

An Innovation Study for Proceeding 2025 Q1 Chinese Top Cities GDP Analysis and Product Level Quality Efficiency & Cost Relevant Connection with Sustainability

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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, product level quality efficiency & cost relevant connection, new horizons in mathematics prize, University of Toronto campus environment & facilities, sustainability, 2025 Q1 the Chinese top cities GDP changes.</p>
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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 handpone 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. [1~25]

2. Discussions

In this paper, 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 work-shop 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. [26~29]

2.1 The product level~cost four factors to GDP development principles

The product level~cost four factors to GDP development principles like expressed in Figure 1 might show the quality caused good performance & stability of product whilst the level would expose some multi-function & securities of one. So that the product longevity would be created by those two factors, additionally which may resulted in by the efficiency & cost in order to improve GDP value eventually because the good product would be formed through high level and good quality special in high-technique product making continuously. On the other hand, the level & quality may create feedback form multi-functional and security one to performance & stability according to the dot lines in that Figure explaining the level to exceed the quality that belongs the new and more complicated factor in raising product longevity and ultimately affects the GDP increasement at final. At the end, the excellent efficiency & cost is able to affect product longevity through multi-function & security in high level and good performance with good quality at tall, which may reflect in the GDP raising finally and ultimately. Thereby, the high-level-product & good-quality may indicate the two important factors that influence the efficiency & cost highness and lowness, and it may expose in product longevity.

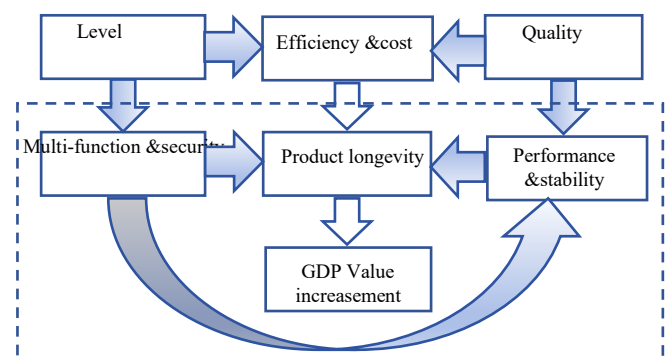


Figure 1. The product level~cost four factors to GDP development principles.

2.2 University of Toronto campus environment & facilities

As one of the most prestigious higher education institutions in Canada, the University of Toronto is renowned for its campus environment and facilities. Below, we will provide you with a detailed introduction to the characteristics and advantages of the University of Toronto in this regard.

1. Beautiful environment: The University of Toronto is located in the heart of Ontario, Canada. The area surrounding the campus is recognized as one of the most livable cities in North America. The campus is shaded by green trees, with lakes and flower beds dotting the landscape, giving it a serene and pleasant atmosphere.

2. Advanced Facilities: As a prestigious institution with a long history, the University of Toronto is committed to providing the most advanced educational facilities. The campus is equipped with modern classrooms, laboratories, libraries, computer centers, and various other facilities. Students can fully utilize these resources for academic research and practical activities.

3. Library: The University of Toronto Library is one of the largest and most comprehensive in North America. Among them, Robarts Library is one of the main libraries of the university, with a rich collection of books and relevant literature and materials in various academic fields. Students can easily access the academic resources they need through the library.

4. Laboratory Facilities: The University of Toronto has made significant investments in research, resulting in highly advanced laboratory facilities. There are corresponding laboratories for various fields such as natural sciences, engineering and technology, and social sciences to meet the needs of students and faculty. These laboratories are equipped with the latest instruments, equipment, and technical support, providing excellent conditions for research.

5. Student Activity Centers: The University of Toronto places great emphasis on fostering well-rounded students, and thus there are a wide variety of student activity centers on campus. These centers offer students a plethora of extracurricular opportunities, such as sports, art performances, and club organizations. Additionally, there are fitness centers and swimming pools for students to unwind and relax. [2]

2.3 2025 Q1 the Chinese top cities GDP analysis

The Chinese top cities GDP analysis in 2025 Q1 might show 570 & 477 billion yuan by Hangzhou & Wuhan cities correspondingly in terms of Figure 1 exhibited their high

economy level and capacity. The actual y-y value may indicate around 5.2% & 5.4% accordingly shown their moderate developed steps then.

