



An Innovation Searching for Prospering Financial Reformation e.g. the ETF and Economy GDP Continual Enhancement on Scientists by Sustainability

Run Xu^{1*}, Changfu Jin², Xianglan Piao², Yonggen Wu³, Jing Yu³, Jiagunag Liu³, Tianyi Yan⁵, Wanhai Wu⁴

¹Gyeongsang National University, School of Nano New Materials Engineering, Jinju-Si 52828, Gyeongsangnam-Do, South Korea

²Yanbian University, Agricultural Engineering Dept., Yanji 133000, Jilin Province, China

³Yantai Institute of Technology, Electromechanical Engineering Dept., Yantai 264005, Shandong Province, China

⁴Jeonbuk National University, Dept. of Business & Administration, JeonjuSi 54896, Jeonllabuk-Do, South Korea

⁵Qingdao University, School of Electromechanical Engineering, Qingdao 266071, Shandong Province, China

*Corresponding Author: Run Xu

DOI: <https://doi.org/10.5281/zenodo.18066526>

Article History	Abstract
Original Research Article	
Received: 09-12-2025	
Accepted: 22-12-2025	
Published: 27-12-2025	
Copyright © 2025 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.	<p><i>The financial reformation like ETF as a funds enables to educate in subject for learner to grasp its content so that he can process funds dealing behavior. It has an advantage pursuit in an exchange and for decreasing risk somewhat with portfolio concept. Moreover it may trace one defining index like Hushen 300 index representing all the composition ones with that index of 300 ones actively in exchange. On the other side, the national & regional GDP with different ones can monitor the entire economy activities within one year and more than one year like ten years. As for enhancing that one the economy activities including consuming business behavior and working at advance factories for earning money and even retirement salary simultaneously. Thereby the working position will become an important thing for us to earn more money for the sake of using after retirement. Certainly our consuming behavior can increase the goods quantity and quality that may activate economic thriving one. Thereby enhancing GDP has to promote high-technology product with owning a better beneficial price for us to earn more money for stabilizing our old years. Please try to consider if one has no enough money how he may live normally and happily many years later, hereby we must put our capital into the Social Security Bureau with enough money and time more than 20 years. At the same time the scientist must write their papers continually to famed journal so as to maintain some achievement in research activity. Hence he may acquire titled as an academician in China academy of Science & Engineering maintaining a permanent title which may carry out bonus permanently per month after he becomes old. We must continually process our research on innovation field to find new phenomenon and project in detail subject. Don't forget to cooperate with others already grasping some internal cause-effect relation to enlarge the relevant skill into products which may bring in new wind on the searching route of technology.</i></p>
Citation: Run Xu, Changfu Jin, Xianglan Piao, Yonggen Wu, Jing Yu, Jiagunag Liu, Tianyi Yan, Wanhai Wu, (2025). An Innovation Searching for Prospering Financial Reformation e.g. the ETF and Economy GDP Continual Enhancement on Scientists by Sustainability. UKR Journal of Economics, Business and Management (UKRJEBM), Volume 1(10), 194-198.	<p>Keywords: prospering economic GDP enhancement, financial reformation, ETF, innovation, scientist, with sustainability, stock's sector increasing, industrial production.</p>

1. Introduction

The GDP (gross domestic product) which indicates national economic status has provided an important role in every aspect in the world. So that the population increasing rate would be maintained for the sake of raising high-technique product with the entire industrial chain constantly which might enhance our new-quality-productivity. Hence we

should consider the effective factors for example the population quantity, new quality productivity with high-technique etc. Like big plane electric vehicle battery AI robot quantum computer medicine making disease diagnosis AI (artificial intelligence) ocean source space exploration etc. other ones. Low population is enable to

offer high life &quality with improving GDP per capita value. Meanwhile, it can enhance the national whole GDP value and help us to boost the economic recovery and many things to do. So the certain population is about to improve our national confidence some degree and make us to become priority one as early as possible even the super-country to lead the world to leadership right.

In contrast, the GDP increasing rate may play a significant role with regulating population increasing rate mutually and cooperatively. Hence the two aspects may be emphasized and paid attention to in thriving the whole national economic developed degree through enough wielding our generations positively and efficiently by our government institution endeavor and evaluation. For the sake of making relevant policies and allocating capital into the necessary industries the corresponding strategic plan needs to be made under various background and entities. Then the according monitor and estimation will be followed and estimated periodically and frequently by the observer in government's institution. At last as to the developed speed in one nation the corresponding population increasing quantity and high-technique product producing will be discussed and considered more preciously and correctly according to the near past years experience and variation.

