

Analysis of the Application of Haidexin Emergency Industry Platform in the Philippines

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【Abstract】

With the rapid development of global economic integration, the continuous improvement of human living standards, the stability of economic development and the security-related socialized anti-risk ability have become important indicators for measuring the overall strength of a country. Located in the Pacific Earthquake Belt, Philippines is an archipelago country in the northwestern Pacific Ocean, with an oceanic monsoon climate. At the same time, the anarchic deforestation phenomenon is more serious, therefore, the probability of being affected by sudden natural disasters due to environmental factors is much higher than that of most countries in the world. The losses and impacts caused by disasters have a negative effect on the economic development and social stability of the Philippines to a certain extent. Strengthening emergency management and disaster prevention capabilities, and reducing the risk and impact of disaster damage are extremely crucial to the economic development of the Philippines. This paper analyzes the Philippines' macroeconomic trends and the impacts of historical disaster events, and combines the impact of emergency management on economic development to analyze the necessity of improvement of the national emergency management capabilities of China-Philippines cooperation. At the same time, under the policy of the Chinese government advocating the construction of the "Community of Human Destiny" and the "The Belt and Road" policy, based on the reliable resources of the Haidexin emergency industry platform, we will discuss and provide rationalization advice on how to work together with representatives from all walks of life in the Philippines to improve the level of national emergency management, promote the economy steady development and enhance overall national strength.

Key Words: economic development, emergency management, Haidexin, overall solution

1. Analysis of Philippine economic development track

1.1 Philippine economic macro development trend

The Philippines was once a model for the development of East Asian economies, second only to Japan. It has experienced the pre-colonial era, the Spanish era, the First Republic of the Philippines, the American era, and the Commonwealth era. Each era has given its corresponding characteristics of the development of the times, which has promoted the economic growth of the Philippines to varying degrees, changed the economic structure of the Philippines to adapt the development trend of the times.

In the 1960s, the Philippines was one of Asia's industrial powers. It produced consumer goods, processed raw materials, and owned assembly plants for automobiles, televisions and household appliances, chemical factories for drugs, scrap metal imports for steel production, for ships and the productions of cement, textiles and fertilizers. In the 1970s and 1980s, East Asian countries seized the opportunity in the three waves of capital transfer in the developed countries to achieve rapid economic growth and development, while the phenomenon of “de-industrialization” has appeared under the influence of historical, political, cultural and other factors, economic development, and economic growth has encountered “bottlenecks” and has shown a downward trend.

In the early 1990s, President Ramos revived the Philippine economy by breaking monopolies, liberalizing foreign investment, and privatizing businesses by controlling powerful family power. However, the Philippine economy was in a state of ups and downs and turbulence affected by the financial crisis of economic globalization from the end of the 20th century to the beginning of the 21st century.

In the 2010s, the Philippine economy emerged under the leadership of Aquino III. Economic growth has risen year by year, slowly developing into a newly industrialized country, and its economy has changed from an agriculture-based economy to a service-based and manufacturing-based economy. As of 2017, GDP by purchasing power parity is estimated at US\$98.698 billion, and the Philippines has become one of the three fastest growing countries in East Asia. In 2017, the Philippines' gross domestic product slightly weakened from 6.9% in 2016 to 6.7%. Its growth was mainly dependent on strong exports. At the same time, investment growth slowed down markedly and consumption growth slowed down. The continued global economic recovery has caused the Philippines' annual export volume to rise sharply in 2017, becoming the main driver of economic growth, and imports continue to grow at double-digit rates. After two years of rapid expansion, investment growth in 2017 has been relatively slow, rising inflation has slowed real wage growth, and private consumption growth has also slowed down effectively.

Trend chart of Philippines' GDP

Year	GDP growth in percent (constant prices, base year = 2000)	GDP in PHP Billion (current prices)	GDP in USD Billion (current prices)	GDP per capita in USD (current prices)	GDP in USD Billion (PPP)	GDP per capita in USD (PPP)	Peso vs Dollar Exchange Rate

