

# Book of Abstracts

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2023 8th International Conference on  
Economics, Management and Social  
Sciences

2023 7th International Conference on  
Education and Information Technologies

July 22-24, 2023  
Xi'an, China



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2023 7th International Conference on Education and Information Technologies

## **Book of Abstracts**

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# Introduction

2023 8th International Conference on Economics, Management and Social Sciences (ICEMSS2023) and 2023 7th International Conference on Education and Information Technologies (ICEDUIT2023) are organized by Shanghai Laixi Conference Services Co., Ltd. According to the similarity among the topics of ICEMSS2023 and ICEDUIT2023, ICEMSS2023 is held in conjunction with ICEDUIT2023 in Xi'an, China during July 22-24, 2023.

ICEMSS2023 and ICEDUIT2023 serve as an optimal platform for specialists, scholars and researchers in the field related to economics, management, social sciences, education and information technologies to facilitate academic communications and exchange ideas. The conferences offer an academic space known for its interdisciplinary approach as well as a space for academics and practitioners.

Major themes of the Conferences include:

**Economics:** Microeconomics, Marxian Economics, Neoclassical Economics, Classical Political Economy, Keynesian Economics, Production, Cost, and Efficiency, Supply and Demand, Welfare, Unemployment, Inflation and Monetary Policy, Fiscal Policy, etc.

**Management:** Human Resources, Advertising Management, Business Management, Engineering Management, Information Management, Enterprise Management, Intellectual Capital Management, Management in Tourism, Management Psychology, Energy Management, Leadership Management, etc.

**Education:** Higher Education, Secondary Education, Elementary Education, Preschool Education, Vocational Education, Curriculum and Teaching, Educational Psychology, Educational Technology, Educational Theory, Teaching Management, Social Education, etc.

**Social Sciences:** Philosophy, Linguistics, Literature, Art and Humanity, History, Archeology, Economics, Politics, Law, Military science, Sociology, Anthropology, Archaeology, Area Studies, Business Studies, Civics, Communication Studies, Criminology, Demography, Development Studies, Economics, Education, etc.

The abstracts that were selected had a complete peer review process. Selected papers are also published at the cooperating journals of each conference. They show the richness in interdisciplinary approaches, theories, models and applied research presented in the conference.

We would like to thank you for your scientific contribution to ICEMSS2023 and ICEDUIT2023 and look forward to having the opportunity to showcase and disseminate your research.

Special thanks also to the organizing committee, and all the people that worked hard, to bring in light this considerable event.

Sincerely,

ICEMSS2023 and ICEDUIT2023 Organizing Committees

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# Incomplete Exchange Rate Transmission and Its Empirical Analysis: Taking China's Natural Gas Imports as an Example

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**Abstract:** The exchange rate, as an important economic factor affecting a country, has always been a hot topic of widespread concern for scholars both domestically and internationally, and the incomplete transmission of exchange rates has become a hot branch of current research. The fluctuation of the RMB exchange rate will first have an impact on import and export prices, and then gradually transmit it to domestic market prices. Exploring the direction, degree, and method of the impact of exchange rate transmission on import prices and market prices can ensure China's energy security and supply, and provide reference for the government to formulate relevant policies to avoid exchange rate fluctuation risks. Against the backdrop of global green energy transformation, natural gas, as an important clean energy source, has played an important role in China's energy structure transformation. However, due to the energy resource characteristics of "rich coal, poor oil, and limited gas" in China, the growth rate of natural gas production has always lagged behind the growth rate of consumption. Therefore, China can only continue to expand its natural gas imports, and the external dependence of natural gas has been increasing year by year. This article takes natural gas as an example to explore the incomplete transmission effect of the RMB exchange rate on prices. Based on previous research by domestic and foreign scholars, the relevant theoretical basis of the RMB exchange rate and the overview of China's natural gas market are sorted out. Monthly data of relevant variables from January 2010 to April 2023 are selected, and methods such as Johansen cointegration test and error correction model are used, Explore the transmission effect of RMB exchange rate fluctuations on China's natural gas import prices and market prices. The research results indicate that there is a negative correlation between the fluctuation of the RMB exchange rate and the import price and market price of natural gas in China, that is, the appreciation of the RMB results in a decrease in both the import price and market price of natural gas; The elasticity coefficient of the impact of RMB exchange rate fluctuation on China's natural gas import price and market price is less than 1, and the transmission effect on natural gas market price is much lower than that of natural gas import price, indicating that the transmission of exchange rate on both is incomplete; Through pulse response, it can be concluded that the impact of exchange rates on natural gas import prices and market prices shows a trend of equilibrium adjustment from short-term to long-term. Finally, summarize the research conclusions based on the empirical analysis results and propose countermeasures and suggestions.

