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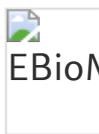
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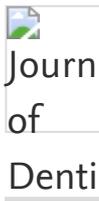
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Dr. Athanasios Damialis

Dr. Athanasios Damialis is a multi-disciplinary scientist working for more than 20 years on the fields of plant and fungal ecology, environmental sciences, biometeorology, climate change and environmental health. His particular focus lies on the reproductive biology of plants (flowering phenology, atmospheric circulation of airborne pollen) and on endophytic fungi. He uses an inter-disciplinary research approach with environment-environment interactions and human-environment interactions. This includes mainly those interactions including, but not limited to, the detection of bio-climatic indicators and spatiotemporal patterns of plant, forest and agricultural habitats and ecosystems, in relation to ongoing and simulated climate change. His research goal is to comprehend the responsive ability of organisms under stress conditions, ultimately, attempting to promote sustainable growth and environmental quality.

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Prof. Nicola Zambrano

Nicola Zambrano is professor of Molecular Biology at the University of Naples Federico II, and group leader at CEINGE Advanced Biotechnologies, Naples, Italy. He holds a M.Sc. degree in biological sciences and a Ph.D. in biotechnologies, acquired within a joint doctoral program from the Universities of L'Aquila and Naples, Italy. He was a visiting fellow at National Cancer Institute, NIH in Bethesda from 1991 to 1994, and visiting scientist at EMBL in Heidelberg, Germany in 1997. His academic career at the Federico II University in Naples started with an assistant professor position in biochemistry (1996), before being enrolled as an associate professor (2002) and then, as a full professor in molecular biology (2010).

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Professor Jinrong Min received his Ph.D. degree in physics from the Institute of Physics, Chinese Academy of Sciences in China, and carried out his post-doctoral training in chromatin structural biology at the Cold Spring Harbor Laboratory, USA. He is currently the principal investigator of the Chromatin Structural Biology Group at the Structural Genomics Consortium (SGC), University of Toronto, and an associate professor in the Department of Physiology at the University of Toronto.

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Dr. Larisa Yarovaya

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Prof. Yarovaya is a researcher the fields of international finance, digital finance, financial integration, Islamic finance, energy economics, information transmission, and international business. She has published her research in peer-reviewed academic journals and is an associate editor of the *International Review of Financial Analysis*, *Journal of International Financial Markets Institutions and Money*, *Heliyon*, and *Data-in-Brief*.



Dr. Pavlos Delias

Pavlos Delias is a tenured faculty member at the [International Hellenic University](#), Department of Accounting and Finance. He holds a jointly supervised PhD from both [Technical University of Crete](#) and [University Paris Dauphine](#), under a cotutelle agreement.

Pavlos Delias has been invited as a visiting professor in several universities (national as well as international). He has contributed to numerous research projects, focusing on applying the principles of business analytics and operational research to decision support systems design and use. He is also a member of the coordination board for the EURO working group on decision support systems. His research interests are in the areas of business process analytics, business analytics and operational research, and multiple criteria analysis.

Chemistry

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Dr. Francesco Epifano

Prof. Epifano obtained his degree in medicinal chemistry and pharmaceutical technology in 1993 from the University of Perugia, Italy. In 1998, he obtained his Ph.D. in agricultural entomology at the Faculty of Agricultural Sciences of the University of Perugia. Currently, he is an associate professor of medicinal chemistry at the Department of Pharmacy of the University Gabriele D'Annunzio of Chieti-Pescara. His recent work is concerned with synthesis and pharmacological properties of secondary metabolites from plants, fungi, and bacteria. Dr. Epifano was the recipient of the 2010 IADR / Glaxo Smith Kline Innovation in Oral Care Award as the co-investigator of the project entitled "Therapeutic potential of Citrus auraptene for periodontal disease", the 2012 Apivita Award for Phytochemistry, and the 2017 Pierre Fabre – Phytochemical Society of Europe Innovation Award.

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Dr. Carolyn Mackintosh-Franklin

Dr. Carolyn Mackintosh-Franklin has had an extensive career in both clinical practice and higher education working at the University of Bradford, University of Liverpool, University of Hull and currently working at the University of Manchester. She received her first degree from the University of Newcastle Upon Tyne, her MSc from the University of Manchester and doctorate from the University of Bradford. She is also a registered nurse specializing in the assessment and management of acute and chronic pain. Her research interests are broad ranging; encompassing work on health care professionals' attitudes towards those in pain, aspects of pain assessment and management, and pedagogic research into learning needs of mature students, with a range of highly cited publications and conference presentations in these areas.



Prof. Graham Pawelec

Graham Pawelec received an MA in natural sciences and a PhD in transplantation immunology from the University of Cambridge, UK. He is currently professor of experimental immunology in the Department of Immunology, University of Tübingen, Tübingen, Germany. He is a visiting professor at Nottingham Trent University, UK and at King's College London, UK, holds an honorary chair at Manchester University, UK. He is a member of the Cancer Solutions Program at the Health Sciences North Research Institute of Canada, Sudbury, Ontario, Canada. He is currently co-editor-in-chief of "Immunity and Aging". Graham's research interests are centred on alterations to immunity, especially T cell-mediated immunity, in ageing and cancer in man, and the influence these have on the outcome of vaccination and immunomodulatory antibody therapies. The impact of polypathogenicity (including multiple infections, cancer, Alzheimer's, diabetes, autoimmunity) as well as stress (psychological, nutritional) on immune signatures reflecting individual immune status is of particular interest in the clinical context.

Computer science

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Dr. Jonathan Chan

Dr. Jonathan H. Chan is an associate professor of computer science and a co-founder of D-Lab at the School of Information Technology, King Mongkut's University of Technology Thonburi, Thailand. Jonathan holds a Ph.D. from the University of Toronto, where he has also served as a visiting professor. In addition to his role as the section editor of *Heliyon Computer science*, Dr. Chan is an action editor of *Neural Networks*, and a member of the editorial boards of *International Journal of Machine Intelligence and Sensory Signal Processing*, *International Journal of Swarm Intelligence*, and *Proceedings in Adaptation, Learning and Optimization*.

