

An Innovation Study for Analyzing USA States GDP & Chinese Provinces GDP Tendency & Changes through Sustainability I

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DOI: <https://doi.org/10.5281/zenodo.20047069>

Article History	Abstract
Original Research Article	<p><i>The high-technology product is to change our life big due to its owning the humanoid-like mind with artificial intelligence technique designed by soft-engineer according to its meeting occasions. With using the neural net-work technique those robots enable to drive themselves to complete the 3D task like dirty difficult dangerous different adding the video model chip into controlled by themselves and human outsides for the sake of completing the impossible-man task. For example about Fukushima nuclear matter using small robots entered cabin to investigate the internal construction in the blast reaction-pile, which may be our pride & pleasure. At the same time, the technique of electronic field will become an important factor to wield its influence in many aspects within agriculture manufacture tertiary industry that may help us to sense the automatic procedures now with adding the relevant computer and electronic communication will complete the blank page, maybe the artificial intelligence product will dominate the future promise business and industry definitely in light of trending situation. So that a lot of employees recruited from the university and institute might occupy more and more position in maker and colleges. So with some technique staffs will be more prevalent in research & development department at maker teams. They will complete the soft-program design and development besides some of them proceed the hardware cultivation continuously from earth surface to space experiment with little gravity. Thereby, the high-technique experience and capacity will change the GDP three aspects largely in future which may boost GDP content with highness refinement edge sharpness etc. innovation techniques. On the other hand, the decreasing unemployment rate through erecting more makers in the society will be providing more work-opportunity for the sake of declining leisure labors and raising service quality and efficiency. So that the more graduates from universities may become important human resource to work for their designing process which could improve our economy increasing status in the end.</i></p> <p>Keywords: An Innovation Study, USA states GDP, Chinese provinces GDP analysis, Sustainably, tendency, with sustainability, changes.</p>
Received: 03-03-2026	
Accepted: 11-04-2026	
Published: 06-05-2026	
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<p>Citation: Run Xu, Changfu Jin, Boyong Hur, Sugun Lim, Yonggen Wu, Wanhao Wu, Junhao Xu, Gonghai Yu, Qinghua Xu, Chunzi Xuan, Mingji Xu, Mingzhe Xu, Changrun Xu, Qionghua Xu, Meihua Shen, Ziniu Yu, Yanjie Mu. (2026). An Innovation Study for Analyzing USA States GDP & Chinese Provinces GDP Tendency & Changes through Sustainability I. UKR Journal of Economics, Business and Management (UKRJEBM), 2(5), 41-46.</p>	

1. Introduction

The high-technique product and skill will become more significant than ever because AI (artificial intelligence) technique replaces the automatic and man-work flow-lines

in a maker largely according to News report. So that those high-tech skill will transform into the product making ability may occupy a more important task for our scientist

and engineers to deal with. Therein, the many AI Robots have to enter the maker workshop to efficient work for men will be prevalent and low cost. At the same time, the AI Robot making makers will stand in the mount peak to proceed all kinds of experiment trials and expand those function software and hardware that may be instructed collaboratively by the university PhD who grasped some important message. Through contacting those cooperation experiment with parameters like temperature, time and deviation scope grasping conditions might be exhibited between them which may play an important effectiveness on how to produce the new product more precisely and having low-cost features. Another one will erect the product equipment like processing machine, automatic flow-equipment which may be depending on the out-source-enterprise with the demand condition. Then the scientists will give his opinions to the deviation endurance which makes the possible making capacity upwards and looks forwards to enduring more time without main error.

The tertiary industry would involve on service business like high-technique-service office for enterprises influence in one region whose making purchase order and complaint so as to request more orders from the maker in neighbor maker and sale centers. They will transfer message from the ultimate customer to factory for improving their some function continuously as a consultation company. On the other hand, the whole GDP increasement might influence the tertiary one reversely due to enough income could raise our consumption capacity, special in service business. However the which business we could proceed the GDP factors will be enhanced from their physical & brain labors. Thereby, whatever you pursued the certain dedication to our society progression at all.