**Keywords:** RMB Exchange Rate, Incomplete Transmission of Exchange Rates, Natural Gas Prices, Cointegration Test, Error Correction Model

# Research on Cost-Benefit Model of Gas Power Plant Under Market Trading Mode

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**Abstract:** With the development of China's electric power market reform, China's electric power trading mode will be transformed from the traditional planned trading mode to the market trading mode with medium and long term trading as the main and spot trading as the secondary. The change of market trading mode will have an impact on the power generation, generation time and generation cost of power plants, and the competition between gas and electric power enterprises will become increasingly fierce. In the face of increasingly fierce market competition, it has become a consensus among gas and electricity enterprises to improve the level of cost control and income ability and take scientific management decisions. Based on the subject-object relationship of power trading and the theory of different power trading modes, this paper expounds the influence of different power trading modes on the production and operation of gas power plants, and analyzes the characteristics of production decision-making of gas power plants under traditional scheduling mode, medium and long term trading mode and medium and long term plus spot trading mode. By reading a lot of literature and field research, this paper constructs an income estimation model under the market transaction mode from five aspects: electricity sales income estimation model, heat income estimation model, auxiliary service compensation and power generation subsidy. By integrating fuel cost estimation model, utilities and outsourced power cost, depreciation cost estimation of fixed assets, maintenance cost estimation, labor finance cost and tax cost, the cost estimation model under market transaction mode is constructed. Based on marginal cost gas price bearing capacity and full cost gas price bearing capacity, the gas price bearing capacity calculation model is constructed. Combined with the production and operation practice of HY gas power plant, the model is tested and an example is analyzed, and some suggestions are put forward for its further application.

**Keywords:** Electricity Market Reform, Natural Gas Power Plant, Cost-Benefit Analysis, Affordable Gas Prices Analysis

# Research on Influencing Factors and Improvement Strategies of Content Marketing Effectiveness

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**Abstract:** In recent years, the application of content marketing in the field of marketing is more and more extensive, gradually become a new trend of marketing. Marketing subjects continue to output high-quality and valuable content, use Internet media to spread widely on social media and e-commerce platforms, and deliver brand-related information to consumers, so as to achieve commercial transformation. How to improve the effectiveness of content marketing has become a topic of urgent concern for enterprises and individual businesses. Based on the basic theories of "4P marketing theory" and "STP theory" as well as previous analysis, this paper innovatively puts forward the definition of content marketing and its effectiveness, in-depth research and analysis of the main internal and external factors affecting the effectiveness of content marketing, and extends the research field of content marketing. Through theoretical analysis, logical deduction, case study and other methods to study the indirect purpose of content marketing, construct the operation diagram of content marketing mode, build the impact mechanism model of content marketing, take "audience number" and "conversion rate" as the research object, divide the branches and analyze the two sub-factors respectively. Finally, through the four aspects of establishing brand, creating content, building platform and winning customers, six channel factors affecting the effect of content marketing, including marketing subjects, customers, content marketing activities, value content, marketing objects and macro environment, are obtained. In addition, relevant analysis results and suggestions are given based on specific cases, so as to provide theoretical basis and basis for the commercial development of enterprises and other marketing subjects.