Therefore, the high-technique products will be completed through wielding our scientist &senior Engineers coordination tightly for the sake of reviving the industrial and tertiary modernization. We should constantly look for and seek the new quality productivity sustainably so as to take place of our traditional industry becoming modernity. An innovation industry like new energy electric generator will be in front of our path forwards, so that the corresponding tactic must be put up and seek the opportunity and fortune in order to burden our responsibility quickly and not to forget recommend the fitting one to appoint new occupation. Like the Bole identified horse or Maosui self-recommended the recommendation will be represent one aspect for our human resource department to consider and evaluate the recommended included a full research room with a set of computer high-technique instrument &device, subordinate, subsidiary staff, salary, house, welfare etc. a series of work so as to appoint his new occupation reasonably and willingly. [1~7]

2. Discussions

The GDP might be significant with exciting our scientist and engineers confidence for the sake of enhancing our high-technology product constantly with an innovation view. As knew it can take up new industrial innovative result for us to pursuit and grasp knowledge and experience armed by new technology spirituality which may last long

time until next generation innovation exhibition completely and clearly. We can imagine the world one hundred years later we know some scenarios from the novel story and movies. There will be many ship-crafts that is to be created with advance technology and they fly from one place to another for the sake of completing save human mission. Maybe our earth-out-space &planet will be conquered somewhat so as to save earth resource and safe they have to transit into near planet for the reserving another route once the earth risk occurring we must get away the earth, or we will die in earth. No matter what will be we primarily seek to enhance our industrial product for promoting our GDP value, that is best way to want doing firstly. [8~11]

2.1 Challenges and Future Development Directions: Deepening Engineering Thinking and Technological Integration

Although ETFs have demonstrated outstanding engineering advantages, their development still faces multiple challenges, which need to be addressed through technological innovation and institutional optimization as a challenge Analysis as following. a. High-frequency Arbitrage and Market Resilience: Algorithmic arbitrage may amplify short-term volatility, especially in extreme market conditions, leading to liquidity depletion risks; b. Concentration and Tail Risk: High-holding concentration in industry ETFs (such as technology, energy) may lead to chain reactions triggered by a single event; c. Cross-border ETF Regulatory Barriers: Foreign exchange control, tax differences, and cross-border settlement efficiency restrict the efficacy of global asset allocation; d. ESG and Sustainability Controversies: Some ETFs' ESG ratings are affected by methodological differences, with the risk of "greenwashing". [1]

2.2 Expansion of Multi-Asset Categories and System Integration: The Engineering Application Ecosystem of ETFs

The engineering advantages of ETFs have driven their penetration into multiple asset categories from the stock market and become the fundamental module of modern financial systems as diversification of Asset Categories as below. a. Bond ETFs: By tracking government bonds and corporate bond indices, providing fixed-income exposure, some products support T+0 trading, becoming a liquidity management tool; b. Commodity ETFs: Covering gold, crude oil, agricultural products, etc., through futures contracts or physical holdings to achieve commodity investment, solving the storage and delivery problems of traditional commodity investment; c. REITs ETFs: Packaging real estate investment trusts, providing real estate income rights for investors, combining the liquidity of stocks with the stability of properties; d. Cryptocurrency ETFs: Such as Bitcoin futures ETF (BITO), linking crypto

assets with the traditional market through a compliant framework, expanding the investor boundaries.

Another one will be the Strategic ETFs and Active Management Innovation as following. a. Intelligent Beta Strategies: Constructing enhanced ETFs through factor selection (such as value, momentum, low volatility), integrating active logic into passive tracking; b. ESG-themed ETFs: Screening targets that meet environmental, social, and governance standards, meeting the needs of sustainable development investment; c. Leveraged/Inverse ETFs: Utilizing derivative tools to amplify the direction or reverse returns of the index, providing tools for hedging or speculation. At last, System Integration and Intelligent Investment Advice as below too. a. Dynamic Asset Allocation: Embedded in intelligent investment advisory systems, ETFs are constructed to form automated portfolios across cycles and markets; b. Risk Hedging Modules: Through ETF portfolios to hedge market, industry, or style risks, such as holding stock ETFs and inverse ETFs simultaneously to avoid systemic risks; c. High-frequency Trading and Quantitative Strategies: The low-latency trading characteristics of ETFs make them an ideal carrier for quantitative funds to execute alpha strategies (Alpha Strategies), such as pair trading, statistical arbitrage, etc.