At the end the tertiary one role is made strong more and more when seeing the GDP value, therefore more and more stores and offices will be allocated in city for the sake of acquiring more information about their products. Meantime, the special sale stores will be much than ever like Huawei handphone and i-pad even portable computer which is a high-light in a department lobby. Their aim at increasing sale amount is one aspect firstly, then sell EV etc. new concept electric auto is two one. As we knew the price difference between them might attain more than 50 times. So that the perspective will be watched special in the tertiary industry which may create more profitable mediate-life consumption less than ten years. Maybe after decade the humanoid robots would enter our life like family, coffee store & canteen in light of present tendency and development, so we might share the automatic time in advance. [1~22]

2. Discussions

The scientist who could be trained by university would have capability to finish the important task within defined experiment and theoretic explanation for his pursuit of research theme. So there would be some experiences and methods to process those difficult somewhat with independence and cooperation for both of occasions. Thereby, from their achievement papers published in high-impact journal and famous one the feasibility could be seen for us to make him to process the sophisticated item and projects. There might be so many chances to keep up with presently searching advanced theme that may have influence the high-technique making field in advance. So that the high-technology product will increase continually through the scientists judgment in terms of observing relevant material of GDP value in different regions within a certain period because the high-tech products amount affects the whole industrial chain for the sake of improving our total GDP amount. In near future, the robot in workshop and family is about to increase largely due to enhancing the mature performance of new functional one expose with lower cost and high efficiency and high-quality continuously. [23~26]

2.1 USA states GDP analysis

The US states GDP analysis might show 699 & 200 billion dollars in 1988 by California & New Jersey states accordingly in terms of Figure 1 to indicate their high economy capacities. The y-y value would exhibit 22% & 20% by them correspondingly expressed their most forwards developed steps.

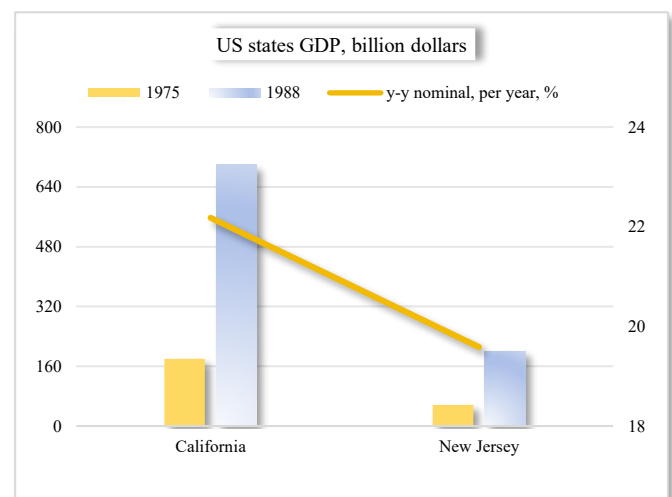


Figure 1 The US states AGDP analysis. [1]

At the same time, the US states GDP analysis might show 0.9 & 0.8 trillion dollars in 2021 by Texas & New York states accordingly in terms of Figure 2 to indicate their high economy capacities. The y-y value would exhibit 15% by them correspondingly expressed their forwards developed steps.

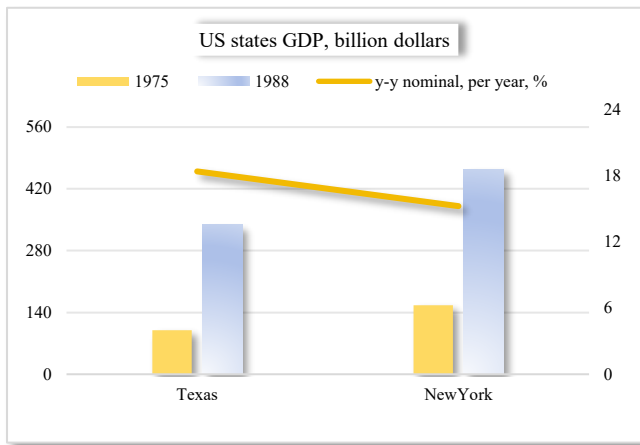


Figure 2 The US states AGDP analysis I. [1]

Meanwhile, the US states GDP analysis might show 0.9 & 0.8 trillion dollars in 2021 by Florida & Illinois states accordingly in terms of Figure 3 to indicate their high economy capacities. The y-y value would exhibit 13% by them correspondingly expressed their forwards developed steps.

