监管机构，实施绿色营销，制定承担社会责任的广告宣传，积极参与公益事业和慈善事业。这样才能为企业带来巨大的营销效用，从长远来看能实现企业经济责任与社会责任的完美统一，企业才能在激烈的市场竞争中实现可持续发展（刘谋升，2012）。因此本研究的量表参考胡兵（2020），Luo&Bhattacharya（2009），Kim 和 Lee（2009）等人的研究，提出如表 4.3 所见相关题项：

表 4.3 社会责任测量题项

社会责任	我会主动选择支持具有社会责任感的企业 我认为企业的社会责任行为会影响我的购买行为 这个企业能提供真实、准确的环保信息给消费者 我会为拥有社会责任的企业产出的绿色产品或服务支付额外费用	胡兵，2020 Luo&Bhattacharya，2009 Kim 和 Lee，2009

（4）匹配性

刘燕（2023）提出，在企业履行社会责任的过程中，企业社会责任匹配性是影响消费者响应的重要因素。根据整理 Lafferty（2007），Forehand&Grier（2003）有关研究，提出如表 4.4 所见相关题项目。

表 4.3 匹配性测量题项

匹配性	这个企业能够将环保理念与企业核心价值观和目标相协调统一 这个企业的产品、品牌、形象、目标市场拥有一致性和匹配性 我会为高匹配性企业的绿色营销产品或服务产生积极的绿色购买意愿	Lafferty，2007 Forehand&Grier，2003

（5）绿色营销感知

消费者感知是观察和提升企业营销效果的一个重要视角，企业预先声誉、契合度、捐赠幅度与类型、品牌知名度、产品类型等五方面因素深刻影响着消费者的感知（董恺伦，张玉强，2023）。通过整理王海燕和任生（2005），徐大佑和韩德昌（2007），　Griskevicius V（2010）的有关研究，消费者在企业的动机和道德感知方面去理解其绿色营销，提出如表酸碱相关题项项目。

表 4.5 绿色营销感知测量题项

动机感知	这个企业参与环保活动是出于真诚的环保使命和责任感	王海燕和任生，2005，徐大佑和韩德昌 2007， Griskevicius V，2010
	这个企业参与环保活动的动机对我的购买决策产生积极影响	
	我愿意为真诚参与环保活动的企业的产品付出额外费用	
道德感知	这个企业的道德活动能够带来积极的消费者支持行为	
	我愿意购买高道德活动的企业产品	
	我愿意为道德活动较高的企业的产品付出额外费用	

（6）品牌形象

近几年，随着“双碳”的逐步颁布落实，许多品牌方相继推出其绿色产品并尝试塑造其绿色形象。然而，在原有基础上塑造新的品牌形象可能会投入大量成本与精力，如果消费者不买单的情况下便会造成企业亏损（林欣宇，张嘉仪，帅泞弋，2023）。因此顾客在进行绿色购买意愿时品牌形象变得十分钟的重要，根据整理김규대（2011），郭向东和曾坚韧（2024）有关研究，提出如表 4.6 所见相关题项目。

表 4.6 品牌形象测量题项

品牌形象	当我购物时，我一定会考虑品牌因素	김규대，2011 郭向东和曾坚韧，2024
	我认为企业绿色营销与品牌形象之间存在密切联系	
	我认为企业的品牌形象可以影响消费者的绿色购买意愿	
	我愿意为品牌形象较高的企业的产品付出额外费用	

（7）绿色购买意愿

刘紫瑶和胡若痴（2022）在消费者绿色消费行为影响因素研究中表明：新冠疫情下消费者绿色产品购买意愿增强并正向影响购买行为；产品质量不显著影响购前决策行为却显著影响购后实践、互动行为；服务质量、信息质量、价格因素均显著影响购前决策行为及购后实践、互动行为。整理侯海青，尹丽（2022）和 Srivastava SK（2007）相关题项提出如表 4.7 相关题项

表 4.7 绿色购买意愿测量题项

绿色购买意愿	在购买前会考虑到自己的购买行为对环境、资源和社会影响，倾向于选择有利于社会绿色发展的产品	侯海青，尹丽 2022 Srivastava SK， 2007
	如果我购买此类产品，我购买这个企业的绿色营销产品	
	我会选择具有环保产品而非传统产品	

综上所述，总的量表的选定如表 4.8. 调查问卷如本章开头所描述，第二部分是关于本文量表的题项，关于量表统计的题项共 31 个，反映了企业的生态观、环保性、社会责任匹配性、品牌形象、绿色营销感知相关的动机感知和道德感知和消费者绿色购买意愿。

表 4.8 量表具体项和来源表

生态观	我认为这个企业非常关注生态环境变化	A1	宋林，2015 匡芮，2020 陈立彬，武琪和张永，2019
	我知道这个企业经常组织员工、消费者等利益相关者参与生态公益活动	A2	
	企业年均大额投资于生态环保	A3	
	我认为这个企业的绿色营销产品或服务，其功能属性是满足绿色发展需求的	A4	
	我认为企业在营销活动中是将生态和可持续发展作为核心理念的	A5	
生态观	这个企业的产品符合国家绿色检测标准，具有环保标志	B1	祝荣，2003 임혜원，2023， 김호和이나라，2011， 高键，2016
	这个企业的产品和服务在绿色环保方面拥有较高知名度	B2	
	这个企业的产品和服务受到环保组织的支持	B3	
	我认为这个企业的产品和服务在绿色环保方面深受顾客信任	B4	
	这个企业为产品和服务在绿色环保方面制定了严格的标准和政策	B5	
	我认为这个企业对绿色环保高度重视	B6	
社会责任	我认为这个企业在生产活动中强调以人为本的价值关怀	C1	胡兵，2020 Luo&Bhattacharya，2009 Kim 和 Lee，2009
	我认为这个企业追求的不仅仅是经济效益，更重视对消费者、社会及自然环境的责任担当	C2	
	我认为这个企业能提供真实、准确的环保信息给消费者	C3	
	我认为这个企业高度重视回馈社会	C4	

匹配性	我认为这个企业能够将环保理念与企业核心价值观和目标相协调统一	D1	Lafferty, 2007 Forehand&Grier, 2003
	我认为这个企业的产品和品牌拥有一致性和匹配性	D2	
	我认为这个企业的形象和目标市场拥有一致性和匹配性	D3	
动机感知	我认为这个企业参与环保活动是出于真诚的环保使命和责任感	E1	王海燕和任生，2005， 徐大佑和韩德昌 2007， Griskevicius V，2010
	我认为这个企业的绿色营销行为的确是为了更好地促进社会的进步	E2	
	我认为这个企业的绿色营销行为的确是为了更好地为消费者创造价值	E3	
道德感知	我认为这个企业的行为遵守法律规则	F1	
	我认为这个企业经营行为注重道德规范	F2	
	我认为该企业积极开展对整个社会生态有贡献的活动	F3	
品牌形象	我认为这个企业很注重自身的品牌形象	G1	김규대，2011 郭向东和曾坚韧，2024
	我认为这个企业的品牌形象很高	G2	
	我愿意购买企业品牌形象较高的产品	G3	
	我愿意为这个企业的品牌形象付出额外费用	G4	
绿色购买意愿	在购买前会考虑到自己的购买行为对环境、资源和社会的影响，倾向于选择有利于社会绿色发展的产品	H1	侯海青，尹丽 2022 Srivastava SK， 2007
	如果我购买此类产品，我购买这个企业的绿色营销产品	H2	
	我会为企业产出的绿色产品或服务支付额外费用	H3	

2. 初期调研

根据前文的论述，我们选定了本次研究调查所使用的量表，共包含 8 个观测变量维度，分别是绿色营销的生态观、环保性、社会责任、匹配性、消费者的动机感知和道德感知、绿色营销企业的品牌形象和消费者的绿色购买意愿，并且对每一个维度设置了相应的调查题项。接下来我们将采取网络问卷调查的方式来对本文的研究内容开展预调研，并对预调研的结果进行分析，来检验本文的调查问卷数据和量表题项表达的可靠性。根据调查问卷回收获得的数据，主要对预调研的数据做信度和效度的分析，完善问卷题项的表达，最后让导师进行审核，确保问卷的准确性，以便为正式实验调查奠定坚实的基础。

2.1 预调研的描述性统计分析

本文采用利用线上网络问卷调查和线下发放纸质调查问卷的方式来同时进行问卷发布和收集数据，本研究对于样本并没有特殊的要求。虽然预测试不需要太多的样本数量，为了实现统计结果的稳定性，应该至少 100 份问卷。本文预测试的被调查者主要是高校教师、学生和高校附近的居民，这在一定程度上可以有效地控制问卷调查过程。通过问卷星平台和线下发布的在线问卷共计 128 份，剔除回答不完整、回答矛盾以及在网络平台答题时间极短的无效问卷，有效问卷 116 份，有效率 90.6%。使用 SPSS 27.0 和 AMOS 28.0 来对调查问卷回收的数据进行处理，预调研样本的描述性统计结果如下表 4–1 所示。

从下表里可以看出，调查所涉及的男女比例是男性大于女性，但总体是差不多的，性别比例分配合理，年龄大多数人都在 19–25 岁，以年轻人为主，学历也都是以本科、专科大学生，都拥有一定的教育水平，收入较低，普遍在 1000 元以下，其中 18–40 岁的人群占到了 80% 以上，因为这部分人群是市场上消费的主力军，也是与绿色产品接触较多的人群，对新兴的绿色营销也较为关注。所以预调研选取的小样本分析也具有一定的代表性。

表 4.1 预测试样本描述性统计（N=116）

样本特征	特征描述	频率	众数	百分比 %
性别	A. 男	61	A	52.6
	B. 女	55		47.4
年龄	A.18 岁及以下	14	C	12.1
	B.19–25 岁	30		25.9
	C.26–30 岁	40		34.5
	D.31–40 岁	20		17.2
	E.41 岁及以上	12		10.3
学历	A. 初中及以下	7	C	6
	B. 高中、中专、职高	43		37.1
	C. 本科、大专、高职	57		49.1
	D. 硕士及以上	9		7.8
月收入	A.1000 元及以下	26	B	22.4
	B.1001 元—3000 元	32		27.6
	C.3001 元—5000 元	28		24.1
	D.5001 元 –8000 元	22		19.0
	E.8001–10000 元	4		3.4
	F.10001 元及以上	4		3.4
	总计	116	–	100.0

2.2 共同方法性偏差检验和相关性分析

共同方法偏差(CMV,common method biases)指的是因为同样的数据来源或评分者、同样的测量环境、项目语境以及本身特征所造成的预测变量与效标变量之间人为的共变。这种人为的共变对研究结果产生严重的混淆并对结论会有潜在的误导，是一种系统误差。共同方法偏差是测量误差的主要来源之一，属于系统误差的范畴。可以独立于研究假设之外对研究变量之间的关系提供另外一种解释，但在经典心理测量中通常并未对此进行单独的分离和处理。

如果共同方法偏差比较严重的话，可能会影响到研究结论的有效性，甚至产生误解。方法偏差会放大或缩小所观察的构念之间的关系，从而导致第一类或第二类的统计错误。如：

弃真错误：两个构念高度相关，测量结果的相关性却不显著。

存伪错误：两个构念完全不相关，测量结果的相关性显著。

共同方法的偏差主要来源于：数据同一个来源或评价者、问卷特征、问卷的内容、问卷测量语境的影响等。共同方法偏差控制方法有程序控制和统计控制：

程序控制，指的是研究者在问卷设计和测量过程中采取的控制措施。统计控制主要是指计算方法控制，如 Harman 单 / 多因素检验或非可测潜在方法因素检验等等。

本文的问卷调查过程中采取了一些控制共同方法偏差的措施，如减少被调查者对测试目的的猜度、匿名回答、异地采集、多时间点调查等，以期望减少共同方法偏差，提高数据的可靠性（ Nguyen, Nathan,2021 ）。

本文研究的预调研的调查数据测量主体相同，为了进一步检验数据的共同方法偏差问题，本文采用“Harman 单因素检验”方法，通过使用 SPSS 27.0 统计软件，对调查数据共同方法偏差进行检验。依据因子分析的结果显示，共有 7 个未旋转的因子特征根 >1，变量解释水平为 76.696%，并且第一个主成分因子解释水平为 43.223%，接近 50% 的临界值。结果表明本文预调研通过调查问卷所获取的调查数据得出的共同方法偏差并不严重，在可以接受的范围内。

同时通过对各个变量进行相关性分析来阐明各变量之间的密切程度，并以此来验证 各变量之间的关系程度和影响。对自变量（企业的绿色营销：生态观、环保性、社会责任和匹配性）、中介变量（消费者行为的动机感知和道德感知）、因变量（消费者绿色购买意愿）和调节变量（企业的品牌形象）之间的线性关系进行验证。下面表 4–2 反映了预调研中 8 个维度的变量的相关性分析结果。企业绿色营销的 4 个维度变量、消费者感知的 2 个维度变量和企业的品牌形象变量，对消费者的绿色购买意愿存在正相关关系。综合以上各变量之间的相关性分析，表明上面相关的 7 个维度变量对消费者绿色购买意愿之间分别呈现正相关，但不能验证企业绿色营销、品牌形象、消费者行为感知和消费者绿色购买意愿之间是否都存在因果关系，还需要做进一步的验证分析。

表 4.2 预测试变量维度的相关性分析

	生态观	环保性	社会责任	动机感知	道德感知	品牌形象	绿色购买意愿
生态观	1.000						
环保性	0.484	1.000					
社会责任	0.501	0.433	1.000				
匹配性	0.412	0.497	0.393				
动机感知	0.412	0.477	0.409	1.000			
道德感知	0.412	0.499	0.399	0.464	1.000		
品牌形象	0.412	0.588	0.609	0.414	0.431	1.000	
绿色购买意愿	0.412	0.465	0.437	0.530	0.357	0.524	1.000

2.3 预调研的信度分析

预调研测量结果的稳定性和可靠性，即信度，指用同一方法对一个对象进行重复测量，所得到的结果与之前的测量结果相一致的程度。信度分析仅针对量表类数据，如李克特量表、反应高低大小等量表类。目前，最常见的信度检验是通过计算 Cronbanchs α 系数，其计算公式如：，其中 K 表示评估指标的个数，S 表示方差。

在预调研取得的数据中，通过对下面量表中的变量进行信度分析，来检验问卷的可信度水平。结合每个变量维度的 Cronbanchs α 系数值的大小来进行验证，判断本文选取的量表是否具有很好的内部一致性。一般说来，Cronbanchs α 系数值小于 0.6，则表示问卷的信度为不可信，效果较差，当它大于 0.7—0.8 则表示问卷的信度为良好，当位于 0.8–0.9 以上则表示信度非常可信，为理想的结果。

通过下面 SPSS 分析得到的表 4–3 可以看出，每一个变量维度所设置的题目项数，得到的 Cronbanchs α 系数和删除所在项的 Cronbanchs α 系数均接近或大于 0.8 以上，说明变量的可信度较好，可靠性较好，该量表的所有测量题项均达到要求，故无需再作缩减，量表具有良好的内部一致性，可信度较高。

表 4.3 预测试量表的信度分析

变量	项数	题目编号	项删除后的 Cronbanchs$^{\alpha}$ 系数	Cronbanchs$^{\alpha}$ 系数
生态观	5	A1	0.909	0.922
		A2	0.899	
		A3	0.905	
		A4	0.897	
		A5	0.910	
环保性	6	B1	0.925	0.941
		B2	0.934	
		B3	0.932	
		B4	0.934	
		B5	0.927	
		B6	0.930	
社会责任	4	C1	0.865	0.892
		C2	0.860	
		C3	0.857	
		C4	0.863	
匹配性	3	D1	0.826	0.893
		D2	0.871	
		D3	0.842	

动机感知	3	E1	0.837	0.862
		E2	0.790	
		E3	0.790	
道德感知	3	F1	0.840	0.893
		F2	0.864	
		F3	0.838	
品牌形象	4	G1	0.867	0.903
		G2	0.889	
		G3	0.865	
		G4	0.876	
绿色购买意愿	3	H1	0.827	0.870
		H2	0.799	
		H3	0.823	

2.4 预调研的效度分析

效度主要用来评价量表的准确度、有效性和正确性，指测量工具或者手段能够准确测得所需测量的事物的程度。信度是效度的必要条件，但不是充分条件，一个测量的效度要高，其信度也必然高，但是一个测量的信度高时，效度并不一定高。因此对预调研结果的效度分析是有必要的。

本次分析所用的测量题量，已经通过了之前相关学者的研究论证，并有了一定的改进之处，题量的分布也相对合适，所以内容效度也会比较高。

效度分析分为两种：分别是探索性因子分析 EFA 和验证性因子分析 CFA。探索性因子分析 EFA 主要用来探索模型结构，而验证性因子分析 CFA 主要是为了验证模型的结构。本文在预调研阶段使用探索性因子 EFA 分析。

在探索性因子分析中，依据 Kaiser（1974）的观点，可从取样适当性数值（KMO）的大小来判别，KMO 的值介于 0 到 1 之间，KMO 值大于 0.9 时表示此样本数据非常适合做因子分析；KMO 值大于 0.8 小于 0.9 表示适合做因子分析；KMO 值大于 0.7 小于 0.8 表示尚可做因子分析；KMO 值大于 0.6 小于 0.7 表示很勉强；KMO 值大于 0.5 小于 0.6 表示不适合做因子分析。巴特利特（Bartlett）球形度指标值 显著性水平 P 小于 0.05 时，代表该问卷量表符合要求，KMO 数值越接近 1，则表示越适合进行探索性分析。

接下来运用主成分分析法，使用方差最大化进行因子正交旋转，进行探索性因子分析，具体数据分析如下：

（1）企业的绿色营销量表效度分析

企业的绿色营销（自变量）量表共有生态观、环保性、社会责任、匹配度 4 个维度。通过 SPSS 27.0 分析得到企业的绿色营销量表效度检验结果。如表 4–4 所示，企业的绿色营销行为量表 KMO 为 0.918，Bartlett 球形度检验的显著性水平 P 值为 0.000，小于显著性水平 0.05，表示企业的绿色营销量表的各题项之间关系好，适合进一步做探索性因子分析。同时利用主成分分析法，根据特征值大于 1 为标准，提取 4 个特征值总计大于 1 的公因子，衡量其累计贡献率，解释的累计和达到 78.062%，说明提取这 4 个公共因子基本可以解释 18 个变量所包含的信息。

表 4.4 企业的绿色营销量表的 KMO 和 Bartlett 检验

KMO 取样适切性量数	**0.918**	
Bartlett 球形度检验	近似卡方	1571.957
	自由度	153
	显著性	0.000

（2）消费者感知量表效度分析

消费者感知（中介变量）量表共有动机感知和道德感知 2 个维度。通过 SPSS 27.0 分析得到消费者感知量表效度检验结果。如表 4–5 所示，消费者感知量表 KMO 为 0.815，Bartlett 球形度检验的显著性水平 P 值为 0.000，小于显著性水平 0.05，表示消费者感知量表的各题项之间关系好，适合进一步做探索性因子分析。同时利用主成分分析法，根据特征值大于 1 为标准，提取 2 个特征值总计大于 1 的公因子，衡量其累计贡献率，解释的累计和达到 80.833%，说明提取这 2 个公共因子基本可以解释 6 个变量所包含的信息。

表 4.5 消费者感知量表的 KMO 和 Bartlett 检验

KMO 取样适切性量数	**0.815**	
Bartlett 球形度检验	近似卡方	392.996
	自由度	15
	显著性	0.000

（3）企业的品牌形象调节量表效度分析

企业的品牌形象（调节变量）共有 1 个维度。同样通过 SPSS 27.0 分析得到企业的品牌形象量表效度检验结果。如表 4–6 所示，企业的品牌形象量表 KMO 为 0.847，Bartlett 球形度检验的显著性水平 P 值为 0.000，小于显著性水平 0.05，表示企业的品牌形象量表的各题项之间关系好，适合进一步做探索性因子分析。同时利用主成分分析法，根据特征值大于 1 为标准，提取 1 个特征值总计大于 1 的公因子，衡量其累计贡献率，解释的累计和达到 77.428%，说明提取这 1 个公共因子基本可以解释 4 个变量所包含的信息。

表 4.6 企业的品牌形象调节量表的 KMO 和 Bartlett 检验

KMO 取样适切性量数	**0.847**	
Bartlett 球形度检验	近似卡方	283.072
	自由度	6
	显著性	0.000

（4）消费者购买行为量表效度分析

消费者购买行为(因变量)共有 1 个维度。通过分析得到消费者购买行为量表效度检验结果。如表 4–7 所示，消费者购买行为量表 KMO 为 0.738，Bartlett 球形度检验的显著性水平 P 值为 0.000，小于显著性水平 0.05，表示消费者购买行为量表的各题项之间关系好，适合进一步做探索性因子分析。同时利用主成分分析法，根据特征值大于 1 为标准，提取 1 个特征值总计大于 1 的公因子，衡量其累计贡献率，解释的累计和达到 79.428%，说明提取这 1 个公共因子基本可以解释 4 个变量所包含的信息。

表 4.7 消费者购买行为量表的 KMO 和 Bartlett 检验

KMO 取样适切性量数	**0.738**	
Bartlett 球形度检验	近似卡方	168.627
	自由度	3
	显著性	0.000

综上所述，探索性因子分析的各项参数指标良好，表示量表的各题项之间关系很好，适合进一步做探索性因子分析。

3. 正式调研

正式调研主要通过线上渠道进行发放问卷，通过网络社交媒体的方式进行调查取样和数据收集。由于本文是研究绿色营销的相关内容，考虑到 70 后及以上年龄的人对绿色营销的了解较少，对绿色营销相关关注度并不高，对绿色产品的购买力度和意愿并不是太强烈，因此发放对象主要为 85 后、90 后和 00 后，主要以有受教育背景的年轻人为主。问卷调研采取便利的网络调查问卷取样，通过线上调查问卷的方式，线上调查问卷主要在问卷星上进行发布调查问卷，填写问卷调查的人可以获得作者准备的红包，以此刺激人群参与调查，线上问卷主要通过问卷星、QQ、微信朋友圈和微信群广发问卷进行转发填写，并且在微信群填答问卷时可以领取红包，以此确保填写人认真填答问卷。最终回收问卷 850 份，其中看过绿色营销产品的有 795 人，删除掉无效问卷，如填写不完整、填写重复答案、答题时间很短不足 100 秒的问卷，有效问卷是 787 份，有效问卷回收率 92.58%。

V. 研究结果

1. 描述性统计分析

1.1 样本数据的描述性统计分析

对正式调研得到的 787 份有效问卷的样本的人口统计学特征进行描述统计分析，表 5.1 是得到的结果。从表 5.1 性别分布来看，被调查者中男性 420 人，占 53.37%，女性 367 人，占 46.63%，总体上男女人数基本相同；从年龄分布来看，被调查者主要集中在 19–40 岁之间，占总样本的 80.18%；从学历分布来看，学历以本科、大专、高职为主，占比 55.02%，高中、中专、职高占比 27.83%。月收入分

布上 1001 元 –3000 元为 213 人占比最高为 27.06%，其次为 1000 元及以下占比 21.47%，5001 元 –8000 元占比 20.58%，10001 元及以上占比最低为 4.19%。

对于 787 份调查数据中，看过或有过绿色营销的企业频率分布前 10 分别为比亚迪、西门子能源、提供绿色交通解决方案的城投公司、晶澳太阳能、宁德时代、阳光电源、Lino Group、智能能源管理，绿色数据中心、大自然食材、纯净山泉，健康食品屋；

印象最深刻的绿色营销推荐的产品推荐前 10 分别为松下的节能家电、自然之选的有机护肤品、联合利华的环保洗衣液、耐克的环保运动装备、生态之选咖啡、阿迪达斯的再生材料运动鞋、雅诗兰黛的天然有机护肤品、欧莱雅的环保化妆品、夏普的环保显示屏、大润发超市的环保购物袋。

表 5.1 频数分析结果

频数分析结果				
名称	选项	频数	百分比（%）	累积百分比（%）
性别	近似卡方	420	53.37	53.37
	显著性	367	46.63	100.00
年龄	18 岁及以下	84	10.67	10.67
	19–25 岁	242	30.75	41.42
	26–30 岁	243	30.88	72.30
	31–40 岁	146	18.55	90.85
	41 岁及以上	72	9.15	100.00
学历	初中及以下	74	9.40	9.40
	高中、中专、职高	219	27.83	37.23
	本科、大专、高职	433	55.02	92.25
	硕士及以上	61	7.75	100.00
月收入	1000 元及以下	169	21.47	21.47
	1001 元 –3000 元	213	27.06	48.54
	3001 元 –5000 元	150	19.06	67.60
	5001 元 –8000 元	162	20.58	88.18
	8001 元 –10000 元	60	7.62	95.81
	10001 元及以上	33	4.19	100.00
	合计	787	100.0	100.0

1.2 变量描述性统计分析

同样对于调查问卷的题目变量也进行了描述性统计分析。使用 SPSS27.0 对回收的数据进行处理分析，通过对 N、极小值、极大值、平均值、标准差、偏度和峰度来检测回收问卷的数据是否呈正态分布，即是否可以进行后续研究。在统计学上当偏度的绝对值小于 3，峰度的绝对值小于 10 时，表明样本基本服从正态分布。从表 5.2 描述性统计的数据分析结果可以看出同时满足这两个条件，从结果中可以看出各项数据结果表明数据基本符合正态分布。

表 5.2 描述性统计

	N	最小值	最大值	均值	标准 偏差	偏度	峰度
A1	787	1	7	4.52	1.703	–0.48	–0.694
A2	787	1	7	4.52	1.621	–0.384	–0.591
A3	787	1	7	4.43	1.639	–0.409	–0.764
A4	787	1	7	4.49	1.641	–0.347	–0.689
A5	787	1	7	4.48	1.591	–0.412	–0.619
B1	787	1	7	4.46	1.662	–0.445	–0.696
B2	787	1	7	4.46	1.657	–0.409	–0.757
B3	787	1	7	4.49	1.681	–0.409	–0.754
B4	787	1	7	4.41	1.597	–0.411	–0.662
B5	787	1	7	4.44	1.605	–0.326	–0.832
B6	787	1	7	4.38	1.646	–0.406	–0.621
C1	787	1	7	4.41	1.631	–0.355	–0.669
C2	787	1	7	4.47	1.671	–0.376	–0.764
C3	787	1	7	4.45	1.653	–0.407	–0.708
C4	787	1	7	4.43	1.645	–0.431	–0.674
D1	787	1	7	4.50	1.616	–0.409	–0.601
D2	787	1	7	4.46	1.588	–0.418	–0.625
D3	787	1	7	4.48	1.599	–0.346	–0.676
E1	787	1	7	4.46	1.723	–0.45	–0.77
E2	787	1	7	4.47	1.677	–0.429	–0.698

E3	787	1	7	4.40	1.725	–0.411	–0.813
F1	787	1	7	4.56	1.609	–0.528	–0.56
F2	787	1	7	4.52	1.643	–0.497	–0.541
F3	787	1	7	4.63	1.631	–0.579	–0.431
G1	787	1	7	4.86	1.556	–0.562	–0.284
G2	787	1	7	4.80	1.525	–0.578	–0.303
G3	787	1	7	4.83	1.553	–0.673	–0.213
G4	787	1	7	4.79	1.494	–0.637	–0.06
H1	787	1	7	4.48	1.626	–0.451	–0.655
H2	787	1	7	4.47	1.621	–0.435	–0.643
H3	787	1	7	4.48	1.634	–0.393	–0.602

1.3 共同方法性偏差检验

问卷调查研究方法所收集的调查数据普遍会存在一定程度的共同方法偏差，这种系统误差如前文预调研所述，并不能完全避免。在正式问卷调查过程中，采取了控制共同方法性偏差的措施和预调研的结果一样，如匿名回答等。基于本研究的预测试的调查数据测量主体相同，为了进一步检验数据的共同方法偏差问题，正式调查的共同方法性偏差计算也是采用“Harman 单因素检验”方法，通过使用 SPSS 27.0 统计软件，对调查数据共同方法偏差进行检验。依据因子分析的结果显示，共有 7 个未旋转的因子特征根 >1，变量解释水平为 74.833%，并且第一个主成分因子 解释水平为 39.165%，小于 50% 的临界值。结果表明本文预测试所获取的调查数据共同方法偏差不严重 .