1980	5.15	270.1	35.9	744	64.4	1334	7.51
1981	3.42	312.0	39.5	797	72.9	1471	7.90
1982	3.62	351.4	41.1	810	80.1	1578	8.54
1983	1.88	408.9	36.8	707	84.9	1630	11.11
1984	-7.32	581.1	34.8	652	81.6	1530	16.70
1985	-7.31	633.6	34.1	623	77.9	1426	18.61
1986	3.42	674.6	33.1	591	82.4	1471	20.39
1987	4.31	756.5	36.8	641	88.4	1540	20.57
1988	6.75	885.5	42.0	715	97.6	1663	21.09
1989	6.21	1025.3	47.3	786	107.6	1791	21.70
1990	3.04	1190.5	48.9	796	115.2	1873	24.33
1991	-0.58	1379.9	50.2	797	118.6	1882	27.48
1992	0.34	1497.5	58.7	912	121.8	1891	25.51
1993	2.12	1633.6	60.2	914	127.1	1929	27.12
1994	4.39	1875.7	71.0	1052	135.5	2007	26.42
1995	4.68	2111.7	83.7	1224	144.8	2118	25.24
1996	5.85	2406.4	93.5	1336	156.1	2232	26.22
1997	5.19	2688.7	92.8	1297	167.1	2336	28.98
1998	-0.58	2952.8	73.8	1009	168.1	2297	40.02
1999	3.08	3244.2	83.0	1110	175.8	2352	39.09
2000	4.41	3580.7	81.0	1053	187.5	2437	44.19
2001	2.89	3888.8	76.3	971	197.3	2511	50.99
2002	3.65	4198.3	81.4	1014	207.8	2591	51.60
2003	4.97	4548.1	83.9	1025	222.7	2720	54.20
2004	6.70	5120.4	91.4	1093	242.7	2905	56.04
2005	4.78	5677.8	103.1	1209	261.0	3061	55.09
2006	5.24	6271.2	122.2	1405	283.5	3255	51.31
2007	6.62	6892.7	149.4	1684	309.9	3493	46.15
2008	4.15	7720.9	173.6	1919	329.0	3636	44.47
2009	1.15	8026.1	168.5	1851	335.4	3685	47.64
2010	7.63	9003.5	199.6	2155	365.3	3945	45.11
2011	3.64	9706.3	224.1	2379	386.1	4098	43.31
2012	6.82	10564.9	250.2	2611	419.6	4380	42.23
2013	7.16	11546.1	272.2	2792	454.3	4660	42.45
2014	6.10	12645.3	284.8	2844	642.8	6924	44.40
2015	5.8	13307.3	292.4	2863	741.0	6547	45.50

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
GDP Growth %	4.6	4.9	4.8	9.2	5	6.4	8	5.6	5.2	5.6
Time	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
GDP Growth %	5.149	3.423	3.619	1.875	-7.324	-7.307	3.417	4.312	6.753	6.205
Time	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
GDP Growth %	3.037	-0.578	0.338	2.116	4.388	4.679	5.846	5.185	-0.577	3.082

Time	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
GDP Growth %	4.411	2.894	3.646	4.970	6.698	4.778	5.243	7.117	4.153	1.148
Time	2010	2011	2012	2013	2014	2015	2016	2017		
GDP Growth %	7.632	3.6	6.8	7.2	6.1	5.8	6.9	6.7		

GDP growth at constant 1985 prices in Philippine pesos

1.2 Major problems in the economic development of the Philippines

Like many countries in the world, the Philippines also has a history of European colonization. It is a colony of Spain and the United States, home to a variety of cultural and ethnic groups, and is considered a perfect example of mixed economy. At present, the Philippines is in the transitional stage from the agricultural economy to the industrial economy. Although economic growth has remained relatively stable in recent years, there are still some economic problems that cannot be ignored.

1.2.1 Defects in the economic structure.

For example, the huge differences in wealth and material distribution, the overall inefficiency and lack of vitality in manufacturing, the subsequent sustained balance of payments deficit and the recurring large public sector deficit are major problem.

1.2.2 Underemployment.

As of January 2018, the labor market was tight, the unemployment rate was about 5%, real wage growth was limited, and the quality of employment was still worrying. According to the labor force survey, the unemployment rate was 6.8%, 6.5%, 6%, 6.6%, 5.5% and 5.7%, respectively from 2012 to 2017. The unemployment rate fell to 5 percent in October 2017, before increasing slightly to 5.3 percent in January 2018, driven by higher employment in the country's three main economic sectors: agriculture, industry, and services, but only some Filipinos could find good jobs in their home countries or overseas jobs, the rest are still in a state of lack of job opportunities to find jobs or informal employment. The Philippines' low unemployment rate points to a continued tight labor market and an economy close to full employment.