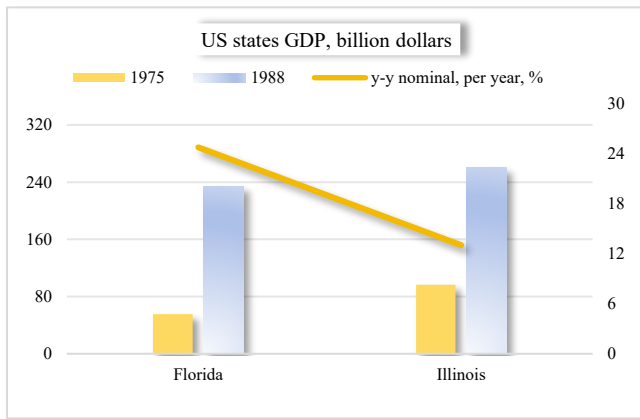


Figure 3 The US states AGDP analysis II. [1]

Meantime, the US states GDP analysis might show 227 & 212 billion dollars in 1988 by Pennsylvania & Ohio states accordingly in terms of Figure 4 to indicate their high economy capacities. The y-y value would exhibit around 13% by both of them correspondingly expressed their forwards developed steps.

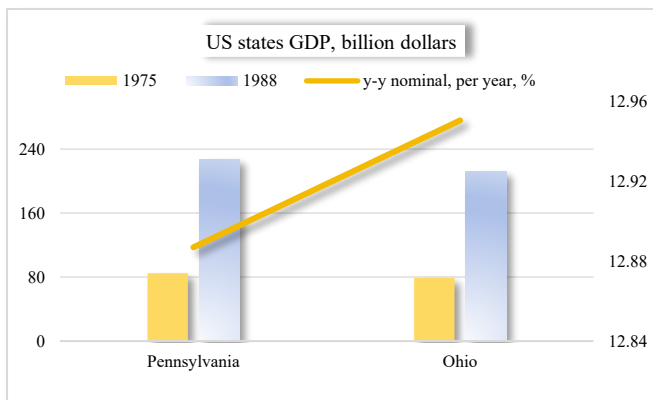


Figure 4 The US states AGDP analysis III. [1]

2.2 Chinese provinces GDP analysis

The Chinese provinces GDP analysis would show 12 & 10 billion dollars by Sichuan & Hunan provinces correspondingly according to Figure 5 in 1989 to indicate their moderate economy capacities. The y-y value might exhibit 23% & 20% by them accordingly expressed their forwards developed steps.

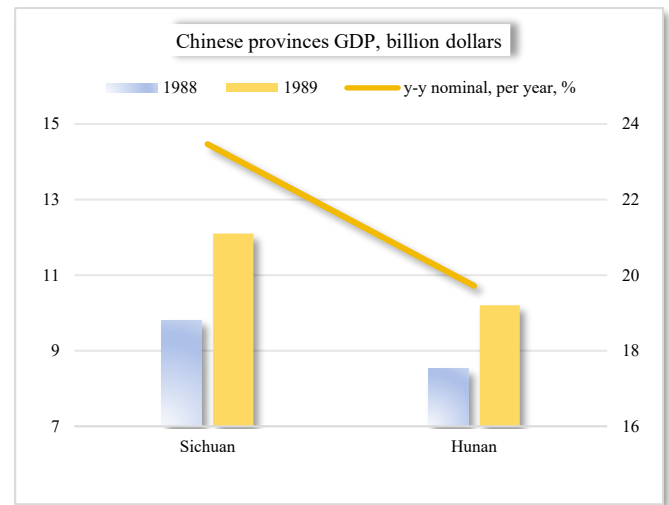


Figure 5 The Chinese provinces GDP analysis. [2]

On the other hand, the Chinese provinces GDP analysis would show 7.2 & 6.9 billion dollars by Fujian & Beijing provinces correspondingly according to Figure 6 in 1989 to indicate their moderate economy capacities. The y-y value might exhibit 23% & 11% by them accordingly expressed the Fujian one more forwards developed steps.

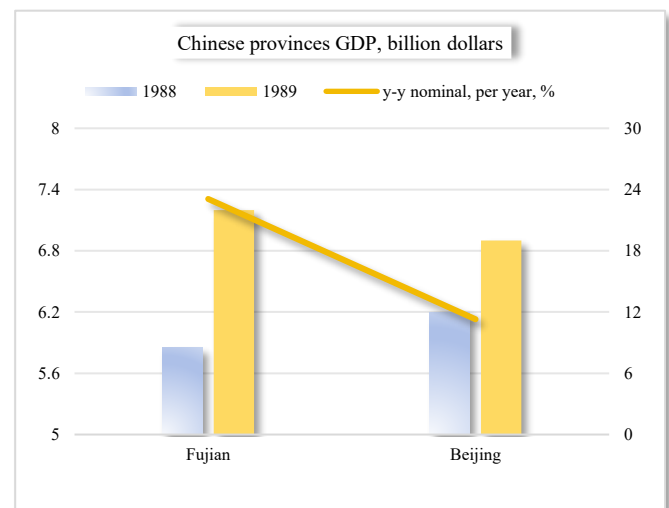


Figure 6 The Chinese provinces GDP analysis I. [2]

On the other hand, the Chinese provinces GDP analysis would show around 4.5 billion dollars by Chongqing & Tianjin provinces correspondingly according to Figure 7 in 1989 to indicate their moderate economy capacities. The y-y value might exhibit 14.6% & 13.1% by them accordingly expressed their more forwards developed steps.

