

International Investment and Market Trends, 2017 (May – July)

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I. Investment Trends Worldwide and in Taiwan

Abstract

- As global economy has stabilized as expected, the World Bank forecasts that global growth will rise to 2.9% in 2018 from 2.4% in 2016.
- In 2016, global flows of FDI (Foreign Direct Investment) fell by 2% and FDI flows to developing countries fell by 14%. With ongoing geopolitical risks and changes in taxation policies, growth in global FDI flows is expected to be limited between 2016 and 2018.
- Due to a higher baseline level from last year, Taiwan's investment by overseas Chinese and foreign nationals and outward investment both declined in the first half of 2017, with the exception of investment in China. Overall investment fell by 31.4% year on year. Fixed investment in productive assets resumed growth in 2013, although public investment as a percentage of GDP declined to 3.7%. As investment in semiconductor and related high-end manufacturing processes in the supply chain increases and the government raises spending on domestic construction work, the investment is expected to break the NT\$3.6 trillion mark this year, posting 2.3% growth.

1. Declines in global FDI

According to the World Investment Report 2017 published by UNCTAD (United Nations Conference on Trade and Development) in June 2017, global FDI (Foreign Direct Investment) flows fell by 2% to US\$1.75 trillion in 2016, remaining below its pre-financial crisis level.

James Zhan, the leader of the research team, says the 14% decline in FDI flows to developing countries involves many potential issues that need to be explored. FDI flows to developing Asia contracted by 15% to US\$443 billion in 2016, registering declines for the first time since 2012.

The US still leads the developed countries in terms of FDI inflows and outflows, while China has seen the most notable growth in FDI outflows. Taiwan, however, has not

attracted strong FDI inflows.

UNCTAD forecasts a modest recovery in FDI flows between 2017 and 2018, up to US\$1.8 trillion, which are still lower than their 2007 peak.

2. World Bank forecasts global economy to pick up in 2018

According to the World Bank's semiannual Global Economic Prospects report which is published in January and June, global growth is expected to accelerate to 2.7% in 2017 from 2.4% in 2016, and further on to 2.9% in 2018.

This report projects stable economic performance worldwide. With a pickup in manufacturing and trade, improved global financial conditions, and stabilizing commodity prices, emerging markets such as Brazil, Russia, and Nigeria will be able to recover from the two-year contraction in growth. The US and Europe are also experiencing an economic upturn.

However, the World Bank also warns that global economy is likely to be affected by a number of downside risks. Heightened policy uncertainty in 2017 will increase the risks of financial market turbulence. These risks include increased debts in emerging markets, changes in trade and monetary policies in major economies, uncertainty in the financial industry, and geopolitical conflicts.

Economic Growth Worldwide and in Major Economies (Unit: %)

	2014	2015	2016e	2017f	2018f	2019f
Real GDP						
World	2.8	2.7	2.4	2.7	2.9	2.9
Advanced Economies	1.9	2.1	1.7	1.9	1.8	1.7
United States	2.4	2.6	1.6	2.1	2.2	1.9
Euro Area	1.2	2.0	1.8	1.7	1.5	1.5
Japan	0.3	1.1	1.0	1.5	1.0	0.6
EMDEs (Emerging Markets and Developing Economies)	4.3	3.6	3.5	4.1	4.5	4.7
Commodity-exporting EMDEs	2.2	0.3	0.4	1.8	2.7	3.0
Other EMDEs	6.0	6.0	5.7	5.7	5.7	5.8
EMDEs excluding China	4.5	5.0	4.5	4.6	4.9	5.1
East Asia and Pacific	6.8	6.5	6.3	6.2	6.1	6.1

Europe and Central Asia	2.3	1.0	1.5	2.5	2.7	2.8
Latin America and the Caribbean	0.9	-0.8	-1.4	0.8	2.1	2.5
Middle East and North Africa	3.4	2.8	3.2	2.1	2.9	3.1
South Asia	6.7	6.9	6.7	6.8	7.1	7.3
Sub-Saharan Africa	4.6	3.1	1.3	2.6	3.2	3.5
World trade volume	4.1	2.7	2.5	4.0	3.8	3.8
Commodity prices						
Oil Price	-7.5	-47.3	-15.6	23.8	5.7	5.4
Non-energy commodity price index	-4.6	-15.0	-2.6	4.0	0.7	1.0

Source: World Bank. * e=estimation; f=forecast

3. Increased domestic fixed investment despite a decline in its share in GDP

Department of Statistics, MOEA, announced the value and annual growth rate of domestic fixed investment in productive assets over the past decade. The investment declined in 2008, 2009, 2011, and 2012 for 11.1%, 8.8%, 1.1%, and 2.6% respectively before it resumed its upward path in 2013. Declines in 2011 and 2012 were mainly caused by the European debt crisis.