1.2.3 Poverty.

Although the Philippines is a fast-growing economy, the situation of poverty has only slightly declined. Poverty is closely related to unemployment. Unfortunately, growth is limited to business process outsourcing (BPO), retail and real estate, and there are many Filipinos who still have no jobs. In addition, the natural disasters have left a large part of the Philippines still below the poverty line. Therefore, economic difference is a common feature. In general, the benefits of faster economic growth have not really penetrated the poor.

1.2.4 Poor infrastructure.

Infrastructure is one of the biggest challenges. The World Economic Forum's Global Competitiveness Report (2014-2015) states that the Philippines is not performing well in terms of overall infrastructure quality. It ranks 91st out of 144 countries, which is basically attributable to inadequate infrastructure investment.

1.2.5 Relies foreign investors and foreign aid

The government relies on and supports foreign investors, multinational corporations and foreign debt as well as foreign aid. In 2013, the Philippines became the third largest recipient of immigrant remittances after India and China. According to data from the Central Bank of the Philippines, remittances from Philippine overseas workers (OFWs) reached \$25.1 billion in 2013. It is 7.6% higher than last year's remittance, accounting for 8.4% of the Philippines' gross domestic product (GDP) in 2013. Source countries for remittances include the United States, Saudi Arabia, the United Kingdom, the United Arab Emirates, Singapore, Canada and Japan. The Philippines relies heavily on these funds, and their economic growth is mainly related to the remittances of Philippine overseas workers and the growth of the business process outsourcing (BPO) sector.

2. Review of the Philippine historical disaster

2.1 Review of historical disaster events in recent years

The Philippines is located in the typhoon belt of the Pacific Ocean and has about 20 typhoons per year. In addition to typhoons, it is also affected by earthquakes, volcanic eruptions, storm surges, floods and landslides.

Typhoon Mangosteen-September 2018

Typhoon Mangosteen landed at Baggao, Cagayan, Philippines, at 1:40 am on September 15, 2018, and crossed the northern part of Luzon at a speed of 30 kilometers per hour. More than 250 domestic and international flights were grounded due to bad weather, 141 areas suffered power outages, and nearly 800 ships and more than 4,200 passengers were stranded. The government opened the government building on the Mangosteen path as a temporary shelter for the people. Schools and factories were temporarily suspended. The typhoon transit area is an agricultural-based area, thousands of people evacuated before the typhoon struck and the crops were seriously damaged. Mangosteen has caused 68 deaths, 138 injuries and 2 missing, causing 43 incidents, such as mountain landslides, floods, road landslides, land subsidence, car accidents, damaging 179, 401 houses, causing losses of 670 million US dollars in infrastructure and agriculture.

Mayon Volcano Eruption-January 2018

Mayon Volcano, located in Albay, 300 km southeast of Manila, suffered two lava collapses on January 15, 2018, with falling rocks and ashes in 29 villages in Camalig and Guinobatan. The lava flow, the falling rock event and the short volcanic debris flow were also observed the next day. Due to falling rocks, landslides and sudden explosions/collapses that may create dangerous volcanic flows, the Philippine Institute of Volcanology and Seismology recommends establishing a permanent and extended hazardous area. As a result, evacuations were carried out in 25 villages. As of February

19, 2018, approximately 90,000 people in six cities and two cities in Albay were affected, there are currently about 62,000 in 57 evacuation centers, there are still level 4 warnings in the area, evacuation is effective for the Albay community.

Typhoon Tembin - December 2017

Several provinces in Mindanao were affected by Tropical Storm Tembin (known locally as Vinta) and landed on December 22, 2017. Tembin killed more than 170 people, causing damage to thousands of homes and livelihoods, affecting parts of northern and central Mindanao. According to the seventh Disaster Response Operations Monitoring Information Center (DROMIC) report issued by the Department of Social Welfare and Development (DSWD), Tembin affected at least 313,498 people in 998 towns in the region.

Tropical Storm Kai-tak - December 2017

Tropical storm Kai-tak (known locally as Urduja) landed in San Policarpio, Eastern Samar Province on December 16, 2017 and the rainfall during the 48 hours reached two months of accumulated rainfall, causing severe flooding. Northern Samar Province, Tacloban and Ormok cities declared a disaster. The NDRRMC launched a national response team to closely monitor the situation and assist local authorities in the affected areas to coordinate responses. There was no request for international assistance. It is reported that a total of 435,220 families were affected in 2,524 villages and 14 people were killed. There are approximately US\$1 million losses on national roads and approximately \$720,000 crop losses.