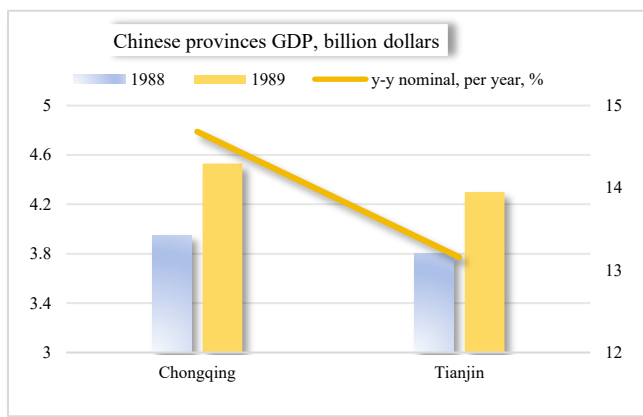


Figure 7 The Chinese provinces GDP analysis II. [2]

Summarily, the technique of electronic field will become an important factor to wield its influence in many aspects within agriculture manufacture tertiary industry that may help us to sense the automatic procedures now with adding the relevant computer and electronic communication will complete the blank page, maybe the artificial intelligence product will dominate the future promise business and industry definitely in light of trending situation. So that a lot of employees recruited from the university and institute might occupy more and more position in maker and colleges. So with some technique staffs will be more prevalent in research & development department at maker teams. They will complete the soft-program design and development besides some of them proceed the hardware cultivation continuously from earth surface to space experiment with little gravity. Thereby, the high-technique experience and capacity will change the GDP three aspects largely in future which may boost GDP content with highness refinement edge, tip etc. innovation techniques. On the other hand, the decreasing unemployment rate through erecting more makers in the society will be providing more work-opportunity for the sake of declining leisure labors and raising service quality and efficiency. So that the more graduates from universities may become important human resource to work for their designing process which could improve our economy increasing status in the end. [27~30]

3. Conclusions

The many population may make us to promote new high-tech skill & product even capacity with rapid development speed that help to improve our GDP amount. On the other side, due to developing emerging products the high-technique skill and capacity would become more important presently, so the research to it has to be urgent and critical now than ever because the increasing GDP (gross domestic product) task in front of our modernization & industrialization. Our university now searches for innovation experiment data for the sake of acquiring the practically substantial phenomena for one or two

procedures and resolution method as for a defining experimental progress within three months or less than that. Thereby, the scientist and scholars may propose their experimental data and achievement in famous journals continuously and sustainably that might push the cutting-edge-field experience and practical process conditions. Then the high-technology skill will be transformed into the sample and launch products so as to deduce those emerging equipment and goods for public market with the convenience & precision like AI (artificial intelligence) humanoid robot producing and with constant update and fix the wrong operation etc. problems for us to solve. With regards to sustainable high-tech product making factors they should be low-cost and high-quality at final for entry to market as early as possible as a period trial and judgement. So that the whole industrial-chain would emerge in the up-stream and down-stream involved many factories request many opportunities for solving many employments problem that might raise the GDP enhancement directly. Another one will indicate the EV (electric vehicle), PHEV (plug-in hybrid electric vehicle) that might represent the presently making industry mainly as an important second industry one to mean the main tide for us to drive more and more special in several years later. Thereby, the solid chargeable-battery will indicate a promise one replaced traditional liquid battery that is to high-electric-capacity, high-efficiency and low chargeable-time for our experts to consideration like rocket engine used that one to implement its launch into the space for finishing surrounding earth-orbit-track. So that laboratory experiment so as to develop those new substances with high-efficiency and high mass-ratio to push the technique completing from simple to advancement course. Therefore, the government institution should enhance more the new emerging industrial programme with capital support largely for the sake of progressing the new one continual development and extension.

Foundation

This paper was supported by the Korean Science & Engineering Fund at the granted No. 96-0300-11-01-03, under the Specific Basis Research program.