2. 信度检验

为了验证问卷内部各项目之间的一致性，以保证问卷设计的合理性，同样和预调研一样，需要对正式调查得到的样本数据进行信度分析。在统计学中，信度分析一般采用 α 系数（即 Cronbanchs α 系数）来衡量，α 系数越大，则表示问卷信度越高，即问卷内部项目的一致性越高，问卷内部各个变量的可信度越强，问卷设计越科学合理。根据美国学者 Joseph（1998）的建议，信度系数大于 0.7，表明数据可靠性较高。因此本研究在正式调查问卷的分析中，采用 α 大于 0.7 问卷信度的检验标准，利用 SPSS27.0 软件进行分析，检验结果如表 5.3 所示。

绿色营销量表题项的校正项目的总分相关（CITC）系数均大于 0.5 的检验标准，项已删除的 Cronbanchs α 系数均小于原 α 系数，表明绿色营销特征量表的信度达到一致性标准；绿色营销特征量表整体的 Cronbanchs α 系数值为 0.933，绿色营销特征测量量表 4 个维度的 Cronbanchs α 系数值分别为 0.912、0.936、0.903 和 0.883 所有系数值均大于 0.8，说明绿色营销特征量表的信度达到稳定性和可靠性标准。

表 5.3 绿色营销的信度分析

	名称	CITC	项已删除的 Cronbach$^{\alpha}$	各维度 Cronbach$^{\alpha}$	量表的 Cronbachs$^{\alpha}$
生态观	A1	0.798	0.888	0.912	0.933
	A2	0.777	0.892		
	A3	0.77	0.894		
	A4	0.782	0.891		
	A5	0.754	0.897		
环保性	B1	0.816	0.924	0.936	
	B2	0.8	0.926		
	B3	0.81	0.924		
	B4	0.804	0.925		
	B5	0.815	0.924		
	B6	0.816	0.924		
责任性	C1	0.779	0.875	0.903	
	C2	0.795	0.869		
	C3	0.779	0.875		
	C4	0.772	0.878		
匹配性	D1	0.784	0.823	0.883	
	D2	0.773	0.833		
	D3	0.76	0.845		

表 5.4 所示，绿色营销感知题项的校正项目的总分相关（CITC）系数均大于 0.5 的检验标准，项已删除的 Cronbanchs α 系数均小于原 α 系数，表明绿色营销感知量表的信度达到一致性标准；绿色营销感知整体的 Cronbanchs α 系数值为 0.872，绿色营销感知量表 2 个维度的 Cronbanchs α 系数值分别为 0.874、0.882 所有系数值均大于 0.8，说明绿色营销感知量表的信度达到稳定性和可靠性标准。

表 5.4 绿色营销感知的信度分析

	名称	CITC	项已删除的 Cronbach$^{\alpha}$	各维度 Cronbach$^{\alpha}$	量表的 Cronbachs$^{\alpha}$
动机感知	E1	0.763	0.816	0.874	0.872
	E2	0.748	0.83		
	E3	0.761	0.819		
道德感知	0.789	0.817	0.924	0.882	
	0.756	0.846	0.926		
	0.768	0.835	0.924		

表 5.5 所示，品牌形象和绿色购买意愿题项的校正项目的总分相关（CITC）系数均大于 0.5 的检验标准，项已删除的 Cronbanchs α 系数均小于原 α 系数，表明品牌形象和绿色购买意愿量表的信度达到一致性标准；品牌形象和绿色购买意愿整体的 Cronbanchs α 系数值为 0.831，品牌形象和绿色购买意愿的 Cronbanchs α 系数值分别为 0.887、0.865 所有系数值均大于 0.8，说明品牌形象和绿色购买意愿的信度达到稳定性和可靠性标准。

表 5.5 品牌形象和绿色购买意愿信度分析

	名称	CITC	项已删除的 Cronbach$^{\alpha}$	各维度 Cronbach$^{\alpha}$	量表的 Cronbachs$^{\alpha}$
品牌形象	G1	0.753	0.855	0.887	0.831
	G2	0.765	0.851		
	G3	0.751	0.856		
	G4	0.745	0.859		
绿色购买意愿	H1	0.758	0.796	0.865	
	H2	0.738	0.814		
	H3	0.732	0.82		

3. 效度检验

3.1 绿色营销的验证性因子

如图 5.1 所示对绿色营销特征进行验证性因子分析。从表 5.6 中数据可以看出，各观测变量与潜在变量之间的标准化路径系数均在 0.5 以上，均具有 1% 的显著水平，说明各因子指标能够很好地解释本文理论模型，模型与数据整体上有良好的适配度。从拟合指标来看，卡方比自由度值为 1.393， 小于 5

的检验标准，GFI、 AGFI 分别为 0.975 和 0.967 均大于 0.9 的检验标准；RMSEA 为 0.022 小于 0.05 的检验标准。相对拟合指数 NFI、TLI、CFI 和 IFI 均大于 0.9 的检验标准，通过运用信度与平均方差提取值计算公式对 CR 和 AVE 计算得出，每个因子的信度均大于 0.7，平均方差提取值均大于 0.5，说明模型变量的组合信度、收敛效度都达到了要求水平，也表明该模型具有很好的内在质量。

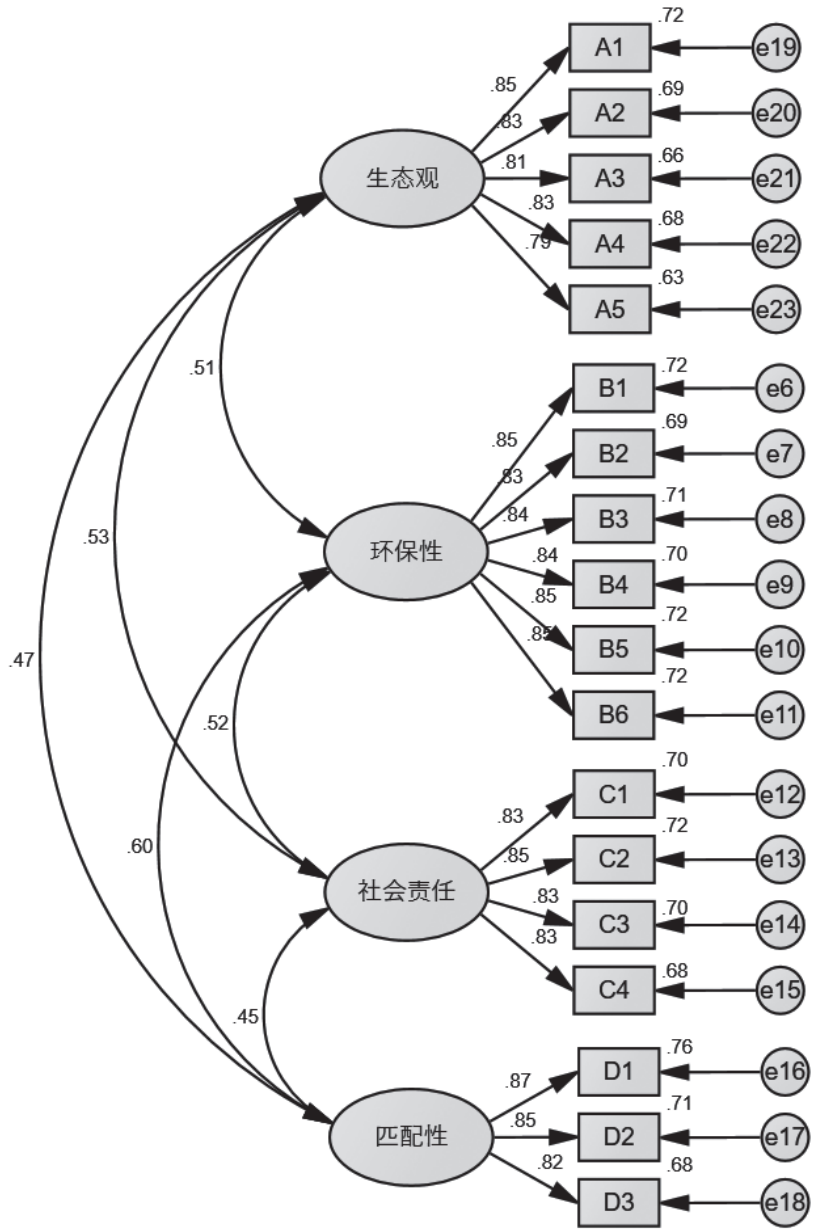

图 5.1 绿色营销特征的验证性因子分析拟合图

表 5.6 绿色营销特征的验证性因子分析结果

			因子载荷	平均方差萃取 AVE 值	组合信度 CR 值
A1	<---	生态观	0.846	0.675	0.912
A2	<---	生态观	0.831		
A3	<---	生态观	0.811		
A4	<---	生态观	0.827		
A5	<---	生态观	0.793		
B1	<---	环保性	0.849	0.710	0.936
B2	<---	环保性	0.831		
B3	<---	环保性	0.842		
B4	<---	环保性	0.838		
B5	<---	环保性	0.850		
B6	<---	环保性	0.846		
C1	<---	社会责任	0.834	0.699	0.903
C2	<---	社会责任	0.849		
C3	<---	社会责任	0.835		
C4	<---	社会责任	0.825		
D1	<---	匹配性	0.869	0.715	0.883
D2	<---	匹配性	0.845		
D3	<---	匹配性	0.822		

拟合指标 $\chi 2$=179.727，df=129，$\chi 2$/df=1.393，GFI=0.975，AGFI=0.967，NFI=0.983，TLI=0.994，CFI=0.995，IFI=0.995，RMSEA=0.022

3.2 绿色营销感知验证性因子

如图 5.2 所示对绿色营销感知进行验证性因子分析。从表 5.7 中数据可以看出，各观测变量与潜在变量之间的标准化路径系数均在 0.5 以上，均具有 1% 的显著水平，说明各因子指标能够很好地解释本文理论模型，模型与数据整体上有良好的适配度。从拟合指标来看，卡方比自由度值为 1.640， 小于 5 的检验标准，GFI、 AGFI 分别为 0.994 和 0.985 均大于 0.9 的检验标准；RMSEA 为 0.029 小于 0.05 的检验标准。相对拟合指数 NFI、TLI、CFI 和 IFI 均大于 0.9 的检验标准，通过运用信度与平均方差提取值计算公式对 CR 和 AVE 计算得出，每个因子的信度均大于 0.7，平均方差提取值均大于 0.5，说明模型变量的组合信度、收敛效度都达到了要求水平，也表明该模型具有很好的内在质量。

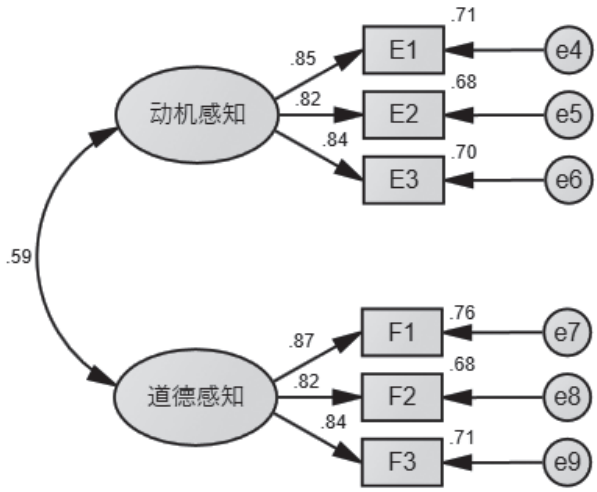

图 5.2 绿色营销感知的验证性因子分析拟合图

表 5.7 绿色营销感知的验证性因子分析结果，

			因子载荷	平均方差萃取 AVE 值	组合信度 CR 值
E1	<---	动机感知	0.845	0.698	0.874
E2	<---	动机感知	0.825		
E3	<---	动机感知	0.836		
F1	<---	道德感知	0.870	0.714	0.882
F2	<---	道德感知	0.822		
F3	<---	道德感知	0.843		

拟合指标 χ 2=13.117，df=8，χ 2/df=1.640，GFI=0.994，AGFI=0.985，
NFI=0.995， TLI=0.996，CFI=0.998，IFI=0.998，RMSEA=0.029

3.3 品牌形象和绿色购买意愿的验证性因子分析

如图 5.3 所示，品牌形象和绿色购买意愿的验证性因子分析。从表 5.8 中数据可以看出，各观测变量与潜在变量之间的标准化路径系数均在 0.5 以上，均具有 1% 的显著水平，说明各因子指标能够很好地解释本文理论模型，模型与数据整体上有良好的适配度。从拟合指标来看，卡方比自由度值为 3.080，小于 5 的检验标准，GFI、AGFI 分别为 0.985 和 0.969 均大于 0.9 的检验标准；RMSEA 为 0.051 小于 0.08 的 检验标准。相对拟合指数 NFI、TLI、CFI 和 IFI 均大于 0.9 的检验标准，通过运用信度与平均方差提取值计算公式对 CR 和 AVE 计算得出，每个因子的信度均大于 0.7，平均方差提取值均大于 0.5，说明模型变量的组合信度、收敛效度都达到了要求水平，也表明该模型具有很好的内在质量。

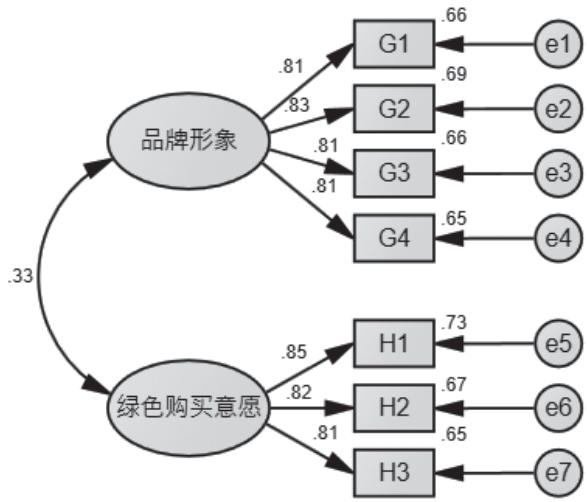

图 5.3 品牌形象和绿色购买意愿的验证性因子分析拟合图

表 5.8 品牌形象和绿色购买意愿的验证性因子分析结果

			因子载荷	平均方差萃取 AVE 值	组合信度 CR 值
G1	<---	品牌形象	0.814	0.664	0.887
G2	<---	品牌形象	0.828		
G3	<---	品牌形象	0.81		
G4	<---	品牌形象	0.807		
H1	<---	绿色购买意愿	0.852	0.681	0.865
H2	<---	绿色购买意愿	0.817		
H3	<---	绿色购买意愿	0.806		

拟合指标 $\chi 2$=40.040，df=13，$\chi 2$/df=3.080，GFI=0.985，AGFI=0.969，
NFI=0.986，TLI=0.985，CFI=0.991，IFI=0.991，RMSEA=0.051

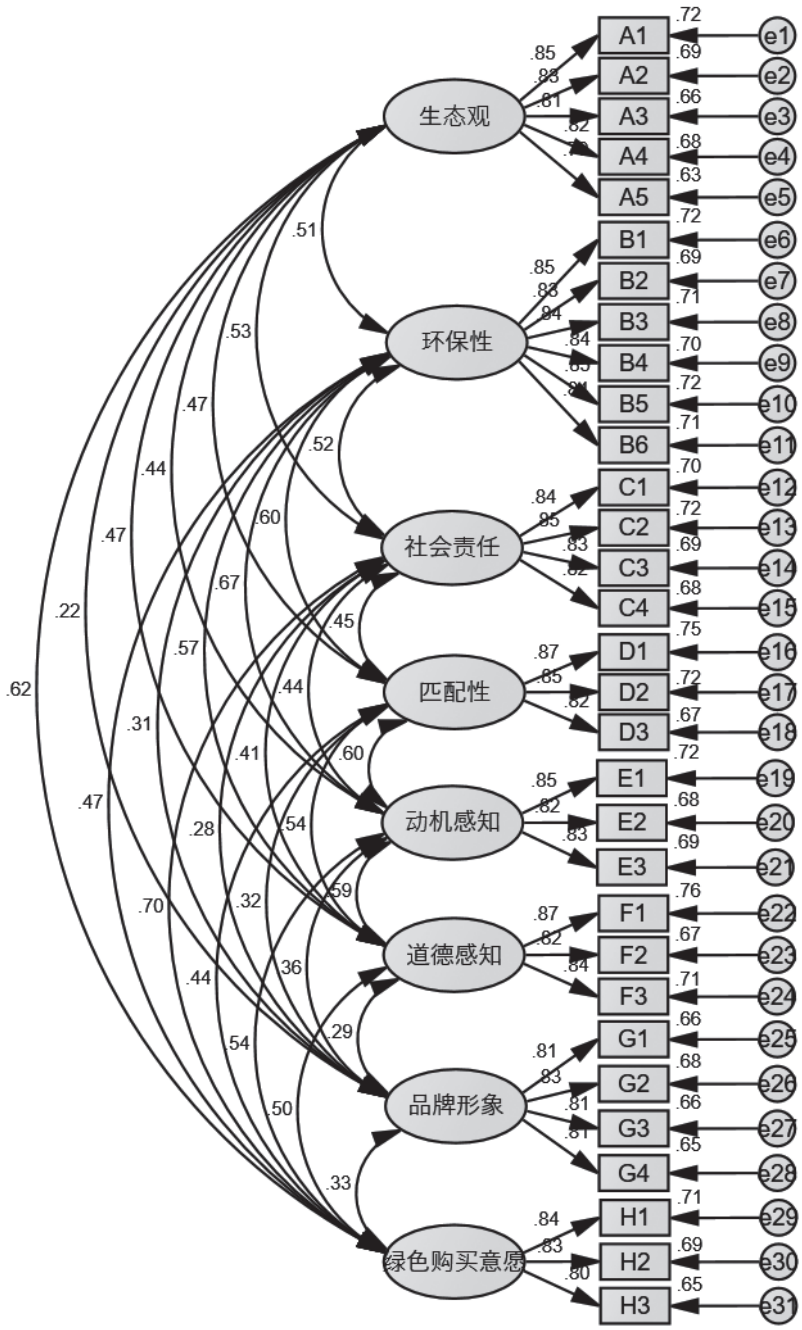

图 5.4 验证性因子分析拟合图

从表 5.9 中数据可以看出，各观测变量与潜在变量之间的标准化路径系数均在 0.5 以上，均具有 1% 的显著水平，说明各因子指标能够很好地解释本文理论模型，模型与数据整体上有良好的适配度。从拟合指标来看，卡方比自由度值为 1.403，小于 5 的检验标准，GFI、 AGFI 分别为 0.956 和 0.946 均大于 0.9 的检验标准；RMSEA 为 0.023 小于 0.08 的 检验标准。相对拟合指数 NFI、TLI、CFI 和 IFI 均大于 0.9 的检验标准，通过运用信度与平均方差提取值计算公式对 CR 和 AVE 计算得出，每个因子的信度均大于 0.7, 平均方差提取值均大于 0.5，说明模型变量的组合信度、收敛效度都达到了要求水平，也表明该模型具有很好的内在质量。

表 5.9 各维度验证性因子分析

名称			因子载荷	平均方差萃取 AVE 值	组合信度 CR 值
A1	<---	生态观	0.847	0.675	0.912
A2	<---	生态观	0.830		
A3	<---	生态观	0.813		
A4	<---	生态观	0.825		
A5	<---	生态观	0.793		
B1	<---	环保性	0.849	0.710	0.936
B2	<---	环保性	0.831		
B3	<---	环保性	0.842		
B4	<---	环保性	0.838		
B5	<---	环保性	0.850		
B6	<---	环保性	0.845		
C1	<---	社会责任	0.839	0.699	0.903
C2	<---	社会责任	0.848		
C3	<---	社会责任	0.832		
C4	<---	社会责任	0.824		
D1	<---	匹配性	0.866	0.716	0.883
D2	<---	匹配性	0.850		
D3	<---	匹配性	0.821		
EE1	<---	动机感知	0.850	0.698	0.874
EE2	<---	动机感知	0.824		
EE3	<---	动机感知	0.832		
F1	<---	道德感知	0.872	0.714	0.882
F2	<---	道德感知	0.820		
F3	<---	道德感知	0.842		

G1	<---	品牌形象	0.812	0.664	0.888
G2	<---	品牌形象	0.827		
G3	<---	品牌形象	0.811		
G4	<---	品牌形象	0.809		
H1	<---	绿色购买意愿	0.840	0.681	0.865
H2	<---	绿色购买意愿	0.831		
H3	<---	绿色购买意愿	0.805		

拟合指标 χ 2=569.612，df=406，χ 2/df=1.403，GFI=0.956，AGFI=0.946，NFI=0.968， TLI=0.989，CFI=0.990，IFI=0.990，RMSEA=0.023

3.4 区别效度检验

区分效度用于衡量不同的潜变量之间的差异性，通过比较 AVE 的平方根与两个潜变量之间的相关系数大小来确定区分效度，如果 AVE 的平方根大于相关系数则说明两个潜变量之间有良好的区分效度。根据结果如表 5.10 所示，生态观、环保性、责任性、匹配性、动机感知、道德感知、品牌形象、绿色购买意愿之间具有显著的相关性（P<0.01），区分效度方面通常通过对比 AVE 平方根的值与相关系数的大小来进行检验。当各变量的相关系数小于 AVE 平方根时，说明该量表具有良好的区分效度。通过上表可知各变量的相关系数均小于 AVE 平方根，表明本量表区分效度良好。

表 5.10 变量间相关系数与 AVE 平方根比较表

区分效度：Pearson 相关与 AVE 平方根值

	生态观	环保性	责任性	匹配性	动机感知	道德感知	品牌形象	绿色购买意愿
生态观	0.822							
环保性	0.469	0.843						
责任性	0.480	0.475	0.836					
匹配性	0.417	0.543	0.400	0.846				
动机感知	0.389	0.608	0.388	0.528	0.835			
道德感知	0.424	0.515	0.369	0.472	0.516	0.845		
品牌形象	0.195	0.282	0.251	0.286	0.314	0.253	0.815	
绿色购买意愿	0.552	0.423	0.618	0.382	0.466	0.439	0.291	0.825