2.3 The USA states GDP comparison

The US top thirteen~twenty one states GDP ranking in 2002 showed 290 billion dollars~174 billion dollars by Virginia~Connecticut state accordingly in Figure 1. Herein, the states exceeded 200 billion dollars had five that were Washington Maryland Indiana Minnesota states in turn following Virginia.

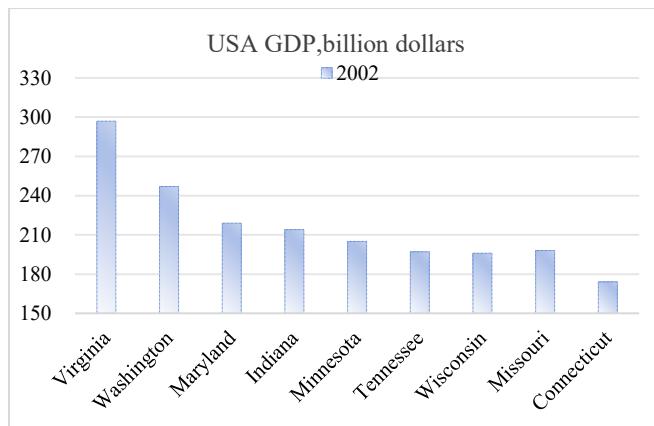


Figure 1 The US top thirteen~twenty one states GDP ranking in 2002. [2]

Furthermore, the US top twelve states GDP ranking in 2002 showed 1,435 billion dollars~299 billion dollars by California~North Carolina state accordingly in Figure 2. Herein, the states exceeded 700 billion dollars had three that were New York Texas states in turns following Virginia.

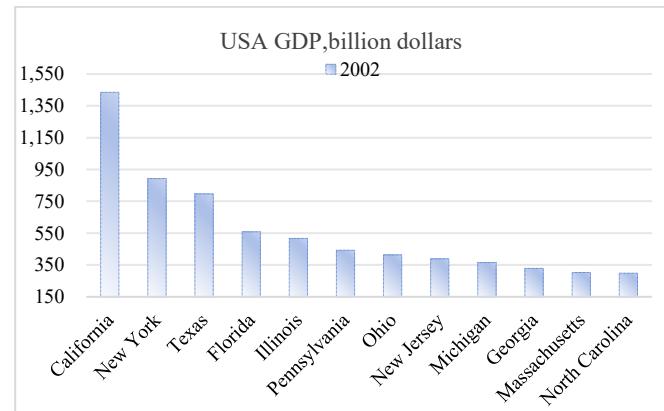


Figure 2 The US top twelve states GDP ranking in 2002. [2]

At the same time, the US top twelve states GDP ranking in 2003 showed 1,548 billion dollars~321 billion dollars by California~North Carolina state accordingly in Figure 3. Herein, the states exceeded 700 billion dollars had three that were New York Texas states in turns following California.

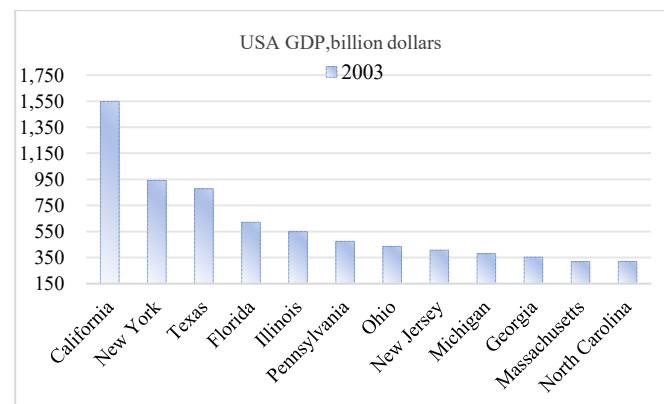


Figure 3 The US top twelve states GDP ranking in 2003. [2]

At last, the US top thirteen~twenty three states GDP ranking in 2003 showed 323 billion dollars~188 billion dollars by Virginia~Connecticut state accordingly in Figure 4. Herein, the states exceeded 250 billion dollars had two that was Washington following Virginia.