Dr. Chan is a founding member and a current VP of the IEEE-CIS Thailand Chapter, and a senior member of IEEE, ACM, and INNS, a member of the Professional Engineers of Ontario (PEO), and a governing board member of APNNS. He also holds an NVIDIA Deep Learning Institute (DLI) University Ambassadorship and is a certified DLI instructor. His research interests include intelligent systems, biomedical informatics, and data science and machine learning in general.

Earth science

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Prof. Andrew S. Hursthouse

Professor Hursthouse is a professor of environmental geochemistry at the University of the West of Scotland (UWS) and holds a Ph.D. in environmental radioactivity from University of Glasgow and a B.Sc. degree in geochemistry from University of Reading. He holds a 100 talent high-end expert fellowship at Hunan University of Science & Technology, Xiangtan, PRC. He has editorial roles in several earth and environmental science journals and has worked in academic and industrial research environments.

Professor Hursthouse's areas of interest and expertise are in earth process interactions and the environmental geochemistry of metallic elements, resource exploitation and implications for human health, and this approach also applied to environmental pollution, industrial processes, economic development and society; remediation and treatment of chemical pollution; chemical and environmental hazards, waste and environmental management and regulation.

Education

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Dr. Sousan Arafeh

Heliyon Education is led by section editor Sousan Arafeh, Ph.D. Dr. Arafeh is an associate professor in the Department of Educational Leadership and Policy Studies and special assistant to the Dean of the College of Education at Southern Connecticut State University (SCSU). Dr. Arafeh is known internationally for work in education policy, assessment, and evaluation; science, technology, engineering, and mathematics (STEM); educational leadership; and cultural, diversity and social justice studies. She served as the deputy director of the National Center for Technology Innovation (NCTI), supported U.S. Department of Education strategic planning, and helped develop two U.S. National Education Technology Plans.

Energy

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Dr. Socrates Kaplanis

Prof. Socrates Kaplanis obtained his degree in physics from University Thessaloniki, a MSc in nuclear reactors from Aston University, and a PhD in radiation detection and modelling from the University Patra. He has held academic positions including professor of renewable energy systems at the Technological Educational Institute of Patra, head of the renewable energy systems laboratory, honorary professor and doctor honoris causa at the Transylvania University in Brasov, and as a visiting professor at the University of Applied Sciences in Aachen, Germany.

Prof. Kaplanis has a research background in solar radiation, prediction modelling, zero and intelligent energy buildings, PV systems engineering, solar thermal engineering, and PV based hybrid systems. He has held various posts, including president of the Technological Educational Institute of Patra, president of the Technological Educational Institute of Western Greece, and vice-president and President of the European Institutions in Higher Education (EURASHE).

Engineering

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Dr. Andrea Francesco Morabito

Professor Andrea Francesco Morabito received his Ph.D. in computer, biomedical, and telecommunications engineering from the University of Reggio Calabria, Italy, where he has also served as an assistant professor in electromagnetic fields since 2010. His research work is mainly focused on models and effective strategies for the solution of inverse problems, in particular, antenna synthesis, phase retrieval, and electromagnetic inverse scattering.



Prof. Mohammad Mehdi Rashidi

Professor Mohammad Mehdi Rashidi received his Ph.D. in mechanical engineering from Tarbiat Modares University, Iran. He is currently a professor of mechanical engineering at Tongji University in Shanghai, China, and previously taught at Bu-Ali University in Iran. Prof. Rashidi was named a 2018 highly cited researcher by Clarivate Analytics.

Environment

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Prof. Frederic Coulon

Professor Frederic Coulon holds a chair in Environmental Chemistry & Microbiology at Cranfield University, UK. In addition to his position as section editor for *Heliyon Environment*, Prof. Coulon is an associate editor for *Environment International* and *Science of the Total Environment*. His professional interests include: soil and water chemistry; fate and transport of chemicals in surface and subsurface waters; water and wastewater treatment; soil and sediment treatment; hazardous waste site remediation; energy and environment; population and environment; and public communication of environmental science and engineering. His research achievements address international priorities under the umbrella of the Water-Soil-Waste nexus across sectors and scales. His work is premised on the understanding that environmental resources are inextricably intertwined and therefore there is a need of advancing a nexus approach to enable integrated and sustainable management of water, soil and waste systems.



Prof. Christian Sonne

Professor Christian Sonne, DVM, PhD, DScVetMed, Dipl. ECZM-EBVS, holds a professorship in veterinary ecotoxicology and wildlife medicine at Aarhus University, Denmark. In addition to his position as section editor for *Heliyon Environment*, Prof. Sonne serves as special issues editor for *Environmental Pollution*. Since 1997, Prof. Sonne has specialized in the cross-field of biological effects from exposure to environmental chemicals, diseases and climate change, giving him a unique insight and profile working with a broad range of animals including predatory mammals, raptorial birds, sea birds, fish and humans. He has a broad insight and interest in internal and reproductive organs (histopathology, size, and morphology), skeletal system (bone density and morphology using e.g. DXA scanning), immune system (intra dermal testing of lymphocyte functioning, immune globulin production and cytokine and APP expressions), endocrine system (steroid and peptide hormones), PBPK modelling, blood biochemistry and infectious diseases (zoonosis). Prof. Sonne uses his global network to obtain interdisciplinary research results. Since 2015, he has applied his in-depth knowledge and understanding of biological processes to also include specific un-solved wildlife issues in Denmark (eider duck population declines) and health of raptors. Recently his innovative approaches have led to the first interactions with private industry focusing on natural resources developments and translational medicine within insulation, osteoporosis and metabolic syndrome. Prof. Sonne also specializes in surgical field implantations of intra-coelomic (abdominally) and subcutaneously satellite transmitters (PTTs) in various sea bird species and immobilization of deer spp.

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Prof. Lilian Mariutti

Prof. Lilian R. B. Mariutti received her master and doctorate degrees in food science from the School of Food Engineering - University of Campinas, Brazil, where she currently has a position as assistant professor. She was a researcher fellow in the Laboratory of Veterinary Drug Residues of the Brazilian Ministry of Agriculture, Livestock and Food Supply. Her research focuses on the identification and bioaccessibility of bioactive compounds and lipids and design of food ingredients from non-conventional sources.