备注：斜对角线数字为 AVE 平方根值

4. 多重线性回归分析

本文建立回归模型，运用行一元、多元回归以及层次回归分析方法检验各研究假设。具体方法是：第一步，放入相应的主要自变量：第二步，放入中介变量，第三步，放入调节变量。回归分析过程中，

将检验各变量回归系数外，还将关注可能存在的多重共线性、序列相关性等统计问题。

本文采用方差膨胀因子（variance inflation factor, VIF）作为检验自变量之间是否存在多重共线性的标准。分析结果表明，本文所涉及的模型的方差膨胀因子（VIF）值均在 0 ~ 5 之间，因此可以确定本文所研究的变量之间不存在多重共线性。本文采用 Durbin–Watson （D–W）检验自变量是否具有序列相关性，本文所研究的各个模型变量所涉及的 DW 值均接近于 2，因此可以确定本文所研究的自变量不具有序列相关性。

在回归分析前，首先对各变量做如下处理：

（1）主要研究变量赋值

绿色营销、绿色营销感知、品牌形象、绿色购买意愿等主要研究变量的值为其量表中所有条目的平均值，各主要研究变量维度的值为该维度中所包含条目的平均值。

（2）变量标准化

在调节效应分析中，变量的相互作用项易产生多重共线性问题，从而影响分析结论。为了避免这些问题，在进行调节效应分析之前，将自变量进行标准化处理（Hayes，2013）。 本文采用的变量标准化计算方法为：

标准化变量值 =（变量观测值—变量均值）÷ 变量标准差

4.1 绿色营销对消费者绿色购买意愿的回归分析

从表 5.11 可知，将绿色营销作为自变量，绿色购买意愿作为因变量进行线性回归分析，从上表可以看出，模型 R 方值为 0.408，意味着绿色营销可以解释绿色购买意愿的 40.8% 变化原因。对模型进行 F 检验时发现模型通过 F 检验 (F=540.806，p=0.000<0.05)，绿色营销的回归系数值为 0.832(t=23.255，p=0.000<0.01)，意味着绿色营销会对绿色购买意愿产生显著的正向影响关系。

表 5.11 绿色营销对消费者绿色购买意愿的线性回归分析结果

	非标准化系数		标准化系数	t	p	共线性诊断	
	B	标准误	**Beta**			**VIF**	容忍度
常数	0.763	0.164	–	4.639	0.000**	–	–
绿色营销	0.832	0.036	0.639	23.255	0.000**	1.000	1.000
R 2	0.408						
调整 R 2	0.407						
F	F =540.806,p=0.000						

因变量：绿色购买意愿

* p<0.05 ** p<0.01

将生态观，环保性，社会责任，匹配性作为自变量，绿色购买意愿作为因变量进行线性回归分析，从表 5.12 可以看出，模型 R 方值为 0.472，意味着生态观，环保性，社会责任，匹配性可以解释绿色购买意愿的 47.2% 变化原因。对模型进行 F 检验时发现模型通过 F 检验 (F=175.111，p=0.000<0.05)，另外，针对模型的多重共线性进行检验发现，模型中 VIF 值均小于 5，意味着不存在着共线性问题，模型较好。具体分析可知：

生态观的回归系数值为 0.307(t=9.483，p=0.000<0.01)，意味着生态观会对绿色购买意愿产生显著的正向影响关系。

环保性的回归系数值为 0.047(t=1.372，p=0.171>0.05)，意味着环保性并不会对绿色购买意愿产生影响关系。

社会责任的回归系数值为 0.425(t=13.553，p=0.000<0.01)，意味着社会责任会对绿色购买意愿产生显著的正向影响关系。

匹配性的回归系数值为 0.061(t=1.919，p=0.055>0.05)，意味着匹配性并不会对绿色购买意愿产生影响关系。

表 5.12 绿色营销对消费者绿色购买意愿的多元线性回归分析结果

	非标准化系数		标准化系数	t	p	共线性诊断	
	B	标准误	**Beta**			**VIF**	容忍度
常数	0.729	0.156	–	4.676	0.000**	–	–
生态观	0.307	0.032	0.300	9.483	0.000**	1.481	0.675
环保性	0.047	0.034	0.046	1.372	0.171	1.677	0.596
社会责任	0.425	0.031	0.427	13.553	0.000**	1.475	0.678
匹配性	0.061	0.032	0.061	1.919	0.055	1.514	0.660
R 2	0.472						
调整 R 2	0.470						
F	F =175.111,p=0.000						

因变量：绿色购买意愿

* p<0.05 ** p<0.01

4.2 绿色营销特征对绿色营销感知的回归分析

将绿色营销作为自变量，绿色营销感知作为因变量进行线性回归分析，从表 5.13 可以看出，模型调整 R 方值为 0.470，意味着绿色营销可以解释绿色营销感知的 47.0% 变化原因。对模型进行 F 检验时发现模型通过 F 检验 (F=698.429，p=0.000<0.05)，绿色营销的回归系数值为 0.806(t=26.428，p=0.000<0.01)，意味着绿色营销会对绿色营销感知产生显著的正向影响关系。

表 5.13 绿色营销对绿色营销感知的线性回归分析结果

	非标准化系数		标准化系数	t	p	共线性诊断	
	B	标准误	**Beta**			**VIF**	容忍度
常数	0.910	0.140	–	6.487	0.000**	–	–
绿色营销	0.806	0.031	0.686	26.428	0.000**	1.000	1.000
R 2	0.471						
调整 R 2	0.470						
F	F =698.429，p=0.000						

因变量：绿色营销感知

* p<0.05 ** p<0.01

从表 5.14 可知，将生态观，环保性，社会责任，匹配性作为自变量，动机感知作为因变量进行线性回归分析，从上表可以看出，模型 R 方值为 0.433，意味着生态观，环保性，社会责任，匹配性可以解释动机感知的 43.3% 变化原因。对模型进行 F 检验时发现模型通过 F 检验 (F=148.999，p=0.000<0.05)，针对模型的多重共线性进行检验发现，模型中 VIF 值均小于 5，意味着不存在着共线性问题，模型较好。具体分析可知：

生态观的回归系数值为 0.064(t=1.793，p=0.073>0.05)，意味着生态观并不会对动机感知产生影响关系。

环保性的回归系数值为 0.440(t=11.819，p=0.000<0.01)，意味着环保性会对动机感知产生显著的正向影响关系。

社会责任的回归系数值为 0.066(t=1.913，p=0.056>0.05)，意味着社会责任并不会对动机感知产生影响关系。

匹配性的回归系数值为 0.270(t=7.692，p=0.000<0.01)，意味着匹配性会对动机感知产生显著的正向影响关系。

表 5.14 绿色营销对绿色营销感知的线性回归分析结果

	非标准化系数		标准化系数	t	p	共线性诊断	
	B	标准误	**Beta**			**VIF**	容忍度
常数	0.700	0.171	–	4.094	0.000**	–	–
生态观	0.064	0.035	0.059	1.793	0.073	1.481	0.675
环保性	0.440	0.037	0.412	11.819	0.000**	1.677	0.596
社会责任	0.066	0.034	0.063	1.913	0.056	1.475	0.678
匹配性	0.270	0.035	0.255	7.692	0.000**	1.514	0.660
R 2	0.433						
调整 R 2	0.430						
F	F =148.999,p=0.000						

因变量：动机感知

* p<0.05 ** p<0.01

将生态观，环保性，社会责任，匹配性作为自变量，道德感知作为因变量进行线性回归分析，从表 5.15 可以看出，模型 R 方值为 0.347，意味着生态观，环保性，社会责任，匹配性可以解释道德感知的 34.7% 变化原因。对模型进行 F 检验时发现模型通过 F 检验 (F=103.665，p=0.000<0.05)，针对模型的多重共线性进行检验发现，模型中 VIF 值均小于 5，意味着不存在着共线性问题，模型较好。具体分析可知：

生态观的回归系数值为 0.172(t=4.712，p=0.000<0.01)，意味着生态观会对道德感知产生显著的正向影响关系。

环保性的回归系数值为 0.294(t=7.656，p=0.000<0.01)，意味着环保性会对道德感知产生显著的正向影响关系。

社会责任的回归系数值为 0.066(t=1.854，p=0.064>0.05)，意味着社会责任并不会对道德感知产生影响关系。

匹配性的回归系数值为 0.225(t=6.225，p=0.000<0.01)，意味着匹配性会对道德感知产生显著的正向影响关系。

表 5.15 绿色营销对绿色营销感知的多元线性回归分析结果

	非标准化系数		标准化系数	t	p	共线性诊断	
	B	标准误	**Beta**			**VIF**	容忍度
常数	1.198	0.176	–	6.810	0.000**	–	–
生态观	0.172	0.037	0.166	4.712	0.000**	1.481	0.675
环保性	0.294	0.038	0.287	7.656	0.000**	1.677	0.596
社会责任	0.066	0.035	0.065	1.854	0.064	1.475	0.678
匹配性	0.225	0.036	0.221	6.225	0.000**	1.514	0.660
R 2	0.347						
调整 R 2	0.343						
F	F =103.665,p=0.000						

因变量：道德感知

* p<0.05 ** p<0.01

4.3 绿色营销感知对绿色购买意愿的回归分析

将绿色营销感知作为自变量，绿色购买意愿作为因变量进行线性回归分析，从表 5.16 可以看出，模型 R 方值为 0.270，意味着绿色营销感知可以解释绿色购买意愿的 27.0% 变化原因。对模型进行 F 检验时发现模型通过 F 检验 (F=290.926，p=0.000<0.05)，绿色营销感知的回归系数值为 0.576(t=17.057，p=0.000<0.01)，意味着绿色营销感知会对绿色购买意愿产生显著的正向影响关系。

表 5.16 绿色营销感知对绿色购买意愿的回归分析分析结果

	非标准化系数		标准化系数	t	p	共线性诊断	
	B	标准误	**Beta**			**VIF**	容忍度
常数	1.877	0.159	–	11.837	0.000**	–	–
绿色营销感知	0.576	0.034	0.520	17.057	0.000**	1.000	1.000
R 2	0.270						
调整 R 2	0.269						
F	F =290.926,p=0.000						

因变量：绿色购买意愿

* p<0.05 ** p<0.01

将动机感知，道德感知作为自变量，而将绿色购买意愿作为因变量进行线性回归分析，从表 5.17 可以看出，模型 R 方值为 0.271，意味着动机感知，道德感知可以解释绿色购买意愿的 27.1% 变化原因。对模型进行 F 检验时发现模型通过 F 检验 (F=145.605，p=0.000<0.05)，针对模型的多重共线性进行检验发现，模型中 VIF 值均小于 5，意味着不存在着共线性问题，模型较好。具体分析可知：

动机感知的回归系数值为 0.308(t=9.157，p=0.000<0.01)，意味着动机感知会对绿色购买意愿产生显著的正向影响关系。

道德感知的回归系数值为 0.267(t=7.604，p=0.000<0.01)，意味着道德感知会对绿色购买意愿产生显著的正向影响关系。

表 5.17 绿色营销感知对绿色购买意愿的线性回归分析分析结果

	非标准化系数		标准化系数	t	p	共线性诊断	
	B	标准误	**Beta**			**VIF**	容忍度
常数	1.885	0.159	–	11.852	0.000**	–	–
动机感知	0.308	0.034	0.326	9.157	0.000**	1.364	0.733
道德感知	0.267	0.035	0.271	7.604	0.000**	1.364	0.733
R 2	0.271						
调整 R 2	0.269						
F	F =145.605,p=0.000						

因变量：绿色购买意愿

* p<0.05 ** p<0.01

4.4 绿色营销感知的中介效应检验

采用 SPSS26.0 的 PROCESS 插件 Bootstrap 方法对中介效应进行检验，通过进行 5000 次重复样本抽取，并以 95% 为显著性置信区间进行检验，如果 0 在其 95% 置信区间以内，说明中介效应不存在；如果 0 在其 95% 置信区间以外，说明中介效应存在，分析结果如表 5.18 所示：

表 5.18 绿色营销感知对绿色营销和绿色购买意愿之间的中介效应检验结果

		Effect	SE	Bias Corrected (95%)	
				CI 下限	CI 上限
绿色营销→绿色营销感知→绿色购买意愿	直接效应	0.694	0.049	0.598	0.790
	间接效应	0.138	0.040	0.058	0.217
	总效应	0.832	0.036	0.762	0.902
绿色营销→动机感知→绿色购买意愿	直接效应	0.740	0.045	0.651	0.828
	间接效应	0.092	0.037	0.019	0.163
	总效应	0.832	0.036	0.762	0.902
绿色营销→道德感知→绿色购买意愿	直接效应	0.752	0.043	0.666	0.837
	间接效应	0.080	0.029	0.024	0.139
	总效应	0.832	0.036	0.762	0.902

绿色营销→绿色营销感知→绿色购买意愿的间接效应为 0.138，95% 的置信区间为 [0.058，0.217]，不包括 0，说明中介效应存在，直接效应为 0.694，95% 的置信区间为 [0.598，0.790]，不包括 0，说明绿色营销感知在绿色营销与绿色购买意愿之间起到部分中介作用。

绿色营销→动机感知→绿色购买意愿的间接效应为 0.092，95% 的置信区间为 [0.019，0.163]，不包括 0，说明中介效应存在，直接效应为 0.740，95% 的置信区间为 [0.651，0.828]，不包括 0，说明动机感知在绿色营销与绿色购买意愿之间起到部分中介作用。

绿色营销→道德感知→绿色购买意愿的间接效应为 0.080，95% 的置信区间为 [0.024，0.139]，不包括 0，说明中介效应存在，直接效应为 0.752，95% 的置信区间为 [0.666，0.837]，不包括 0，说明道德感知在绿色营销与绿色购买意愿之间起到部分中介作用。

4.5 品牌形象的调节效应检验

（1）品牌形象对绿色营销和消费者绿色购买意愿的调节作用

在检验品牌形象对绿色营销和消费者绿色购买意愿的调节作用时，首先检验自变量绿色营销和调节变量品牌形象对因变量消费者绿色购买意愿的影响，接着将绿色营销和调节变量品牌形象的交互项作为自变量纳入模型，检验结果如表 5.19 所示：

表 5.19 绿色营销感知对绿色营销和绿色购买意愿之间的中介效应检验结果

模型	R	R^2	调整后 R^2	标准误	更改统计		
					R^2 变化量	F 变化量	显著性 F 变化量
1	0.644	0.415	0.414	1.105	0.415	278.418	0.000
2	0.647	0.419	0.417	1.102	0.004	5.092	0.024

第一次回归模型检验的是自变量绿色营销和调节变量品牌形象对因变量消费者绿色购买意愿的影响，R^2 值 0.415，第二次回归模型检验的是绿色营销和调节变量品牌形象的交互项作为自变量对消费者绿色购买意愿影响，R2 值为 0.419，第二次回归模型中 F 更改值为 5.029*，（P=0.024），表示第二次回归模型具有统计意义。由此可知，品牌形象对绿色营销和消费者绿色购买意愿具有调节作用。

从表 5.20 可以看出，交互项绿色营销 × 品牌形象值为 0.087，且在 0.05 水平下显著，品牌形象在绿色营销和消费者绿色购买意愿之间起到正向调节作用。

表 5.20 品牌形象对绿色营销和消费者绿色购买意愿的调节作用检验

模型		非标准化系数		标准化系数	t	显著性
		B	标准误	Beta		
1	（常量）	4.476	0.039		113.604	0.000
	绿色营销	0.879	0.042	0.609	21.059	0.000
	品牌形象	0.131	0.042	0.091	3.146	0.002
2	（常量）	4.447	0.041		107.786	0.000
	绿色营销	0.876	0.042	0.607	21.029	0.000
	品牌形象	0.186	0.048	0.129	3.862	0.000
	绿色营销 * 品牌形象	0.087	0.038	0.072	2.257	0.024

a 因变量：消费者绿色购买意愿

（2）品牌形象在绿色营销和绿色营销感知之间调节作用

在检验品牌形象对绿色营销和消费者绿色营销感知的调节作用时，首先检验自变量绿色营销和调节变量品牌形象对因变量消费者绿色营销感知的影响，接着将绿色营销和调节变量品牌形象的交互项作为自变量纳入模型，检验结果如下表 5.21 所示：

表 5.21 品牌形象对绿色营销和消费者绿色营销感知的调节模型摘要

模型	R	R^2	调整后 R^2	标准误	更改统计		
					R^2 变化量	F 变化量	显著性 F 变化量
1	0.694	0.482	0.481	0.938	0.482	365.07	0.000
2	0.697	0.486	0.484	0.935	0.004	6.150	0.013

第一次回归模型检验的是自变量绿色营销和调节变量品牌形象对因变量消费者绿色营销感知的影响，R^2 值 0.482，第二次回归模型检验的是绿色营销和调节变量品牌形象的交互项作为自变量对消费者绿色营销感知影响，R2 值为 0.486，第二次回归模型中 F 更改值为 6.150*，（P=0.013），表示第二次回归模型具有统计意义。由此可知，品牌形象对绿色营销和消费者绿色营销感知具有调节作用。

从表 5.22 可以看出，交互项绿色营销 × 品牌形象值为 0.081，且在 0.05 水平下显著，品牌形象在绿色营销和消费者绿色营销感知之间起到正向调节作用。

表 5.22 品牌形象对绿色营销和消费者绿色营销感知的调节作用检验

模型		非标准化系数		标准化系数	t	显著性
		B	标准误	Beta		
1	（常量）	4.508	0.033		134.797	0.000
	绿色营销	0.845	0.035	0.649	23.858	0.000
	品牌形象	0.147	0.035	0.113	4.154	0.000
2	（常量）	4.481	0.035		128.040	0.000
	绿色营销	0.842	0.035	0.647	23.843	0.000
	品牌形象	0.198	0.041	0.152	4.849	0.000
	绿色营销 * 品牌形象	0.081	0.033	0.074	2.480	0.013

a 因变量：消费者绿色营销感知

（3）品牌形象在绿色营销和动机感知之间调节作用

在检验品牌形象对绿色营销和消费者动机感知的调节作用时，首先检验自变量绿色营销和调节变量品牌形象对因变量消费者动机感知的影响，接着将绿色营销和调节变量品牌形象的交互项作为自变量纳入模型，检验结果如表 5.23 所示：

表 5.23 品牌形象在绿色营销和动机感知之间的调节模型摘要

模型	R	R^2	调整后 R^2	标准误	更改统计		
					R^2 变化量	F 变化量	显著性 F 变化量
1	0.630	0.396	0.395	1.187	0.396	257.523	0.000
2	0.632	0.399	0.397	1.186	0.003	3.324	0.069

第一次回归模型检验的是自变量绿色营销和调节变量品牌形象对因变量消费者动机感知的影响，R^2 值 0.396，第二次回归模型检验的是绿色营销和调节变量品牌形象的交互项作为自变量对消费者动机感知影响，R2 值为 0.399，第二次回归模型中 F 更改值为 3.324，（P=0.069），表示第二次回归模型不具有统计意义。由此可知，品牌形象对绿色营销和消费者动机感知没有调节作用。

从表 5.24 可以看出，交互项绿色营销 × 品牌形象值为 0.075，没有达到显著性水平，说明品牌形象在绿色营销和消费者动机感知之间没有调节作用，假设不成立。

表 5.24 品牌形象在绿色营销和动机感知之间的调节作用检验

模型		非标准化系数		标准化系数	t	显著性
		B	标准误	Beta		
1	（常量）	4.443	0.042		104.956	0.000
	绿色营销	0.882	0.045	0.578	19.676	0.000
	品牌形象	0.189	0.045	0.124	4.226	0.000

2	（常量）	4.418	0.044		99.548	0.000
	绿色营销	0.880	0.045	0.576	19.635	0.000
	品牌形象	0.237	0.052	0.155	4.575	0.000
	绿色营销 * 品牌形象	0.075	0.041	0.059	1.823	0.069

a 因变量：消费者动机感知

（4）品牌形象在绿色营销和道德感知之间调节作用

在检验品牌形象对绿色营销和道德感知的调节作用时，首先检验自变量绿色营销和调节变量品牌形象对因变量消费者道德感知的影响，接着将绿色营销和调节变量品牌形象的交互项作为自变量纳入模型，检验结果如表 5.25 所示：

表 5.25 品牌形象在绿色营销和道德感知之间调节模型摘要

模型	R	R^2	调整后 R^2	标准误	更改统计		
					R^2 变化量	F 变化量	显著性 F 变化量
1	0.579	0.336	0.334	1.195	0.336	198.108	0.000
2	0.583	0.339	0.337	1.192	0.004	4.313	0.038

第一次回归模型检验的是自变量绿色营销和调节变量品牌形象对因变量道德感知的影响，R^2 值 0.336，第二次回归模型检验的是绿色营销和调节变量品牌形象的交互项作为自变量对消费者道德感知影响，R^2 值为 0.339，第二次回归模型中 F 更改值为 4.313*，（P=0.038），表示第二次回归模型具有统计意义。由此可知，品牌形象对绿色营销和道德感知具有调节作用。

从表 5.26 可以看出，交互项绿色营销 × 品牌形象值为 0.086，且在 0.05 水平下显著，品牌形象在绿色营销和道德感知之间起到正向调节作用。

表 5.26 品牌形象在绿色营销和道德感知之间调节作用检验

模型		非标准化系数		标准化系数	t	显著性
		B	标准误	Beta		
1	（常量）	4.573	0.043		107.375	0.000
	绿色营销	0.808	0.045	0.552	17.912	0.000
	品牌形象	0.105	0.045	0.072	2.323	0.020
2	（常量）	4.545	0.045		101.842	0.000
	绿色营销	0.805	0.045	0.550	17.873	0.000
	品牌形象	0.159	0.052	0.109	3.057	0.002
	绿色营销 * 品牌形象	0.086	0.042	0.071	2.077	0.038

a 因变量：道德感知

根据 Preacher（2007）的建议，在调节变量品牌形象不同数值水平上（低于和高于均值 1 个标准差）检验有条件的间接效应。采用 Hayes 在 2017 年 开发的 SPSS 26.0 回归分析功能中的 PROCESS 3.0 插件工具进行调节作用检验，自助抽样设为 5000 次，95% 置信区间估计的方法对研究模型进行检验。从表 5.27 左边部分可以看出，品牌形象低时，消费者营销通过消费者营销感知影响消费者绿色购买意愿的间接效应为 0.102，95% 置信区间为 [0.033，0.165]，CI 不包括 0，说明其间接效应显著；当品牌形象高时，消费者营销通过消费者营销感知影响消费者绿色购买意愿的间接效应为 0.123，95% 置信区间为 [0.042，0.196]，CI 不包括 0，说明其间接显著。此外，表中右边部分调节中介指标 INDEX 为 0.008，95% 置信区间为 [0.001， 0.017]，CI 不包括 0，说明有调节的中介效应显著。

表 5.27 品牌形象有调节的中介作用检验

	有条件的间接效应				有调节的中介效应			
	Effect	SE	LLCI	ULCI	INDEX	SE	LLCI	ULCI
低水平	0.102	0.034	0.033	0.165	0.008	0.004	0.001	0.017
高水平	0.123	0.041	0.042	0.196				

4.6 回归分析小结

在本研究所提出 24 项主假设及分假设中，经检验有 18 项假设成立，6 项假设不成立，即研究设计中提出的大部分假设在实证检验中得到了验证，结果汇总为表 5.28 所示。

表 5.28 回归分析小结

	结果
H1：绿色营销对消费者绿色购买意愿具有正向影响。	支持
H1a：绿色营销的生态性对消费者绿色购买意愿具有正向影响。	支持
H1b：绿色营销的环保性对消费者绿色购买意愿具有正向影响。	不支持
H1c：绿色营销的社会责任对消费者绿色购买意愿具有正向影响。	支持
H1d：绿色营销的匹配度对消费者绿色购买意愿具有正向影响。	不支持
H2：品牌形象在绿色营销和消费者绿色购买意愿之间起到正向调节作用。	支持
H3：品牌形象在绿色营销和绿色营销感知之间起到正向调节作用。	支持
H3a：品牌形象在绿色营销和企业动机感知起到正向调节作用。	不支持
H3b：品牌形象在绿色营销和企业道德感知之间起到正向调节作用。	支持
H4：绿色营销对绿色营销感知具有正向影响。	支持
H4a：绿色营销的生态观对企业动机感知具有正向影响。	不支持
H4b：绿色营销环保性对企业动机感知具有正向影响。	支持