With investment in semiconductor and related high-end manufacturing processes in the supply chain expected to rise and government construction spending increasing, fixed investment is projected to exceed NT\$3.6 trillion, posting 2.3% growth.

Taiwan's fixed investment as a percentage of GDP has decreased constantly over the past decade, from 23.9% in 2007 to 20.9% in 2016. With the completion of major public construction projects, the government's tight financial situations, and the handover of state-run businesses to cooperative ownership, the share of public investment (government and state-run businesses) in GDP declined to 3.7%, 1.6 percentage points lower than 2007.

Taiwan's fixed investment as a percentage of GDP is lower than Korea and Japan whose industrial structure is similar. In 2016, fixed investment as a percentage of GDP in Korea and Japan was 29.7% and 23.2% respectively.

Taiwan's Fixed Investment, 2012 - 2016

	2012	2013	2014	2015	2016
Value (NT\$100 Million)	32,821	33,787	34,938	34,928	35,834
As a percentage of GDP	22.3	22.2	21.7	20.8	20.9

Source: Department of Statistics, MOEA

4. Decreased investment by overseas Chinese and foreign nationals in 1H 2017

Investment Commission, MOEA, announced statistics of investments by overseas Chinese and foreign nationals, investment from China, outward investment, and investment to China from January to June. Only investment to China managed to grow, while the other three types of investment posted declines. Investment by overseas Chinese and foreign nationals fell by 31.4% year on year.

According to Investment Commission, the decline in investment by overseas Chinese and foreign nationals is attributed to the Dutch companies' large investment projects and M&A activity in last May which raised the baseline as these investments and acquisitions nearly equaled the amount of investment in the first half of 2017. The decline in outward investment is also caused by a higher baseline level as Hon Hai Precision Industry's investment in Japanese Sharp was approved in last May.

The top five industries invested by overseas Chinese and foreign nationals are electronic part and components manufacturing (47.92%), wholesale and retail trade (10.17%), financial and insurance (8.79%), real estate (7.93%), and professional, scientific and technical activities (6.78%). The top five industries account for 81.6% of investments by overseas Chinese and foreign nationals; however, only the real estate and the professional, scientific and technical activities industries have posted year-on-year growth.

Investment Commission pointed out that declines in investments by people of Mainland China were modest. While new investments have been approved, the amount is small. Outward investment also declined slightly and is likely to see

growth in late 2017.

Top Five Industries Invested by Oversea Chinese and Foreign Nationals, January – June,
2017 (Unit: US\$1000; %)

	Number of cases	Amount (Share)	YoY Amount	YoY Comparison	
				Amount	Growth
Electronic parts and component manufacturing	38	1,807,867 (47.92)	3,485,529	-1,677,662	-48.13
Wholesale and retail trade	530	383,685 (10.17)	565,711	-182,026	-32.18
Financial and insurance	117	331,607 (8.79)	509,553	-177,946	-34.92
Real estate	73	299,216 (7.93)	175,000	124,216	70.98
Specialist, science, and technical services	262	255,953 (6.78)	246,485	9,468	3.84

Source: Investment Commission, MOEA

II. Key Industrial Information

1. Information and communications industry

- **Development of new materials to contribute to the advancement of semiconductor technology**

Chip manufacturing technology will evolve towards five directions. In patterning and FEOL processes, die shrink causes electric current leakage, leading to low transistor performance. As a result, the space between the conductive wires in the BEOL layer must be reduced, resulting in insulation problems due to the extremely thin insulation layer. In advanced packaging processes, uneven quality of packaging materials affects the yield rate, while high-density IC packaging drives demand for heat dissipation materials. For memory manufacturing, vendors have to consider introducing new materials as existing materials are unable to meet demand for high-performance, high-capacity memory.

The five technology trends mentioned above gives rise to the role of new materials. However, the chip material market is dominated by US and Japanese vendors. Hence, Taiwanese manufacturers may be subject to foreign control when developing chip technology.