Earthquake - July 2017

A 6.5- magnitude earthquake occurred in the Philippines on July 6, 2017. The depth of the earthquake is 6.49 kilometers, and its epicenter is located three kilometers north-northeast of Masarayao on Leyte Island. An estimated 371,680 people live within 15 kilometers of the epicenter. As of July 19, nearly 1,000 aftershocks have occurred, including several 4.0-magnitude and 5.8-magnitude earthquakes on 10 July. Three deaths and 448 injuries are reported.

Earthquake - February to March 2017

On February 10, 2017, a 6.7-magnitude earthquake caused loss of life and property in the Caraga region, especially in Surigao Del Norte Province. The depth of the earthquake is 10 kilometers and the epicenter is located near Surigao City. On March 5, a 5.9- magnitude tremor occurred near San Francisco Municipality, caused a total of 53,455 people in 10,691 families, in 82 towns in North Surigo. According to reports, 8 people were killed and 249 injured from the initial 6.7-magnitude earthquake to the March 5 earthquake.

Floods and landslides - January 2017

On January 16, 2017, flash floods in northern Mindanao and the Visayas caused more than 63,000 people to be displaced, with an estimated 48,000 inside 115 evacuation centers.

Typhoon Haima - October 2016

On October 19, 2016, the typhoon landed in Cagayan as a category 4 storm, with 8 people dying from the storm. These deaths occurred on the landslides of Caraga (CAR). In addition, two people were reported missing. According to the Department of Social Welfare and Development (DSWD), a total of 53,433 people were displaced in the CAR and Regions I, II, III, IV-A and V.

Floods and landslides - August 2016

From August 13 to 14, 2016, heavy rains and floods caused by the southwest monsoon and a low-pressure weather forced more than 260,000 people to flee their homes. Strong monsoon rains affected six parts of the country, mainly in Luzon, causing flooding and landslides in certain areas of

Rizal and Northern Luzon. A few days after the rainstorm, approximately 18,000 were housed in 77 designated evacuation centers across the country. On August 17, Dagupan, a city 200 kilometers north of Manila, declared a disaster, following a city-wide flooding.

Typhoon Melor - December 2015

Typhoon Melor landed on Batag Island in Northern Samar on December 16, 2015 and landed on five other sites on December 16, 2015. Melor has a wind speed of 150 km/h (93.2 mph) and gusts of up to 185 km/h (114 mph), bringing heavy rainfall over a diameter of 300 km. Provincial and local governments have preemptive evacuation in communities with high risk of landslides. More than 730,000 people from five regions were evacuated to evacuation centers. Four people were confirmed death and more than 199,850 houses were damaged. The area of most damaged houses was in Oriental Northern Samar Province and Sorsogon Province. 99 classrooms and 35 medical facilities were damaged.

Typhoon Koppu - October 2015

Typhoon Koppu (known locally as Lando) landed in the Philippines on October 14, 2015. According to government reports, at least 46 people were killed, 82 were injured and 5 were missing due to the storm. More than 500,000 people were evacuated, of which 108,700 were distributed in 424 evacuation centers. The government-led typhoon relief effort was transferred to recovery efforts within three weeks.

Typhoon Rammasun - July 2014

Typhoon Rammasun (known locally as Glenda) landed on Lapu-Lapu, Albay Province in the eastern Philippines, on July 15, 2014. It crossed the National Capital Region area the following morning, impacting Metro Manila with strong winds and heavy rain, causing power outages and interrupting telecommunications. Rammasun killed 100 people and destroyed more than 100,000 homes. The remaining 400,000 homes were affected, about 500,000 people were displaced, and 27,000 people were evacuated to 108 evacuation centers.

Typhoon Haiyan - November 2013

Tropical Storm Haiyan (known locally as Yolanda) was originally formed in Micronesia, then gained strength, continued westward, and landed for the first time in Guiuan municipality, East Samar, on November 8, 2013. The preliminary report estimated that about 4.3 million people were affected in 36 provinces. The government accepted international assistance from the United Nations. The number of affected population has increased to 14 million in nine regions, including 4 million people still displaced. The humanitarian partners launched the Strategic Response Plan (SRP) for Typhoon Haiyan on December 10, which required US\$791 million to supplement government-led typhoon response and recovery efforts. Haiyan was the most deadly event in the Asia-Pacific region in 2013, killing more than 6,000 people.