H4c：绿色营销的社会责任对企业动机感知具有正向影响。	不支持
H4d：绿色营销的匹配性对企业动机感知具有正向影响。	支持
H4e：绿色营销的生态观对企业道德感知具有正向影响。	支持
H4f：绿色营销的环保性对企业道德感知具有正向影响。	支持
H4g：绿色营销的社会责任对企业道德感知具有正向影响。	不支持
H4h：绿色营销的匹配性对企业道德感知具有正向影响。	支持
H5：绿色营销感知对其绿色购买意愿具有正向影响。	支持
H5a：绿色营销感知的企业动机感知对其绿色购买意愿具有正向影响。	支持
H5b：绿色营销感知的企业道德感知对其绿色购买意愿具有正向影响。	支持
H6：绿色营销感知在绿色营销与消费者的绿色购买意愿之间起到中介作用。	支持
H6a：企业动机感知在绿色营销与消费者的绿色购买意愿之间起到中介作用。	支持
H6b：企业道德感知在绿色营销与消费者的绿色购买意愿之间起到中介作用。	支持

根据假设检验研究结果，如图 5.5 所示得出企业绿色营销对绿色购买意愿的影响模型图，

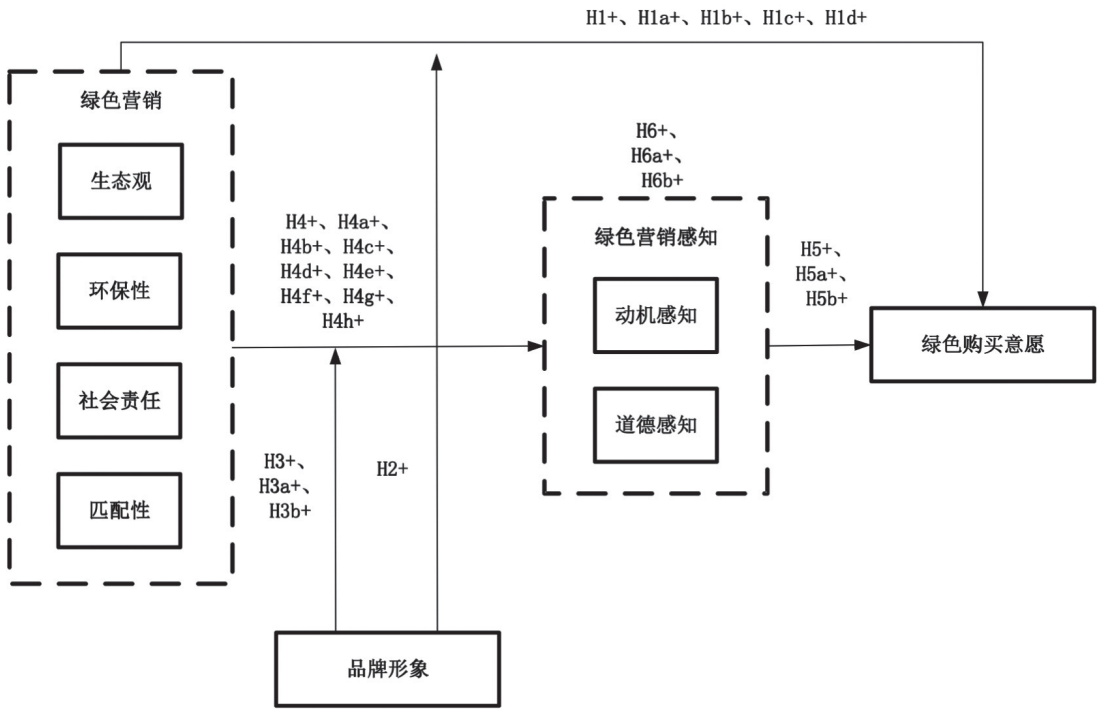

图 5.5 企业绿色营销对绿色购买意愿的影响模型图

VI. 结论

1. 总结

1.1 企业绿色营销与消费者绿色购买意愿

根据以上数据分析显示，企业施行绿色营销对消费者的绿色购买意愿有积极影响。其中，绿色营销的生态观和社会责任性对消费者的绿色购买意愿有着显著的直接影响。绿色营销的环保性和匹配性对消费者绿色购买意愿显著影响较小。

绿色营销的生态观是倡导绿色消费意识，让消费者意识到使用绿色产品、采用绿色生活方式，不仅能提高自身的生活质量和健康水平，而且能够改善生态环境，为下一代留下可持续发展的财富。企业在培养消费者绿色消费意识的同时，也在培养成熟的绿色市场。企业通过绿色营销向消费者传递一种有关产品更多的环保信息，而企业的生态观会传达给消费者更好的消费理念，从而帮助消费者快速地做出绿色消费的选择，从而帮助消费者降低购买决策的风险。因此，消费者在做出购买决定之前需要了解企业产品的生态观，即企业绿色营销生态观将促进消费者的绿色购买意愿。

所有的绿色营销都需要建立在品牌的真诚承诺加履行的基础上，企业需要有良好的社会责任感，让消费者感受到品牌对社会的责任感是很重要的因素，高的社会责任感可以让消费者的绿色购买意愿产生更强烈的影响，即企业绿色营销的社会责任会促进消费者的绿色购买意愿。

绿色营销的环保性是指对产品的全面的环境质量的评价。对于产品的全面环境质量检验需要时间作为检验标准，并不是一朝一夕的问题，并不是所有绿色营销产品都是对某产品领域有较高的全面环境质量评价，这导致企业的绿色营销环保性对消费者的绿色购买意愿显著影响较小。

绿色营销的匹配性指的是与企业的产品、品牌、形象、目标市场的一致性与匹配度。拿 787 份调查数据中看过或有过绿色营销的企业，提到频率最低的企业 Bally，作为瑞士的奢侈品品牌 Bally，因其鞋履产品一直受到登山一族的喜爱，推出过 Bally Peak Outlook 计划及“8x8000m”行动，旨在清理八座 8000 米喜马拉雅山峰的大本营，以帮助当地社区恢复赖以生存的地貌环境，但 Bally 的产品和品牌形象是瑞士百年奢侈皮具，其受众也是追求潮流与奢侈的消费者，影响消费者购买因素的不是其绿色营销计划本身，而是其品牌的奢侈品属性，所以绿色营销的匹配性对于消费者的绿色购买意愿影响较小。

综上，绿色营销的生态观和社会责任都对消费者的绿色购买意愿产生影响，而绿色营销的环保性和匹配性对消费者的绿色购买意愿的显著影响较小。其研究结果丰富了绿色营销的理论研究，从绿色营销划分的自身维度特征识别出影响消费者绿色购买意愿的因素，为绿色营销特质的维度划分提供了借鉴意义，同时本文也丰富了绿色营销的实证研究，使绿色营销研究更加客观科学，提出的管理启示具有数据支持同时也具有一定的客观性和针对性。

1.2 品牌形象的调节作用

无论是哪种形式，品牌都需要意识到，由于对待绿色品牌和相关消费行为，消费者的情感偏好大于认知偏好。对于初生品牌而言，为自身注入绿色基因，能够更加快速、长久地获得消费者的价值认同，获取消费者的信任和好感。对于成熟品牌而言，为自身附加绿色基因更能彰显企业的社会责任，使消费者对品牌产生新的认知，拉近心理距离。

数据分析得出品牌形象在绿色营销和消费者绿色购买意愿之间起到正向调节作用；品牌形象在绿色营销和绿色营销感知之间起到正向调节作用；品牌形象在绿色营销和企业动机感知之间没有起到正向调节作用；品牌形象在绿色营销和企业道德感知之间起到正向调节作用。

绿色营销由于其自身的生态观等特质会对消费者的绿色购买意愿产生影响。当品牌形象高时，他们更倾向于追求这样的品牌，而此时绿色营销推荐的信息迎合了他们的需求。因此当消费者的品牌形象度越高，绿色营销对其绿色购买意愿产生的影响越强烈。企业的道德感知就是对企业开展绿色营销所履行的法律法规及之外的社会责任，但是，消费者没有办法去判断企业是否对自己的绿色营销做法诚实。有些企业对其产品的绿色功能提出了未经证实且具有误导性的主张，这种不当行为通常被称为“漂绿”（Huang R, Chen D，2015）。正是由于“漂绿”广泛存在于市场中，当消费者评估一家企业的绿色举措时，他们可能会试图推断该企业参与绿色企业社会责任的动机（毛振福和余伟萍等，2019）。因此，消费者会因为绿色营销过程中感受到企业的道德感知从而产生积极的情感反应。

企业的动机感知是对企业开展绿色营销的初衷、动机，消费者很少愿意花时间去了解企业的初衷和动机，他们更关心于结果，绿色营销过程中对消费者的影响不会受到品牌形象高低的影响。因此品牌形象不会调节绿色营销和企业动机感知之间的关系。

1.3 绿色营销与绿色营销感知

数据分析得出，绿色营销对绿色营销感知反应具有正向影响，其中绿色营销的生态观对绿色营销的企业动机感知具有正向影响，绿色营销的生态观和社会责任对绿色营销感知中的企业动机感知没有显著直接影响；绿色营销的生态观、环保性和匹配性对绿色营销感知中企业道德感知具有正向影响，绿色营销的社会责任对企业道德感知没有显著的直接影响。

企业的动机感知是企业开展绿色营销的初衷、动机，企业根据市场的需求开发出绿色营销的相关产品，其最终目标是为了增加利润。企业的道德感知则与道德标准和道德原则有关，根据道义论，有道德动机的公司从事绿色活动，是因为这是正确的做法，更有效地保护环境。道德组织强调道德发展和道德力量，以确保他们不仅防止不道德行为，而且会促进“以德报德”的行为（Sekerka L E, Comer D R 等，2014）。绿色营销的四个维度特征会对绿色营销感知产生不同的影响，具体分析如下：绿色营销的生态观是营销中所传达的价值观在，是企业在营销绿色产品时的重点，其内容具有一定感染力，这会增强消费者对于购买绿色产品的意愿，因此会加强企业的动机感知和道德感知。绿色营销的匹配性会把企业的产品、品牌形象、形象和目标市场做一个统一，会增强企业的营销信心，进而加强企业的动机感知和道德感知。绿色营销的环保性会使产品的全面环境质量变高，这会不断刺激消费者进行消费，从而导致企业的营销信心不断增强，但不会使企业主动产生动机感知，绿色营销的环保性只能增强其企业的道德感知，不会增强企业的动机感知。绿色营销的社会责任是必须从始至终贯彻整个绿色营销因素，其过程中，绿色营销的各个特征会传达给企业的绿色营销感知，但这个特征不会直接影响企业的道德感知。

综上所述，绿色营销会对企业的绿色营销感知反应产生影响，具体是绿色营销的生态观、匹配性对绿色营销企业动机感知具有正向影响，绿色营销的环保性和社会责任对企业动机感知没有显著的直接影响；绿色营销的生态观、环保性、匹配性对企业道德感知具有正向影响，绿色营销的社会责任对企业道德感知没有显著的直接影响。

1.4 绿色营销感知与绿色购买意愿

数据分析得出绿色营销感知对绿色购买意愿具有正向影响，其中绿色营销感知的动机感知和道德感知都对其绿色购买意愿具有正向影响。

当消费者看绿色营销的相关产品时，会感受到企业的动机感知。而企业的动机感知就是正向地传递绿色产品的价值，消费者会被带入其中，而企业的道德感知则是企业在绿色营销中的表现的社会责

任感。因此企业的动机感知比企业的道德感知对消费者绿色购买意愿的影响更大。

综上所述，绿色营销感知会对消费者的绿色购买意愿产生影响，并且企业动机感知对消费者绿色购买意愿的影响更强烈。

1.5 绿色营销感知的中介作用

数据分析得出绿色营销感知在绿色营销与绿色购买意愿之间起到中介作用。企业的动机感知和道德感知都在绿色营销与绿色购买意愿之间起到中介作用。

当消费者认为企业推行绿色营销的动机是出于真诚的环保理念，而不仅仅是出于市场营销的考量时，他们更可能对企业的产品产生信任，从而增加其绿色购买意愿。当消费者认为企业的绿色营销是出于对环境和社会责任的尊重和承诺时，他们往往更愿意支持这样的企业，从而增加了其绿色购买意愿。消费者充分感受到企业的动机感知和道德感知，进而影响了他们对产品的购买意愿。因此，企业在推行绿色营销时应注重传递真诚的环保理念和社会责任感，以增强消费者对绿色营销的认同感，进而促进绿色购买意愿的提升。

2. 展望与启示

1.1 企业角度

随着经济的增长，环境意识的增强使消费者的消费观念发生了转变，人们开始意识到过度消耗自然资源和环境污染会加剧地球生态系统的灾难，威胁到人类的生存。因此，消费者开始了自发地去购买绿色产品，这已成为一种必然趋势。面对消费市场的变化，企业必须转变经营理念，制定以绿色生产、绿色消费和环境保护为核心的绿色营销战略。

由于绿色营销对企业提出了环保要求，促使企业的促销策略发生了重大转变。企业不再将注意力单纯放在追求利润增长上，而是开始在营销活动中注重生态环境保护，促进经济与生态的协调发展。

展望未来，可以预见到各国政府将越来越重视环保法规的制定和执行，绿色营销将在政策推动下成为企业不得不关注的领域。企业必须遵守相关法律法规，否则可能面临严重的处罚和严重的企业形象受损。

企业需要重视自身的生态环保观念，通过正确的绿色营销策略来吸引和留住客户，拒绝“漂绿”现象的出现，在绿色营销过程中，企业要在追求自身利益的同时积极参与环保公益事业，与社会共同推动可持续发展。企业也应关注自身的社会责任，认识到履行社会责任的重要性。企业应该向消费者真诚地传递其以环保为目的初心，积极承担在绿色发展中所担任的社会责任感，让消费者更好地感受到其企业的动机感知和道德感知。

目前，充分利用大数据和人工智能技术可以帮助企业更精准地了解消费者需求，实现个性化绿色营销，通过分析海量数据，企业可以更好地了解消费者的喜好、行为模式和购买趋势，从而定制符合他们需求的绿色产品和营销策略，提高市场精准度和效果。同时清洁能源技术的不断发展也对绿色营销起到积极作用，企业采用清洁能源，如太阳能、风能等，可以减少对传统化石能源的依赖，降低碳排放和环境污染，使企业可以更轻松地实现生产过程中的碳排放降低，符合绿色营销的理念，同时也有助于提升企业的环保形象和可持续发展战略。

另外，提升品牌形象的有效途径之一是供应链整合。企业应注重供应链的绿色化，与供应商合作，共同推动环保理念在整个供应链中的实施。这不仅能够提升品牌形象和市场竞争力，还有助于降低企

业自身的环境风险。

2.2 绿色营销自身角度

“绿色经济”“可持续发展”“碳达峰”“碳中和”这样的理念再也不是空中楼阁，从国际机构到各国政府，从各类企业到普罗大众，都愈发关注环境问题、承担绿色责任。绿色营销是企业在产品的研发、制定和实施市场营销战略过程中，满足顾客对社会环境保护的需求，同时又能兼具企业自身经济效益的一种营销模式。

同时本次研究表明，绿色营销的生态观和社会责任正向地促进消费者的绿色购买意愿，因此绿色营销本身应该注重。具体建议有以下几点：

绿色营销的理念：绿色营销的环保概念要贯彻整个产品设计、生产、销售以及售后服务等各个环节，满足消费者对环保的需求，同时还有助于企业树立良好的企业形象和社会责任感。

绿色产品或服务：在设计和生产产品或服务时，需要注重环保，减少资源消耗，并确保产品的包装或残留物可以成为可用的资源。

价格策略：考虑到成本因素的同时也要顾及消费者的接受程度。随着人们环保意识的增强和收入的增加，消费者对于绿色产品的接受程度也会提高，因此可以选取适度地提高价格以反映产品的环保价值。

宣传推广方式：企业在进行产品或服务的推广宣传时，可以通过线上线下多种方式进行，如今数字化社会做好线上网站优化推广、社交媒体营销、视频营销、博客营销等可以更好地传递绿色产品的理念和优势。

渠道策略：企业需要建立稳定的绿色营销渠道，这包括选择合适的中间商，建立稳定的营销网络，重视营销渠道有关环节的工作，如绿色交通工具的选择，绿色仓库的建立等。

消费者教育：政府和社会有关部门需要加强消费者教育，向消费者介绍环保产品的特点和好处，提高消费者对于绿色产品的理解和认同度。

真实的环保标识：政府需要规范环保标识，企业依法需使用真实的环保标识，禁止虚假的环保标签，避免误导消费者，提高消费者对于绿色产品真实性的信任度。

2.3 消费者角度

随着近两年的环保之风盛行，品牌都在消费市场上“追求环保”，因此绿色营销便成为一大消费趋势。建议如下：

（1）消费者在观看到绿色营销的内容时需要避免冲动消费，擦亮双眼鉴别“漂绿”（green washing）现象。有些企业虚假鼓吹自己是环保型企业，用绿色环保项目宣传造势以标榜其绿色行为，以此用来逃脱法律责任，掩盖对社会和环境的破坏等行为。面对这样的企业，消费者可以通过多方渠道获取信息，如查阅第三方机构的评测报告、阅读消费者评论、关注独立的环保组织等，以确保所购买的绿色产品或服务符合其宣传的环保标准，一旦发现立刻向有关部门举报。

（2）保持正确的消费观，警惕消费陷阱，查阅不同绿色营销的产品的测评和发声，利用各个平台的差异化消除与产品之间的信息不对称性，选择适合自己的产品，必要的适合要拿起法律的武器保护自己的消费者权益。

（3）避免从众心理，保持个性化消费观念也是十分重要的。每个人都有自己的消费偏好和价值观，应该根据个人需求和信念来选择适合自己的绿色产品，而不是盲目跟风或盲目崇拜某些品牌或产品。消费者的理性选择和独立思考，有助于推动绿色营销市场向更加健康和可持续的方向发展。

3. 研究局限和未来研究方向

（1）实证研究可能存在样本选择上的偏差，本研究的问卷虽然是线上和线下同时进行，但由于便利性、经费和时间的不足，线下调查主要是在中国校园内进行，情况较为单一，这可能导致结论的泛化性受到限制。考虑到线上调查可以消除地域的限制，但线上调查也会出现被试者在填答问卷时会产生随意填写的情况导致问卷数据无效的情况，未来在进行绿色营销的研究时，应注意选择多样化且有深度的方法。

（2）时间跨度不足：本研究只关注短期内企业绿色营销对消费者购买意愿的影响，缺乏对长期效应的考量，无法全面评估绿色营销策略的持续性和长期影响。未来的研究可以通过跟踪消费者的购买行为和态度变化，以及对品牌忠诚度的影响等指标，来评估绿色营销策略的长期效应，这将有助于更全面地理解企业绿色营销对消费者行为和态度的持续影响。同时，除购买意愿外，研究可以进一步分析消费者的实际购买行为，包括购买频率、购买数量、品类选择等方面的变化，以更好地理解绿色营销对消费者实际消费行为的影响。

（3） 随着科技的发展，未来研究可以关注新兴科技在绿色营销中的应用，比如虚拟现实、人工智能等技术如何影响消费者对绿色产品的认知和购买意愿。

（4）本文的研究中缺少跨文化之间的比较研究。探索不同文化背景下消费者对绿色营销的态度和反应，有助于企业更好地制定针对不同文化群体的绿色营销策略。

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附录

消费者行为调查问卷

编码：

尊敬的朋友，您好！

我是韩国新韩大学的学生，现在正在做一个关于企业绿色营销对消费者绿色购买意愿的市场调研。问卷是匿名的，不会泄露您的隐私，请您如实填写！答案没有对错之分，仅作为学术分析使用，您的回答仅代表您个人的观点并作为此项研究的重要依据，如果您需要了解本研究的最终结论，敬请您留下您的联系方式。在此我对您的配合表示深深的感谢！

1. 您有看过绿色营销产品的经历吗？

A. 有 B. 没有

2. 您看过或有过绿色营销的企业是？ _____

3. 您印象最深刻的绿色营销推荐产品的是？如果忘记具体姓名，可填写忘记 _____

4. 关于企业开展绿色营销，您认为题项的描述在多大程度上与您认为的情况不符？请根据您对企业绿色营销的生态观、环保性、责任性和匹配度四个角度回答下列问题。（在相应的选项下打“√”， 分数越低表示越不同意，分数越高表示越同意）								
序列	题项	非常不同意	不同意	不太同意	一般	有点同意	同意	非常同意
A1	我认为这个企业非常关注生态环境变化	1	2	3	4	5	6	7
A2	我知道这个企业经常组织员工、消费者等利益相关者参与生态公益活动	1	2	3	4	5	6	7
A3	企业年均大额投资于生态环保	1	2	3	4	5	6	7
A4	我认为这个企业的绿色营销产品或服务，其功能属性是满足绿色发展需求的	1	2	3	4	5	6	7
A5	我认为企业在营销活动中是将生态和可持续发展作为核心理念的	1	2	3	4	5	6	7
B1	这个企业的产品符合国家绿色检测标准，具有环保标志	1	2	3	4	5	6	7
B2	这个企业的产品和服务在绿色环保方面拥有较高知名度	1	2	3	4	5	6	7
B3	这个企业的产品和服务在绿色环保方面拥有较高知名度	1	2	3	4	5	6	7
B4	我认为这个企业的产品和服务在绿色环保方面深受顾客信任	1	2	3	4	5	6	7
B5	这个企业为产品和服务在绿色环保方面制定了严格的标准和政策	1	2	3	4	5	6	7
B6	我认为这个企业对绿色环保高度重视	1	2	3	4	5	6	7
C1	我认为这个企业在生产活动中强调以人为本的价值关怀	1	2	3	4	5	6	7
C2	我认为这个企业追求的不仅仅是经济效益，更重视对消费者、社会及自然环境的责任担当	1	2	3	4	5	6	7
C3	我认为这个企业能提供真实、准确的环保信息给消费者	1	2	3	4	5	6	7

G4	我愿意为这个企业的品牌形象付出额外费用	1	2	3	4	5	6	7

7. 请您在消费者绿色购买意愿角度回答下列问题。（在相应的选项下打“√”，分数越低表示越不同意，分数越高表示越同意）

序列	题项	非常不同意	不同意	不太同意	一般	有点同意	同意	非常同意
H1	在购买前会考虑到自己的购买行为对环境、资源和社会影响，倾向于选择有利于社会绿色发展的产品	1	2	3	4	5	6	7
H2	如果我购买此类产品，我购买这个企业的绿色营销产品	1	2	3	4	5	6	7
H3	我会为企业产出的绿色产品或服务支付额外费用	1	2	3	4	5	6	7

8. 请您继续填写匿名的个人情况。

I1. 请问您的性别是：

A. 男　　B. 女

I2. 请问您的年龄是：

A.18 岁及以下

B.19–25 岁

C.26–30 岁

D.31–40 岁

E.41 岁及以上

I3. 请问您的学历是：

A. 初中及以下

B. 高中、中专、职高

C. 本科、大专、高职

D. 硕士及以上

I4. 请问您的月收入是（学生按每月的平均消费水平填写）？

A.1000 元及以下

B.1001 元—3000 元

C.3001 元—5000 元

D.5001 元 –8000 元

E.8001–10000 元

F.10001 元及以上

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Journal of Advanced Academic Research and Studies 高等学术研究期刊
Vol. 1, No.9, September 2024 (pp. 67-81)
http://www.nlbaeai.org/

ISSN 3006-4007 (Print)
ISSN 3006-4015 (Online)

Research on the Technological and Economic Adaptability of Air Source Heat Pumps in Multi-Span Greenhouses: A Case Study of Shiling Town, Suqian

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Received 07 March 2024, Revised 03 June 2024, Accepted 01 September 2024

Abstract

Purpose – The purpose of this research is to evaluate the technological and economic feasibility of using air-source heat pumps in multi-span greenhouses, specifically focusing on Shiling Town, Suqian. This paper aims to examine the energy savings, operational costs, and environmental impact of air-source heat pumps compared to traditional heating systems.

Design/Methodology/Approach – The study employs a combination of field surveys, cost-benefit analysis, and sensitivity analysis to assess the performance of air-source heat pumps in real-world greenhouse environments. The methodology includes data collection from local greenhouse operators, government agencies, and technology suppliers, as well as a detailed economic assessment of the technology's adaptability to local conditions.

Findings – The study finds that air-source heat pumps can significantly reduce energy consumption and operational costs in multi-span greenhouses. In regions with subsidies and favorable energy prices, the payback period for installing air-source heat pumps can be as low as 3-4 years. However, the initial investment and maintenance costs remain barriers to widespread adoption, particularly in smaller operations.

Research Implications – The findings suggest that targeted government policies, financial support, and improvements in maintenance services are crucial for the widespread adoption of air-source heat pumps in agriculture. The study provides valuable insights for policymakers and greenhouse operators looking to optimize energy use and reduce carbon emissions.

Keywords: Air Source Heat Pump, Multi-Span Greenhouse, Energy Efficiency, Cost-Benefit Analysis, Sustainable Agriculture

JEL Classifications: Q20, O13, C53

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I. Introduction

The demand for sustainable and energy-efficient technologies in agricultural facilities, particularly in greenhouses, has significantly increased due to the urgent need for carbon reduction and energy conservation. Greenhouses, widely used for cultivating crops in controlled environments, have traditionally relied on high-energy-consuming heating systems such as coal-fired boilers, gas heating systems, and electric heating. While these conventional systems ensure stable thermal conditions for plant growth, they come with several drawbacks, including high operational costs, significant energy inefficiency, and adverse environmental impacts caused by greenhouse gas (GHG) emissions. The Chinese government has been pushing for cleaner and more sustainable energy alternatives in agriculture, making it essential to explore innovative technologies that can reduce dependence on fossil fuels while ensuring stable crop production throughout the year (Congedo, Baglivo, & D'Agostino, 2023).