- **Develop next-generation memory aligned with market needs**

MRAM, PRAM, and ReRAM are the most likely replacement for existing memory technologies. Therefore, the selection of the materials plays a decisive role in the performance of the memory. MRAM must use ferromagnetic materials. The GST films in PRAM may be of chalcogenide materials. ReRAM uses a variety of materials. Whichever material is used, the adoption of new semiconductor materials is inevitable. However, a series of evaluations including manufacturing costs, potential pollution problems, diffusion, and manufacturing processes is needed when introducing new materials. Engineers may even need to redesign manufacturing processes. Therefore, the adoption of new materials is not just about changing the materials, but may also require altering the production lines. Considering the

time and costs involved, vendors will find it difficult to make changes if they choose the wrong materials.

Currently, Intel's 3D Xpoint memory is mainly used in PCs and notebook PCs, while Samsung's embedded MRAM mainly targets IoT devices and automotive electronic systems. Despite different target markets for these two types of memory, vendors that successfully develop next-generation memory aligned with market demand ahead of others will be able to hold the right to speak for a longer term.

2. Pharma & biotech industry

- **Governments accelerate smart healthcare applications with ICT technology**

In light with the global issue of population ageing which leads to an increase in medical spending, governments worldwide are pursuing more efficient solutions. Most of them have relied on ICT technology such as cloud platforms, wireless communications, smart terminal connections, artificial intelligence, and big data analytics to strength disease prevention and achieve smart healthcare. Smart healthcare has become a future trend and a major task for governments worldwide.

Smart healthcare must address the needs for telecare, youth health, long-term healthcare and medical services. Application services in these fields include medical information management, value-added healthcare services with big data analytics, fitness and diet management, telecare for chronic diseases, and other types of smart medical and health management systems. China has included smart healthcare into its 13th Five-year Plan.

- **The United States and Singapore achieve higher cost efficiency with improved healthcare**

Vendors in the healthcare field worldwide have plunged into the development of wearable devices and services to seize the smart health opportunity. An observation of the vendors' applications shows they have focused on the development of connected, wireless software and hardware, integration of platforms as well as data integration, analysis, and value adding. In addition, AI

technology which has been used in health management, medical risk analysis, medical imaging, virtual nurses, medicine discovery, diagnosis assistance, medical research, and nutriology has started to bear fruit in the medical sector.

In terms of innovative applications, the largest US chained retailer Walgreens has introduced the Balance Rewards for healthy choices program which incents members' adoption of healthy habits. With patients becoming more aware of the importance of a healthy lifestyle and engaging with this program more frequently, Walgreens can have a better understanding of its customers and help patients with chronic diseases (diabetes, hypertension, and cardiovascular diseases) remind themselves to follow healthy habits.

In Singapore, digital databases are established to keep track of records retained at the hospital. The aim is to evaluate the results and quality of clinical healthcare practices, thereby promoting the Smart Health-Assist initiative which includes four types of solutions. The first type involves the development of next-generation sensors such as stick-on patches, sensors embedded in household items, and other innovative embedded sensors. The second type aims to connect home healthcare with medical services at the hospital to ensure seamless integration of data. The third type refers to professional decision-making systems which help medical practitioners carry out treatment accurately and provide healthcare suggestions. The fourth type combines home healthcare data with the national healthcare database for big data analytics in order to facilitate identification of diseases and gene research. TeleMetrix +(TM+) is the first commercial cloud-based telehealth service in Singapore.

3. Fintech industry

- **Application of AI in the financial sector to be a trend, increasing supervision and compliance challenges**

The rapid development of AI has revolutionized every industry. The data- and labor-intensive financial services industry has been influenced most significantly. As digital finance grows at an astonishing speed in recent years,

financial services are transitioning to online from offline, laying a solid foundation for the introduction of AI into the financial industry.

The application of AI in the financial industry consists of two aspects. The first aspect is integrating AI with front-desk services which include all kinds of labor-intensive routine work such as customer services, complaint processing, and reception, or damage estimation and loss verification of the abovementioned work. Such labor-intensive work with low entry barriers will be the initial application of AI in the financial industry. The second aspect is related to the core services of this industry – investment decision making and risk management. These data-intensive services use algorithms to automate transactions or investment strategy planning such as quantitative trading and investment advisory services. With AI, qualitative and quantitative data is integrated with real-time market information and Internet users' opinions, thereby enhancing the accuracy of investment advice. However, using AI in this area will affect the fairness and stability of the financial market. Therefore, services in this area including software upgrade, pressure test, market data aggregation, system monitoring, virtual security, business sustainability, disaster prevention, and regular inspection of vulnerabilities will be conducted under strict supervision.