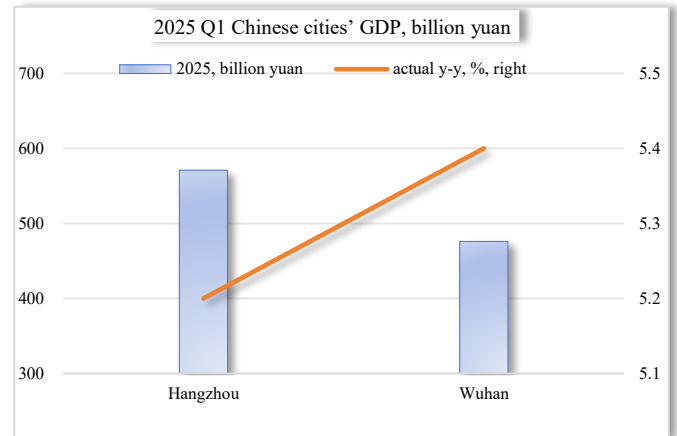


Figure 1 The Chinese top cities GDP analysis in 2025 Q1. [29]

On the other hand, the Chinese top cities GDP analysis in 2025 might show 590 & 570 billion yuan by Chongqing & Shenzhen cities correspondingly in terms of Figure 2 exhibited their high economy level and capacity. The actual y-y value may indicate around 5.7% shown their moderate developed steps then.

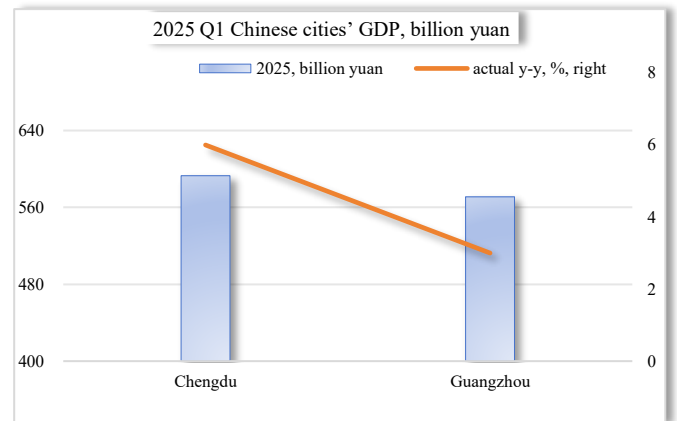


Figure 2 The Chinese top cities GDP analysis in 2025 Q1 I. [29]

On the other hand, the Chinese top cities GDP analysis in 2026 might show 610 & 470 billion yuan by Suzhou & Nanjing cities correspondingly in terms of Figure 3 exhibited their high economy level and capacity. The actual y-y value may indicate around 6% & 5.3% shown their moderate developed steps then.

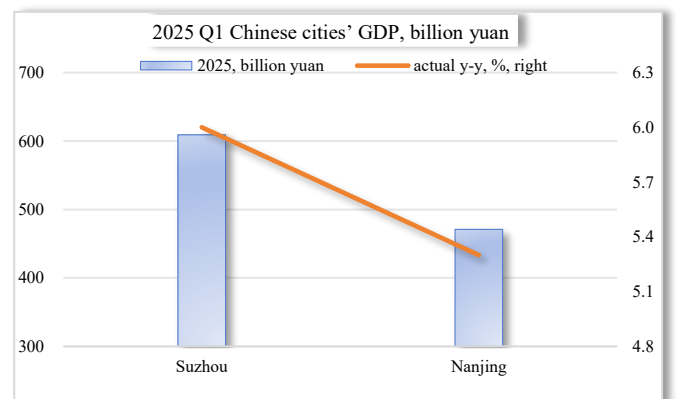


Figure 3 The Chinese top cities GDP analysis in 2025 Q1 II. [29]

Meanwhile, the Chinese top cities GDP analysis in 2026 might show 1,270~895 billion yuan by Shanghai~Shenzhen cities correspondingly in terms of Figure 4 exhibited their high economy level and capacity. The actual y-y value may indicate around 5.2% shown their moderate developed steps then.