Materials science

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Prof. Luis M. Gandía

Luis M. Gandía is a full professor of chemical engineering at the Public University of Navarre (UPNA) since 2010. Prof. Gandía obtained his Ph.D. in chemistry at the Faculty of Chemistry of the University of the Basque Country in Donostia/San Sebastián in 1993. He is a founding member of the Institute for Advanced Materials (InaMat) at UPNA. He is the head of a multi-disciplinary research team mainly working on renewable resources valorization and the development of catalytic materials for environmental and energy applications. His research interests include: preparation and physico-chemical characterization of heterogeneous catalysts; structured and micro-structured catalysts and chemical reactors; photocatalysis; biofuels and synthetic fuels; hydrogen energy; Li-ion batteries; methane conversion; CO₂ valorization and Computational Fluid Dynamics (CFD).

Mathematics

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Prof. Hermann J. Eberl

Dr. Hermann Eberl is a professor in the Department of Mathematics and Statistics at the University of Guelph (Canada), where he is also the director of the Biophysics Interdepartmental Graduate Program. Prior to joining the University of Guelph he obtained his graduate degrees (Dipl.Math., Dr.rer.nat) at the Technical University of Munich (Germany) and was a postdoctoral fellow first at the Delft University of Technology (the Netherlands), and then at the GSF National Research Center for Environment and Health in Oberschleissheim (Germany).

His research is in mathematical modelling, analysis, and simulation of biological systems and their interaction with their physical environment. This encompasses dynamical systems, partial differential equations, numerical analysis and scientific computing. The two primary strands of his research in recent years were the development and application of mathematical methods in biofilm research and mathematical modelling of honeybee colonies and their diseases.

Microbiology

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Dr. Dana Stanley

Associate Professor Dana Stanley was awarded a PhD in molecular microbiology from Victoria University, Melbourne, in 2009. Her PhD project, "Generation and Characterisation of Ethanol-Tolerant *Saccharomyces cerevisiae* Mutants," investigated the molecular and metabolic determinants of ethanol tolerance in yeast and was awarded "the most outstanding PhD in 2009" by the University. Prof. Stanley held a postdoctoral position in CSIRO's Animal Health Laboratories (AAHL), one of the world's most sophisticated animal research laboratories, where she researched poultry intestinal health, specifically gut microbiota and genetics. Currently, Prof. Stanley is a leader of the molecular microbiology research cluster at Central Queensland University, focusing in human and livestock intestinal health, probiotic and next generation antibiotic development and pathogen control. She is working in collaboration with world's leading probiotic companies on research projects aiming to improve intestinal health of agricultural animals and humans. Prof. Stanley's work has been published in *Nature Medicine* (as the first author), *Nature Communications* and *Nature Immunology*.

Neuroscience

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Dr. Mario Tiberi

Dr. Mario Tiberi is a senior scientist at the Ottawa Hospital Research Institute's Neuroscience Program, and associate professor at the University of Ottawa Faculty of Medicine in the departments of medicine, cellular and molecular medicine, and psychiatry. He is also a member of the University of Ottawa Brain and Mind Research Institute. Dr. Tiberi completed his PhD in Pharmacology (1990) on opioid receptors at the Université de Montréal under the supervision of Dr. Jacques Magnan, before moving on to a very successful post-doctoral training at the Howard Hughes Medical Institutes at Duke University in Dr. Marc Caron's laboratory. It was during his postdoctoral training that Dr. Tiberi refined his area of research expertise in molecular biology and biochemistry of dopamine receptors. His research interests focus on dopamine receptors, G proteins, signal transduction, desensitization and phosphorylation. Dr. Tiberi's work aims to understand complex structure and molecular relationships of dopamine receptor signaling complexes using in vitro cellular systems and pre-clinical in vivo models, with the aim of aiding in the development of novel therapeutic strategies for brain disorders such as Parkinson's disease, stroke, schizophrenia and drug addiction. Dr. Tiberi has published over 50 scientific papers and edited two books. He has wide experience with undergrad and graduate student supervision as well as teaching. Many of his former graduate students have gone on to successful independent research careers.

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Prof. Emilio Clementi

Emilio Clementi graduated in medicine and surgery at the University of Milano, received his doctorate in pharmacotherapy at the University of Brescia to move as research fellow to the University College London. He is currently full professor of pharmacology and director of the clinical pharmacology unit of the National Health System at the University of Milano, co-opted member in the executive committee of the International Union of basic and clinical Pharmacology (IUPHAR).

He has published on the pathophysiology of nitric oxide and its relevance in therapeutic perspective, especially in skeletal muscle, and on pharmacokinetics, pharmacogenetics and pharmacoepidemiology in paediatrics. He is presently the editor in chief of pharmacological research.



Dr. Dimitrio Lamprou

Dimitrios Lamprou (Ph.D. MBA) is a reader in pharmaceutical engineering and the MSc programme director in industrial pharmaceuticals at the School of Pharmacy in Queen's University Belfast (UK). He is also the chair at United Kingdom and Ireland Controlled Release Society (UKICRS). Dr. Lamprou specialises in the areas of pharmaceutical manufacturing & emerging technologies and his research and academic leadership have been recognised in a range of awards, including the Royal Pharmaceutical Society Science Award and the Scottish Universities Life Sciences Alliance Leaders Scheme Award. His group is applying nano and microfabrication techniques in pharmaceutical and medical device manufacturing, such as 3D printing & bioprinting, electrospinning and microfluidics.



Dr. Martin Leonard

Dr. Leonard obtained his PhD in pharmacology in 2000 from University College Dublin, Ireland. He has over 15 years' experience as a toxicologist focussed to developing and improving on models and methods for assessment of toxicological hazard, including the use of high content omics technology and iPSC in vitro models of the airway. Dr. Leonard is a European registered toxicologist and currently holds a position as principal toxicologist at Public Health England directing research into the mechanisms of allergen and particulate hazard associated with asthma and allergic airway disease. Dr. Leonard has published extensively in the fields of toxicology, cell biology and immunology. In addition to section editor at Heliyon, he is also associate editor for the journal Toxicology in Vitro.