**Keywords:** Content Marketing, Number of Audience, Conversion Rate, Content Marketing Effectiveness

# Chaos and Complexity in Esports: A Theoretical Framework for Understanding Professional Players' Career Transitions

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**Abstract:** As the esports industry continues to grow rapidly, it is vital to understand the unique challenges and opportunities that professional players face during their career transitions. This study aims to provide a nuanced understanding of the esports career transition process by identifying unique factors that influence professional players' career trajectories, and providing a comprehensive framework based on the Chaos Theory of Careers (CTC). Our research methodology comprises desk research of sourcing secondary data, reviewing and synthesising existing literature, and integrating secondary data with primary data from long-term observations. During our five-year fieldwork observations in the esports industry, we employed a longitudinal qualitative approach to better understand the complexity and dynamism of this rapidly evolving field. Through purposive and snowball sampling, we selected participants including athletes, coaches, and managers for our study. Applying the CTC framework in the esports context, the study explores various aspects of esports professional players' career transitions. We first explore initial conditions such as family and societal support, self-efficacy belief, and entry barriers and opportunities; Then we identify attractors that shape players' career trajectories, including the interplay of personal values, interests, and skills; market trends and industry shifts; and the role of networking and reputation. The study also examines the impact of complexity, change, and chance events on career transitions, highlighting athletes' adaptation to game and industry changes, streaming and content creation opportunities, and the effects of sponsorships and organisational changes on career trajectories. Additionally, the research explores patterns and fractals, such as the emergence of non-linear career paths, fractals of success and learning from failure, and network fractals and the role of social connections in career development. Lastly, the study discusses construction elements in esports career transitions, encompassing active career management strategies, skill development and continuous learning, and balancing short-term versus long-term goals. These findings provide insights for a more profound understanding of the dynamic and complex nature of esports career transitions and highlight the importance of comprehending these transitions to better support the professional development of esports players.

**Keywords:** Esports, Professional Players, Career Transitions

# Forecasting Whale Tourism Demand in Ulsan, South Korea: A Deep Learning Approach

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**Abstract:** Whale tourism is an emerging tourism segment that combines the appreciation of marine wildlife with sustainable and responsible tourism practices. As the global interest in wildlife conservation and ecotourism grows, whale tourism has gained popularity due to its potential for fostering public awareness, supporting local economies, and promoting environmental conservation efforts. Understanding and accurately forecasting the demand for whale tourism is of paramount importance to developing effective management strategies and supporting sustainable tourism growth. In South Korea, whale tourism first began in Jangsaengpo, Nam-gu, Ulsan, in April 2009. Ulsan is the only whale-representative city in South Korea where Jangsaengpo, which served as the center of the modern whaling industry, is located. It is suitable for whale tourism due to its abundant whale hardware infrastructure, and many tourists visit Ulsan as a tourist destination for whale tourism. As data collection and storage capabilities continue to advance, data-driven analyses have gained prominence across various domains. However, limited attention has been given to demand prediction specifically for whale tourism, impeding the accurate forecasting of visitor demand for diverse marine tourism destinations. In this study, data-based and scientific demand forecasting for whale tourism in Ulsan, South Korea applying the deep learning method will be important for presenting guidelines for establishing sustainable whale tourism policies in Ulsan in the future. This research aims to provide fundamental insights into the development of South Korea's whale tourism sector and contributes to reducing uncertainties and risks, thereby facilitating the establishment of rational and sustainable tourism promotion policies.

**Keywords:** Whale Tourism, Demand Forecasting, Deep Learning

# The Impact of Green Credit Policy on Enterprises' Business Performance

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**Abstract:** Green credit policy is a means to promote the development of environmental protection by adjusting the credit structure to play the role of financial intermediary of commercial banks and other financial institutions. Green credit policy, as an extension of environmental policy, is extending to all aspects of enterprise development with multiple tentacles. It has a qualitative impact on enterprise production and management, especially on heavy polluting enterprises. Based on the panel data of A-share listed companies from 2008 to 2022, this paper uses the principal component analysis method to construct a comprehensive index of business performance. Firstly, the parallel trend test method was used to test whether the business performance of heavy polluting enterprises and non-heavy polluting enterprises had the same trend before the implementation of the policy. Secondly, taking the requirements of the Notice of China Banking Regulatory Commission on Submitting green Credit Statistical Forms in 2013 as exogenous impact variables, the differential impact of green credit policies on the operational performance of heavy polluting enterprises and low polluting enterprises was investigated by using the differential difference model, with heavy polluting enterprises as the treatment group and low polluting enterprises as the control group. Finally, robustness test was conducted. Placebo test and PSM-DID method were used in this paper to verify the reliability of the conclusions. The empirical test results show that green credit policy can significantly improve the business performance of enterprises in industries restricted by green credit. Further research shows that compared with heavy polluting enterprises in the growth stage, the business performance of heavy polluting enterprises in the mature or declining stage is more affected by the policy.