Typhoon Nari - October 2013

Typhoon Nari (locally known as Santi) hit the northern part Philippines earlier on October 12, 2013, killing 13 people and affecting more than 200,000 people. More than 43,000 people (or 9,000 families) have been displaced, some living with host families and others in evacuation centers. More than 16,500 homes were damaged. Bulacan province was severely damaged by floods, several villages were flooded, and rice and vegetable farms were damaged and destroyed.

2.2 The impact of disasters on economic development

The various disasters have some major negative impacts on the development of social economy. First, direct economic losses directly affect economic growth. Serious social wealth loss has a direct block and damage to social and economic development. The disaster hinders the development of the social economy, and even makes the economic and social development regress in some areas and in a certain period of time, and becomes a long-term constraint factor for the development of the national economy. Second, disasters have caused economic development costs to rise, revenues have decreased, and economic growth has slowed down: on the one hand, the state has to increase investment in disaster prevention and mitigation, resulting in an increase in the cost of economic development; Under the premise of a total investment in society, the expansion of investment in disaster prevention and mitigation will cause the reduction of direct investment for economic development and the impediment of social reproduction development. Third, disasters often cause the production of some products to not work properly for a certain period of time, such as crop failures, energy shortages, and the abnormal production of raw materials required for some infrastructure, directly or indirectly bringing prices rise. The prices rise will not only directly affect the lives of the people, but also indirectly affect the economic and social development.

3. The impact of emergency management on economic development

3.1 Ensuring economic development

From a macro perspective, the improvement of economic development must be done to develop resources and reduce expenditure. Developing resources uses addition to promote the continuous appreciation of social assets, while reducing expenditure uses subtraction minimizes or avoids unnecessary expenses. In a sense, the occurrence of emergencies is a stumbling block on the road of economic development, which not only reduces social wealth, but also brings certain damage to the social system. Therefore, the risk prevention and emergency management of emergencies can reduce its impact on the loss of social value, reduce social harm, ensure economic development, make emergency management the core of reducing expenditure, and have the most basic value in social governance.

3.2 Promoting social progress

The state of the current social system is a relatively balanced, and there are also many factors that cause it to fluctuate, and emergencies are one of the factors. The emergencies undermined the original equilibrium state, making the social system a low point and becoming vulnerable. Therefore, in order to better cope with and prevent the losses and risks caused by emergencies, we must take necessary measures to strengthen the social system construction, adjust and improve some functions, and thus promote social progress.

3.3 Boosting international status

With the development trend of economic globalization, while the global economy is growing year by year, the disparity between the rich and the poor is becoming more and more obvious, which has aggravated social contradictions. The ups and downs of the economy in many countries, the turmoil in social order, terrorism, separatism, and extremism have disrupted the healthy and harmonious development of the world. In addition, due to the influence of the natural environment and climate, the sudden occurrence of natural disasters is still on the rise. Therefore, ensuring economic development, maintaining social stability, and reasonable and efficient response of emergencies have become the focus of global attention. National emergency management strength is closely related to the development of the country. The level of development of the country determines its international status and has a profound impact on the world pattern of economic and environmental globalization.

4. Need for the Philippines to improve emergency response

At present, the Philippines is committed to building a harmonious economic society, and the international and domestic situation has created a rare historical opportunity for the construction of a harmonious society. Despite this, it is more necessary to be prepared for danger, to be aware of the difficulties and problems that may be faced at present. Under the situation of rapid market economy and increasing globalization, various unstable factors are increasing, and at the same time, interference and destruction of nature also brings many adverse consequences. In this situation, only by doing the emergency management of relevant emergencies can we ensure the smooth progress of building a harmonious society. Therefore, it is extremely urgent for the Philippines to improve its emergency response.

4.1 Need for the trend of international emergency management development

Under the background of global environmental change and social and economic globalization, most of countries in the world have suffered more or less from natural disasters, accident disasters, public health and social security, which seriously affect the stability of the country and the healthy development of social economy. Many developed countries are aware of the importance of developing and improving emergency management in the face of risks and uncertainties in the future. They have begun to gradually attach importance to the building of emergency management capabilities, and vigorously develop emergency industries to promote stable economic development while ensuring calm and effective response to emergencies.