Physics

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Prof. Gerald Cleaver

Gerald B. Cleaver earned his Ph.D. in early universe cosmology and string theory at Caltech. He is a professor and graduate program director of the department of physics at Baylor University in Waco, Texas. He also heads the Early Universe Cosmology and String Theory (EUCOS) division of Baylor's Center for Astrophysics, Space Physics and Engineering Research (CASPER).

With CASPER colleagues, Prof. Cleaver (i) explores quantum gravity effects in the early universe and the signatures of specific quantum gravity proposals, especially with regard to the cosmic microwave background (CMB), (ii) studies relativistic thermodynamics and physics & cosmology applications to cryptography, (iii) analyzes spacetime curvatures (and their possible divergences) for theorized spacetime wormholes, and (iv) investigates advanced spacecraft propulsion systems. Prof. Cleaver was a member of a NASA blue-ribbon review committee for advanced propulsion system proposals. He has written over 100 journal articles and conference proceedings, is co-author of an elementary particle physics textbook, author of six book chapters, on the editorial board of four science journals, and referee for nine physics journals.

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Dr. Pavica Sheldon

Dr. Pavica Sheldon received her PhD in communication studies from Louisiana State University, and currently serves as chair and associate professor in the Department of Communication Arts at University of Alabama in Huntsville. Dr. Sheldon is an author of three books and over 40 journal articles, studying uses and gratifications of social media, and also how people communicate forgiveness in interpersonal relationships.

Quantitative biology, biotechnology and bioengineering

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Dr. Andrea de Martino

Andrea De Martino received his PhD in theoretical physics from SISSA (Trieste, Italy). He worked at the Hahn-Meitner-Institut (Berlin, Germany), the Italian Institute for the Physics of Matter (Rome, Italy) and Sapienza University (Rome) before joining the National Research Council and, more recently, the Italian Institute for Genomic Medicine in Turin, where he is part of the Statistical Inference & Computational Biology Unit.

Dr. De Martino is generally interested in the physics of living systems across multiple scales, from single cells to ecosystems. He works in broadly defined systems biology (computational & mathematical biology, genome-scale models, bioinformatics, etc.). Dr. De Martino's favorite questions revolve around the functional roles of cell-to-cell heterogeneities, the interplay between physiology and gene expression in proliferating vs quiescent cells, the processing of information by biological networks, and the emergence of multi-cellular and population-level behavior.

Social science

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Prof. P. Vigneswara Ilavarasan

P. Vigneswara Ilavarasan (PhD - IIT Kanpur) is a professor of information systems at the Dept. of Management Studies, Indian Institute of Technology Delhi. He researches and teaches about the interaction of information and communication technologies (ICTs), society, and business.

Dr. Ilavarasan has been a visiting research fellow at United Nations University - School of Computing and Society (Macau) and School of Management, Curtin University (Perth). He is a recipient of the Outstanding Young Faculty Fellowship Award at IIT Delhi and Prof. M.N. Srinivas Memorial Prize of the Indian Sociological Society. He is also a senior research fellow at LIRNEasia, a leading regional ICT policy and regulation think tank. He has received large research grants from Dept of Science & Technology (Govt of India), ICSSR (India), IDRC (Canada), Oxford Analytica (UK), IPTS (European Commission), CIPPEC (Argentina) and IdeaCorp (Philippines). His research has appeared in various leading international journals and at numerous global conferences.

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Research article

Towards an understanding of corporate image in the hospitality industry
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ABSTRACT

The purpose of this study is to determine how the perceptions and understandings of hotel managers in East Java to improve the corporate image as a hotel marketing strategy. Research respondents are managers who work in the hospitality industry. A total of ninety-six stars hotel in East Java were assessed. Each star hotel has nine managers so that the study population is 621 managers. The research sample of 232 managers. The sampling technique is simple random sampling. Statistical techniques used Confirmatory Factor Analysis (CFA) and descriptive analysis of mean and mode. This research is related to the success of the hospitality marketing strategy; therefore, it is urgent to conduct an in-depth investigation of the corporate image of the hotel. The results showed that managers who work in the hotel industry better understand the corporate image of the hotel at a psychological level to maintain trust in customers. Trust becomes part of the psychological managers in implementing corporate image practices in the hospitality industry.

1. Introduction

In the past year, the hotel industry in Indonesia has increased, triggered by international networks in the field of tourism and social media. Besides, the implementation of government programs in the sector of building infrastructure such as toll roads, ports and airports strongly support the tourism industry, which ultimately has an impact on the hotel industry. Support from the development of social media also affects the tourism and hospitality industry. The hotel industry in East Java has experienced significant progress. That is due to the support of the industrial sector, education, trade and growth of the many tourist vehicles in East Java developed by the local community.

Continuity of hotel performance must be maintained; for this reason, an appropriate marketing strategy is needed. The effect of implementing a marketing strategy is a corporate image. Some literature that discusses corporate image also includes marketing strategies, i.e. branding (Balmer and Gray, 2003). In practice, many service organizations, such as hotels use communication channels to build a corporate image to position the intended brand or hotel name. Also, service practices are an effort for organizations to obtain image positions (O'loughlin and Szmigin, 2007). The interaction between employees and consumers to create an image has become an interesting study. Many researchers (El-Adly, 2019;

Lashley, 2000; Ruetzler et al., 2014; Shafiee et al., 2020) have discussed the interactions between employees/managers and consumers. Many experts argue about that connection. Some discussions conclude that internal revenue and human resource strategies are the essential elements for creating a corporate image (de Chernatony and Segal-Horn, 2003). Internal marketing and human resource management are fundamental elements in creating and maintaining service images (de Chernatony and Segal-Horn, 2003).

Another opinion explained that service organizations such as hotels stated that organizations are brands (Wallace and De Chernatony, 2009). Thus the organizational values are represented by brands. Imagery is part of the discussion about brands (Falola et al., 2018; Minkiewicz et al., 2011). This argument reinforces that when an employee/manager displays a brand through interactive activities with customers, it affects the perception of the company's image. Service organizations such as hotels practice corporate image through the intermediaries of managers in communicating and providing services to consumers (Wallace and De Chernatony, 2009). Employees directly provide values to consumers who later become positive perceptions, beliefs and impressions (Alvarez Dominguez, 2011; Wallace and De Chernatony, 2009).