**Keywords:** Green Credit, Heavy Polluting Enterprises, Enterprise Performance

# COVID-19 and Corporate Performance: The Moderating Role of ESG Performance

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**Abstract:** The outbreak of COVID-19 has had a strong impact on the survival and development of enterprises. This paper takes China's A-share listed companies in some industries from 2016 to 2021 as the research object, and empirically tests the moderating role of corporate ESG performance in coping with the impact of COVID-19 on corporate performance. The results show that: (1) COVID-19 has had a significant adverse impact on corporate performance, and good ESG performance can weaken this adverse effect, that is, with the improvement of corporate ESG performance, the impact of COVID-19 on corporate performance will gradually weaken. (2) Further research shows that among the three sub-dimensions of ESG performance, social dimension and corporate governance dimension can mitigate the adverse impact of COVID-19 on corporate performance to varying degrees, while the moderating effect of environmental dimension is not significant; The mitigation effect of enterprise ESG performance on the epidemic was more obvious in listed companies with high financing constraints. The results of grouping regression, propensity score matching, subsample regression and replacement of explained variables prove the robustness of the conclusions. The research in this paper expands the research on the relationship between ESG performance and enterprise performance in the context of the epidemic, further enriching the academic literature on the relationship between ESG performance and enterprise performance, and has certain implications for enterprises to improve ESG performance and enhance their own sustainable development ability.

**Keywords:** COVID-19, Corporate Performance, Moderating Effect

# Analysis of Factors Influencing the Demand for Gasoline and Diesel in the Transportation Industry Under the Substitution of New Energy Vehicles

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**Abstract:** The transportation industry is a key energy consuming sector in China, with a demand for gasoline and diesel accounting for over 75%. In order to comprehensively analyze the changes in the demand for gasoline and diesel in China's transportation industry under the background of the development of new energy vehicles and its influencing factors, this paper uses the LMDI decomposition method to decompose the factors affecting the growth of the demand for gasoline and diesel in China's transportation industry into four parts: energy structure effect, energy intensity effect, industrial structure effect and economic effect. The demand for gasoline and diesel in China's transportation industry from 2000 to 2020 is divided into four stages. The decomposition results indicate that, overall, China's gasoline and diesel demand decreased by 218.3304 million tons of standard coal from 2000 to 2019, and the contributions of various factors to the changes in gasoline and diesel demand were -13.96%, -10.47%, -10.45%, and 135%, respectively; Among the four stages, economic effects are the main reason for the increase in demand for gasoline and diesel in China's transportation industry; The energy structure effect and energy intensity effect are mainly promoting in the first three stages, and inhibiting in the fourth stage. The main reason is that the development of new energy vehicles can substitute for fuel vehicles; The industrial structure effect is mainly manifested as inhibitory effect in the first three stages, and promoting effect in the fourth stage; Due to the larger proportion of diesel in the energy demand of the transportation industry compared to gasoline, the effects of various factors on diesel are more significant than gasoline.