Ethic Declaration

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

References

1. USA states GDP analysis, Apr 28, 2026
2. Chinese provinces GDP changes, Apr 13, 2026
3. Run Xu, Boyong Hur, Sugun Lim, Wanhao Wu, Guanghui Yu, Xianglan piao, Enji Li, An Innovation Searching for Retrieving Shanghai & Anhui Provinces and Tokyo City's GDP

Enhancement and Two Subjects for Scientist to Publish Sustainably, *Isrg j. multidiscip. Stud.* Volume-IV, Issue-I, 2026, 28~32

4. Run Xu, Changfu Jin, Yonggen Wu, Tianyi Yan, Boyong Hur, Sugun Lim, Tao Yu, Wanhao Wu, Guanghui Yu, The Innovative Searching for Booming Tokyo & Hong Kong Cities and Shanghai & Anhui Provinces GDP Enhancement Variations on Scientists Publishing in Subjects Information for PhD. by Sustainability, *Edu Rekha International Journal of Arts, Law & Social Science*, Volume- 2 Issue -1 (January-February)2026, 1~5
5. Run Xu, Changfu Jin, Yonggen Wu, Tianyi Yan, Boyong Hur, Sugun Lim, Tao Yu, Wanhao Wu, Guanghui Yu, The Innovation Searching for Booming Holland & China Provinces and Shanghai & Beijing GDP Enhancement Variations on Scientists Published in Subjects by Sustainability, *Edu Rekha International Journal of Arts, Law & Social Science*, Volume- 2 Issue -1 (January-February)2026, 6~10
6. Run Xu, Xianglan piao, Changfu Jin, Boyong Hur, Sugun Lim, Wanhao Wu, Guanghui Yu, Enji Li, An Innovation Searching for Retrieving the Economy GDP with the Venezuela & China's Enhancements and 2025 China Auto makers sale amount by Sustainability, *Edu Rekha International Journal of Entrepreneurship, Economics and Business Management*, Volume- 2 Issue -1 (January-February)2026, 1~4
7. Run Xu, Xianglan piao, Changfu Jin, Boyong Hur, Sugun Lim, Wanhao Wu, Guanghui Yu, Enji Li, An Innovation Searching for Retrieving the Anhui & Hong Kong City and New Energy Vehicle Sale Amount and Singapore & Shan'xi Province's GDP Enhancements by Sustainability, *UAI J Econ Bus Manag*, Volume-2 Issue-1 (January~February) 2026, 6~9
8. Run Xu, Xianglan piao, Changfu Jin, Boyong Hur, Sugun Lim, Wanhao Wu, Guanghui Yu, Enji Li, An Innovation Searching for Retrieving the Venezuela & China's GDP Continuous Enhancement Variations, Additionally the Nuclear Bomb Amount by Sustainability, *UAI J Mult Cul Stu.*, Volume-2 Issue-1 (January~February) 2026, 41~44
9. Run Xu, Xianglan piao, Changfu Jin, Boyong Hur, Sugun Lim, Wanhao Wu, Guanghui Yu, Enji Li, An Innovation Searching for Retrieving Nuclear-Energy Generating Electricity Amount's GDP Enhancement Variations, Additionally the Nuclear Bomb Amount by Sustainability, *UAI J Mult Cul Stu.*, Volume-2 Issue-1 (January~February) 2026, 45~48
10. Run Xu, Boyong Hur, Wanhao Wu, Guanghui Yu, Enji Li, An Innovation Searching for Thriving the Freight Exportation Strength by Five Permanent Members, Additionally the Air-Plane Passengers Number by Sustainability, *UAI J Mult Cul Stu.*, Volume-2, Issue-1 (January~February) 2026, 49~52
11. Run Xu, Wanhao Wu, Guanghui Yu, Enji Li, An Innovation Searching for Retrieving the Freight Exportation Strength by Five Permanent Members, Additionally the Air-Plane Passengers Number by Sustainability, *UAI J Mult Cul Stu.*, Volume-2 Issue-1 (January~February) 2026, 53~57
12. Run Xu, Wanhao Wu, Guanghui Yu, Enji Li, An Innovation Searching for Retrieving GDP Value Increase with the Saudi Arabia & Chinese Top Provinces by Sustainability, *UAI J Mult Cul Stu.*, Volume-2 Issue-1 (January~February) 2026, 58~62
13. Run Xu*, Boyong Hur, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Value Enhancement with the Chinese Tendency and Tianjin & Qingdao Cities by Sustainability, *Edu Rekha International Journal of Arts, Law & Social Science*, Volume-2, Issue-1 (January-February)2026, 21~24
14. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Value Enhancement with the Asian & European Top Nations and Chinese & Japanese Ones by Sustainability, *UAI J Mult Cul Stu.*, Volume-2 Issue-1 (January~February) 2026, 63~66
15. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Prospering GDP Value Enhancement with the Tianjin & Qingdao Cities and Korean & Japanese Per Capita Nations by Sustainability, *EDU REKHA INTERNATIONAL JOURNAL OF ENTREPRENEURSHIP, ECONOMICS AND BUSINESS MANAGEMENT*, Volume-2, Issue-1 (January - February) 2026, 6~9
16. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Prospering GDP Value Enhancement with the Nanjing & Suzhou Cities and Japan & Korea Per Capita Nations by Sustainability, *EDU REKHA INTERNATIONAL JOURNAL OF ENTREPRENEURSHIP, ECONOMICS AND BUSINESS MANAGEMENT*, Volume-2, Issue-1 (January - February) 2026, 10~13
17. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Prospering GDP Value Enhancement with Japan & Korea and China Cities on Scientist by Sustainability, *UAI J Mult Cul Stu.*, Volume-2 Issue-1 (January~February) 2026, 67~71
18. Run Xu, Wanhao Wu, Guanghui Yu, An innovation Searching for Prospering GDP Value Increase with the China Tendency and Global