Some marketing strategies are programmed to obtain positive perceptions, beliefs and impressions from the minds of consumers. This

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effort can be made through internal and external marketing strategies. Corporate image is the impact of organizational activities to obtain a collection of perceptions, beliefs and impressions from the target market (Aziz, 2018; Heinberg et al., 2018; Singh and Sarkar, 2019). This explanation confirms that corporate image is the primary indicator to assess the success of an organization's marketing strategy.

The dimensions of the corporate image are corporate images from the organizational and individual aspects (Yeo et al., 2011). Regulatory aspects related to the internal efforts of the organization means that the organization seeks to create a positive image for stakeholders and the public. In contrast, the individual aspects are related to aspects of the market where consumers or customers have a perception as a result of the company's marketing activities.

An old view was put forward by (Boulding, 1956) as an expert who proclaimed the meaning of the corporate image. Corporate image is identified into two aspects which are functional and psychological views (Boulding, 1956). In its development, the theory of corporate image by Kennedy (1977) emphasized that practical aspects involve environmental organizations such as attractiveness, advocacy, comfort, service and familiarity. While the psychological issues include non-physical elements such as trust, reputation, awareness and favorability (Dowling, 1986). Research related to the corporate image has been done, but the use of practical and psychological terms to identify a corporate image is still less widespread. Some studies that use functional and psychological indicators include Kandampully (2007) and Christelle (2012) which reinforce previous views. Furthermore, this study uses practical and psychological symbols to measure the corporate image. This research is different from that conducted by Chien and Chi (2019) this study is more consistent using the indicators proposed (Boulding, 1956), to be applied to the hospitality industry in Indonesia. Recent research has been perceived that the company image is formed from corporate branding, which is done to persuade consumers to remain loyal to the company's products (Balmer and Gray, 2003).

This study aims to investigate the responses of several hotel managers in East Java about the corporate image. Researchers are encouraged to want to know related to the hotel sector, which has increased the number of room occupancy. According to the records of the Central Statistics Agency (BPS-Statistics Indonesia) in 2017 amounted to 55.4% and in 2018 increased to 57%. Inevitably this increase comes from hotel marketing activities. Along with the increasing room occupancy, it is necessary to have an explanation of the responses and understanding of hotel managers in East Java about the corporate image. The results of this study can provide information benefits for internal hotel stakeholders such as employees, managers and hotel owners to improve marketing strategies.

2. Critical review

Company image is a collection of perceptions, beliefs and impressions made by an organization so that stakeholders and the public have an opinion of identity (Balmer et al., 2019; Iglesias et al., 2019b). Boulding (1956) as an expert who proclaimed the meaning of corporate image identified corporate image into two views, namely functional and psychological opinions. Kandampully (2007) argues that the practical component is related to something tangible that can be measured easily, while the psychological part according to Kennedy (1977) is associated with psychological manifestation through feelings and behaviour.

According to traditional thinking, research on service images mostly focuses on the functional aspects of service (Christelle, 2012). Thinking about corporate image focusing on physical evidence and the process of how to communicate the values of physical evidence to stakeholders or the public Zeithaml and Bitner (1996). But until now, the literature that

discusses corporate image, especially in the service sector still focuses on functional and psychological values (de Chernatony and Segal-Horn, 2003; Wallace and De Chernatony, 2009). The necessary thing in the discussion about corporate image today is that corporate image is not a new concept, especially in the service company concept. The corporate image was discussed by Bristol (1960). The stakeholder's demands on the organization make the company's image determine the organization's success. In principle, the corporate image refers to the internal and external interests of the organization (Dowling, 1986). Therefore the organization chooses a marketing strategy to create a particular perception of the organization.

The concept of corporate image is formed from the development of the brand image concept. Many research results describe the development of brand image which ultimately becomes the company's image (Bristol, 1960; Zhang et al., 2019). Therefore, the company's image is not something new. But at this time, the development of digital information systems with high access speeds has made the corporate image as an urgent main idea to be investigated. de Chernatony and Segal-Horn (2003) explains that there is also a lot of literature that discusses interactions between employees and consumers to create a corporate image. This is known as internal marketing. But internal marketing cannot stand alone. Internal marketing requires the role of competent human resources as an essential element in creating and maintaining a corporate image.

The activity of creating perceptions in the minds of stakeholders through a company's marketing strategy is referred to as forming the company's image (Balmer, 2012; Christelle, 2012). Dowling (1986) defines a company's image as a set of meanings on an object, in this case, is a company, where the purpose comes from perceptions, memories and connections, can also go from one's beliefs, ideas, feelings and impressions. Christelle (2012) determines the meaning of the corporate image is the company's efforts to provide a vision and hope to stakeholders and the public. The views of other researchers explain the corporate image is a picture of the company according to the opinions of customers, shareholders, the people, the media and other parties developed to meet the interests of stakeholders (Jo Hatch and Schultz, 2003). Corporate image is formed through total corporate communication activities (Heinberg et al., 2018). The results of communication are integrated shows that can reconstruct single meaningful information. This only information is called the corporate image. So, Minkiewicz et al. (2011); Tran, Mai An, Bang Nguyen (2015) explained the concept of corporate image is a process.

Each organization has specific public targets. This target is adjusted to the objectives of the stakeholders (Balmer and Gray, 2003; Harinoto et al., 2018). What is avoided is when stakeholders have different goals so that the organization does not have a single, consistent image. This is detrimental to the sustainability of an organization. The failure factor of the company's vision is caused by differences in the objectives of the stakeholders. Roper and Davies (2007) broadened the view of the corporate image that the interests of internal stakeholders such as employees, managers, top leaders, and owners have a fundamental role in forming a single image that is more profitable for the company.

The latest view is explained by Christelle (2012) that corporate image is an outcome that comes from the organization's product and service offerings, organizational member behaviour, company culture and company communication. It was also explained that the company's image was formed from business practices based on environmental protection and social welfare.