4.2 Need for improvement of disaster prevention and mitigation capacity

The geographical location and climatic environment of the Philippines cause the probability of being affected by sudden natural disasters every year much higher than most countries in the world.

The backward public infrastructure cannot withstand the invasion of strong destructive natural disasters. Many infrastructures have disappeared after the disaster, losing their original functions and even causing harm. In addition, various problems erupted due to inadequate urban construction planning have increased the impact of disasters, making the Philippines' disaster-resistance and disaster prevention capabilities particularly vulnerable to disasters and risks.

4.3 Requirements of the National Disaster Risk Reduction and Management Plan (NDRRMP)

The Philippines passed the Disaster Risk Reduction and Management Act in 2010 to lay the basis for a paradigm shift from just disaster preparedness and response to disaster risk reduction and management (DRRM). The National DRRM Plan serves as the national guide on how sustainable development can be achieved through inclusive growth while building the adaptive capacities of communities; increasing the resilience of vulnerable sectors; and optimizing disaster mitigation opportunities with the end in view of promoting people's welfare and security towards gender-responsive and rights-based sustainable development. The Philippines hopes that through NDRRMP, it will have "safer, more adaptable and resilient Philippine communities to achieve sustainable development", and realize it through four areas of "disaster prevention and mitigation, disaster preparedness, disaster response, and post-disaster recovery".

4.4 Need for the harmony between man and nature

Judging from the current situation, the long-term mismatch between human development and the natural environment has led to more environmental safety issues. It not only causes incalculable economic losses to the countries concerned, but also threatens the development and survival of human society. In a sense, the improvement of emergency response can reduce or prevent the damage caused by disasters and keep humans in a relatively harmonious state with the natural environment.

4.5 The inevitable requirement of current technological development

With the advancement of human science and technology, some large cities with developed technology possess certain characteristics of robots, creating convenience and comfort for the material and spiritual needs of citizens. However, the rapid upgrade of technology is a double-edged sword. The more popular the application of electronic systems and equipment systems, the more sophisticated and complex the structure is, the more likely it is to malfunction, and the more difficult it is to diagnose and repair. Because people are eager for quick success, some technologies are put into use in advance during the running-in period, which reliability is highly uncertain and may cause some sudden disasters. Therefore, improving emergency response and coping with scientific and technological disasters is also an inevitable requirement of social development.

5. Application of Haidexin emergency industry platform in the Philippines

5.1 Corporate profile

Tellhow adheres to the mission of “creating intelligent technology, products and services to improve the quality of human life”. After years of exploration and precipitation, it has formed a development pattern of smart energy, military equipment, digital creativity, smart city, and investment business. Longyan Haidexin Automobile Co., Ltd., a subsidiary of Tellhow, takes "the world’s most professional emergency solution service provider" as its mission, conforms to the global emergency industry trend, responds to the national strategy of military-civilian integration, and vigorously develops the smart emergency industry.

5.2 Corporate vision

There is only one earth on which human beings live. Countries are in the same world, sharing the same fate, and the current international situation is also developing towards world multipolarization, economic globalization, cultural diversity and social information. Therefore, Chinese President Xi Jinping has put forward the development strategy of The Belt and Road and Community of Human Destiny in recent years, and strives to fully rely on the existing dual and multilateral mechanisms of China and relevant countries, and with the help of existing and effective regional cooperation platforms, actively develop economic partnerships with other countries, and jointly build a community of interests, a community of destiny and a community of responsibility for political mutual trust, economic integration, and cultural inclusion. Tellhow and Haidexin have always focused on the development strategy, “Personal success lies in the realization if undertaking responsibilities. The value of life lies in continuously undertaking responsibilities.” as the professional values, to established a corporate culture system centered on “realization of undertaking responsibilities ” and actively participated in social progress and improvement. At the moment when opportunities and challenges coexist, Tellhow and Haidexin closely focus on the concept of “customer-centered and striver-oriented”, with innovation and transcendence, continuous improvement, going out of China and over the whole world.

