

# Taiwan's Social and Economic Challenges

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## 1. Introduction

When we read or talk about Taiwan, we attribute a number of ideas and thoughts about a distant island from Europe which was one of the well-known East Asian economic miracles, the so-called Asian new industrialized economies (ANIEs), together with Hong Kong, Singapore, and the Republic of Korea (ROK). The rich bibliography describing and analyzing the background of the spectacular economic development of these economies also mentioned these famous fours as tigers, dragons and ANICs (Asian newly industrialized countries). No need to say, the latter is not punctual, as Hong Kong—contrary to Singapore and the ROK—is not a country, but since 1997, a special administrative region (SAR) of the People's Republic of China. Moreover, with the exception of a few countries, Taiwan is also not recognized as an independent state, but as a part of China. Members of the European Union and all other significant powers in the world consider Taiwan as an important entity in terms of its economic performance, and in fact, with its own currency and financial and corporate system, Taiwan has its own economy, but in the international political arena, Taiwan is not considered as an independent entity. It is radically different, than it was before the early 1970s, when Taiwan, the so-called Republic of China, represented China in the United Nations' Security Council. So, for several decades now, Taiwan has to act in international isolation in terms of political relations, but in terms of trade, business, sports, culture, education, and many other fields, it developed a wide range of cooperation with most countries of the world.

The relations between Taiwan and the “Mainland”, the People's Republic of China (PRC) have also undergone important changes. Even though Beijing considers Taiwan as a renegade province, the trade and investment relations between the two sides of the Taiwan Strait became intensive. The PRC needs semiconductors and other state of art technologies while Taiwan needs growing export market opportunities. Nowadays, PRC is far the biggest trade partner of Taiwan, by and large 30-40 percent of the Taiwanese export is purchased by the PRC.

The economic ties became really strong, therefore, contrary to militant rhetoric of politicians, PRC has no interest to get the control back over Taiwan by military force, unless the government in Taipei declares its independence.

## 2. About Taiwan in a Nutshell

The island of Taiwan (formerly called Formosa) is located off the south-eastern coast of the continental China, at the western edge of the Pacific Ocean, between Japan and the Philippines. The Central Mountain Range divides the east and west coasts and stretches from north to south. With Japan to the north, the People's Republic of China (PRC) to the west beyond the Strait of Taiwan, and the Philippines to the south, Taiwan has always been a location of strategic maritime importance since ancient times. It has played an important role in the development of Asia, as well as in world history, politics, and trade. As a result, Taiwan, which comprises several smaller archipelagos in the South China Sea, now enjoys a high level of openness and cultural diversity. Taiwan's geographical and historical uniqueness has given rise to a diversity of ethnic groups, cultures, and languages. There are 380,000 people who belong to twelve officially recognized indigenous tribes, each with their own social structure, language, and cultural traditions. Taiwan has a population of 23 million people who still observe their culture and still speak regional Chinese dialects in addition to Mandarin (MOE Taiwan, 2017). Taiwan's jurisdiction extends to the archipelagos of Penghu, Kinmen, and Matsu, as well as numerous other islets. The total area of Taiwan, including the outlying islands, is around 36,197 square kilometers which is similar in size to the Netherlands (Taiwan at a Glance 2020-2021, 2020) and slightly bigger than one third of Hungary.

Taiwan is relatively poor in mineral resources, but it has small deposits of coal, natural gas, limestone, marble, asbestos, and arable land. The majority of the island is covered by a mountain range, with more than 300 peaks over 3,000 meters above sea level. Its highest point is Yu Shan (3,952 m). Therefore, Taiwan has very limited possibilities for agriculture. According to the figures of the CIA Factbook (2021), based on estimation, the ratio of agricultural land is 22.7 percent only. The population of Taiwan was 23,572,052 (July 2021), while life expectancy at birth for the total population is 80.95 years (for males: 77.93 years, for females: 84.14 years in 2021) (CIA World Factbook, 2021).

After the 1960s, Taiwan went through a rapid economic and industrial reform, also experienced remarkable social development. The basis of this spectacular development was the export-oriented economic development policy combined with the implementation of the so-called developmental state model, which was a locally adopted way of the post-WWII economic development model of Japan.

The concept of the “developmental state” was first described and introduced by C. Johnson (1982) in the economic bibliography. He fundamentally applied this concept to Japan, but later it has been extended to other countries as well, in particular to the first wave of the newly industrialized Asian economies (ANIEs) (South Korea, Taiwan, Hong Kong, and Singapore).

According to Ricz (2016), Johnson’s 1982 model is still valid and in line with that the most important characteristics of the developmental state are described as follows: a “capitalist, plan-rational model, with a long-term commitment to the developmental-oriented approach, and active state interventionism in order to achieve the main socio-economic objectives. It is also tenable that for building or maintaining a developmental state some kind of social consensus is needed regarding the central role of the state in development, as well as on the content of the main socioeconomic objectives” (Ricz, 2016). The classic school of Johnson as well as Ricz (2016) and Csáki (2016) underlined that from the very beginning, the Japanese governance wanted to differentiate the approach it has applied both from the American model and the Soviet planned economy. The developmental state is almost the complete opposite of the so-called rentier state, the peculiar features of which have been analyzed by Gyene (2017), using the example of the post-Soviet countries of Central Asia. In these countries, the state/government control over the economy is also strong, but the source of the “rent” is primarily the selling of natural goods, raw materials, rather than work, representing an increasing share of added value.