In this study, the company's image is formed due to a logical function process, involving all elements and organizational resources (Boulding, 1956; Kennedy, 1977). For example, a description of the quality of a product can be obtained by packaging, colours, logos, symbols, services

and other observations. This view explains the company's image from a functional aspect that is physically observable directly. In another aspect, the company's image is formed because of the cognitive component (psychological). This psychological component involves internal stakeholders such as employees, managers and owners—for example, excitement, trust, reputation, caring and other aspects. The image of an organization is obtained from the experiences of internal and external stakeholders. Therefore, the image can be managed through a strategy to manage corporate identity. This strategy needs to be structured to produce the image desired by the organization (Falola et al., 2018; Miniewicz et al., 2011; Tran and Bang Nguyen, 2015).

The concept of corporate image obtains successive terms such as corporate identity, reputation and personality. So it is expressly undefined. Corporate image is the totality of perceptions, beliefs and impressions of the organization's external parties. The organization's external parties have individual opinions based on judgments made by the company (Iglesias et al., 2019a; Singh et al., 2019; Triatmanto et al., 2019). The hypothesis built in the study wants to prove that the functional corporate image and corporate psychological image are able to measure the company's image in the hotel hospitality industry.

3. Research methodology

This research investigates corporate image variables through two indicators, functional and psychological (Balmer, 2012; Balmer et al., 2019; Boulding, 1956; Kennedy, 1977). while functional indicators measure corporate image through attractiveness, service, familiarity, comfort and advocacy the Psychological indicators measure corporate image through favorability, trust, reputation and awareness (see Figure 1). This type of research is quantitative research. The questionnaire was used as a research instrument to collect data, and apply a Likert scale with a choice of five being strongly agreed; four is agreeing, three is neutral, two is disagreeing, and one is strongly disagreeing. Research respondents are managers who work in star-rated hotels in East Java. The number of managers is 621 managers. Samples were selected as many as

232 managers. The average research sample was 38.16%. This figure is still in the relevant category in determining the research sample. This research did not involve any living creatures, thus any informed consent from any ethical committees is not needed. Data analysis techniques using CFA analysis and description. Before a CFA analysis is carried out, an exploratory factor (EFA) analysis is first carried out, to classify indicators that are variable dimensions (Frane and Hill, 1976). CFA analysis to ensure that the selected indicator can reflect the measured variable. To assess the level of understanding using factor loading figures. Description analysis is used to determine the respondents' perceptions of each measurement. Researchers used the SPSS and Amos programs to conduct data analysis.

4. Result

This study discusses an in-depth understanding of corporate image by proving the theories and their application in the hospitality industry. The analysis method uses factor analysis to determine the right indicators, and then a confirmatory analysis is carried out to determine the ability of indicators to explain corporate image variables. Exploratory statistical analysis test results have a Kaiser-Meyer-Olkin (KMO) value for the functional corporate image indicator of 0.507, while the psychological corporate image indicator of the Barlett test value is 0.532. Both indicators have Barlett Test values which are also significant at 0.05. These results indicate that factor analysis can be continued. The results of testing using the AMOS program produce factor loading (λ) values, Squared Multiple Correlation (R²) values, and probability values (p) for each research indicator. The results of testing using the SPSS program produce validity r values for each symbol, the Chronbach Alpha value and the average value of the research indicators. The results of the analysis are presented in Table 1.

The value of r statistic ($\alpha = 0.05$; $df = 232$) is 0.13. The validity test of each research instrument shows that the calculated r-value is greater than the r statistic. For the functional measurement of Corporate Image has an Alpha Chronbach (AC) value of 0.76 and a psychological corporate

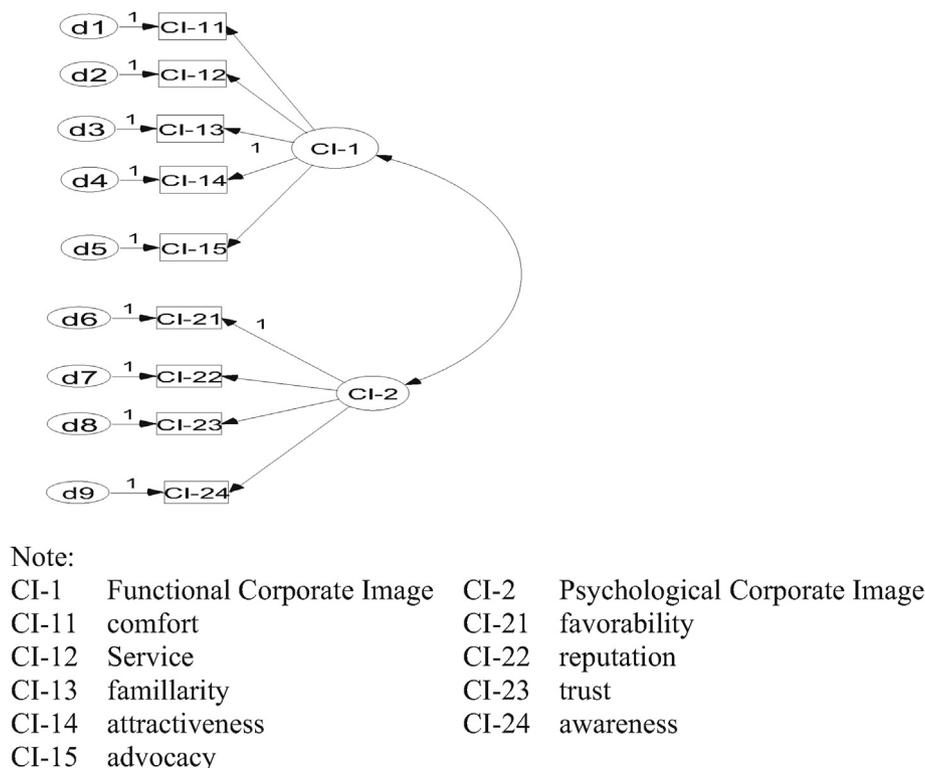


Figure 1. Research model.

Table 1. CFA analysis results and descriptions.