**Keywords:** Demand for Gasoline and Diesel, LMDI Decomposition, Substitution of New Energy Vehicles, Energy Structure Effect, Energy Intensity Effect, Economic Effects



# Research on the Prediction of Gasoline Consumption in China Under the Background of the Replacement by New Energy Vehicles

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**Abstract:** Gasoline as a traditional bulk energy commodity, accurately predicting the future development trend of gasoline consumption in China under the background of replacing by new energy vehicles, is of great significance to steadily promote the transformation and upgrading of fossil energy. By selecting the key influencing factors of gasoline consumption, the prediction model of system dynamics is established. Through testing, the average absolute error of model history fitting is 3.08%, and the simulation effect is good. Then the gasoline consumption is forecast by referring to the social economy and the development plan of new energy vehicle and setting five scenarios. It is forecasted that gasoline consumption will soon peak and shrink with the development of new energy vehicles. Comparing the results of five scenarios, it is concluded that the comprehensive control scenario is more in line with the reality of our development. Under this scenario, Chinese gasoline consumption declines at an average annual rate of 2.17% after reaching the peak of 139 million tons in 2024, until new energy vehicles fully replace fuel passenger vehicles in 2070, and gasoline consumption completely disappears. Therefore, for refining and chemical enterprises and gasoline sales enterprises, low-carbon suggestions such as paying attention to the key replacement nodes and replacement scale of new energy vehicles for gasoline and deploying gas stations in advance to transform into comprehensive energy service stations are put forward.

**Keywords:** Gasoline Consumption, New Energy Vehicles, System Dynamics, Scenario Prediction

# Customer Overcapacity and Enterprise Inefficient Investment -- Based on Empirical Research of Core Customers of Listed Companies in China

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**Abstract:** Based on the information of listed core customers disclosed by China's Shanghai and Shenzhen A-share non-financial listed companies from 2008 to 2021, this paper analyzes theoretically and empirically the impact of customers' overcapacity on their inefficient investment, so as to investigate the economic consequences of customers' overcapacity in the supply chain. It is found that customer overcapacity has a significant positive impact on the inefficiency investment of enterprises, and shows an increasing trend with the increase of customer dependence, and a decreasing trend with the improvement of the competitive position of enterprises in the market, indicating that customer overcapacity has a vertical spillover effect of the supply chain, which promotes the increase of the inefficiency investment level of enterprises. Further analysis based on China's institutional background shows that when enterprises are state-owned and the degree of regional marketization is low, the above relationship is stronger, indicating that the spillover effect is also subject to the intervention of the nature of enterprise property rights, and regional marketization process.

**Keywords:** Overcapacity, Inefficient Investment, Supply Chain Spillover Effect, Property Rights, Marketization Process

# Digital Level, Redundant Resources and Enterprise Innovation

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**Abstract:** With the development of the digital economy and the continuous integration of digital technology and the real economy, more and more enterprises are taking improving their digital level as their core development strategy, thereby enhancing their competitive advantage. This article takes A-share listed companies in China from 2012 to 2020 as research samples to empirically analyze the impact of improving the digital level of enterprises on their innovation capabilities from the perspective of the digital economy, and examines the moderating effect of redundant resources on this impact. Research has found that there is a significant positive correlation between the digital level of enterprises and their innovation. Path analysis shows that redundant resources can have a moderating effect on the relationship between digital level and enterprise innovation, that is, enterprise digitalization can improve enterprise innovation capability by alleviating resource constraints of innovation activities. Further heterogeneity analysis shows that the digital level in the eastern region of China has a more significant promoting effect on enterprise innovation than in the central and western regions, while the digital level of private enterprises has a more significant promoting effect on enterprise innovation than state-owned enterprises. This paper provides theoretical support for promoting enterprises' Digital transformation, improving resource allocation efficiency and enhancing enterprises' innovation capability, and also provides reference for China's development of digital economy to achieve innovation driven development.

**Keywords:** Digital Level, Enterprise Innovation, Redundant Resources, Regulatory Effect

# The Impact of Talent Agglomeration on Regional Economic Growth Under Government Intervention: Evidence from New First-Tier Cities

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**Abstract:** Against the backdrop of the innovation-driven development strategy, the importance of talent as the primary resource has become increasingly prominent, and attracting and aggregating talents has become an important strategy for regional economic and social development. This paper measures the degree of talent agglomeration in various regions based on provincial panel data of the regions where the new first-tier cities are located from 2010 to 2021, constructs an empirical model to explore the impact of talent agglomeration on regional economic growth, and further constructs a threshold model to expand the analysis of the moderating effects of government fiscal spending on science and technology. The results indicate that talent agglomeration has a non-linear, inverted U-shaped effect on regional economic growth. The government's financial investment in science and technology has a significant positive effect on the relationship between talent agglomeration and regional economic growth, and there is a double threshold effect. In the process of crossing the corresponding double threshold, with the increase of the government's financial investment in science and technology, the degree of talent concentration has a marginal incremental effect on the regional economic growth. Therefore, scientifically grasping the reasonable range of talent agglomeration and fully leveraging the role of financial support are of great significance to promote sustainable regional economic development and unleash the potential of talents.