One of the most promising alternatives to traditional heating systems is the use of air-source heat pumps (ASHPs). ASHPs extract heat from the outside air and transfer it into an enclosed environment, such as a greenhouse, to provide effective temperature regulation. This technology has gained popularity in residential and industrial heating applications and is now being evaluated for its potential in greenhouse operations. Studies have shown that ASHPs offer a more energy-efficient and environmentally friendly alternative to conventional heating methods, as they require less electricity to generate heat compared to electric resistance heating or fossil-fuel-based heating systems (Mattinen, Nissinen, & Hyysalo, 2015). Unlike coal or gas systems, ASHPs do not directly burn fuel, which significantly reduces carbon dioxide (CO_2) emissions. Additionally, ASHPs have demonstrated the ability to maintain stable internal temperatures, improving plant growth conditions while reducing energy consumption (Auce, Jermuss, Rucins, & Ivanovs, 2021).

The efficiency of ASHPs in greenhouse heating has been explored in several studies. Research conducted by Zhou et al. (2025) found that an air-source heating system improved heating capacity by 27% and increased the coefficient of performance (COP) by 23% compared to conventional heating methods. These results indicate that ASHPs can achieve substantial energy savings while maintaining optimal temperature levels inside the greenhouse. Additionally, hybrid ASHP systems that integrate solar energy and heat recovery mechanisms have shown even higher efficiency gains, leading to a 10.8% increase in heat collection and a 7.9% improvement in energy conservation (Zhou et al., 2025).

Another important aspect of ASHP implementation in greenhouses is economic feasibility. A cost-benefit analysis conducted by Chen and Li (2022) compared ASHPs with conventional gas boiler heating systems in greenhouse environments. Their study found that, although ASHPs have higher initial installation costs, they result in lower long-term operational expenses due to their higher energy efficiency and reduced fuel dependency. The payback period for ASHP systems was found to be significantly shorter in regions with moderate climates where ASHPs can function efficiently without additional backup heating sources. In extreme climates, however, ASHPs may require supplementary heating methods to maintain desired temperatures, which can increase overall costs.

The environmental impact of ASHP systems has also been studied extensively. Research by Zhai et al. (2022) compared the carbon emissions of ASHPs and ground-source heat pumps (GSHPs), concluding that ASHPs are a viable alternative for reducing greenhouse gas emissions in agricultural operations. The study showed that while GSHPs are more efficient in certain conditions, ASHPs offer greater flexibility and require lower installation costs, making them more accessible for greenhouse farmers. Furthermore, research conducted by

Lim, Baik, and Kim (2020) found that ASHPs integrated with underground air circulation systems significantly reduced energy consumption and CO□ emissions in greenhouse farming.

Despite their benefits, ASHPs also face challenges related to performance variability in extreme weather conditions. Studies have shown that ASHP efficiency decreases in very low outdoor temperatures, potentially requiring additional heating support to compensate for reduced heat output (Benli, 2013). To address this limitation, researchers have proposed integrating ASHPs with solar-assisted systems or hybrid solutions that combine air and ground heat sources. For example, Li et al. (2024) examined a solar air collector-air source heat pump (SAC-ASHP) system, which improved heat stability in greenhouses while maintaining cost efficiency.

In the case of Shiling Town, Suqian, a region experiencing diverse climatic conditions, evaluating the performance and economic feasibility of ASHPs is particularly crucial. The potential for ASHPs to replace traditional heating systems in this region depends on several factors, including seasonal temperature variations, operational costs, and the integration of renewable energy sources. By conducting a comprehensive assessment of ASHP efficiency in greenhouse operations, this study aims to determine whether this technology can serve as a sustainable heating solution for agricultural facilities in China. The findings will contribute to a broader understanding of ASHP application in greenhouse environments and provide valuable insights for policymakers, farmers, and researchers interested in advancing sustainable agricultural practices.

II. A Review of Teaching Models in Public Administration

The implementation of energy-efficient technologies in agriculture is driven by principles of sustainable development, energy conservation, and economic optimization. The transition toward sustainable heating solutions in agricultural greenhouses aligns with theories of environmental economics and resource efficiency. Sustainable development theories emphasize the need for energy-efficient alternatives that minimize carbon footprints while optimizing performance (Lauttamäki & Hyysalo, 2019). The application of air-source heat pumps (ASHPs) in multi-span greenhouses is a direct application of these principles, as ASHPs reduce reliance on fossil fuels and enhance the energy sustainability of agricultural operations. Furthermore, integrating renewable energy solutions such as photovoltaic (PV) systems can significantly improve the overall energy efficiency of greenhouse operations, providing additional energy savings and stability, particularly in off-grid areas (Cesari et al., 2021).

1. Technological Conditions

ASHPs function based on thermodynamic principles, extracting thermal energy from ambient air and transferring it to an enclosed space, such as a greenhouse, through a process known as the "reverse refrigeration cycle." This cycle is significantly more energy-efficient than traditional heating methods, as it requires minimal input energy to move heat from one place to another rather than generating it directly through combustion (Carroll, Chesser, & Lyons, 2020). The efficiency of an ASHP system is measured by its coefficient of performance (COP), which represents the ratio of heating output to electrical energy input. Studies show that COP values for ASHPs typically range from 2.5 to 4.5, depending on climatic conditions and system configurations, meaning that for every unit of electricity consumed, the system produces 2.5 to 4.5 units of heat energy (Christodoulides, Christou, & Florides, 2024).

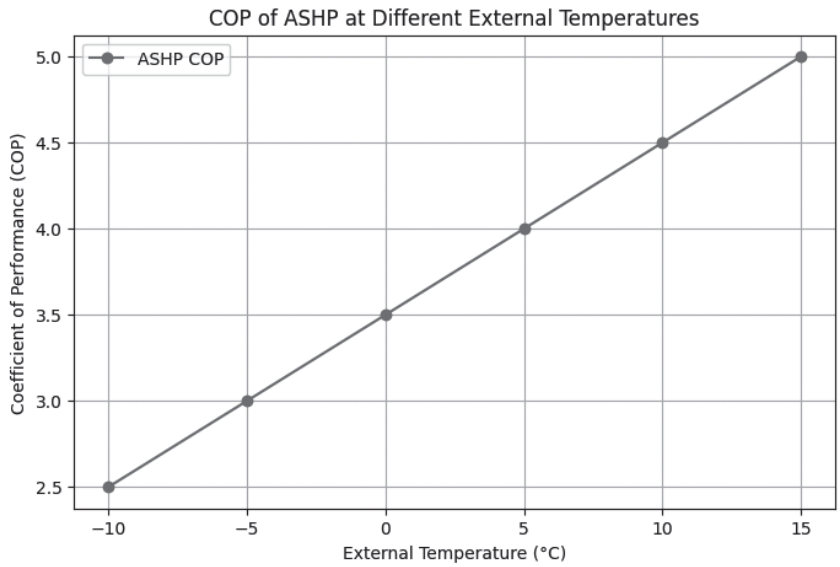

Fig 1. COP of ASHP at Different External Temperatures

provides a schematic representation of the reverse refrigeration cycle in an ASHP, illustrating how heat is extracted from the outside air, compressed to a higher temperature, and transferred into the greenhouse environment.

2. Economic and Environmental Impact

The economic feasibility of ASHPs in greenhouse heating is determined by several factors, including initial investment costs, operational savings, and payback periods. Research by Bayer et al. (2012) indicates that although the upfront installation cost of ASHPs is 20–30% higher than conventional heating methods, long-term savings in operational costs offset the initial investment. This is particularly evident in regions where energy prices fluctuate, as ASHPs provide greater stability in heating expenses.

A cost-benefit analysis conducted by Michelsen and Madlener (2010) found that ASHP systems had an average payback period of 5–7 years, depending on electricity rates and greenhouse size. Furthermore, hybrid ASHP systems that integrate solar-assisted technologies can reduce operational costs by an additional 15–20%, making them even more economically viable.

From an environmental perspective, ASHPs contribute significantly to carbon footprint reduction by eliminating direct emissions from fossil fuel combustion. A comparative study by Blázquez et al. (2023) analyzed greenhouse gas (GHG) emissions from different heating systems and found that ASHPs resulted in 30–50% lower emissions compared to gas boilers and coal heating. This aligns with global efforts to reduce GHG emissions, as proposed in China's carbon neutrality goals.

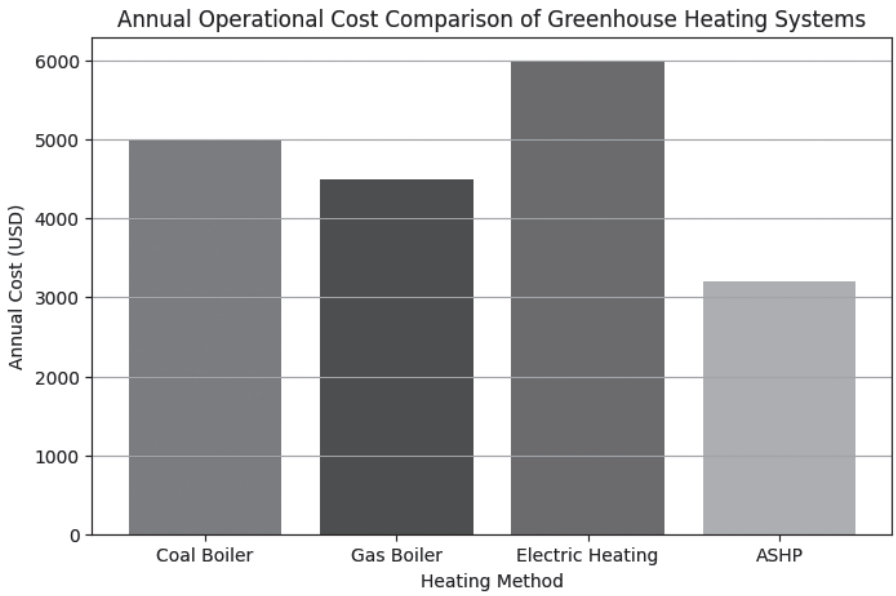

Fig 2a: Annual Operational Cost Comparison of Greenhouse Heating Systems

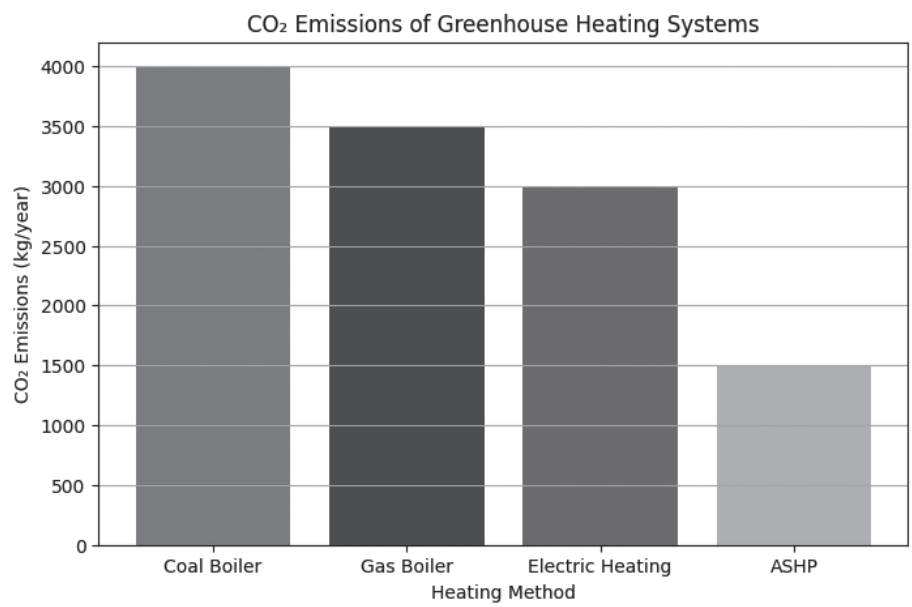

Figure 2b: CO_2 Emissions of Greenhouse Heating Systems

As shown in Figure 2a and Figure 2b, the comparison of greenhouse heating systems highlights their distinct differences in both operational cost and environmental impact. Figure 2a illustrates the annual operational costs of various heating systems, where the Coal Boiler and Gas Boiler incur the highest costs at approximately $5,000 and $4,000, respectively. In contrast, Electric Heating and ASHP (Air Source Heat Pump) offer significantly lower costs, with ASHP emerging as the most cost-effective solution at just over $2,000. This stark contrast suggests that transitioning to ASHP could lead to substantial cost savings for greenhouse operations. Figure 2b depicts the CO_2emissions per year for the same heating methods, showing a similar trend. Coal Boiler and Gas Boiler systems emit approximately 3,500 kg and 3,000 kg of CO_2annually, whereas Electric Heating and ASHP systems contribute far less, with ASHP being the most environmentally friendly, emitting under 1,000 kg of CO_2annually. These figures underline the dual advantage of ASHP, both in terms of operational cost savings and significant reductions in greenhouse gas emissions, making it a highly sustainable option for greenhouse heating systems.

III. Case Study: Shiling Town, Suqian

1. Background of Shiling Town

Shiling Town, located in the northern part of Jiangsu Province, is recognized as a leading center for modern agricultural practices, particularly in facility agriculture. The town has invested heavily in greenhouse cultivation, leveraging controlled environment agriculture (CEA) techniques to ensure year-round food production. The region's temperate monsoon climate, characterized by cold winters with average temperatures dropping below 0°C and hot summers exceeding 35°C, poses a significant challenge for energy management in greenhouse operations. Maintaining optimal temperature and humidity levels within greenhouses throughout the year is essential for crop growth, requiring efficient and cost-effective heating and cooling systems.

Due to the increasing emphasis on sustainable agriculture and environmental protection, Shiling Town has launched multiple pilot programs aimed at integrating clean energy technologies into its agricultural sector. These initiatives align with China's broader carbon neutrality goals and government policies supporting green energy adoption in rural industries. One such promising solution is the implementation of air-source heat pumps (ASHPs) in greenhouse heating systems, replacing traditional energy-intensive methods.

2. Current Greenhouse Practices and Energy Use

Agriculture in Shiling Town relies on multi-span greenhouses, which provide better environmental control but also increase energy demand, particularly during extreme weather conditions. Currently, the predominant heating methods include coal-fired boilers, electric heating systems, and liquefied natural gas (LNG)-powered systems. These traditional heating methods, although effective, pose significant challenges:

1. High Energy Consumption: Coal-based and electric heating systems consume substantial amounts of fuel and electricity, resulting in high operational costs for farmers.

2. Environmental Impact: Coal combustion releases carbon dioxide (CO_2), sulfur dioxide (SO_2), and particulate matter, contributing to air pollution and greenhouse gas emissions.

3. Economic Burden: Fluctuating energy prices make it difficult for farmers to predict heating costs, creating

uncertainty in long-term financial planning.

Local government policies have started pushing for a transition toward low-carbon agricultural solutions, with financial incentives for greenhouse owners willing to adopt renewable and energy-efficient heating systems. Among the alternatives under consideration, air-source heat pumps (ASHPs) have emerged as a viable solution due to their efficiency and economic feasibility.

ASHPs operate by extracting heat from the outside air and transferring it into the greenhouse environment through a reverse refrigeration cycle. This method significantly reduces dependence on fossil fuels and lowers energy expenses over time. Research indicates that ASHPs can reduce heating costs by 30–50% compared to coal-fired heating systems (Bayer et al., 2012). Furthermore, hybrid ASHP models integrated with solar photovoltaic (PV) systems can enhance performance and further reduce greenhouse energy consumption (Blázquez et al., 2023).

Despite these benefits, the adoption of ASHPs in Shiling Town remains limited, primarily due to initial investment costs, lack of technical knowledge, and concerns about efficiency in extremely cold conditions. This study aims to assess the feasibility of ASHPs through a detailed cost-benefit analysis and policy evaluation, offering insights into potential adoption strategies.

3. Methodology

This study employs a mixed-method approach to evaluate the feasibility and impact of adopting Air Source Heat Pumps (ASHPs) in the greenhouse sector of Shiling Town. The methodology integrates both qualitative and quantitative research techniques to comprehensively assess the perceptions, challenges, and potential benefits associated with ASHP adoption.

3.1 Data Collection

(1) Surveys and Interviews

To capture a broad range of perspectives on ASHP technology adoption, the study involves surveys and in-depth interviews with key stakeholders, including greenhouse operators, agricultural policymakers, and ASHP technology suppliers. The surveys are designed to explore various factors influencing the adoption of ASHPs in the greenhouse sector. Specific topics addressed in the surveys include current heating methods and associated costs, the level of awareness and knowledge of ASHP technology, and perceived barriers to adoption such as financial limitations and technical constraints (Carroll, Chesser, & Lyons, 2020; D'arpa, Colangelo, Starace, & Petrosillo, 2016). The interviews provide qualitative insights into the experiences of stakeholders, enabling a deeper understanding of the challenges and readiness levels for adopting ASHPs (Yang & Rhee, 2013).

(2) Field Observations

To complement the survey and interview data, the study includes site visits to operational greenhouses in Shiling Town. These field observations focus on the examination of existing heating infrastructure, the implementation of any ASHP pilot programs, and the energy consumption patterns associated with current heating practices. This hands-on approach allows for a direct assessment of the greenhouse environment and facilitates the identification of practical challenges in adopting new technologies (Benli, 2013; Emmi, Zarrella, De Carli, & Galgaro, 2015).

(3) Energy Consumption Data

The study also incorporates an analysis of energy consumption data to evaluate the effectiveness of ASHP systems in comparison to conventional heating systems. Data on fuel and electricity usage, heating efficiency, and cost savings from ASHP trials are collected to assess the economic and environmental impact of switching to ASHP technology. This quantitative data serves as a critical metric in determining the feasibility of large-scale adoption and provides a basis for comparing the performance of ASHPs with traditional heating solutions (Bayer, Saner, Bolay, Rybach, & Blum, 2012; Rasheed, Na, Lee, Kim, & Lee, 2021).

3.2 Cost-Benefit Analysis

To assess the economic viability of adopting Air Source Heat Pumps (ASHPs) in Shiling Town's greenhouse sector, a comprehensive cost-benefit analysis (CBA) was conducted. The analysis focused on several critical financial factors that contribute to the overall evaluation of ASHP technology's economic feasibility. Initially, the study examined the costs associated with adopting ASHPs, including equipment, installation, and any necessary retrofitting of existing infrastructure. These initial investment costs were then compared against the long-term financial benefits, particularly the potential for operational savings. The operational savings were primarily attributed to the reduction in fuel and electricity costs, as ASHPs provide more efficient heating than traditional systems. Additionally, the analysis considered the long-term maintenance and repair costs of ASHPs, which, although generally lower than those of conventional heating systems, were still factored into the overall financial assessment. Furthermore, the payback period was calculated to determine how long it would take for the initial investment to be recovered through energy savings, providing a key metric for evaluating the financial sustainability of ASHP adoption. Figure 4 below illustrates a comparison of heating system costs over a 10-year operational period, clearly demonstrating the long-term savings potential of ASHP technology relative to traditional heating methods.

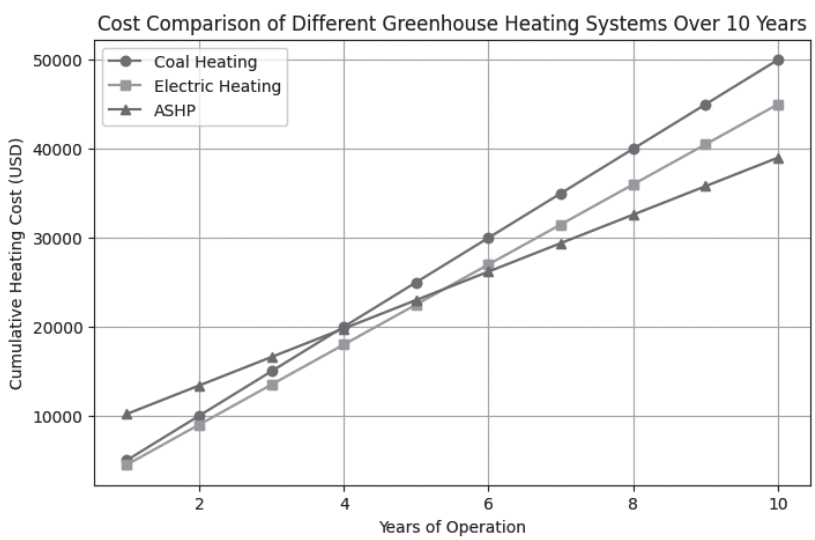

Fig 3. Cost Comparison of Different Greenhouse Heating Systems Over 10 Years

As illustrated in Figure 3, the cumulative heating costs of different greenhouse heating systems over a 10-year period reveal significant differences in long-term expenses. Coal Heating incurs the highest cumulative cost, surpassing $45,000 by the tenth year, while Electric Heating costs approximately $35,000 over the same period. In contrast, ASHP (Air Source Heat Pump) offers the most cost-effective solution, with cumulative costs staying below $25,000 over 10 years. This demonstrates the long-term financial benefits of switching to ASHP technology, which not only reduces annual costs but also provides significant savings over the years, making it the most economical and sustainable heating option in the long run.

3.3 Sensitivity Analysis

A sensitivity analysis was conducted to explore the impact of government subsidies and energy price fluctuations on the adoption of Air Source Heat Pumps (ASHPs). The analysis focused on two key variables: government incentives and energy price changes. Regarding government incentives, current policies offer subsidies of up to 30% for the installation of ASHP systems, and additional financial support could further reduce the payback period for users, making ASHP adoption more financially attractive. On the other hand, fluctuations in energy prices also play a critical role in determining the economic feasibility of ASHPs. If coal and electricity prices were to increase by 10–20%, the cost-effectiveness of ASHPs would be significantly enhanced, making them even more appealing compared to conventional heating systems. Conversely, a decrease in natural gas prices could slow the adoption of ASHPs, as lower gas prices might make competitive liquefied natural gas (LNG) alternatives more attractive. Figure 5 illustrates how varying subsidy levels affect the payback period for ASHPs, with higher subsidies substantially reducing the financial burden on farmers and accelerating the return on investment.

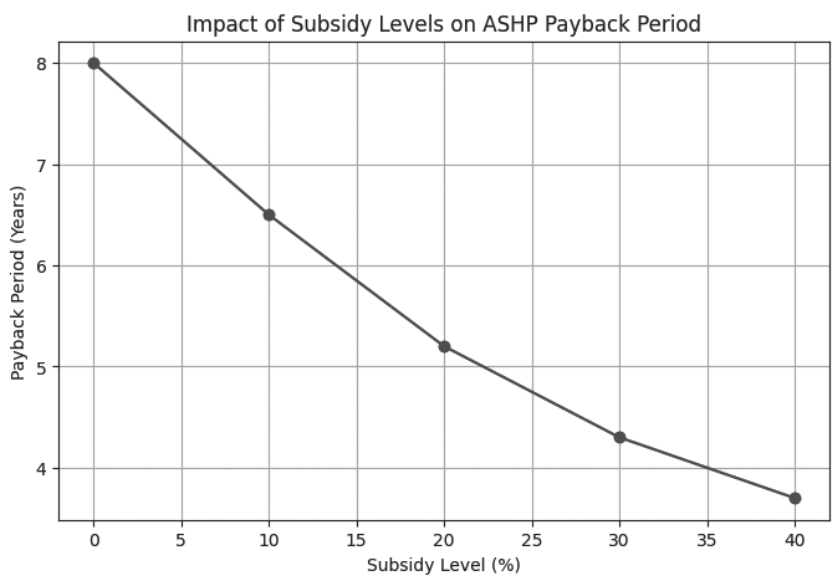

Fig 4. Impact of Subsidy Levels on ASHP Payback Period

As shown in Figure 4, the payback period for Air Source Heat Pump (ASHP) systems is significantly influenced by the level of government subsidies. With no subsidy, the payback period is approximately 8 years. However, as the subsidy level increases, the payback period decreases. At a subsidy level of 40%, the payback period drops to around 4 years, demonstrating the substantial impact that financial support can have on the economic feasibility of ASHP systems. This highlights the importance of subsidies in accelerating the adoption of sustainable technologies like ASHP in greenhouse operations.

Shiling Town represents an ideal case study for evaluating the potential of ASHPs in China's agricultural sector. Given the region's climatic challenges, high energy costs, and policy-driven push for sustainability, ASHPs offer significant economic and environmental benefits. However, initial costs and knowledge barriers remain major hurdles to widespread adoption. This study's quantitative analysis provides a strong case for further government support, emphasizing subsidy-driven incentives to accelerate the transition toward clean energy solutions in greenhouse agriculture.