Variable/Indicator	r validity	λ	p	R ²	mean	Chronbach A	ranking
CI-1 Functional Corporate Image					4.07	0.76	
CI-11 Comfort	0.62	0.82	0.000	0.67	4.17		2
CI-12 Service	0.56	0.81	0.000	0.66	4.05		3
CI-13 Familiarity	0.46	0.76	fixed	0.58	3.91		5
CI-14 Attractiveness	0.73	0.83	0.000	0.69	4.25		1
CI-15 Advocacy	0.47	0.75	0.000	0.56	3.98		4
CI-2 Psychological Corporate Image					4.06	0.89	
CI-21 Favorability	0.55	0.81	fixed	0.65	4.02		2
CI-22 Reputation	0.58	0.79	0.000	0.63	3.93		4
CI-23 Trust	0.67	0.98	0.000	0.96	4.33		1
CI-24 Awareness	0.39	0.91	0.000	0.83	3.99		3

image of 0.89. The AC value produced exceeds the statistic r of 0.13, meaning that the respondent understands the research instrument, and if asked twice, the respondent has the opportunity to answer consistently. Attraction (CI-14) has a validity value of 0.73. This figure occupies a higher level than the four functional indicators of corporate image. These results indicate that respondents best understand the statement of attractiveness. Trust (CI-23) has a validity value of 0.67. This figure occupies a higher level than the three psychological image indicators of the corporate image. These results indicate that respondents best understand the statement of trust.

The results of the CFA analysis for five functional indicators of corporate image namely comfort (0.82), service (0.81), familiarity (0.76), attractiveness (0.83), advocacy (0.75) have a factor loading value overcome cut-off (0.50). This comparison shows that comfort, service, familiarity, attractiveness, and support can be a reflection of the functional corporate image. The highest loading factor value is the attractiveness indicator (0.83).

Next, the results of the CFA analysis for four psychological indicators of corporate image namely favorability (0.81), reputation (0.79), trust (0.67) and awareness (0.91) have factor loading values overcome cut-offs (0.50). This comparison shows that favorability, reputation, confidence and knowledge can be a reflection of an psychological corporate image. The highest factor loading value is the trust indicator (0.98). The results of the CFA analysis are presented in Figure 2.

The results of the Confirmatory Research Model produced a statistical Chi-Square value of 36.78 smaller than the Chi-Square table value ($\alpha = 0.05$; DF = 26) of 38.88. While the probability of the model produces an amount of 0.078 higher than the error rate ($\alpha = 0.05$), the meaning of this comparison is to accept the null hypothesis (H0) and reject a hypothesis

other than null (Ha). The definition of acceptance of the null hypothesis (H0) is that there is no difference between the model built and the facts. The conclusion from this CFA analysis is that the measurement model for the functional and psychological corporate image is accepted.

The description analysis results for the functional variable corporate image obtained an average Likert scale of 4.07, meaning that respondents responded agreeing that the functional corporate image is perceived positively for comfort, service, familiarity, attractiveness and advocacy (Balmer, 2012; Boulding, 1956; Kennedy, 1977). From these five indicators, it was found that the attractiveness indicator has the highest level position perceived by respondents. Various things can be done by the hotel industry to increase attractiveness by utilizing multiple media to communicate with customers so that it has more appeal compared to competitors. The second sequence is comfort, for service industries such as hotels to provide comfort to customers is the main product that must be highlighted; This is what will actually improve the image of the service company (Balmer, 1956; Foroudi et al., 2019; Heinberg et al., 2018). The third order of indicators that make up the corporate psychological image is service, service by hotel employees is an important concern for consumers; this is a memory that sticks in the minds of consumers to form an image for the hotel (Ortegón-Cortázar and Royo-Vela, 2019; Yusof and Ariffin, 2016). In addition, the familiarity indicator is an indicator that hotel management must pay attention to maintain the company's position in the minds of consumers, while the lowest respondent's perception is advocacy (Boulding, 1956; Kennedy, 1977; Septianto et al., 2021; Stylidis et al., 2020).

Next, the results of the descriptive analysis for the corporate image psychological variable obtained an average Likert scale of 4.06, meaning that respondents responded agreeing that the psychological perception of the corporate image was positively perceived as favorability, reputation, trust, and awareness (Boulding, 1956; Chien and Chi, 2019; Falola et al., 2018). From these four indicators, it was found that the trust indicator had the highest level of position, which was seen positively by the respondents, meaning that in the hotel industry, consumers are more concerned with hotels that are proven to be more reliable (Boulding, 1956; Giovanis et al., 2014; Kennedy, 1977; Yusof and Ariffin, 2016). The second order is awareness; the results of the respondents' choices indicate that hotel guests are aware that their intention is correct because they have a good reputation. The third place is the favorability indicator, meaning that hotel consumers prefer hotels that are already popular and better known for their corporate image. Meanwhile, the lowest respondents' perception was reputation (Septianto et al., 2021; Singh et al., 2019; Yusof and Ariffin, 2016).

5. Discussion

This study explains the meaning of the corporate image of the hospitality industry in East Java divided into two parts, namely, functional corporate image and psychological corporate image (Balmer and

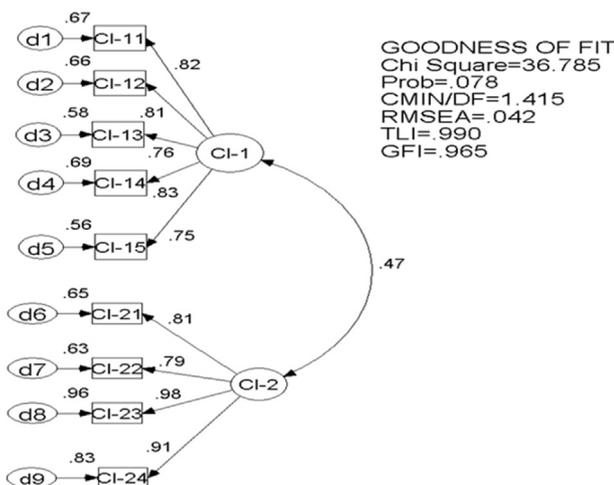


Figure 2. Confirmatory results of research models.