Figure 4 The Chinese top cities GDP analysis in 2025 Q1 III. [29]

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.

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

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Conflict of Interest

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

References

1. New horizons in mathematics prize, Tencent News, Apr 23, 2026
2. University of Toronto campus environment, Baike.so.com
3. Run Xu, An Innovation Searching for Prospering Financial Reformation like Stock's Sectors Increasing Amount and Economy GDP & its Per Capita Enhancement on Scientists Sustainably, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 153~157 **Impact factor 4.33**
4. Run Xu, An Innovation Searching for Prospering Economy GDP Enhancement with Different Regions on Scientists with Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 148~152 **Impact factor 4.33**
5. Run Xu, An Innovation Searching for Prospering Financial Reformation like ETF and Economy GDP Enhancement on Scientists by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 143~147
6. Run Xu, Changfu Jin, An Innovation Searching for Prospering Financial Reformation like ETF and Economy GDP with Different Regions Enhancement on Scientists by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 139~142
7. Run Xu, Changfu Jin, Xianglan Piao, Yonggen Wu, Jing Yu, Jiagunag Liu, Tianyi Yan, Wanhao Wu, 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, Volume 1, Issue 10, 2025, 194~198
8. Run Xu, An Innovation Searching for Prospering Financial Reformation e.g. ETF and Economy GDP Enhancement on Scientists Publishing their Achievements at High Impact Factor Journals by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 189~193
9. Run Xu, An Innovation Searching for Prospering Financial Reformation e.g. ETF and Economy GDP Enhancement with G20 Group etc. on Scientists' Behavior and Judgement with Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 184~188 **Impact factor 4.33**
10. Run Xu, An Innovation Searching for Prospering Financial Reformation like ETF and Economy GDP Enhancement with Some Various Regions on Scientists by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 178~183 **Impact factor 4.33**
11. Run Xu, Changfu Jin, Yonggen Wu, Wanhao Wu, Tianyi Yan, An Innovation Searching for Boosting Financial Reformation e.g. ETF and Economy GDP Enhancement on Scientists' Behavior and Judgement Writing Papers by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 199~203 **Impact factor 4.33**
12. Run Xu, An Innovation Searching for Prospering Financial Reformation e.g. ETF and Economy GDP Enhancement with Hubei & Hunan Provinces on Scientists' Published Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 204~208 **Impact factor 4.33**
13. Run Xu, An Innovation Searching for Prospering Economy GDP Enhancement with Osaka & Shanghai and Hong Kong Cities & Shandong and Fujian Provinces on Scientists' Analysizing Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 303~307 **Impact factor 4.33**
14. Run Xu, An Innovation Searching for Prospering Financial Reformation e.g. ETF and Economy GDP Enhancement with Indian Cities & Shandong and Fujian Provinces on Scientists' Analysizing Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 308~313 **Impact factor 4.33**
15. Run Xu, Changfu Jin, Wanhao Wu, Yonggen Wu, Tao Yu, Tianyi Yan, Zhenguo Li, An Innovation Searching for Prospering Financial Reformation e.g. ETF and Economy GDP Enhancement with Various Cities on Scientists' Published Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 314~319 **Impact factor 4.33**
16. Run Xu, Changfu Jin, Wanhao Wu, Yonggen Wu, Tao Yu, Tianyi Yan, Zhenguo Li, An Innovation Searching for Prospering Financial Reformation e.g. ETF and Economy GDP Enhancement with High-Speed Train Milage on Scientists' Published Behavior and Judgement through Sustainability, UKR Journal of Economics, Business and Management, Volume 1, Issue 10, 2025, 320~325 **Impact factor 4.33**
17. Run Xu, An Innovation Searching for Prospering Economy GDP Enhancement with the India & Taipei

on Scientists' Analyzing Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 2, Issue 1, 2026, 10~13
Impact factor 4.33