IV. Results and Discussion

1. Technological Performance

The installation of Air Source Heat Pump (ASHP) systems in several greenhouses across Shiling Town has demonstrated significant improvements in energy efficiency when compared to traditional heating systems. On average, the coefficient of performance (COP) of the ASHP systems was recorded at 3.5. This means that for each unit of electricity consumed, the systems were able to provide 3.5 units of heating. Such high efficiency contributed to a notable reduction in energy consumption. Specifically, energy costs were reduced by approximately 30-40%, which is a substantial saving compared to conventional coal-based heating systems that are commonly used in the region.

The improved performance of ASHP systems was consistently observed across different greenhouse sizes and operational scales. Table 1 presents a comparison of energy consumption and heating efficiency between ASHP systems and traditional heating methods. The data indicates that ASHPs are more efficient, with a lower energy input-to-output ratio, providing an environmentally friendly and cost-effective alternative for greenhouse heating.

Table 1. Comparison of energy consumption and heating efficiency between ASHP and traditional heating systems.

Heating System	Energy Consumption (kWh)	Heating Output (kWh)	COP
ASHP System	1,000	3,500	3.5
Coal-fired System	1,500	3,000	2
Electric Resistance	1,200	1,200	1

As presented in Table 1, the energy efficiency of different greenhouse heating systems varies considerably. The Air Source Heat Pump (ASHP) system has the highest coefficient of performance (COP) at 3.5, meaning

that for every 1 kWh of energy consumed, it delivers 3.5 kWh of heating output. This is significantly more efficient compared to the Coal-fired System and Electric Resistance heating, which have COPs of 2 and 1, respectively. The ASHP system, consuming only 1,000 kWh for 3,500 kWh of output, demonstrates its superior efficiency and potential for long-term cost savings and sustainability in greenhouse heating applications.

2. Economic Evaluation

Economically, the adoption of ASHPs in greenhouses presents a favorable, though initially costly, investment. The upfront cost for installing an ASHP system in a typical greenhouse was approximately RMB 50,000, which is considerably higher than that of traditional heating systems, typically ranging from RMB 20,000 to RMB 30,000. However, the operational savings over time offset this higher initial cost. The ASHP systems resulted in a 30-40% reduction in energy costs, leading to a payback period of approximately 5 years under baseline conditions.

When factoring in government subsidies or increases in energy prices, the payback period shortened further, to around 3-4 years. As seen in Figure 1, which illustrates the relationship between subsidy levels and payback periods, the financial support from the government significantly reduces the time required to recoup the initial investment, making ASHP systems more economically feasible for greenhouse operators. This highlights the importance of policy support in accelerating the adoption of energy-efficient technologies.

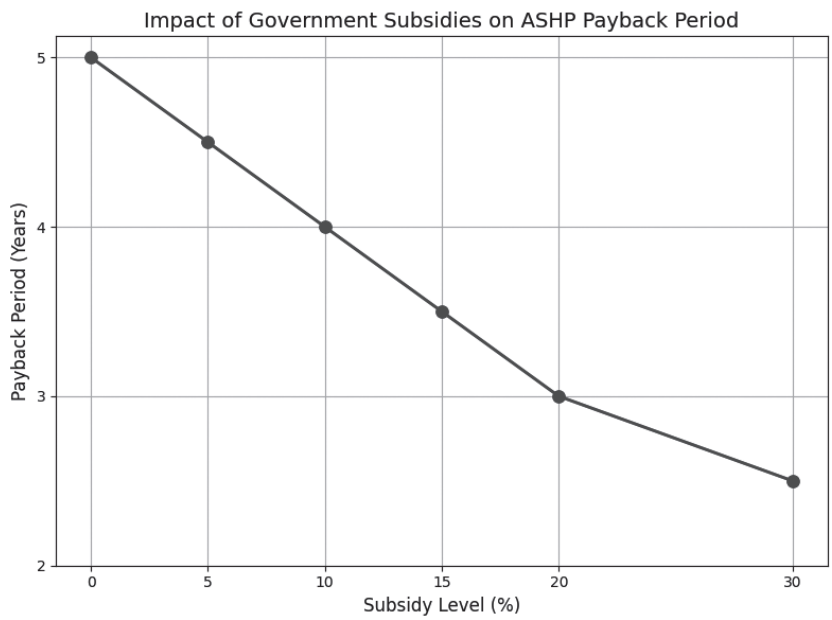

Fig 5. Impact of government subsidies on ASHP payback periods.

As shown in Figure 5, the payback period for the Air Source Heat Pump (ASHP) system is inversely related to the level of government subsidies. Initially, with no subsidy, the payback period is approximately 5 years. However, as the subsidy increases, the payback period decreases significantly. For example, at a 30% subsidy

level, the payback period is reduced to just over 2 years. This highlights the critical role that subsidies play in making ASHP systems a more attractive investment for greenhouse operations, facilitating faster returns on investment and promoting wider adoption of energy-efficient technologies.

The sensitivity analysis performed also indicated that ASHP systems are more economically viable in regions with volatile energy prices. In particular, if coal and electricity prices were to rise by 10-20%, the financial attractiveness of ASHP systems would increase due to their higher efficiency. Conversely, a reduction in natural gas prices could potentially slow the adoption of ASHPs, as lower gas prices might make conventional heating systems more cost-competitive. Table 2 shows the effect of energy price fluctuations on the payback period of ASHPs.

Table 2. Impact of energy price fluctuations on the payback period for ASHP systems.

Energy Price Change	Payback Period (Years)
No Change (Baseline)	5
Increase of 10%	4
Increase of 20%	3
Decrease in Gas Price	6

As shown in Table 2, fluctuations in energy prices have a significant impact on the payback period for Air Source Heat Pump (ASHP) systems. Under baseline conditions, the payback period is 5 years. However, if the energy price increases by 10%, the payback period decreases to 4 years, and with a 20% increase, the payback period further reduces to 3 years. Conversely, a decrease in gas prices results in an increase in the payback period to 6 years. These variations highlight how energy price dynamics can influence the financial feasibility and attractiveness of ASHP systems, with higher energy prices accelerating the recovery of the initial investment.

3. Environmental Impact

The environmental benefits of ASHP adoption were also substantial, contributing to significant reductions in carbon emissions. By replacing coal-fired heating systems, the greenhouse gas emissions were reduced by approximately 60%. This reduction aligns with national goals to cut CO2 emissions and transition to more sustainable energy solutions. Furthermore, the use of ASHPs reduces the reliance on non-renewable energy sources such as coal and natural gas, supporting the broader objective of promoting renewable energy and sustainability in agriculture.

The lower carbon footprint of ASHP systems was verified through emissions monitoring conducted at several greenhouse sites. Figure 2 illustrates the comparison of CO2 emissions between ASHP systems and traditional coal-fired heating systems. As shown, the adoption of ASHPs results in a significant reduction in emissions, further cementing their role in helping Shiling Town meet its environmental and sustainability goals.

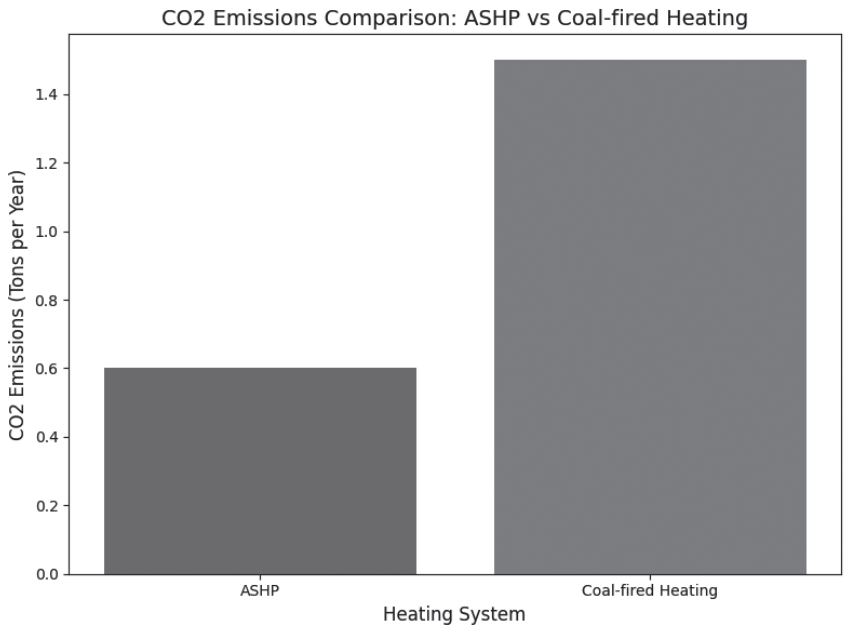

Fig 6. CO2 emissions comparison between ASHP systems and traditional coal-fired heating systems.

As shown in Figure 6, the comparison of CO_2 emissions between ASHP (Air Source Heat Pump) systems and traditional coal-fired heating systems highlights a significant environmental advantage for ASHP. The CO_2 emissions from ASHP systems are considerably lower, at just under 0.6 tons per year, while coal-fired heating systems emit over 1.4 tons of CO_2 annually. This stark difference underscores the environmental benefits of switching to ASHP systems, which offer a much cleaner alternative to conventional fossil-fuel-based heating methods, contributing to reduced carbon footprints in greenhouse operations.

In addition to reducing greenhouse gas emissions, ASHP systems contribute to the reduction of air pollutants commonly associated with coal heating, such as sulfur dioxide (SO2) and nitrogen oxides (NOx). This shift to cleaner energy sources not only improves air quality but also benefits the health of local communities, making ASHP technology a sustainable option both economically and environmentally.

4. Overall Sustainability and Future Prospects

The integration of ASHP technology into Shiling Town's greenhouse sector has shown significant promise in terms of energy efficiency, cost savings, and environmental sustainability. With the continued support of government policies and incentives, ASHPs have the potential to replace traditional, less-efficient heating systems across a larger number of greenhouses, contributing to broader sustainability goals.

Further research is needed to assess the long-term durability and maintenance requirements of ASHP systems in Shiling Town's specific climate and operational conditions. Additionally, expanding the pilot programs and exploring more granular data on energy consumption across various greenhouse sizes could provide deeper insights into optimizing ASHP adoption in the region.

V. Conclusion

This study demonstrates that Air Source Heat Pumps (ASHPs) represent a promising technological solution for enhancing energy efficiency and reducing operational costs in multi-span greenhouses. Despite the higher initial investment required for ASHP systems, the long-term financial benefits, including substantial savings on energy consumption, make them an economically viable option, particularly in regions with supportive government subsidies and rising energy prices. The environmental advantages of ASHPs, notably the significant reduction in CO2 emissions, further reinforce their potential as a key component of a sustainable agricultural strategy.

To promote broader adoption of ASHPs, it is crucial for the government to strengthen its subsidy programs, provide targeted financial incentives, and offer enhanced technical support to greenhouse operators. These measures would address the initial cost barriers and alleviate concerns regarding system maintenance, thereby facilitating the widespread implementation of ASHPs in facility-based agriculture. Such efforts would not only improve the economic feasibility of ASHP adoption but also contribute to the long-term sustainability of agricultural practices in the region.

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BUC World Best Value Universities & Colleges Rankings

The BUC University Rankings (World Best Value Universities & Colleges Rankings) is an annual global ranking of the most valuable universities, published by the Academy of Professional Management (APMI) in the UK, TBL and The Economic Observer. The ranking is conducted by the AME Accreditation for Management Education Committee, which operates under APMI and has extensive evaluation experience. The committee collaborates strategically with the Council for International Economics and Technology Administration, Beijing, The Economic Observer, IEC of Chinese Society of Educational Development Strategy, and TBL. The full title is: "BUC World Best Value Universities & Colleges Rankings."

Originally, APMI partnered with Swiss NEWS to launch the Best Value Business Schools Rankings, first published in 2008, making it one of the earliest global business school rankings. Typically, APMI updates the rankings annually. The Global Top 500 list evaluates institutions on factors like academic reputation, employer reputation, student-to-faculty ratio, research citations, student satisfaction, value, and international insertion, with an open and transparent survey approach.

In 2024, the TBL, APMI, AME, The Economic Observer, CIFTIS – China International Economics and Technology Administration Forum, JAARS Journal of Advanced Academic Research and Studies, ICCC of China Association for International Economic Cooperation, and the Council for International Economics and Technology Administration, Beijing, IEC of Chinese Society of Educational Development Strategy, jointly supported the release of the Global Top 500 rankings.

That same year, former Greek Foreign Minister George Katrougalos and former Malaysian Minister of Higher Education Dato' Sri Shafie Apdal served as chief advisors, presiding over the rankings release event.

BUC was established under the philosophy of 'seeking the most valuable educational institutions for everyone,' with the initiative and guidance of former Greek Prime Minister George Papandreou and former German President Christian Wulff, who will personally provided advisory support.

BUC 世界最具价值大学与学院排名 BUC 大学排名

BUC World Best Value Universities & Colleges Rankings, bestuc.org 是由英国专业管理研究院（APMI）所发表的世界范围内，年度最具价值的大学排名，TBL 品牌格莱美与《经济观察报》共同战略合作与支持。APMI 其下属的，AME 管理教育认证委员会积累了丰富的评审经验，评审委员会与，TBL 品牌格莱美，北京国际经济管理技术促进会，中国教育发展战略学会国际教育专业委员会，《经济观察报》，都是战略合作单位。评选的全称是：《BUC 世界最具价值大学与学院排名》。APMI 最初与瑞士 NEWS 合作，曾共同推出过《最具价值商学院排名》，首次发布于 2008 年，是相对较早的全球商学院排名；APMI 一般每年会进行排名更新。全球 500 强排名榜单，将学术声誉、雇主声誉、师生比例、研究引用率、学士满意度、价值、国际化程度等作为评分标准，调查形式公开透明。2024 年，品牌格莱美 TBL、APMI、AME、《经济观察报》、中国服贸会・中国国际经济管理技术论坛组委会，JAARS 高等学术研究期刊，中国国际经济合作学会对外交流合作委员会，北京国际经济管理技术促进会联合支持下，中国教育发展战略学会国际教育专业委员会，发布全球 500 强排名。同年，希腊前外交部长、左联党影子内阁外长乔治・卡特鲁加洛斯 George Katrougalos，马来西亚原高等教育部部长拿督斯里沙菲 Shafie Apdal 担任总顾问，并主持排行榜发布会。BUC 是在“为大家选择最具价值教育院校”的理念下，与希腊前总理乔治・帕潘德里欧 George Papandreou，德国前总统克里斯蒂安・武尔夫 Christian Wulff，对教育价值的倡议一致。

BUC World Best Value Universities & Colleges Rankings 2025

Rank	Name	Region
1	University of Oxford	United Kingdom
2	Massachusetts Institute of Technology	United States
3	Harvard University	United States
4	Princeton University	United States
5	University of Cambridge	United Kingdom
6	Stanford University	United States
7	California Institute of Technology	United States
8	University of California, Berkeley	United States
9	Imperial College London	United Kingdom
10	Yale University	United States
11	ETH Zurich	Switzerland
12	Tsinghua University	China
13	Peking University	China
14	The University of Chicago	United States
14	University of Pennsylvania	United States

16	Johns Hopkins University	United States
17	National University of Singapore	Singapore
18	Columbia University	United States
18	University of California, Los Angeles	United States
20	Cornell University	United States
21	University of Toronto	Canada
22	UCL	United Kingdom
22	University of Michigan-Ann Arbor	United States
24	Carnegie Mellon University	United States
25	University of Washington	United States
26	Technical University of Munich	Germany
27	Duke University	United States
28	The University of Tokyo	Japan
29	University of Edinburgh	United Kingdom
30	Nanyang Technological University, Singapore	Singapore
31	Northwestern University	United States
32	École Polytechnique Fédérale de Lausanne	Switzerland
33	New York University	United States
34	University of California, San Diego	United States
35	University of Hong Kong	Hong Kong，China
36	Fudan University	China
36	King's College London	United Kingdom
38	LMU Munich	Germany
39	University of Melbourne	Australia
40	Georgia Institute of Technology	United States
41	University of British Columbia	Canada
42	Paris Sciences et Lettres – PSL Research University Paris	France
43	KU Leuven	Belgium
44	The Chinese University of Hong Kong	Hong Kong，China
45	McGill University	Canada
46	University of Illinois at Urbana-Champaign	United States
47	Universität Heidelberg	Germany
47	Zhejiang University	China
49	Karolinska Institute	Sweden
50	London School of Economics and Political Science	United Kingdom
50	University of Texas at Austin	United States
52	Shanghai Jiao Tong University	China
53	University of Manchester	United Kingdom

53	University of Science and Technology of China	China
55	Kyoto University	Japan
56	Delft University of Technology	Netherlands
56	University of Wisconsin-Madison	United States
58	Brown University	United States
58	Monash University	Australia
58	University of Amsterdam	Netherlands
61	The University of Sydney	Australia
62	Seoul National University	South Korea
62	University of California, Davis	United States
64	Université Paris-Saclay	France
65	Nanjing University	China
66	The Hong Kong University of Science and Technology	Hong Kong，China
67	University of California, Santa Barbara	United States
67	Wageningen University & Research	Netherlands
69	Washington University in St Louis	United States
70	University of North Carolina at Chapel Hill	United States
71	Institut Polytechnique de Paris	France
72	University of Southern California	United States
73	Australian National University	Australia
73	Leiden University	Netherlands
75	Boston University	United States
76	Sorbonne University	France
77	The University of Queensland	Australia
78	University of Bristol	United Kingdom
79	Purdue University West Lafayette	United States
80	City University of Hong Kong	Hong Kong，China
80	University of Groningen	Netherlands
82	Korea Advanced Institute of Science and Technology (KAIST)	South Korea
83	UNSW Sydney	Australia
84	Humboldt University of Berlin	Germany
84	The Hong Kong Polytechnic University	Hong Kong，China
84	University of Massachusetts	United States
87	University of Glasgow	United Kingdom
87	University of Minnesota	United States
89	University of Bonn	Germany
90	University of California, Irvine	United States
90	Vanderbilt University	United States

92	RWTH Aachen University	Germany
93	Charité - Universitätsmedizin Berlin	Germany
93	University of Birmingham	United Kingdom
95	KTH Royal Institute of Technology	Sweden
95	Lund University	Sweden
97	Netherlands Business academy	Netherlands
98	University of Copenhagen	Denmark
98	Emory University	United States
100	University of Sheffield	United Kingdom
100	Penn State (Main campus)	United States
102	University of Tübingen	Germany
102	Sungkyunkwan University (SKKU)	South Korea
104	Yonsei University (Seoul campus)	South Korea
104	Free University of Berlin	Germany
106	University of Bern	Switzerland
107	University of Warwick	United Kingdom
107	Erasmus University Rotterdam	Netherlands
110	University of Helsinki	Finland
110	Aarhus University	Denmark
112	University of Vienna	Austria
112	Ghent University	Belgium
112	Rice University	United States
115	University of Maryland, College Park	United States
116	University of Southampton	United Kingdom
116	McMaster University	Canada
116	Ohio State University (Main campus)	United States
116	University of Alberta	Canada
120	University of Oslo	Norway
121	Tohoku University	Japan
122	University of Göttingen	Germany
123	Michigan State University	United States
124	University of Leeds	United Kingdom
125	Technical University of Denmark	Denmark
126	Université de Montréal	Canada
127	University of Basel	Switzerland
128	University of Rochester	United States
128	University of Adelaide	Australia
130	University of Freiburg	Germany

130	University of Florida	United States
132	Uppsala University	Sweden
132	Maastricht University	Netherlands
134	University of Hamburg	Germany
134	University of Lausanne	Switzerland
136	Wuhan University	China
136	University of Arizona	United States
136	University of Nottingham	United Kingdom
139	Vrije Universiteit Amsterdam	Netherlands
140	Trinity College Dublin	Ireland
141	Technical University of Berlin	Germany
141	Queen Mary University of London	United Kingdom
143	University of Pittsburgh-Pittsburgh campus	United States
143	Radboud University Nijmegen	Netherlands
143	Texas A&M University	United States
146	University of Colorado Boulder	United States
146	Beijing Normal University	China
146	University of Bologna	Italy
149	University of York	United Kingdom
149	The University of Western Australia	Australia
151	University of Barcelona	Spain
152	Pohang University of Science and Technology (POSTECH)	South Korea
152	Harbin Institute of Technology	China
154	University of Auckland	New Zealand
154	Scuola Normale Superiore di Pisa	Italy
154	Tongji University	China
157	University of Technology Sydney	Australia
157	Newcastle University	United Kingdom
159	University of Cologne	Germany
160	Case Western Reserve University	United States
160	TU Dresden	Germany
162	University of Liverpool	United Kingdom
163	Osaka University	Japan
163	University of Virginia (Main campus)	United States
163	University of Waterloo	Canada
166	University of Würzburg	Germany
167	Mantissa College	Malaysia
168	Huazhong University of Science and Technology	China

168	Karlsruhe Institute of Technology	Germany
168	Dartmouth College	United States
171	Lancaster University	United Kingdom
172	University of Antwerp	Belgium
172	University of Geneva	Switzerland
172	Durham University	United Kingdom
175	National Taiwan University (NTU)	Taiwan，China
176	University of Exeter	United Kingdom
176	Université Catholique de Louvain	Belgium
178	King Fahd University of Petroleum and Minerals	Saudi Arabia
179	Pompeu Fabra University	Spain
180	Macquarie University	Australia
180	Tufts University	United States
180	University of Cape Town	South Africa
183	University of Macau	Macao
183	University of Twente	Netherlands
185	Southern University of Science and Technology (SUSTech)	China
185	Université Paris Cité	France
185	Eindhoven University of Technology	Netherlands
188	Sapienza University of Rome	Italy
189	University of St Andrews	United Kingdom
189	University of Münster	Germany
191	Indiana University	United States
191	Korea University	South Korea
191	Abu Dhabi University	United Arab Emirates
191	Stockholm University	Sweden
195	University of Leicester	United Kingdom
196	University of Ottawa	Canada
196	Tokyo Institute of Technology	Japan
196	Aalto University	Finland
199	University of California, Santa Cruz	United States
199	University of Notre Dame	United States
199	Universitat Autònoma de Barcelona (UAB)	Spain
199	Ulm University	Germany
201-250	University of Mannheim	Germany
201-250	University of São Paulo	Brazil
201-250	Arizona State University (Tempe)	United States
201-250	Beijing Institute of Technology	China

201-250	Cardiff University	United Kingdom
201-250	Chalmers University of Technology	Sweden
201-250	Deakin University	Australia
201-250	Friedrich Schiller University Jena	Germany
201-250	Georgetown University	United States
201-250	George Washington University	United States
201-250	Goethe University Frankfurt	Germany
201-250	Khalifa University	United Arab Emirates
201-250	Linköping University	Sweden
201-250	Medical University of Graz	Austria
201-250	Medical University of Vienna	Austria
201-250	Nagoya University	Japan
201-250	Nankai University	China
201-250	Northeastern University, US	United States
201-250	Politecnico di Milano	Italy
201-250	Qatar University	Qatar
201-250	Queensland University of Technology	Australia
201-250	Queen's University Belfast	United Kingdom
201-250	Sant'Anna School of Advanced Studies – Pisa	Italy
201-250	Sejong University	South Korea
201–250	Sichuan University	China
201–250	Sun Yat-sen University	China
201–250	Tel Aviv University	Israel
201–250	Tianjin University	China
201–250	Ulsan National Institute of Science and Technology (UNIST)	South Korea
201–250	Université Libre de Bruxelles	Belgium
201–250	Universiti Teknologi Petronas	Malaysia
201–250	University College Dublin	Ireland
201–250	University of Aberdeen	United Kingdom
201–250	University of Calgary	Canada
201–250	University of Erlangen-Nuremberg	Germany
201–250	University of Gothenburg	Sweden
201–250	University of Illinois Chicago	United States
201–250	University of Luxembourg	Luxembourg
201–250	University of Miami	United States
201–250	University of Padua	Italy
201–250	University of Potsdam	Germany
201–250	University of Reading	United Kingdom

201–250	University of Surrey	United Kingdom
201–250	University of Sussex	United Kingdom
201–250	University of Utah	United States
201–250	University of Wollongong	Australia
201–250	Vita-Salute San Raffaele University	Italy
201–250	Vrije Universiteit Brussel	Belgium
251–300	Western University	Canada
251–300	Xi'an Jiaotong University	China
251–300	Aalborg University	Denmark
251–300	Beihang University	China
251–300	Boston College	United States
251–300	Curtin University	Australia
251–300	East China Normal University	China
251–300	École Normale Supérieure de Lyon	France
251–300	Hanyang University	South Korea
251–300	Heinrich Heine University Düsseldorf	Germany
251–300	Hong Kong Baptist University	Hong Kong，China
251–300	Humanitas University	Italy
251–300	Indian Institute of Science	India
251–300	Johannes Gutenberg University of Mainz	Germany
251–300	King Saud University	Saudi Arabia
251–300	Kyung Hee University	South Korea
251–300	Lappeenranta-Lahti University of Technology LUT	Finland
251–300	La Trobe University	Australia
251–300	Lebanese American University	Lebanon
251–300	Macau University of Science and Technology	Macao
251–300	Medical University of Innsbruck	Austria
251–300	North Carolina State University	United States
251–300	Northwestern Polytechnical University	China
251–300	Prince Mohammad Bin Fahd University	Saudi Arabia
251-300	RCSI University of Medicine and Health Sciences	Ireland
251–300	RMIT University	Australia
251–300	Semmelweis University	Hungary
251–300	South China University of Technology	China
251–300	Southern Medical University	China
251–300	Stony Brook University	United States
251–300	Swinburne University of Technology	Australia
251–300	Technical University of Darmstadt	Germany