**Keywords:** Talent Clustering, Economic Growth, Government Intervention, New First-Tier Cities

# Measurement of Embodied Carbon in China's Export Trade and Its Influencing Factors: Evidence from RCEP Countries

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**Abstract:** The article calculates the implied carbon emissions of China's export trade from 2001 to 2021 and the implied carbon emissions of trade with RCEP countries. The IO-SDA model is used to decompose the factors that affect the implied carbon emissions of China's export trade based on unit energy consumption, carbon emissions, energy intensity, economic structure, trade structure, and trade scale factors; Analyze the influencing factors of implied carbon changes in export trade among various industrial sectors from two dimensions: industrial sectors and national income levels, and conduct heterogeneity analysis. The results indicate that the implied carbon emissions from China's export trade are showing an upward trend, with trade scale factors playing a dominant positive promoting role, trade structure playing a weaker promoting role, economic structure, energy intensity, and carbon emissions per unit of energy consumption playing a restraining role, and energy intensity playing a leading inhibitory role. In addition, China promotes the export of low-carbon intensive sectors and suppresses the export of high carbon intensive sectors in its trade with RCEP countries. With the progress of production technology, the energy consumption per unit output value of China's industrial sectors has decreased, and energy utilization efficiency has improved. Moreover, China's industrial sectors are increasingly emphasizing the use of clean and low-carbon energy, and the energy structure has been optimized; China's export trade volume to high-income and middle-income countries has grown faster than that of middle-income and low-income countries, and the proportion of low-carbon intensive products in China's exports to middle-income and low-income countries is relatively high, while the proportion of high carbon intensive products in high-income countries' exports is relatively high.

**Keywords:** RCEP Countries, Input-Output Analysis, Embodied Carbon in Trade, SDA Model, Analysis of Heterogeneity

# The Impact of Urban Sprawl on Carbon Emission Efficiency Under the Background of Rapid Urbanization in China

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**Abstract:** China, as the world's largest energy consumer and carbon emitter, strives to achieve carbon peaking by 2030 and carbon neutrality by 2060. As an important vehicle for the country's economic and social development, over 70% of carbon emissions from China's production activities are generated by cities. Therefore, the construction of low-carbon cities is crucial to the achievement of the "double carbon goal". However, the urban sprawl that accompanies China's rapid urbanization has an impact on carbon emissions and agglomeration economy, becoming a resistance to the construction of low-carbon cities and affecting the efficiency of urban carbon emissions. In this context, it is of great theoretical and practical significance to study the impact of urban sprawl on carbon emission efficiency to promote high-quality urban development, rationalize urban layout, reduce energy consumption and carbon emission, and improve carbon emission efficiency. This paper measures the carbon emission efficiency of 279 prefecture-level cities in China from 2012-2019 using an EBM model that integrates the new radial and non-radial DEA techniques. On this basis, the impact of urban sprawl on carbon emission efficiency in the context of rapid urbanization is examined, and heterogeneity analysis is also done for cities with different policies, locations and sizes. The results show that the impact of urban sprawl on carbon efficiency is inverted in a "U" shape, i.e., urban sprawl beyond a certain range will have a negative impact on carbon efficiency. In the heterogeneity analysis, the impact of urban sprawl on the carbon emission efficiency of low-carbon pilot cities is smaller than that of non-low-carbon pilot cities, and the negative effect on the carbon emission efficiency of western cities is larger than that of east-central cities, while the impact on the carbon emission efficiency of mega and mega cities is not affected, and the impact on the carbon emission efficiency of large cities is the most representative. This paper provides relevant empirical insights for rational urban layout planning, controlling urban sprawl, strengthening low-carbon city construction, improving carbon emission efficiency, and achieving the carbon peaking and carbon neutrality goals.