Despite the rosy outlook for AI in the financial services industry, this industry is very complicated. For the short term, AI will continue to act in a supporting role to financial employees. For completely automated transactions or other core business, strict supervision and compliance management will pose a major challenge for vendors.

4. E-commerce industry

- **Emergence of live video streaming spurs consumption through real-time interaction**

Live video streaming has become a valuable tool in recent years. Besides providing a stage for young people to express themselves, live video streaming is also a marketing channel for e-commerce, news, and product launch. All industries want to promote their products, content, and services via live

streaming.

Live video streaming has undergone transformation such as the combination with social media, e-commerce, or esports. In the past, the audience could only be the receiver of TV programs. Now through live interaction, the audience can be involved in the show without being physically present. As a result, more and more people are watching video content online. Another advantage of live video streaming is that vendors can collect audience data easily such as their age, gender, time of viewing, and product preferences. By applying big data analytics to the data, vendors can better understand consumers and create their marketing strategies. This enables them to focus their spending on more efficient products, presenters, and streaming techniques to turn traffic into profits and expand their business.

The combination of live streaming and e-commerce enables the presenter to demonstrate products in person while answering the audience's questions immediately. Vendors can also get the audience's response directly, thereby shortening the breaking-in period. While live interaction can stimulate consumption effectively, e-commerce live streaming shows still have many problems such as the selection of presenters, the risks of live video streaming, and the understanding of the audience's attributes.

5. Startups industry

● **Smart home becomes a field of competition again**

After years of development, the smart home market has yet to take off due to separate platforms provided by individual vendors, high product diversification, and incompatible user interfaces. These factors have led to difficulty in equipment expansion and management. However, the emergence of voice assistants is likely to transform this fragmented market.

Voice assistants have become a next-generation human-machine interface. With the ability to provide more intuitive communications and smart controls, voice assistants bring better life and work experiences for users. Therefore, Amazon, Google, Microsoft, Apple, and many other vendors have dived into the

development of voice assistants such as Korean Samsung's Bixby, leading messaging app vendor Line's Clova, Chinese search engine leader Baidu's Duer. Leading mobile phone and communications equipment vendor Huawei is also planning to develop its own voice assistant.

● **IT security to become an emerging industry**

Digital transformation has become a key to sustainability for modern businesses. The development of emerging technology has led to more advanced applications including AI analysis, computing/networking/sensors, robotic technology, VR/AR, sharing economy, intelligent/community economy, and crowdsourcing/crowdfunding. In addition, increased consumers' preferences and expectations as well as demand for the lowest price have put the supervisors under considerable pressure such as demand for consumer rights protection and security management. Driven by new competition and growing supervision pressure, IT services have seen rapid evolution.

Amid escalating information security threats, businesses are faced with new cyber security threats and challenges. These threats usually target IP, credit card information, personal information, money, reputation, business intelligence, and sensitive business information. When using existing information security measures to defend all kinds of cyber security threats and applying emerging technology, businesses need to constantly consider corresponding risks, adjust internal information immediately, and enhance their security devices and control levels.

Besides businesses, governments must possess cyber security capabilities as well. Governments' core capabilities should contain the ability to respond to cyber incidents, 360-degree analysis of digital risks (information security event notification, uninterrupted business management, evaluation of information security control), threat management (monitoring of information security control), and compliance (review compliance based on national/supply chain's security standards and monitoring instructions).

III. Analysis of Investment in Taipei

1. Advantages of investing in Taipei

Taipei is the capital city of Taiwan with 280 of Taiwan's top 500 companies registered in this city. Among the 540 foreign companies newly established in Taiwan, 350 of them are based in Taipei City, accounting for 64.8%.

As of 2016, there were 224,499 companies based in Taipei City with a total revenue of NT\$12.2136 trillion, equivalent to 1/3 of Taiwan's total revenue (31.8%). Of the US\$11.037 billion investment by overseas Chinese and foreign nationals, US\$6.252 billion (56.6%) was invested in Taipei City, indicating this city is the first choice for foreign investors in Taiwan.