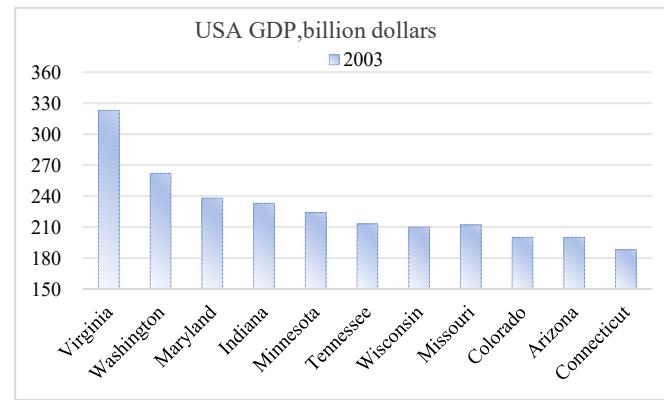


Figure 4 The US top thirteen~twenty three states GDP ranking in 2003. [2]

2.4 Company with top ten market value

The company with top ten market value ranking in 2025 showed 4.4 trillion dollars~1 trillion dollars by the

Nvidia~Berkshire Hathaway accordingly in Figure 5 exhibited the Nvidia, Microsoft, Apple, Amazon, Google strong companies strength in turns in 2025.

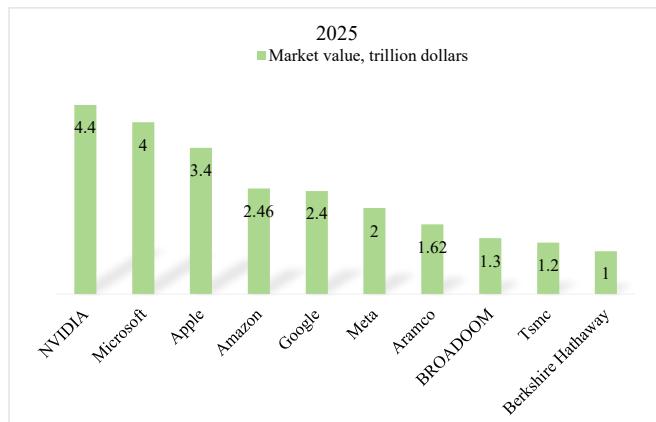


Figure 5 The company with top ten market value ranking in 2025. [3]

2.5 Chengdu & Hangzhou GDP analysis

The Chengdu & Hangzhou ranking in 2012~2024 showed 2,351~2,186 billion dollars by them accordingly in 2024 in Figure 6 while their y-y 2024 recorded 3.1%~2.6% respectively exhibited middle development speed and their y-y 2023 attained about 13% for both with higher economy development. In contrast, the y-y 2012 indicated 11% & 9% for them accordingly expressed the higher economy development.

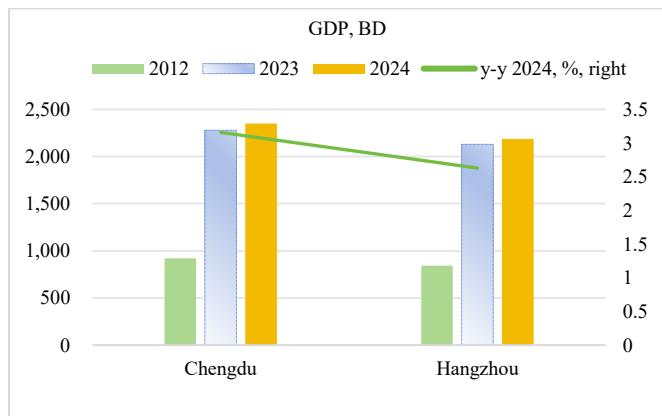


Figure 6 The Chengdu & Hangzhou ranking in 2012~2024. [4]

2.6 System Integration and Intelligent Investment Advice

a. Dynamic Asset Allocation: Embedded in intelligent investment advisory systems, ETFs are constructed to form automated portfolios across cycles and markets; b. Risk Hedging Modules: Through ETF portfolios to hedge market, industry, or style risks, such as holding stock ETFs and inverse ETFs simultaneously to avoid systemic risks; c. High-frequency Trading and Quantitative Strategies: The low-latency trading characteristics of ETFs make them an ideal carrier for quantitative funds to execute alpha strategies (Alpha Strategies), such as pair trading, statistical arbitrage, etc. [1]

Overview, the high-technology product will meet our modernized requirement day by day, so our experimental laboratory and factory research & development departments would continually produce the innovation ones for us to share and enjoy from now on. Firstly the former will look forwards to finding some new things like new function and materials procedure, and secondly the mature ones will be transforming into factory to trial sample towards the customer downstream maker and dealer, then thirdly the new product may be pushed into market and consumer in the end. Thereby the more sophisticated and advanced function and lowering cost, enhancing effect path and measure still will be searched for sustainably. [12~14]