**Keywords:** Urban Sprawl, Carbon Emission Efficiency, EBM

# The Effect of Difficulties in Life Change Experienced After Becoming a Single Parent on Householder's Depression: Moderating Effect of Gender

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**Abstract:** Today, South Korean family forms are diversified quantitatively and qualitatively, and the value of family life and family perception are facing changes, and the number of single-parent families is continuously increasing in modern society. Therefore, This study attempted to analyze the effect of difficulties in life change experienced by single parent householder on depression based on James and Gilliland's Crisis Theory. Also it intended to verify how the Moderating effect appears in the relationship between difficulties in life change and depression according to the householder's gender. Therefore, it performed statistical analysis using the SPSS 26.0 program based on the response data of 2,500 single parent householders who participated in the [2018 Single parent Family survey] by the Ministry of Gender Equality and Family. As a result, bigger difficulties in life change experienced after becoming a single parent makes higher depression of householder, the moderating effect of gender was appeared in the relationship between difficulties in life change and depression and female single parent householder's depression level was higher than male single parent householder, life change factors that causing householder's depression was different by gender. Based on the results, it suggested: 1) to develop service for mental health improvement of single parent householders and distribute social member bond reinforcement interchange program, 2) to expand the support policies category by the life change actual conditions analysis and consider gender differences when supporting policies, 3) to reorganize administrative system to ease the eligibility criteria for beneficiaries and reduce stigma to improve single parent householder's policy accessibility and effectiveness.

**Keywords:** Single Parent Householder, Difficulties in Life Change, Depression

# The U Model Linking Innovation and National Culture

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**Abstract:** Whether national culture is an obstacle or a boost to the development of science and technology has always been a hot research topic that has attracted much attention and is full of controversy in the field of history of science and technology. This paper first summarizes the empirical relationship between national culture and national innovation ability based on Hofstede's cultural dimensions and global innovation data, and finds that cultural dimensions such as power distance, individualism, uncertainty handling, etc. are indeed influencing national innovation ability. There is a significant statistical relationship. There is no doubt that culture affects innovation, and both positive and negative. The article then focuses on Asia, comparing innovation and entrepreneurship indicators in Buddhist economies such as Bhutan, Cambodia, China, Japan, South Korea, Laos, Myanmar, Nepal, Singapore, Thailand, Vietnam, and Hong Kong and Taiwan regions. It was found that those countries or regions with approximately 30% Buddhist population had significantly higher innovation index, entrepreneurship index and important economic indicators than other regions. Based on literature review, we proposed a hypothesis: Religious diversity (RDI, religion diversity index) affects innovation and entrepreneurship. The empirical results prove that RDI has a significant positive correlation with GDP per capita, business freedom, innovation index, entrepreneurship index and happiness index. As we all know, the excellent traditional Chinese culture is unified and diverse, but what is less known is that China's religious diversity index is quite high, higher than that of Europe and North America, and it has had a multicultural influence on neighboring countries and regions in Asia for a long time, formed the Chinese cultural circle and the Chinese economic circle, and created the economic miracle of modern Asia, including the economic take-off after China's reform and opening up. The paper finally introduced a U model of innovation to show how Chinese traditional culture and modern sciences can be combined to boost innovation and entrepreneurship. The U model covers six steps, namely, problem identification, preparation of information, Ponderation and incubation, Proposal and idea, prototype and iteration, and plan for implementation. It has been implemented in university education as well as enterprise and government training in mainland China and Hong Kong.