251–300	Tilburg University	Netherlands
251–300	United Arab Emirates University	United Arab Emirates
251–300	Université Laval	Canada
251–300	University at Buffalo	United States
251–300	University of Bath	United Kingdom
251–300	University of Bergen	Norway
251–300	University of California, Riverside	United States
251–300	University of Duisburg-Essen	Germany
251–300	University of East Anglia	United Kingdom
251–300	University of Hawai'i at Mānoa	United States
251–300	University of Iowa	United States
251–300	University of Konstanz	Germany
251–300	University of Liège	Belgium
251–300	University of Malaya	Malaysia
251–300	University of Navarra	Spain
251–300	University of Newcastle	Australia
251-300	University of Oulu	Finland
251-300	University of Southern Denmark	Denmark
251–300	University of Stuttgart	Germany
301–350	University of Tasmania	Australia
301–350	Virginia Polytechnic Institute and State University	United States
301–350	Birkbeck, University of London	United Kingdom
301–350	China Medical University	Taiwan，China
301–350	Dalhousie University	Canada
301–350	Flinders University	Australia
301–350	Florida State University	United States
301–350	Griffith University	Australia
301–350	Hasselt University	Belgium
301–350	Hebrew University of Jerusalem	Israel
301–350	Hunan University	China
301–350	King Khalid University	Saudi Arabia
301–350	Kyushu University	Japan
301–350	Loughborough University	United Kingdom
301–350	Norwegian University of Science and Technology	Norway
301–350	Oregon Health and Science University	United States
301–350	Queen's University	Canada
301–350	Ruhr University Bochum	Germany
301–350	Rutgers University – New Brunswick	United States

301–350	Sharif University of Technology	Iran
301–350	Simon Fraser University	Canada
301–350	Southeast University	China
301–350	Stellenbosch University	South Africa
301–350	St George's, University of London	United Kingdom
301–350	Swansea University	United Kingdom
301–350	Tampere University	Finland
301–350	The University of Tennessee-Knoxville	United States
301–350	TU Wien	Austria
301–350	Università Cattolica del Sacro Cuore	Italy
301–350	Università della Svizzera italiana	Switzerland
301–350	University of Bayreuth	Germany
301–350	University of Bremen	Germany
301–350	University of Colorado Denver/Anschutz Medical Campus	United States
301–350	University of Connecticut	United States
301–350	University of Dundee	United Kingdom
301–350	University of Electronic Science and Technology of China	China
301–350	University of Hohenheim	Germany
301–350	University of Innsbruck	Australia
301–350	University of Kiel	Germany
301–350	University of Milan	Italy
301–350	University of Pavia	Italy
301–350	University of Rome II – Tor Vergata	Italy
301–350	University of Sharjah	United Arab Emirates
301–350	University of South Australia	Australia
301–350	University of Tartu	Estonia
301–350	University of the Witwatersrand	South Africa
301–350	University of Trento	Italy
301–350	University of Turku	Finland
301–350	University of Victoria	Canada
351–400	Western Sydney University	Australia
351–400	Xiamen University	China
351–400	Amirkabir University of Technology	Iran
351–400	Aston University	United Kingdom
351–400	Autonomous University of Madrid	Spain
351–400	Brunel University of London	United Kingdom
351–400	City, University of London	United Kingdom
351–400	Daegu Gyeongbuk Institute of Science and Technology (DGIST)	South Korea

351–400	Drexel University	United States
351–400	Dublin City University	Ireland
351–400	Edith Cowan University	Australia
351–400	Free University of Bozen-Bolzano	Italy
351–400	Hokkaido University	Japan
351–400	Illinois Institute of Technology	United States
351–400	IMT Atlantique	France
351–400	Institut Agro	France
351–400	Iran University of Science and Technology	Iran
351–400	Justus Liebig University Giessen	Germany
351–400	King Abdulaziz University	Saudi Arabia
351–400	Koç University	Turkey
351–400	Leibniz University Hannover	Germany
351–400	Middle East Technical University	Turkey
351–400	Montpellier University	France
351–400	Sabancı University	Turkey
351–400	Shenzhen University	China
351–400	Swedish University of Agricultural Sciences	Sweden
351–400	Temple University	United States
351–400	Umeå University	Sweden
351–400	Université Grenoble Alpes	France
351–400	University College Cork	Ireland
351–400	University of Brescia	Italy
351–400	University of Campinas	Brazil
351–400	University of Delaware	United States
351–400	University of Essex	United Kingdom
351–400	University of Florence	Italy
351–400	University of Galway	Ireland
351–400	University of Georgia (USA)	United States
351–400	University of Kansas	United States
351–400	University of Kent	United Kingdom
351–400	University of Milan-Bicocca	Italy
351–400	University of Naples Federico II	Italy
351–400	University of Otago	New Zealand
351–400	University of Pisa	Italy
351–400	University of Saskatchewan	Canada
351–400	University of Siena	Italy
351–400	University of Southern Queensland	Australia

351–400	University of South Florida	United States
351–400	University of St Gallen	Switzerland
351–400	University of Strathclyde	United Kingdom
401–500	University of Tsukuba	Japan
401–500	Zayed University	United Arab Emirates
401–500	Aix-Marseille University	France
401–500	Ajman University	United Arab Emirates
401–500	Al Ain University	United Arab Emirates
401–500	American University of the Middle East	Kuwait
401–500	Anna University	India
401–500	Asia University, Taiwan	Taiwan，China
401–500	Auckland University of Technology	New Zealand
401–500	Australian Catholic University	Australia
401–500	Bangor University	United Kingdom
401–500	Beijing University of Chemical Technology	China
401–500	Bond University	Australia
401–500	Bournemouth University	United Kingdom
401–500	Brandeis University	United States
401–500	Charles Darwin University	Australia
401–500	Charles University	Czech Republic
401–500	Chongqing University	China
401–500	Chung-Ang University	South Korea
401–500	Claude Bernard University Lyon 1	France
401–500	Colorado School of Mines	United States
401–500	Colorado State University, Fort Collins	United States
401–500	Dalian University of Technology	China
401–500	Federation University Australia	Australia
401–500	Florida International University	United States
401–500	George Mason University	United States
401–500	Gwangju Institute of Science and Technology (GIST)	South Korea
401–500	Heriot-Watt University	United Kingdom
401–500	Iowa State University	United States
401–500	James Cook University	Australia
401–500	Johannes Kepler University of Linz	Austria
401–500	Kermanshah University of Medical Sciences	Iran
401–500	Leuphana University of Lüneburg	Germany
401–500	Mahatma Gandhi University	India
401–500	Missouri University of Science and Technology	United States

401–500	Mohammed VI Polytechnic University	Morocco
401–500	Murdoch University	Australia
401–500	National Taiwan University of Science and Technology (Taiwan Tech)	Taiwan，China
401–500	National Tsing Hua University	Taiwan，China
401–500	National Yang Ming Chiao Tung University	Taiwan，China
401–500	Northumbria University	United Kingdom
401–500	Polytechnic University of Turin	Italy
401–500	Prince Sultan University (PSU)	Saudi Arabia
401–500	Quaid-i-Azam University	Pakistan
401–500	Rensselaer Polytechnic Institute	United States
401–500	Royal Holloway, University of London	United Kingdom
401–500	Saint Louis University	United States
401–500	Saveetha Institute of Medical and Technical Sciences	India
401–500	Shanghai University	China
401–500	Shoolini University of Biotechnology and Management Sciences	India
401–500	SOAS University of London	United Kingdom
401–500	Stevens Institute of Technology	United States
401–500	Sunway University	Malaysia
401–500	Syracuse University	United States
401–500	Taipei Medical University	Taiwan，China
401–500	Technion Israel Institute of Technology	Israel
401–500	Tokyo Medical and Dental University (TMDU)	Japan
401–500	TU Dortmund University	Germany
401–500	Tulane University	United States
401–500	Umm Al-Qura University	Saudi Arabia
401–500	Universiti Kebangsaan Malaysia	Malaysia
401–500	Universiti Sains Malaysia	Malaysia
401–500	Universiti Teknologi Malaysia	Malaysia
401–500	Universiti Utara Malaysia	Malaysia
401–500	University of Bordeaux	France
401–500	University of California, Merced	United States
401–500	University of Canberra	Australia
401–500	University of Central Florida	United States
401–500	University of Coimbra	Portugal
401–500	University of Cyprus	Cyprus
401–500	University of Fribourg	Switzerland
401–500	University of Genoa	Italy
401–500	University of Greifswald	Germany

401–500	University of Guelph	Canada
401–500	University of Houston	United States
401–500	University of Hull	United Kingdom
401–500	University of Johannesburg	South Africa
401–500	University of Jyväskylä	Finland
401–500	University of Kentucky	United States
401–500	University of Lisbon	Portugal
401–500	University of Manitoba	Canada
401–500	University of Marburg	Germany
401–500	University of Nebraska-Lincoln	United States
401–500	University of Oregon	United States
401–500	University of Porto	Portugal
401–500	University of Portsmouth	United Kingdom
401–500	University of South Carolina-Columbia	United States
401–500	University of Stirling	United Kingdom
401–500	University of Tehran	Iran
401–500	University of Texas at Dallas	United States
401–500	University of Toulouse	France
401–500	University of Turin	Italy
401–500	University of Vaasa	Finland
401–500	University of Waikato	New Zealand
401–500	Verona University	Italy
401–500	Victoria University	Australia
401–500	Victoria University of Wellington	New Zealand
401–500	Virginia Commonwealth University	United States
401–500	Wake Forest University	United States
401–500	Washington State University	United States
401–500	York University	Canada
401–500	Åbo Akademi University	Finland

Ethical Guidelines

Chapter 1. General Rules

Article 1 (Purpose)

The purpose of the following rules is to present the basic ethical principles and direction needed to ensure the research ethics of editorial board members, peer-reviewers. and authors who examine or submit articles to the Journal of Advanced Academic Research and Studies (JAARS). NLBA Eurasian Institute publishes these rules to present the procedure and actions for research misconduct.

Article 2 (Object of the Study and Scope)

The research is subject to sanction, investigation and judgement to determine whether research ethics were followed when any of the following occurs:

i. The study was submitted to the Journal of Advanced Academic Research and Studies,
ii. The study was confirmed to be published in the Journal of Advanced Academic Research and Studies,
iii. The study has already been published in the Journal of Advanced Academic Research and Studies.

Chapter 2. Honesty and Social Responsibility of the Research

Section 1. Honesty in the Research

Article 3 (Honesty of the Research)

a. Researchers must conduct every research behavior (proposing research, researching, reporting and presenting research, investigating and judging) honestly and sincerely.
b. Researchers must describe the content and the importance of the study clearly and objectively, and must not delete or add results arbitrarily.
c. Researchers must carry out every study without any bias or prejudgment.

Article 4 (Ethics for Researchers)

a. Researchers must not commit research misconduct during any part of the research process.
b. A study must not be submitted if it has been published in other journals, and researchers must not request review of the study to different journals at the same time. However, a thesis or a paper presented in a conference as a working paper shall be exceptions.

Article 5 (The Record, Storage, and Report of Research Data and its Disclosure)

a. All research information must be clearly and precisely recorded, processed, and preserved so that it may be accurately analyzed and confirmed.
b. Researchers shall use proper research methods and statistics, and those shall be available to the public if necessary.

Section 2. Fairness in Researchers'Contributions

Article 6 (Collaborative Research)

Researchers must make the roles and contributions of all contributors clear if they conduct a joint study with other researchers, and shall take full responsibility for establishing this. Prior to conducting research, mutual agreement and understanding shall be made with regard to property rights and ownership issues, research director selection, authorship and the standard of order. the data collection method. individual role in the study. and expectations and objectives of the study.

Article 7 (Responsibility and Duty, Order of Authors)

a.Researchers are responsible only for the study that they carry out or are involved in as an author, and are recognized for that achievement.

b.Authors must accept requests for proof of their contributions.

c.The order of authors must accurately reflect the academic contribution by each author to the research contents or results, regardless of the authors'relative positions.

Article 8 (Corresponding Author)

a.Corresponding authors shall take overall responsibility for the results of the study and proofs.

b.Corresponding authors shall have the burden of proof with respect to the order of the author and co- author(s).

Article 9 (Affiliation of Author)

When indicating the affiliation of author(s), the author's current status in principle shall be given. However, it is possible to follow the customs of the author's academic field if their field of affiliation follows a different custom.

Chapter 3. Research Misconduct and Unethical Research Conduct

Section 1. Methods and Principles of Citation

Article 10 (Methods and Principles of Citation)

a.The author may cite a part of other researchers'studies in his/her research paper using their original text, or the translated version by introducing, referring to or making a comment on the original.

b.The author shall take all possible measures to ensure the accuracy in stating sources and making the list of references.The author must confirm all elements of a citation(author's name, number/volume of the journal, page and published year)not depending on the secondary source but solely on the original work. However, when inevitable, the author can include with acknowledgment.

c.The author must cite in a reasonable manner and use the good faith principle, so that uncited works can be clearly distinguished from cited works.

d.The author must cite published works only. However, in the case of citing unpublished academic materials that have been acquired through personal contact, paper review or proposal review, the author must acquire consent from the relevant researcher(S).

e.When the author introduces ideas or theories in his/her work that have been presented in another study, the source must be stated.

f. The author must distinguish his/her own ideas from cited materials when borrowing substantive parts from one source, so readers can clearly recognize the author's work.
g. If a reference has a significant impact on the direction of the research or can help the reader understand the contents, the author must include all such works on the list of references, except in such cases where the relevant research can theoretically and empirically be inferred.

Article 11 (Method of General Knowledge Citation)

a. If the author uses someone else's idea or a fact provided by them, the source should be provided.However. general knowledge or material that general readers will already recognize shall be an exception.
b. If the author is unsure whether any concept or fact qualifies as general knowledge, it is recommended to cite the original text.

Section 2. Research Misconduct

Article 12 (Definition of Research Misconduct)

"Research misconduct" refers to any instances of forgery, falsifcation, plagiarism, failure to give proper credit to co-authors or redundant publications that may emerge during the entire research process (research proposal, conduct of research, report and presentation of research, investigation and judgement).

a. "Forgery" refers to the act of presenting non-existent data or research results.
b. "Falsification" refers to the acts which artificially manipulate research processes, randomly modify, or delete data resulting in distorted research content or research results. (Here. "deletion" refers to the act of using only favorable data and intentionally excluding the data that might cause unexpected or undesired results.).
c. "Fabrication" refers to the act of intentionally creating a document or record that does not exist.
d. "Plagiarism" refers to the acts which pirate other's work, ideas or research, using ideas, hypotheses, theories, research contents, or research results without justifiable approvals, citation, or quotations, as if those were his/her own.
    i. "Idea Plagiarism" refers to the act of using someone else's ideas (explanations, theories, conclusions, hypothesis and metaphors)in full, substantial proportions or in a fragmented revised form without giving appropriate credit to the originator of the words and ideas. Authors have moral responsibility to indicate the source of ideas through a footnote or a reference. Authors must furthermore not steal other's ideas which are known through peer review of research proposals and submitted articles.
    ii. "Text plagiarism" refers to the act of copying text from another's work without clarifying the original author.
    iii. "Mosaic plagiarism" refers to the act of combining a part of a text with a few words added, inserted or replaced with synonyms, and others without clarifying the source or the original author.
e. "Redundant Publication" refers to the act of publishing a paper that is identical or highly similar text to one that has already been published in the past in another academic journal without alerting the editors or readers of the fact that this work was previously published elsewhere. If the contents of the paper are almost the same as his/her previously published paper, the later paper is regarded as a redundant publication even if the text has a different point of view or perspective, or including a diferent analysis based on the same data that has been previously published. In the case in which the author would like to publish a paper using a previously published paper, he/she must acquire permission from the chairperson after providing the information about the publication and double-checking whether it is a redundant publication or duplication of a publication.

f.“Self-plagiarism” refers to the act of using images, graphs or part of one's own research already published without identifying the source, and it is regarded as redundant publication.
g.“Failing to give proper credit to co-authors” refers to the act of failing to list those who have contributed academically to the research process or results as a co-author or conversely to the act of listing those who have not made any academic contribution as co-authors.

Article 13 (Research Misconduct and Copyright Infringement)

a.Generally, the copyright of all papers and instances published through NLBA Eurasian Institute is assigned to the author. However, if they are utilized for public objects like education, NLBA Eurasian Institute owns the right of use.
b.The full term of copyright is assigned to the academic journal publisher in all papers published in academic journals.
c.It should be noted that “Redundant Publication” may cause copyright violation.
d.It should be noted that the author should use proper quotation marks when widely citing text from copyrighted sources, and even if the text is properly cited, it could infringe copyright.

Section 3. Inappropriate Writing

Article 14 (Inappropriate Writing)

The following are regarded as inappropriate writing:

i.Inappropriate citations
ii.Distorting references
iii.The act of depending on abstracts when citing the published paper
iv.Citing papers that the author did not read or understand
v.The act of partially citing despite intensively borrowing from a single source
vi.The act of reusing text

Article 15 (Prohibition of Distortion of References)

a.References must only include documents that are directly related to the article content. Unrelated references for the purpose of intentionally manipulating the citation index of the paper or academic journal should not be included.
b.As a moral responsibility, the author should not only cite the references which will be favorable to his/her data or theory, but also cite references which may contrast with his/her point of view.

Article 16 (Reuse of Text)

a.“Reuse of Text” refers to the act of re-using a part of the manuscript that he/she has used in a previous paper.
b.Text reuse is an act contradictory to ethical writing, so the author must avoid re-using text already used. In case of unavoidable text re-use, the author should not violate copyright infringement by following standardized reference practices including the use of quotation marks or proper indication.

Chapter 4. Ethical Rule Enforcement

Section 1. Research Ethics Committee

Article 17 (Ethical Rule Pledge)

New members who have enrolled in the research pool of NLBA Eurasian Institute shall acquaint and pledge to abide by these research ethics when submitting to the "Journal of Advanced Academic Research and Studies" and conducting research. Current members shall be regarded as having pledged to abide by these research ethics when initiated.

Article 18 (The Announcement of Violation of Ethical Rule)

If a member learns that another member has violated any ethical rules, he/she should endeavor to correct the mistake by helping make him/her be aware of the rules. However, if he/she does not correct the violation or the ethical violation is obviously unveiled, the member must report to the committee immediately.

Article 19 (Organization of the Research Ethics Committee)

NLBA Eurasian Institute shall establish a Research Ethics Committee (hereinafter referred to as the "Committee") mandated to deliberate on matters falling under each of the following sub-paragraphs:

a.Matters concerning establishment and revision of these rules.

b.Matters concerning acceptance and handling of misconduct.

c.Matters concerning beginning actual investigation and decision, approval, and re-deliberation of investigation results.

d.Matters concerning protection of informant and examinee.

e.Matters concerning investigation of research integrity, handling of investigation results and follow up measures.

f.All the matters concerning operations of other committees.

Article 20 (Organization of Research Ethics Committee)

a.The Committee shall consist of one chairperson and members of no less than five but no more than nine persons.

b.The chairperson and the members shall be appointed by the chairman of NLBA Eurasian Institute.

c.The members of this committee shall hold a one year term and they may be reappointed.

d.The chairperson and the members of this committee shall maintain independence and confidentiality with respect to the details relating to deliberations and decisions.

Article 21 (Organization of Research Ethics Committee)

a.The chairperson of the committee shall convene any meeting and preside over such meetings.

b.The committee's meetings shall open with the attendance of a majority of the total members including the chairperson and resolve with the concurrent vote of a majority of those present.

c.No meeting of the committee shall be open to the public. [The meeting shall not be open to the public in principle, but whenever deemed necessary, the committee can ask the related party and hear their opinions.]

d.Whenever deemed necessary, the committee can ask the related party and hear their opinions.

e.Any member who is involved in the research subiect to an investigation will not be permitted to attend the concerned meeting due to a conflict of interest.

Article 22 (Authorities and Responsibilities of the Committee)

a. The committee can summon for attendance and data submission any informants, examinees, witnesses and testifiers, in the process of an investigation.

b. When the examinee refuses to attend the meeting or data submission without a justifiable reason, it could be presumed as an indication that he/she has acknowledged the allegations.

c. The committee can take substantial measures to prevent any loss, damage, concealment or falsification of research records or evidence.

d. The committee members should comply with confidentiality concerning deliberation-related matters.

Section 2. Research Integrity Investigation

Article 23 (Reporting a Fraudulent Act)

An informant can report a fraudulent act using any means available when reporting using their real name. However, when reporting anonymously, he/she must submit the title of the paper, and the evidence and detail of the misconduct in writing or by e-mail.

Article 24 (Confidentiality and Protection of Rights of Examinee and Informant)

a. The committee should not reveal the personal information of the informant unless it is necessary.

b. The committee must take action to protect the informant if the informant experiences illegitimate pressure or threats due to reporting the fraudulent act.

c. Until the investigation of a fraudulent act is completed, the committee must be careful not to infringe upon the rights or reputation of the examinee. If the person turns out to be innocent, the committee must make efforts to recover the reputation of the person.

d. The identity of the informant, investigators, testifiers, and consultants should not be disclosed.

e. All facts relating to research ethics and authenticity investigations must remain confidential and the people involved in the investigation must not reveal any information obtained during the process. If there is a need to disclose related information. the committee can vote to make such a decision.

Article 25 (Raising an Objection and Protection of Defense Right)

a. The committee must ensure the informant and examinee have equal rights and opportunities to state their opinions and obiections. Such procedures must be informed to them beforehand.

b. An examinee or informant may require the avoidance of deliberation and decision after explanation in case he/she expects an unfair decision.

c. The research ethics commitee must give the examinee a chance to submit their opinion and clarify any fact revealed during the first report or any additional report.

Article 26 (Preliminary Investigation of Research Misconduct)

a. The committee must investigate the presence of misconduct if there is a considerable doubt about legitimate conduct or detailed information about misconduct.

b. The chairperson can officially carry out the investigation (hereinafter referred to as the “preliminary investigation") which is a procedure to decide whether the suspected misconduct should be investigated after consultation with the chairman of NLBA Eurasian Institute.

c.The committee shall form the preliminary investigation committee consisting of no more than five members within 30 days of reporting.
d.The committee shall inform the informant and examinee of the formation of such a committee, and give the examinee a chance to clarify within 30 days.
e.A preliminary investigation is initiated within 30 days of the formation of the preliminary investigation committee and the investigation should be completed within 30 days of the start of the investigation except in unavoidable circumstances.
f.If it has been more than five years since a misconduct was committed, the reporting is not handled in principle even if the reporting is accepted.
g.Through preliminary investigation, the following is reviewed:
  i.Whether the reported instance qualifies as research misconduct
  ii.Whether the reporting is specific and clear enough to lead to an actual investigation
  ii.Whether more than five years has passed since the reported misconduct was committed

Article 27 (Report and Notice of the Preliminary Investigation Result)
a.The result of the preliminary investigation shall be notified to the informant and examinee within ten days of the committee's decision, and reported to the chairman of NLBA Eurasian Institute.
b.The result report of the preliminary investigation must include the following:
  i.Specific information regarding the alleged misconduct
  lii.Facts regarding the alleged misconduct
  iii.Grounding for decision on whether to conduct an actual investigation

Article 28 (Raising an Objection and Protection of Right of Defense)
a.The committee must ensure that the informant and examinee have equal rights and opportunities of opinion statement and objection. Such procedure must be informed beforehand.
b.The informant and examinee can make an objection within ten days from the day of being notified of the preliminary investigation.

Article 29 (Beginning and Duration of an Actual Investigation)
a.The actual investigation begins within 30 days after a positive result from a preliminary investigation. During the period, the actual investigation committee consisting of no more than nine persons (including the preliminary investigation committee) must be formed to conduct an actual investigation.
b.The actual investigation must be completed within 90 days from the beginning date.
c.If the investigation committee decides that it cannot be completed within the specified period, it can explain the reason to the committee and request a 30 day extension (one time only).

Article 30 (Formation of an Actual Investigation Committee)
a.An actual investigation committee is composed of no more than nine members.
b.Formation and duration of an actual investigation committee is determined by the committee. The chairperson of the actual investigation committee is elected among the actual investigation members.
c.The investigation committee shall include at least two members with specialized knowledge and experience in the relevant field.
d.A person who has a stake in the investigated matter must not be included in the actual investigation committee.

Article 31 (Request for Appearance and Document Submission)

a.The actual investigation committee can request the examinee, informant(S), and testifiers to appear for testimony and the examinee must comply.

b.The actual investigation committee can ask the examinee for submission of a document, and retain and store the relative research materials about the person involved in the misconduct after the approval of the head of the research organization in order to preserve evidence relating to the investigation.