3. Conclusions

The financial reformation like ETF as a funds enables to educate in subject for learner to grasp its content so that he can process funds dealing behavior. It has an advantage pursuit in an exchange and for decreasing risk somewhat with portfolio concept. Moreover it may trace one defining index like Hushen 300 index representing all the composition ones with that index of 300 ones actively in exchange. On the other side, the national & regional GDP with different ones can monitor the entire economy activities within one year and more than one year like ten years. As for enhancing that one the economy activities including consuming business behavior and working at advance factories for earning money and even retirement salary simultaneously. Thereby the working position will become an important thing for us to earn more money for the sake of using after retirement. Certainly our consuming behavior can increase the goods quantity and quality that may activate economic thriving one. Thereby enhancing GDP has to promote high-technology product with owning a better beneficial price for us to earn more money for stabilizing our old years. Please try to consider if one has no enough money how he may live normally and happily many years later, hereby we must put our capital into the Social Security Bureau with enough money and time more than 20 years. At the same time the scientist must write their papers continually to famed journal so as to maintain some achievement in research activity. Hence he may acquire titled as an academician in China academy of Science & Engineering maintaining a permanent title which may carry out bonus permanently per month after he becomes old. We must continually process our research on innovation field to find new phenomenon and project in detail subject. Don't forget to cooperate with others already grasping some internal cause-effect relation to enlarge the relevant skill into products which may bring in new wind on the searching route of technology.

Funding

This work was supported by the Korean Science &Engineering Fund (KSEF) under the granted No. 96-0300-11-01-03 with the Specified Basis Research Program.

Ethic Declarations

The authors declared that there were not conflicts of interest to disclose.

References

1. ETF generation, Quark
2. The US top states GDP ranking, Tencent News, Dec. 19, 2025
3. Tencent News, Wechat, Dec. 22, 2025
4. Tencent News, Wechat, Dec. 23, 2025
5. Run Xu, Younwook Kim, The Numerical Simulation of Force with Parameters of Angular Speed & Constant Angular Acceleration in Three and Five Freedoms of Robotic Arm II, Cross Current International Journal of Economics, Management and Media Studies, 2022, 4(1): 1~10
6. Run Xu, The Numerical Simulation of Properties with High Angular Speed & Low Angular Acceleration in Three & Five Freedoms of Robotic Arm I, South Asian Research Journal of Engineering and Technology, 2022, 4(1): 1~9
7. Run Xu, and Younwook Kim, The Numerical Simulation of Force with Low Angular Speed and Constant Acceleration in Three and Five Freedoms of Robotic Arm, SunText Review of Material Science, 2022, 3(1): 117 **Impact factor 2.6**
8. Run Xu, The Numerical Simulation of Forces with High Angular Speed and Low Angular Acceleration in Three and Five Freedoms of Robotic Arm, SunText Review of Material Science, 2022, 3(1): 115 **Impact factor 2.6**
9. Run Xu, Younwook Kim, The Numerical Simulation of Torque with Parameters of Speed & Angular Speed Acceleration in Five Freedoms of Robotic Arm III , SunText Review of Material Science, 2022,3(1):119 **Impact factor 2.6**
10. Run Xu, Younwook Kim, The Numerical Simulation of Force with Parameters of Angular Speed & Constant Angular Acceleration in Three and Five Freedoms of Robotic Arm II, SunText Review of Material Science, 2022, 3(1): 118 **Impact factor 2.6**
11. Run Xu, Younwook Kim, The Numerical Simulation of Torque with Parameters of Speed & Angular Speed and Acceleration in Five Freedoms of Robotic Arm IV, J Robotics Automation Res, 2022, 3(1): 59~63 **Google Scholar, CrossRef**
12. Run X, The Effect of Intelligence Product Investment on Corporation Efficiency, **(American)** SunText Review of Economics & Business, 2021,S1:104, DOI:<https://doi.org/10.51737/2766-4775,2021,S1,104> **Impact factor 2.9, Google Scholar, CrossRef, Scilit**
13. Run X, The Study on Cost Control of Product R &D in Company, **(American)** SunText Review of Economics & Business, 2021,S1:101, DOI:<https://doi.org/10.51737/2766-4775,2021,S1,101> **Impact factor 2.9, Google Scholar, CrossRef, Scilit**