18. Run Xu, An Innovation Searching for Prospering High-Technique Product and Economy GDP Enhancement with Indian Maharashtra State & Beijing City and Nobel Laureates on Scientists' Analyzing Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 2, Issue 1, 2026, 14~18
Impact factor 4.33
19. Run Xu, Changfu Jin, Wanhao Wu, Yonggen Wu, Tianyi Yan, An Innovation Searching for Prospering Economy GDP Enhancement with the Indian & Chinese North-Eastern Three Provinces and Nobel Prize Amount Ranking Analysis on Scientists' Writing Behavior and Judgement by Sustainability , UKR Journal of Economics, Business and Management, Volume 2, Issue 1, 2026, 24~28
Impact factor 4.33
20. Run Xu, Changfu Jin, An Innovation Searching for Prospering Economy GDP Enhancement with the Holland & China Provinces and Forecasting Global Ranking Analysis on Scientists' Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 2, Issue 1, 2026, 19~23 **Impact factor 4.33**
21. Run Xu, Changfu Jin, Yonggen Wu, Tianyi Yan, An Innovation Searching for Prospering Economy GDP Enhancement with the Holland & China Jiangsu etc. Provinces and Forecasting Global Ranking Analysis on Scientists' Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 2, Issue 1, 2026, 29~32
Impact factor 4.33
22. Run Xu, Changfu Jin, Xianglan Piao, Yonggen Wu, Tao Yu, Boyong Hur, Hyojun Ahn, An Innovation Searching for Prospering Economy GDP Enhancement with the Venezuela vs Shanghai City & Anhui Province etc. vs the Global Average Level etc. Analysis on Scientists' Behavior and Judgement by Sustainability, UKR Journal of Economics, Business and Management, Volume 2, Issue 1, 2026, 33~37 **Impact factor 4.33**
23. Run Xu, Changfu Jin, Yonggen Wu, Tianyi Yan, An Innovative Research about Thriving Chinese New-Power Auto-Makers Sale numbers in 2025 & GDP Enhancement with Venezuela and Chinese Cities etc. Additionally Hubei & Hunan Provinces on Scientists Sustainably, UKR Journal of Economics, Business and Management, Volume 2, Issue 1, 2026, 38~42
24. Run Xu, Changfu Jin, Yonggen Wu, Tianyi Yan, An Innovative Research about Thriving GDP Enhancement with Chinese North-Eastern Three Provinces and Indian States, Additionally Nobel Prize Amount Variations on Scientists Sustainably, UKR Journal of Economics, Business and Management, Volume 2, Issue 1, 2026, 43~47
25. Run Xu, An Innovative Research about Booming GDP Enhancement with Chinese Hubei & Hunan Provinces, Additionally Stocks Sector Variations on Scientists by Sustainability, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 29~32
26. Run Xu, Changfu Jin, Yonggen Wu, An Innovation Research about Booming GDP Enhancement with Tokyo Korea Holland & Chinese Top Provinces on Scientist by Sustainability, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 25~28
27. Run Xu, Xianglan piao, Changfu Jin, Boyong Hur, Sugun Lim, Wanhao Wu, Guanghui Yu, Enji Li, An Innovation Searching for Retrieving Anhui & Hong Kong City and New Energy Vehicle Sale Amount and Singapore & Shan'xi Province's GDP Enhancements by Sustainability, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 33~36
28. Run Xu, Boyong Hur, Sugun Lim, Wanhao Wu, Guanghui Yu, Xianglan piao, Enji Li, An Innovation Searching for Retrieving Singapore & Shan'xi Province and Tokyo & Hong Kong City's GDP Enhancements and Nuclear-Energy Generating Electricity Amount by Sustainability, UAI J Mult Cul Stu., Volume-2 Issue-1 (January~February) 2026, 37~40
29. Chinese top cities GDP analysis in 2025~2026 Q1, Apr 25, 2026