5.3 Application of Tellhow- Haidexin Emergency Industry Platform in the Philippines

5.3.1 Emergency equipment

The destruction and impact of natural disasters often cause the Philippine economy to be hit hard, the people could hardly survive, and many relief efforts still depend on some international organizations. In order to better protect people's livelihood and reduce the damage and impact caused by disasters, the construction and promotion of emergency support capabilities is imperative for the Philippines. In the emergency field, Haidexin focus continuously on the emergency industry situation, and provides individual emergency overall solutions according to the industrial characteristic and needs. Based on providing emergency power supply, emergency drainage, communication and

command, logistics support, anti terror and riot and other emergency equipment, Intellectual Service System of Internet of Vehicles with independent innovation, Haideixin overall design corresponding services, such as emergency training and exercises, test, and maintenance, as well as provide on-site and remote support in the major conferences, activities, natural disasters and accidents.

Products and applications: including Emergency Power Supply Vehicle, Emergency Drainage Vehicle, Communication Command Vehicle, Emergency Lighting Vehicle, Multi-functional Rescue Equipment Vehicle, Kitchen Vehicle, Camping Vehicle, Intelligent Cloud Service System, etc., are widely used in electric power, communications, military, nuclear power, water affairs, transportation, national rescue teams, etc. They play an active role in public emergencies, such as the China-Africa Cooperation Forum, the 18th Summit of Shanghai Cooperation Organization, the 19th Session of National Congress of the Communist Party of China, the “New Gutian Congress”, M8.0 Wenchuan Earthquake, Super Typhoon “Meranti”, the flood-resistance rescue along the Yangtze River, and rescue of the Wangjialing mine.

5.3.2 Smart city emergency service

The in-depth development of the Internet has spawned a new network and new data environment for Innovation 2.0, creating a new ecosystem of innovation 2.0 that takes people's life, work, and social space as a space for open space in the metropolis, and has spawned a smart society. As a product of social development, the city is also an important stage for the development of today's society. It also needs to create smart cities and a harmonious society with the characteristics of user innovation, open innovation, collaborative innovation and mass innovation. Haidexin leads the designing, investment, construction and operation of smart city in the field of smart city emergency services. Relying on the rich experience in the fields of intelligent building and energy and focusing on the needs of smart city construction, Haidexin can provide top-level design for smart city, solutions, system integration and operation, maintenance and other services for the Philippines, to help rebuild the management system, governance model, public service, and industrial layout with modern information technology, to enhance the happiness and security of the Filipino people.

Products and applications: Top level design for smart city, Smart Energy, Healthy Building, Smart Park, Smart Airport, Solar PV, Urban Heating, Smart Energy and Environmental Solutions, Building Health Environment Automatic Controlling System, Smart Airport Solutions, Smart Air Purification Solutions, Building Lifecycle Management Platform, Photovoltaic Monitoring Management System, Smart Heating Solutions, Water Disaster Prevention and Control System, Intelligent Lighting and Energy Saving Products, etc.

5.3.3 Smart energy

The power industry has become an important basic industry in the national economy in the 21st century. It is the top priority of the national economic development strategy. Since the use of electric energy has spread throughout the national economy, society and human life, in the field of smart energy, Haidexin focuses on the energy Internet system solutions, power information, operation and maintenance, power distribution equipment and automation systems, intelligent emergency power supplies, international power engineering construction and other markets, relying on Tsinghua Strait Research Institute, Germany, the United States Research Center and other platforms, energy Internet solutions, power grid big data intelligent distribution operation and maintenance control

as the key development, and initially completed the development of products such as power generation cloud and energy efficiency cloud, which can provide information, security, standardization and intelligent services for the construction of the power industry in the Philippines, to promote the healthy development of the power industry and provide a strong guarantee for the rapid development of the Philippine economy.

Products and applications: A. Haidexin provides customized energy services for power producers, grid operators, and electricity sellers, including overall energy Internet solution, such as consulting design, power trading, integrated energy, intelligent operation and maintenance, energy efficiency management, and electricity marketing; B. Haidexin developed a series of power professional software products based on the self-developed eOMP software technology platform. The products cover related professional management software such as power grid production, power grid dispatching, power grid security, provides solutions and services for informatization of industry; C. Haidexin is committed to information technology applications, introduces international advanced technology, R&D 1-1000kW various types of intelligent diesel (heavy) oil generator sets, trailer power stations, silent generator sets, hydropower equipment, etc., which widely used in factories, mines, buildings, operators, construction, ships, oil fields and refining; D. Haidexin specializes in the production of 12kV-40.5kV medium voltage components, 0.4kV-40.5kV series of medium and low voltage complete sets of equipment, intelligent outdoor cable equipment and large-scale intelligent integrated box transformer substation and other power transmission and distribution equipment, widely used in infrastructure construction such as power plants, power grid, telecommunications, transportation, water conservancy, chemical industry, environmental protection, mining, new energy, and building.