The Taiwanese ICT industry has demonstrated outstanding performance in the world (IT, communications, semiconductor, and photoelectric products account for over 70% of the worldwide market) and 43.2% the ICT vendors are based in Taipei City. As an initial trial market and test bed for medicine and biotechnology in Asia Pacific, Taiwan is well known for its research on clinical medicine and Chinese-specific diseases. Internationally recognized clinical test and research centers, medical centers, and leading companies are all concentrated in Taipei. The capital market is an important factor in industrial development and the Taipei capital market is supported by over 17,000 financial institutes and venture capital firms. The large number of financial institutes and employees will benefit the development of financial business.

Advantages of investing in Taipei City

Advantages	Competitive Industries		Suggestions
<ul style="list-style-type: none"> ● Professionals Professional and high-quality workforce; over 75.46% of the citizens hold a university or higher degree; 1.28 million people are in work. ● Research competences Over 70 research centers and colleges, including world-famous universities and research centers, are located in Taipei City, providing abundant industrial research competencies. ● Policy environment Policy environment: Comprehensive legal and administrative systems with dedicated laws in place to reward and subsidize investment, 	ICT industry	<ul style="list-style-type: none"> ● Taiwanese IT, communications, semiconductor, and photoelectric products account for over 70% of the worldwide market. Over 9,000 ICT companies, equivalent to 43.2% of total ICT companies in Taiwan, are based in Taipei. ● The technology corridor formed by the Nankang Software Park, the Neihu Technology Park, the Dawan South Section Industrial Zone, and the Neihu's Fifth Replanning District creates a remarkable cluster effect. 	<ul style="list-style-type: none"> ● Increase development of emerging markets by working with local brands and channels to expand business in these markets. ● Continue to develop hardware and software technology for IoT applications such as smart city and wearable devices. ● The AR/VR industries: with growing maturity of the commercial application of AR and VR technologies, it is advised to review technology development trends and invest in cutting-edge technology.
	Pharma & Biotech Industry	<ul style="list-style-type: none"> ● Taiwan is famous for research on clinical medicine and Chinese-specific diseases. With 7 medical centers, over 10 research institutes, and 23 internationally recognized clinic test 	<ul style="list-style-type: none"> ● Invest in new drug development technology such as using AI to shorten R&D time. ● Leverage the ICT industry's manufacturing technology and mass production capabilities to develop innovative

Advantages	Competitive Industries		Suggestions
<p>providing a stable and healthy policy environment.</p> <ul style="list-style-type: none"> ● Consumption power Taipei City has the highest average household disposable income in Taiwan, at NT\$1.314031 million, 1.4 times higher than any other places in Taiwan. ● Infrastructure Infrastructure: Highly developed transportation systems, stable water and electricity supply, and over 80% fiber coverage in the city. 		<p>and research centers, Taipei has demonstrated excellent R&D competencies.</p> <ul style="list-style-type: none"> ● Over 300 biotech companies are based in Taipei City, representing one-fourth of the total in Taiwan. 	<p>biotech products.</p>
	Fintech Industry	<ul style="list-style-type: none"> ● There are 17,851 financial and insurance firms in Taipei City (46.5% of the total in Taiwan); financial headquarters and venture capital firms account for over 80%. ● With a robust financial system, Taipei City is the financial center in Taiwan. 	<ul style="list-style-type: none"> ● Adoption and grasp of key financial technology will play a major role in future industry development. ● Expand the public use of financial technology such as robo-advisors to attract more foreign investment.

Source: compiled by Topology Research Institute, August 2017

2. Taipei City government's investment promotion strategies

To encourage business investment, the Taipei City Government has developed the Taipei Municipal Self-Government Ordinance for Industrial Development to reward and subsidize business investment, thereby increasing companies' investment intentions. So far, over NT\$1 billion has been given away, bringing in over NT\$18.3 billion in business investment, increasing industry value by over NT\$114.9 billion, and providing 6656 jobs.

Investment promotion strategies in Taipei and Asian Cities

Item		Taipei	Tokyo	Seoul	Singapore
Subsidized industries		IT service, medical care, telecom, biotechnology, renewable energy, recreation and tourism, cultural and creative, sports, conference and exhibition industries.	The three core industries including innovative IT services, advanced medical care, and advanced agriculture, coupled with the financial industry.	IT, digital, biopharmaceutical, green, business service, fashion and design, financial, and convention tour industries.	Startup, manufacturing, and service industries.
Subsidies	Tax	1. Subsidy of up to NT\$50 million for house tax and land value tax.	1. Income tax: 20% deduction for foreign companies in the core industries.	1. Corporation tax and income tax: 100% deduction in the first seven years and 50% deduction in the sequential three years. 2. 100% deduction on land/building acquisition tax, registration tax, property tax, and comprehensive land	1. Income tax deduction: up to 50% of the investment amount 2. Emerging industries are exempted from corporate tax for five to 10 years.