**Keywords:** Innovation and Entrepreneurship, The U Model, Chinese Traditional Culture



# Digitization and Social Security Fund Budget Balancing -- Based on the Sample of Listed Companies

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**Abstract:** We use text-mining method to measure the degree of digital development of listed companies during 2012-2021, while matching data from a sample of prefecture-level cities, to empirically analyze the economic impact of digital economy on social insurance fund budget balance and its mechanism. We find that the development of digital economy reduces the self-sufficiency of social insurance fund budget and increases the pressure of social insurance fund balance, which is manifested by the increase of enterprises' demand for high-skilled labor force driving the income of social insurance fund budget, while the decrease of demand for low-skilled labor force leads to the increase of unemployment and increases the expenditure intensity of social insurance fund; meanwhile, it widens the gap between executive employees and ordinary employees within enterprises and the salary gap between senior employees and ordinary employees, which increases the pressure of social security contributions and is not conducive to maintaining a balanced social security fund budget. The above findings have passed a series of robustness tests including the exogenous shock test of "broadband China". This paper helps to reveal the trend of social insurance fund budgets in the digital economy, and provides research support to further improve the social insurance fund budget system.

**Keywords:** Digital Economy, Social Security Fund, Budget Balance, Employment Pattern, Social Welfare

# Investigation of Chinese College Students' Marine Ecological Protection Behavior Based on TPB Model

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**Abstract:** The ocean is the cradle of human activities and the key to sustainable human development. Ocean not only provides human beings with abundant material resources, but also contributes to the regulation of global climate, precipitation and other ecosystems. Besides, college students are the most vivacious youth in each country. Therefore, studying their marine ecological protection behavioral intention is of great significance to global marine ecological protection practice. Based on the theory of planned behavior (TPB), the study compiled the questionnaire on college students' marine ecological protection behavioral intention. Furthermore, 865 college students from a Chinese city were chosen for empirical research to examine factors influencing Chinese college students' marine ecological protection. Results showed that Chinese college students' three psychological factors (attitude towards behavior ( $\beta=0.218$ ,  $p<0.001$ ), subjective norm ( $\beta=0.211$ ,  $p<0.001$ ) and perceived behavioral control ( $\beta=0.224$ ,  $p<0.001$ )) positively and significantly influenced their marine ecological intention, their marine ecological intention ( $\beta=0.416$ ,  $p<0.001$ ) further impacted their behavior, and Perceived Behavioral Control was proved to be the main key factor influencing the Chinese college students' marine ecological intention. So that, it is necessary to deepen the understanding of these factors so as to effectively improve the behavioral intention of Chinese college students' marine ecological protection. It can also effectively improve Chinese college students' cognition of and enthusiasm to participate in marine ecological protection, and contribute Chinese college students' share to the global marine ecological protection.

**Keywords:** Marine Ecological Protection Behavioral, Theory of Planned Behavior, College Student Education

# An Analysis of Non-subject Curricula of Korean, Chinese and Japanese National Primary and Secondary School Curricula

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**Abstract:** *Purpose:* The purpose of this study was to draw implications for Korea's curriculum revision direction by comparing the characteristics and trends of the non-subject curriculum areas in Korea, China, and Japan. *Methods:* To this end, the name, goal, time allocation, sub-areas, document system and contents of these areas were reviewed and compared in the national elementary and secondary school curriculum revised in 2015, 2017, and 2018 respectively, in Korea, China and Japan. *Results:* As a non-subject curriculum, Korea has Creative Experiential Activities, China has Comprehensive Practical Activities, and Japan has the Period for Integrated Studies, Special Activities, Moral activities and Foreign language activities. Goals of non-subject curriculum in Korea are, group activities, a sense of community and creative life attitudes, in China it is, value recognition, responsibility, problem solving, and creativity realization, and in Japan, it is morals, foreign language subject goals, and integrated cross-sectional inquiry. In sub-domains, Korea has autonomous activities, club activities, volunteer activities, and career activities. China has inquiry activities, social service activities, design and production activities, and career and other activities. In Japan, moral activities, foreign language activities, class activity, student council activity, club activity, and school event are included. *Conclusion:* As a result of the comparison of the three countries, a transformation into a generative curriculum rather than non subject or extra-curricular activities, it is suggested and it is necessary to prepare for the possibility of expanding the non-subject curriculum as a preparation for the future society.

**Keywords:** Korean Non-subject Curriculum, China's Comprehensive Practical Activities, Japan's Period for Integrated Studies, Special Activities



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