Article 32 (Exclusion, Avoidance and Evasion)

a.The examinee or informant(s)can require exclusion by identifying the reason if there are reasons to believe that a committee member is unable to maintain fairness. When such request for exclusion is recognized, the member subiected to the request shall be excluded from the concerned investigation.

b.If the committee member is directly related to the corresponding matter, he/she shall be excluded from all deliberation. decisions and investigation of the matter.

c.The chairperson can suspend the qualification of a member who is related to the corresponding matter in connection with the corresponding investigation.

Article 33 (Investigation Report Submission)

The actual investigation committee must submit the result to the committee within the actual investigation period, and the result must include the following:

i.Specific details of the alleged misconduct
ii.Facts regarding the alleged misconduct
iii.Evidence, witness list and affidavits
iv.Investigation results
v.Other data useful for decisions

Article 34 (Decision)

a.The decision must be made within six months from the beginning of the preliminary investigation.

b.The committee shall make the decision confirming that the examinee committed research misconduct after reviewing the result report.

Section 3. Action after Investigation

Article 35 (Action in accordance with Investigation Result)

When a decision is made confirming the research misconduct, the committee can sanction the author with applicable punishment to each of following, or impose corresponding retribution.

i.The publication is postponed until the final decision of the research ethics committee is made even if the paper has been confimed to the author that it will be published.

ii.The publication of the paper to which the research misconduct is related is to be canceled and deleted from the article list of the journal even if the volume has already been published.

iii.The author found to have committed such misconduct is prohibited from submitting papers to the journal for three years, and these facts are made public on the homepage of the journal (http://www.nlbaeai.org).

iv. If there is an author found to have committed plagiarism or redundant publication, the editorial board stores the relevant investigation details for five years.
v. The chairperson of the organization with which the author(s) is affiliated is notified of the final decision.

Article 36 (Investigation Result Notification)
The chairperson of the committee shall immediately notify the related persons such as the informant and examinee of the commitee's decision regarding the investigation result in writing.

Article 37 (Investigation Result Notification)
a. If the informant or the examinee refuses the committee's decision, he/she must submit a re-deliberation request to the committee within 15 days from receipt of the result notice as prescribed in Article 37.
b. The committee must decide whether re-deliberation is necessary within 10 days of the receipt of the re-deliberation request.
c. The committee will decide there-deliberation procedure and method.

Article 38 (Follow-ups such as Recovery of Author's Honor)
If the results of the investigation confirm that no research misconduct has been identified, the committee must take follow-up steps to recover the reputation of the examinee.

Article 39 (Storing the Record and Confidentiality)
a. All records regarding the preliminary and actual investigation are stored for five years from the date of the investigation's conclusion.
b. All facts relating to research ethics and the investigation must remain confidential and the people involved in the investigation must not reveal any information obtained during the process. If there is a need to disclose investigation information, the committee can vote to make such decision.

Article 40 (Etc.)
Matters that are not determined by these rules are to be decided by the editorial board.

Article 41 (Date of Effectiveness)
These regulations shall be effective as of January 1, 2024.

Editorial Regulations

Journal of Advanced Academic Research and Studies (JAARS)

Chapter 1. General Roles

Article 1 (Purpose)

The purpose of the following rules is to prescribe matters regarding the editorial work and standards for the Journal of Advanced Academic Research and Studies (hereinafter referred to as "JAARS") published by NLBA Eurasian Institute.

Chapter 2. Editorial Committee

Article 2 (Editorial Committee)

The editorial committee (hereinafter referred to as "committee") is established in order to accomplish the purpose of Article 1.

Article 3 (Formation of Editorial Committee)

a. The editorial members shall be appointed by the chairman of NLBA Eurasian Institute, and the committee shall consist of no more than 50 members.

b. The chief editor shall be appointed by the chairman of NLBA Eurasian Institute and is in charge of all editing.

c. The editorial committee shall be composed of two chief editors, one editor, and one managing editor. The editors are appointed by the chairman of NLBA Eurasian Institute among editorial members.

d. The term for the chief editor is three years, and the term for the editorial members is two years, and editorial members may be reappointed.

e. This committee makes decisions with a majority attendance of the members and a majority agreement of the members present.

Article 4 (Qualification of Editorial Members)

The editorial members shall meet the following qualifications:

i. Being at least an associate professor in a domestic/international university or a person equally qualified

ii. Someone who studies in an area within the JAARS's specialty and who has published at least 3 articles in a journal (or l article in an SCI, SSCI and/or SCOPUS indexed journal) within the last three years

Article 5 (Responsibilities and Obligations of Editorial Members)

a. Editorial members are fully responsible for the decision to publish JAARS-submitted papers, confirm their integrity during the deliberation process, and observe candidates during the editing process.

b. Editorial members should respect the author's person and independence as a scholar, and make the process of the evaluation of the research paper public if there is a request.

c. Editorial members should handle submitted papers only based on the quality and submission guidelines, not based on the author's gender, age, or affiliation.

d.Editorial members should request a reviewer with specialized knowledge and fair evaluation ability in the relevant field to evaluate submitted papers. However, if evaluations of the same paper are remarkably different, editorial members can acquire advice from an expert in the relevant field.
e.Editorial members should not disclose the matters of the author and the details of the paper until a decision is made pertaining to the publication of the submitted paper.

Chapter 3. Paper Submission and Peer Review Committee

Article 6 (Qualification of Submission and Submission)

a.All the paper submitters must be members registered with JAARS.
b.All papers should be submitted through the JAARS's online submission system (http://www.nlbaeai.org/) and Email:edubscon@outlook.com, and can be submitted at any time. English-language papers from authors outside of the United States of America may also be submitted using e-mail.

Article 7 (Formation of Peer Review Committee)

a.Peer reviewers are appointed by the chief editor, and selected based on the field of the reviewer's expertise. (According to circumstances, a peer reviewer who is not a member of JAARS may be appointed.)
b.Editorial members for each content subject such as international economy, international management, or practice of trade can also serve as peer reviewers.
c.The chief editor represents editorial members, handles all the matters relating to review, and reports the results of peer review to the committee.
d.The managing editor is in charge of the procedure relating to review.
e.The classification and selection of submitted papers is decided by the chief editor and the managing editor, and they report it to the committee.

Article 8 (Qualification of Peer Reviewers)

Peer reviewers shall have the following qualifications:

i.Being at least an associate professor in a domestic/international university, or a person who is as equally specialized as the person above.
ii.Someone who studies an area within the JAARS's specialty and has published at least 3 articles in a iournal (or 1 article in an SCI, SSCI and/or SCOPUS indexed journal) within the last three years.
ii.Someone who presents a paper, chairs a session or serves as a discussant at an academic conference at the same level of the institution, or has served as a reviewer of a study which has been indexed in a domestic or international journal within the last three years.

Article 9 (Responsibility and Duty of Peer Reviewers)

a.Peer reviewers should evaluate papers and report the results of the evaluation to the committee within the time period set by the committee. However, if he/she believes that they are not appropriately qualified to review the paper, they should notify the committee without delay.
b.Peer reviewers should respect the author's person and independence as a scholar. Peer reviewers may request for revision of the paper with detailed explanations if needed in the evaluation of the research paper.

c.Papers are reviewed confidentially using a method in which the name and affiliation of the author is confidential to the public. Showing the paper and/or discussing the contents of the paper with a third party is not desirable unless a consultation is needed for purposes of review.

Article 10 (Unethical Behavior in the Review Process)

a.Peer reviewers must not manipulate either directly or indirectly the related research-specific information contained in the research proposal or review process without the consent of the original author.

b.Peer reviewers must be careful of the following since it could be regarded as unethical research practices in the review process:

i.The act of handing over are quested paper to students or a third party

ii.The act of discussing the details of a paper with colleagues

ii.The act of obtaining a copy of the requested material without shredding it after review

iv.The act of disgracing the honor of others or fabricating a personal attack in the review process

v.The act of reviewing and evaluating a research paper without reading it

Article 11 (Personal and Intellectual Conflict)

a.Peer reviewers must fairly evaluate using an objective standard regardless of personal academic conviction.

b.Peer reviewers must avoid personal preiudice when reviewing a paper. If there is a conflict of interest including personal confict, it must be notified to the committee.

c.Peer reviewers must not propose rejecting a paper due to a confict in interpretation or with the point of view of the reviewer.

Chapter 4. Principle and Process of Paper Review

Article 12 (Papers for Peer-review)

Review shall proceed based on the writing and submission guidelines. If the submitted paper substantially diverges from the writing and submission guidelines, the paper may not be reviewed.

Article 13 (Request for Review and Review Fee)

a.The chief editor discusses the selection of reviewers with editorial members and selects two reviewers for each paper after submitted papers pass the eligibility test.

b.The chief editor immediately requests the two selected reviewers to review the relevant submitted paper.

c.Papers are reviewed by confidential method in which the name and affiliation of the author is confidential to the reviewer, the name of the reviewer is confidential to the author.

d.The chief editor requests a review after deleting the name and the affiliation of the author from the submitted paper, so that the reviewer cannot obtain the identity of the author.

e.A review fee shall be paid to the reviewer.

Article 14 (Review of Paper and Decision)

a.Reviewers shall submit a decision report via the JAARS's online submission system (http://www.nlbaeai.org/) and Email:edubscon@outlook.com within two weeks after they are asked to review a paper.

b.The reviewer shall decide whether the paper should be published based on the following standard. However, if the paper receives less than 30 points in the suitability and creativity of the topic, it will not be published.

i.The suitability of the topic(20 points)

ii.The creativity of the topic (20 points)

iii.The validity of the research analysis (20 points)

iv.The organization and logic development of the paper (20 points)

v.The contribution of the result (10 points)

vi.The expression of the sentence and the requirement of editing (10 points)

The reviewer must give one of the following four possible marks within the two week period: A (90~100 points, acceptance), B (80~89 points,acceptance after minor revisions), C (70~79 points,re-review after revision), F (Rejection), and write an overall review comment concerning the revision and supplementation of the paper.

c.In an instance where the reviewer does not finish the review within the two week period, the chief editor can nominate a new reviewer.

Article 15 (Correction of Papers according to the Editing Guideline)

a.Before holding an editorial committee meeting, the chief editor shall request editorial staff correct those papers that receive“acceptance”or “acceptance after minor revisions”, using the journal's paper editing guidelines. However, if there is a paper that receives “acceptance” after the editorial committee meeting, the chief editor will request the editorial staff to correct the paper after the meeting.

b.The chief editor shall notify each author of the result of his or her paper review after receiving the corrected version of the paper from the editorial staff. However, papers which receive a “rejection” shall not be notified of their result.

Article 16 (Decision of Paper and Principle of Editing)

a.The chief editor shall call an editorial board meeting and make publication decisions after receiving finished papers from reviewers.

b.The editorial board will make decisions to publish based on the following chart. The editorial board should respect reviewers'decisions on relevant papers, but can make decisions based on the editorial policy of the JAARS.

Results of 2 peer-reviews	Overall evaluation(average)	Decision to publish
AA	A	Acceptance
AB, AC, BB	B	Acceptance after minor revisions
AD, BC, BD, CC	C	Re-evaluation after revision
CD. DD	F	Rejection

c.The paper that is awarded “acceptance” should receive a “B” or higher from reviewers or the level of overall evaluation (average) should be“B"or higher, and the paper that is awarded “acceptance after minor revisions” should have its satisfactory revisions and/or developments confirmed by the initial reviewer after re-submission.

d.The editorial board shall confirm that papers in consideration for publication are suitable to the writing and submission guideline of JAARS, look through detailed matters, and decide particular issue policies such as the number of papers and the order of them.

e.In the case where a paper was presented or submitted for review previously, it cannot be published in JAARS.
f.In the case where an author submits two or more papers for consideration, only one paper that receives "acceptance"shall be published in the same issue.

Article 17 (Notification of the Result)

a.The chief editor shall notify an author of the review result after the initial evaluation or re-evaluation is finished, but can request the author to revise and develop the paper based on the evaluation report. If the editorial board makes a final decision on publication, the author should be notified.
b.The author must be notified of the review result within one month from the day of receiving the paper or revised paper (or the deadline of submission). If it is impossible to notify the author within one month, the reason and the due date of notification must be notified to the author.
c.Unless there is a specific reason, the author must submit a file including a response to the evaluation report, revision to and/or development of the paper to the chief editor after editing the paper within the period the editorial board suggests when he/she is asked to edit the paper. The changed details must be confirmed by the editorial board as well. In case the author does not submit the revision and development to the editorial board within the period, it shall be automatically postponed until this process is finished.
d.A paper that receives a "C" in the overall evaluation (average) shall be re-evaluated after the chief editor sends the revised article and revision report to the initial reviewer(s).
e.In cases where the evaluations of the same paper are remarkably different among reviewers, the chief editor can nominate a third reviewer and request a re-evaluation. In this case, the chief editor shall send the evaluation report to three different reviewers and have them submit the final evaluation report based on the details of the paper, and the paper can be published after revision only if the final mark awarded the revised paper is higher than a "B" in the overall evaluation.
f.The chief editor will issue an acceptance letter for the papers confirmed to be published.

Article 18 (Proofreading and Editing)

a.The chief editor shall request domestic/international members to proofread and edit papers confirmed to be published.
b.Proofreading and editing members shall be recommended by the chief editor and appointed by the chairman of NLBA Eurasian Institute.
c.The chief editor shall send the results of proofreading and editing to the original author and request the author to edit the paper appropriately.
d.The author, unless there is a specific reason, must submit the revised paper and revision report to the chief editor after editing the paper within the period the editorial board suggests when he/she is asked to edit the paper. The changed details must be confirmed by the editorial board as well.
e.Even if a paper is confirmed to be published, it will be rejected if it has not fulfilled the editing procedure following the result of proofreading and editing, or has been found to have committed research misconduct of any kind.
f.If an editing member finds plagiarism, inadequate form, or low quality in the process of editing a paper that the journal has confirmed to be published, he/she must notify the chief editor. and can suggest proper responses to the findings. g. The chief editor suggests whether to avoid publication of a paper or have the author re-submit the paper after revision and development according to the guidelines stipulated in Article 5. In the case of a paper requested to be revised and developed, publication can be postponed based on the degree of completion and the schedule of revision and development.

Chapter 5. Editing and Publication

Article 19 (Editing and the Date of Publication)

JAARS is published twelve times a year in principle. However, if there is a reason such as the number of submitted papers, the committee can increase or decrease the number of issues.

Article 20 (Notification of Editing)

a.The chief editor shall acquire publication consent from the authors of the confirmed papers before printing.

b.The chief editor shall report to the chairman of NLBA Eurasian Institute when the editorial process following editorial policy is completed, and shall further follow the outlined process for printing and editing.

Article 21 (Sanction on Plagiarism and Redundant Publication)

If the ethics committee finds that a submitted paper or a published paper contains plagiarism or was published in another journal, the following sanctions will be taken:

a.Distributing after deleting the relevant paper in the journal if the journal has not been distributed yet,

b.Notification of paper deletion on the website if it the related issue has already been distributed,

c.Notification of the plagiarism or redundant publication of the relevant paper on the website,

d.Banning the relevant author from submitting papers to all journals published by JAARS for two years from the date when plagiarism and redundant publication is found and from presenting in conference,

e.Notifying the author's affiliated organization or institution of the fact of the plagiarism or the redundant publication, if necessary.

Article 22 (Transfer of the Rights of Publication, Duplication, Public Transmission, and Distribution)

a.The right of publication of the paper is owned by NLBA Eurasian Institute unless specified.

b.The author(s) shall transfer the right of duplication, public transmission, and publication to NLBA Eurasian Institute.If they do not agree, the relevant paper cannot be published in JAARS.

Article 23 (Notification of Paper on Homepage)

Papers published in JAARS shall be publicly notified on the JAARS homepage (http://www.nlbaeai.org/)

Article 24 (Etc.)

The matters that are not decided in these rules are either subject to the submission guidelines or decided by the editorial board.

Article 25 (Date of Effectiveness)

These regulations shall be effective as of January 1, 2024.

Author's Check List

Journal of Advanced Academic Research and Economics (JAARS)

Title of Manuscript: _____

Manuscript ID: _____

Please check ☑ to confirm fulfllment of instructions below before submitting your manuscript.

1.General guidelines

□ The submission contains an original manuscript, a checklist, and a copyright transfer agreement.
□ The manuscript follows the journal template, using MS Word.
□ The manuscript consists of a title page, abstract, keywords, JEL Classifications, acknowledgement (if any), main text, references, appendix (if any), tables and figures.
□ The pages are numbered consecutively beginning with the title page.

2.Title page

□ The manuscript consists of title, author(s)name(s), and affliation(s).
□ The lower area of the title page includes the name(s)of the author(s)and e-mail of the corresponding author only.

3.Abstract, Keywords and JEL classifications

□ The Abstract is less than 250 words for an original article.
□ Includes no more than six keywords.
□ Includes no more than five JEL classifications.

4.Main text

□ Subtitles are ordered according to the journal template.
□ All figures and tables are cited in numerical order as they are first mentioned in the text.
□ All figures and tables are referenced within the text.

5.Tables and figures

□ The titles of figures and tables are set flush left above them, capitalizing the first letter of each word in these titles except for prepositions and articles.
□ Vertical lines are avoided in tables.
□ Pictures or photos are supplied in high resolution (minimum 300 dpi) .
□ Pictures or photos are supplied at a reasonably legible size for printing if they may be affected by resizing in the printing process.

6.References

□ References follow KITRI style.
□ Each entry in the reference list is cited in the main text.
□ All references are listed in alphabetical order followed by the year published.
□ The title of books and journals is expressed in italics.
□ Complete references are included with the full title of the article and up to six author names. Where there are seven or more authors,they are identified as "et al."
□ Journal articles have been double-checked as to whether the author name, (published year), title, joumal name, volume (issue number) and pages are correct.
□ Books have been double-checked as to whether the author name, (published year), title of book (editions, if any), place of publication, publisher's name, and pages are correct.

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NLBA Eurasian Institute

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All authors of this manuscript must agree to the following:

1. All authors certify that the manuscript does not violate any copyright and confirm its originality.

2. All authors have made an actual and intellectual contribution to this manuscript and hold responsibility for its contents.

3. This manuscript has not been published or will not be submitted to another journal for publication.

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5. All authors of this manuscript confirm the transfer of all copyrights in and relating to the above-named manuscript, in all forms and media, through the world, in all languages, to "Journal of Advanced Academic Research and Studies".

6. If each author's signature does not appear below, the signing author(s)represent that they sign this Agreement as authorized agents for and on behalf of all the manuscript authors, and that this Agreement and authorization is made on behalf of all the authors.

In order for my manuscript to be accepted for publication in the Journal of Advanced Academic Research and Economics (JAARS), I hereby assign and transfer to the NLBA Eurasian Institute all rights, title, and interest in and the copyright in the manuscript, entitled.

Date:

Corresponding Author: Signature:

*Submission:You must submit a scanned file (file type: jpg, gif, or pdf) of this signed confirmation and final manuscript file (file type:MS Word) online after the manuscript has been accepted for publication.

Call for Papers

Journal of Advanced Academic Research and Economics (JAARS)

The Journal of Advanced Academic Research and Economics (JAARS) is the official publication of the NLBA Eurasian Institute publishes manuscripts of significant interest that contribute to the theoretical and practical basis of business, economics, and international trade studies. JAARS's broad scope and editorial polices create accessible, thought-provoking content for the general academic community of business, economics, and international trade.The goal of JAARS is to publish insightful, innovative and impactful research on business, economics, and international trade. JAARS is multidisciplinary in scope and interdisciplinary in content and methodology.

Subject Coverage

JAARS is an interdisciplinary journal that welcomes submissions from scholars in business, economics, and trade disciplines and from other disciplines (e.g,political science) if the manuscripts fall within the JAARS domain statement. Papers are especially welcome which combine and integrate theories and concepts that are taken from or that can be traced to origins in different disciplines.

JAARS is a methodologically pluralistic journal.Quantitative and qualitative research methodologies are both encouraged, as long as the studies are methodologically rigorous.Conceptual and theory-development papers, empirical hypothesis-testing papers, and case-based studies are all welcome. Mathematical modeling papers are welcome if the modeling is appropriate and the intuition explained carefully.

Notes for Prospective Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. All papers are referred through a peer review process.

All manuscripts should follow the submission guidelines on the JAARS homepage ((http://www.nlbaeai.org/).

JAARS operates an on-line submission system. Manuscripts should be submitted to the on-line submission system at http://www.nlbaeai.org following all prompts on the screen.
There is no firm submission deadline for papers and the submitted articles will be evaluated on a rolling basis.
Any queries should be sent to the Editor of JAARS at the following address:edubscon@outlook.com

Guidelines for Authors (In Brief)
[Journal of Advanced Academic Research and Studies (JAARS)]

How to submit the paper

The authors submit their manuscripts (in MS Word Format) to the on-line submission system at http://www.nlbaeai.org

Blind Review Policy

The journal follows double blind peer review policy. The paper is sent to two reviewers appropriately qualified experts in the field selected by the editor to review the paper in the light of journal's guidelines and features of a quality research paper. For papers which require changes, the same reviewers will be used to ensure that the quality of the revised paper is acceptable.

Manuscript Preparation Guidelines

The author(s) must follow the Manuscript Preparation Guidelines in preparing the manuscript before submission.

1. Language

The language of the manuscript must be English (American English, e.g. "color" instead of "colour").

2. Length of Paper

The length of the paper should not exceed 30 pages (Times New Roman, 12 Font) excluding tables, figures, references and appendices (if any). Articles should be typed in double-space (including footnotes and references) on one side of the paper only (preferably Letter size) with 1 inch margin. Authors are urged to write as concisely as possible, but not at the expense of clarity.

3. Title Page

The title page should include: (i) A concise and informative title, (ii) The name(s) of the author(s), (iii) The affiliation(s) and address(es) of the author(s), and (iv) The e-mail address, telephone and fax numbers of the corresponding author.

4. Abstract

Please provide an abstract of 200 to 250 words. The abstract should not contain any undefined abbreviations or unspecified references. The content of abstract must include Purpose, Design/Methodology/Approach, Findings, and Research Implications.

5. Keywords and JEL Classification Code

Please provide 4 to 6 keywords which can be used for indexing purposes.

6. Acknowledgement

The author may use acknowledgement section in the title page of the paper (if any).

7. Subdivision of the article

Divide your article into clearly defined and numbered sections. Sections should be numbered in Roman numerals (e.g., I, II). Subsections should be numbered using the decimal system (e.g., 1., 1.1., 1.1.1., 1.1.2., 1.2., …, 2., 2.1.). The abstract is not included in section numbering.

8. Table and Figure

Present tables and figures within the article, not at the end of the article. Please note that the article will be published in black and white (print), although online version will contain the colorful figures (if any). However, the color print will be available in extreme cases as per the request of the author.

9. References

Author(s) should follow the latest edition of KITRI style in referencing. Please visit www.nlbaeai.org to learn more about KITRI style.

■ **Citations in the text**

Please ensure that every reference cited in the text is also present in the reference list (and vice versa).

■ **Reference List**

References should be arranged first alphabetically and then further sorted chronologically if necessary.

Guidelines for Authors (In Brief)
[Journal of Advanced Academic Research and Studies (JAARS)]

■ **Examples:**

Reference to a journal publication:

Wegener, D. T., J. F. Dollan and Soon-Hwan Jeon (2015), "Current Trends of Marketing Activities in Parallel Imports", Journal of Asia Trade and Business, 11(5), 55-57.

Hyun, Jun-Seog and Won-Joong Kim (2015), "A Study on the Effects of Export-Import Share and Exchange Rate", Journal of International Trade & Commerce, 11(1), 142-145. http://dx.doi.org/10.16980/jitc.11.1.201502.139

NB: For Oriental authors such as Korean, Chinese and Japanese authors, the first names are spelled out. Names shall be romanized according to their own preference. For Korean authors, the first and second syllables of first names shall be hyphenated.

Reference to a book:

Schmithoff, C. M. (2010), Letter of Credit, New York, NY: Pitman Press, 158.
Jeon, Soon-Hwan (2017), International Trade Practices (5th ed.), Seoul: Hanol, 156.

Reference to a chapter in an edited book:

Bomhoff, E. J. (1998), "Introduction". In E. M. Rogers and S. Taylor (Eds.), The Global Leadership Mindset (2nd ed.), Oxford, UK: Oxford University Press, 12-25.

Reference to a web source:

Liu, Chengwei (2005), Price Reduction for Non-conformity: Perspectives from the CISG. Available from http://www.cisg.law.pace.edu/cisg/biblio (accessed January 11, 2016)

Manuscript Review Timeframe

Manuscripts will be initially reviewed by the Editor within two weeks from submission.

The Editor will contact the corresponding author with news of whether or not the submission will be advanced to the first round of blind reviews (or is being rejected as not suitable for publication in the journal).

Typically, the blind review process takes approximately six to eight weeks.

The JAARS does not process any submission that does not comply with complete requirements of submission guidelines.

Contributors of articles accepted for publication will receive a complimentary copy of the issue in which their article appears.

ISSN 3006-4007 (Print)
ISSN 3006-4015 (Online)

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