Top Ten Auto Makers on Scientists by Sustainability, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 82~85

19. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Value Increase with Asian & European Nations and Shanghai & Beijing Cities etc. on Scientist Sustainably, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 86~89
20. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Value Increase with Wuhan Nanjing & Hangzhou Cities and Indian Delhi Capital & Mumbai and Calcutta & Chennai Cities Sustainably, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 90~93
21. Run Xu, Wanhao Wu, Guanghui Yu, The Searching for Retrieving GDP Increase with Asian Top Nations like China Japan & India Nations on Scientist Sustainably, ISRG journal of Engineering and Technology, Volume II, Issue I, 2026, 1~5
22. Run Xu, Wanhao Wu, Guanghui Yu, The Searching for Retrieving Brazil States & Jiangsu Cities GDP Increase and the Academic Conference & Journal on Scientist Sustainably, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 109~112
23. Run Xu, Wanhao Wu, Guanghui Yu, The Searching for Retrieving GDP Increase with Asian Top Nations like China Japan & India Nations and Graduate abroad Tendencies on Scientist Sustainably, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 105~108
24. Run Xu, Wanhao Wu, Guanghui Yu, The Searching for Retrieving GDP Increase with China Top Cities & Africa Top Nations and the Academic Journal with the International Journal of Computational Engineering Research on Scientists, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 113~116
25. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Increase with China Top Cities & Africa Top Nations GDP comparison and Auto Maker & Brands on Scientist Publishing Papers at Journal Sustainably, ISRG J Humanities Cultural Studies, Volume-III Issue-I (January- February) 2026, 67~71
26. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Increase with European Union & China GDP comparison and Wind Turbine Generator's Research & Development on Scientist Sustainably, UKR Journal of Economics, Business and Management, Volume 2, Issue 2, 2026, 16~20
27. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Increase with China Top Cities & Africa Top Nations GDP comparison and Auto Maker & Brands on Scientist Publishing Papers at Journal Sustainably, UKR Journal of Economics, Business and Management, Volume 2, Issue 2, 2026, 21~25
28. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Increase with European Union & China GDP comparison on Scientist Publishing Papers at Journal Sustainably, Edu Rekha International Journal of Entrepreneurship, Economics and Business Management, Volume-2, Issue-1 (January - February) 2026, 25~29
29. Run Xu, Wanhao Wu, Guanghui Yu, An Innovation Searching for Boosting GDP Increase with Autonomous-Driving Skills in Automotive Maker and European Union & China GDP comparing on Scientist Publishing Papers at Journal Sustainably, UAI J Econ Bus Manag, Volume-II Issue-I (January~February) 2026, 29~32
30. Run Xu, Wanhao Wu, Guanghui Yu, The Innovation Searching for Reviving GDP Increase Analysis with the Belgium & Poland and 2025 Liaoning Province Cities and Swiss & Czechoslovakia, ISRG J Econ Fin, Volume-III , Issue-I (January- February) 2026, 37~41