Greyser, 2003; Boulding, 1956; Kennedy, 1977). The corporate image of the hospitality industry is reflected by several measures including comfort, service, familiarity, attractiveness, and advocacy. This is in accordance with the theory stated that image could increase positive support in the minds of consumers (Amperawati et al., 2020; Chien and Chi, 2019; Fan, 2005). According to the perceptions of hotel managers in East Java about the functional corporate image is more reflected by the attractiveness of the hotel. The hotel manager believes that the hotel where they work can get customers if the hotel has an appeal. The attractiveness of hotels can be formed from the location of the hotel, hotel facilities, prices that are comparable to the benefits received by customers. These components are offered by hotel managers when interacting with hotel visitors (Falola et al., 2018; Minkiewicz et al., 2011). The intensity of employee interaction with hotel visitors is able to attract visitors to the positive image built by employees in keeping visitors coming back again (An and Han, 2020; Jo Hatch and Schultz, 2003; Steven White and Griffith, 1997). Also, hotel managers in building communication channels, especially internet media or social media, are more focused on attractiveness. For example, most hotel website pages display attractive facilities and infrastructure. For pricing policy made by the hotel, managers are to set prices that have an appeal. This is done to get its charm (Balmer et al., 2020; Heinberg et al., 2018; Singh et al., 2019; Steven White and Griffith, 1997).

Next to the psychological image of the hotel industry is reflected by several measures, including favorability, reputation, trust and awareness. According to the perception of the manager of the hotel in East Java about the psychological corporate image is reflected by the trust that is offered by the hotel (Balmer and Greyser, 2003; Boulding, 1956). The hotel manager believes that the hotel where they work can get many visitors if the hotel is trusted by consumers/customers. This means that every hotel must be able to build psychological awareness in the minds of consumers so that customers can be charged to consume the same brand again (Singh and Sarkar, 2019; Xhema et al., 2018). The trust that a hotel earned can be formed from the safety of visitors and the feeling of privacy. Hotel managers in interacting with hotel visitors always pay attention to a sense of security and privacy to customers or hotel visitors.

This study has adequately demonstrated that the functional corporate image and corporate psychological image are able to form a corporate image as indicators to be considered. In particular, this study has made original contributions to image management, especially for the hospitality service industry and the literature on service marketing management in the hospitality industry. Based on the findings of this study, this study emphasizes that hotel managers should be more intensive in investigating hotel consumers as a way to keep abreast of the latest developments in the market and changing customer trends to innovate according to the values developed in the hospitality service market.

Theoretically, this study has advanced reasoning in marketing management to develop image theory and service marketing management literature on various measures used by consumers to determine consumption choices decisions on vacation in hotels. The findings of this study form a platform for further studies to be replicated in other developing countries that have similar human resource conditions in Indonesia. The conclusions of this study apply to a larger number of hotel managers in developing countries around the world.

6. Conclusion and further studies

According to the perceptions of hotel managers in East Java about the functional corporate image focuses on the attractiveness of hotels, and hotel managers understand how to create an attraction for the hotels they manage. The hotel manager's perception of the psychological corporate image is more focused on the element of trust so that in interacting with customers, hotel managers always pay attention to the component of trust in consumers, customers, and hotel visitors. The findings of this study found that the corporate image of hotels in East Java lies in the attractiveness and the element of trust. So that the minimum standards that must be owned by the manager of the hotel have the knowledge and ability to create confidence and attractiveness of the hotel be worth to be considered and fulfilled as the main condition. For future research, it is recommended to expand research results in other service industries such as in education, financial services, and banking. It is also recommended to expand research in other hospitality industries such as in restaurants and tourist destinations, considering the service industry is more unique compared to other industries. This still needs to be done to strengthen the results of research on corporate image.

Declarations

Author contribution statement

Boge Triatmanto: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Hariato Respati: Conceived and designed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Nanik Wahyuni: Performed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

Data included in article/supplementary material/referenced in article.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

Appendix

Sample Correlations (Group number 1)

	CI_24	CI_15	CI_14	CI_11	CI_12	CI_13	CI_21	CI_22	CI_23
CI_24	1								
CI_15	0.38	1							
CI_14	0.34	0.61	1						
CI_11	0.29	0.61	0.70	1					
CI_12	0.35	0.63	0.67	0.65	1				
CI_13	0.36	0.55	0.63	0.63	0.62	1			
CI_21	0.71	0.32	0.36	0.36	0.35	0.34	1		
CI_22	0.72	0.32	0.31	0.29	0.31	0.31	0.73	1	
CI_23	0.90	0.37	0.37	0.34	0.38	0.38	0.79	0.77	1

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
CI_23	<—	X2	1.083	0.057	19.051	***	par_1
CI_22	<—	X2	0.956	0.067	14.196	***	par_2
CI_21	<—	X2	1				
CI_13	<—	X1	1				
CI_12	<—	X1	1.094	0.087	12.551	***	par_3
CI_11	<—	X1	0.931	0.073	12.717	***	par_4
CI_14	<—	X1	1.007	0.078	12.84	***	par_5
CI_15	<—	X1	0.878	0.077	11.435	***	par_6
CI_24	<—	X2	1.017	0.059	17.319	***	par_7

Squared Multiple Correlations: (Group number 1 - Default model)

R Square	Estimate
CI_24	0.83
CI_15	0.56
CI_14	0.69
CI_11	0.67
CI_12	0.66
CI_13	0.58
CI_21	0.65
CI_22	0.63
CI_23	0.96

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
CI_23	<—	X2	0.979
CI_22	<—	X2	0.795
CI_21	<—	X2	0.808
CI_13	<—	X1	0.759
CI_12	<—	X1	0.811
CI_11	<—	X1	0.821
CI_14	<—	X1	0.831
CI_15	<—	X1	0.750
CI_24	<—	X2	0.911

Factor Analysis – C1

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,507
Bartlett's Test of Sphericity	Approx. Chi-Square	21,657
	df	10
	Sig.	,017

Factor Analysis – C2

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,532
Bartlett's Test of Sphericity	Approx. Chi-Square	68,064
	df	6
	Sig.	,000

Covariances: (Group number 1 - Default model)

Covariances		Estimate	S.E.	C.R.	P	Label
X2	<—>	X1	0.154	0.028	5.576	*** par_8

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