5.3.4 Military equipment

The level of national defense and military modernization of a country is a symbol of national strength, an important component of state power, and a strong backing for the state to safeguard national interests. In the field of military equipment, Haidexin specializes in the research and development, production and service of communication command, navigation, in-vehicle electronic information systems, radar and electronic countermeasure systems, photoelectric imaging and measurement systems, operational command and support systems, power stations and power distribution systems, new energy and mechatronics, special air conditioner, ammunition and its supporting fuze / composite solid propellant, which can provide products and equipment for various armed forces in the Philippines, lay the foundation for the Philippine national defense undertaking, safeguard the people's livelihood, and enhance the overall national strength.

Products and applications: Vehicle Communication Command System, Military Mobile Power Station, Radar and Countermeasure Products, Photoelectric Detection System

5.3.5 Digital creativity (virtual emergency scene)

As we all know, the occurrence of any disasters will result in different levels of loss of property and life, especially inevitable natural disasters. The presentation and implementation of emergency drills can help to better grasp the emergency skills and effectively face the sudden disasters and avoid or reduce the damage as much as possible. With the advancement and development of science and technology, the combination of emergency drills and virtual reality technology has made the

traditional emergency drills perfect interpretation and sublimation. Based on the suddenness, diversity, and seriousness of the emergency public events, combined with the various hazards that may occur at the event site, Haidexin adopts mature VR, AR, 3D technologies and VR devices to present emergency real-life scenarios and dangers for emergency safety education and training exercises. The experiencers can master the corresponding preventive knowledge and emergency measures through the various disasters or dangerous scenes experience. The virtual emergency scene experience service can help the Philippines to carry out emergency drills or rehearsals through various methods such as actual drills, simulation exercises, and desktop deductions, so that the effectiveness of emergency drills can be improved, effectively supplementing the training effects. In the emergency management work, it also helps relevant departments and personnel to be familiar with the emergency command process, and master the disposal methods of various emergencies.

5.3.6 Emergency industry financial service

The Belt and Road and Community of Human Destiny development strategy demonstrate China's important ideas and determination to achieve peaceful development and build a harmonious world. Focusing on the emergency industry, combining with the reality of emergency industry, adhering to the concept of "investment services and resource integration", through the linkage and strategic cooperation with industry-related listed companies, Haidexin will create a unique emergency industry resource integration platform, bringing together, high-end and elites from all walks of life, such as government, finance, industry and professional institutions, provide more value-added services to the invested enterprises, and help the domestic and international emergency industries to flourish and create good economic and social benefits. At the same time, I hope that through the friendly exchanges and cooperation between China and the Philippines, we can incubate more and better emergency industry projects and promote the common progress and development.

6. Conclusion

Era of progress, social development, and the level of human needs is also increasing. The Industry 4.0 era has brought challenges and opportunities to the development of a country and a nation, and at the same time endowed a new mission and responsibility. The Philippines should seize this great opportunity and firmly establish the scientific management awareness, maintain friendly relations between China and the Philippines, and work closely together, mutually benefit, in order to better promote sound economic development and enhance overall national strength, guarantee peace and prosperity and harmonious development.

The construction and development of the emergency industry has important and far-reaching significance for the promotion of industrial structure upgrading, the transformation of economic development mode, and the acceleration of a harmonious society construction. Therefore, in the new era of the arrival of Industry 4.0, the Philippines should grasp the development opportunities, increase the emphasis on the development of the emergency industry, and consolidate the basic capabilities. At the same time, leveraging the Belt and Road and Human Destiny Community policies proposed by the Chinese government, the Philippines should integrate the emergency industry resources, strengthen exchanges with China's superior emergency enterprises (such as Haidexin), to

promote the development of the cluster, so that the emergency industry will continue to grow and develop, so as to better promote the steady development of the economy, enhance the overall national strength to guarantee peace and prosperity and harmonious development.

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