Item		Taipei	Tokyo	Seoul	Singapore
				tax in the first five years	
	Loan and rent	1. Up to NT\$50 million for loan interest subsidy. 2. 50% reduction in the rent of state-owned land for two to five years; a subsidy of up to NT\$5 million for land rent.	1. Purchasing or renting a building: 25% subsidy and 8% tax deduction. 2. Purchasing or renting machines or equipment: 100% subsidy for companies in the core industries 3. Renting offices in specified development districts enjoys 10% to 50% reduction in rent.		1. Loan deduction: exemption from withholding tax on all or part of the interest. 2. Withholding tax is exempted on all or part of the license fee. 3. Double deduction for research expenses. 4. Approved startups receive a subsidy of 75,000 (NT\$1.66 million) SGD; investment at a two-to-one or one-to-one SGD ratio.
	Labor	1. Wages: up to NT\$5 million 2. Training: up to NT\$1 million	1. Subsidies for foreigners' living: 2 million Yen (NT\$550,000) per person for going to hospital and 5 million Yen (NT\$1.35 million) per person for going to international	1. Employment subsidy of 1 million KRW (NT\$26000) per person per month for six months. 2. Training subsidy of up to 200 million KRW (NT\$5.32 million).	

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Item		Taipei	Tokyo	Seoul	Singapore
			schools.		
	Others	1. Subsidy for innovation: up to NT\$5 million for R&D and brand creation; up to NT\$3 million for business incubation; up to NT\$1 million for starting up a business			

Source: compiled by Topology Research Institute, August 2017

3. Investment case study and suggestions

Hon Hai's investment in the US and GSK's investment in an AI startup are two landmark cases in 2017. Therefore, this report will analyze the investment incentives in these two cases and compare them with the Taipei City Government's investment promotion strategies to provide policy suggestions.

Investment case study and suggestions

Landmark investment	Incentives	Analysis and Suggestions for Taipei City Government's Investment Promotion Strategies
In July 2017, Hon Hai announced US\$10 billion of investment for a new 10.5G panel plant in Wisconsin.	<ol style="list-style-type: none"> 1. The Wisconsin government will provide a US\$3 billion tax break package (including income tax, investment tax, and sales tax) 2. Geographic advantages of Wisconsin: <ol style="list-style-type: none"> (1) Proximate to the US market. (2) Save customs and logistics costs as products can be sold locally. (3) Strength ties with its main customer Apple due to its geographic proximity to this client. 3. Expansion of infrastructure under planning; stable water and electricity supply 	<ol style="list-style-type: none"> 1. The government's investment promotion strategies are too distributed and fail to target specific industries, and hence are unable to provide customized subsidies. 2. The government should reinforce incentives by focusing the city's policy resources on key industries of the future (e.g. increase the investment subsidy for each technology park to provide more incentives for investment in the ICT industry).
In July 2017, GSK announced to use Exscientia's AI technology in	<ol style="list-style-type: none"> 1. Application of AI in the biomedical field has gradually matured. AI has been successfully used to identify drugs for rare diseases this year. 2. AI analytics is expected to reduce 	<ol style="list-style-type: none"> 1. The DCB (Development Center for Biotechnology), the PITDC (Medical and Pharmaceutical Industrial Technology Development

Landmark investment	Incentives	Analysis and Suggestions for Taipei City Government's Investment Promotion Strategies
drug discovery.	testing frequency and increase drug development efficiency, thereby significantly decreasing new drug development time.	<p>Center), and TMU (Taipei Medical University) teamed up with US AI company Insilico Medicine on drug development. The government is advised to further strengthen the biomedical applications of AI (such as encourage training of research & technical experts, create long-term talent development programs in the industry, etc.)</p> <p>2. The biomedical industry has extremely high demand for R&D talents; therefore, the government should strengthen its policies for recruiting high-end workers (for example, the Tokyo government offers a subsidy of NT\$550,000 per year for every foreign high-tech worker in the medical industry) to demonstrate its ambition to recruit talents.</p>

Source: compiled by Topology Research Institute, August 2017