The economic achievements of the 1970s and 1980s allowed Taiwan to rank among the Asian Tigers and in the 1990s, among developed countries. Since the 1980s, the economic structure of Taiwan gradually shifted from labor-intensive industries to high-tech industries, wherein the electronics industry was particularly vital to the world’s economy. Taiwan has excelled in the semiconductor, optoelectronics, information technology, communications, and electronics fields. At present, the economy is shifting toward nanotechnology, biotechnology, optoelectronics, and the tourism service industry. Moreover, international trade is the economic lifeline of Taiwan. Japan and the United States were Taiwan’s top two

trading partners until 2005, when mainland China took over as Taiwan's main import/export trading region, while Japan and the United States came in second and third. In recent years, the unfavorable financial situations of the US and European economies and the economic slowdown in mainland China had a joint impact on the economic performance of Taiwan (MEET-Taiwan, 2017).

Globalization reshaped the economies by increasing market competition all around the world, and also brought about a thorough transformation in the characteristics of competition in the market. As a result of deregulations and international agreements, governments, instead of directly interfering into the competition, rather apply indirect tools in order to improve the conditions of business environment. Another robust phenomenon is the massive increase in online sales over the last years and the intensive growth of e-commerce and development continues every year in most developed economies (Erdeiné Késmárki-Gally et al., 2015; Dobroselskyi et al., 2021). Taiwan has a dynamic capitalist economy with gradually decreasing government guidance on investment and foreign trade. Exports, led by electronics, machinery, and petrochemicals provided the primary impetus for its economic development. This heavy dependence on exports exposes the economy to fluctuations in world demand. Taiwan's diplomatic isolation, low birth rate, and the rapidly ageing population are other major long-term challenges. On the basis of estimated figures of CIA World Factbook (2021) and of the recent data (2022) of the Directorate General of Budget, Accounting and Statistics (DGBAS) of Taiwan, it is highlighted that Taiwan's PPP-based (purchasing power parity) GDP was 1,143.277 billion USD in 2019, GDP (official exchange rate) was 611.391 billion USD (2019), while the GDP growth rate was 3.36 percent (2020). The per capita GDP (real) was 28,383 USD (2020), while the ratio of gross national saving was 38.39 percent of GDP (2020). In 2018, the composition of GDP by sector of origin was as follows: agriculture (1.8 percent), industry (36.0 percent) and services (62.1 percent). The main industries are: electronics, communications and information technology products, petroleum refining, chemicals, textiles, iron and steel, machinery, cement, food processing, vehicles, consumer products, and pharmaceuticals. In March 2022, the labor force was estimated 11.8758 million, the division of which by sectors was as follows: agriculture (4.63 percent), industry (35.35 percent), and services (60.02 percent). The unemployment rate was 3.66 percent in 2022, 2.7 percent lower than in 2016, but slightly more than in 2018 (3.69 percent) (CIA 2017, 2021). In 2017, the Taiwanese public debt was 35.7 percent of the GDP (0.5 percent less than in 2016), while in 2017 the budget had 0.1 percent deficit. In 2019, the inflation rate (consumer prices) was 0.5 percent, a year before it was 1.3 percent. In 2019, the total exports of Taiwan amounted

to 388.49 billion USD (383.484 billion USD in 2018), while the total amount of imports was 308.744 billion USD (in 2017 it was 305.428 billion USD). In 2019, the main export commodities were: integrated circuits, office machinery/parts, computers, refined petroleum, liquid crystal displays, while in the same year the main items of imports were: integrated circuits, crude petroleum, photography equipment, natural gas, refined petroleum. In 2019, the main trading partners were as follows. Export markets: P.R. China 26 percent, United States 14 percent, Hong Kong 12 percent, Japan 7 percent, Singapore 7 percent, South Korea 5 percent, while in the same year the main import sources were P.R. China 21 percent, Japan 16 percent, United States 11 percent, South Korea 6 percent (CIA World Factbook, 2021). It can be clearly seen that the People's Republic of China is not only the biggest export market for Taiwanese goods, but also the biggest supplier of imports as well.

According to more recent sources, Taiwan exported goods in the value of 347.2 billion USD worldwide in 2020. It means 24.4 percent increase since 2016 and a 5.4 percent growth just from 2019 to 2020 (Workman, 2021). With other words, it can be said that Taiwan's economic performance was not significantly hit by the Covid-19 pandemic. In the year 2020, the main export figures and partners of Taiwan were as follows (Table 1):

Table 1: Taiwan's main export figures and partners in 2021

Country	USD, billion	Share in Taiwan's total exports (%)
PRC	103.1	29.7
United States	50.9	14.7
Hong Kong	49.3	14.2
Japan	23.5	6.8
Singapore	19.2	5.5
South Korea	15.2	4.4
Vietnam	10.6	3.0
Malaysia	9.5	2.7
Netherlands	6.1	1.8
Germany	6.1	1.7

Source: The author's own compilation based on Workman (2021).

It can also be underlined that in 2020, Taiwan achieved an outstanding trade surplus with many of its main trade partners, and the island gained an overall 59.8 billion USD surplus during 2020, which was 37 percent more than in 2019 (43.6 billion USD). Taiwanese surpluses with the United States (59.6 percent), Hong

Kong (22.3 percent) and the PRC (13.5 percent) increased in 2020 in comparison to the year before (Workman, 2021).

Besides outstanding export records, Taiwan has one of the biggest reserves of foreign exchange and gold in the world, the total amount of which was estimated 456.7 billion USD (on December 31, 2017), while the year before it was 439 billion USD. Taiwan's total amount of external debt was an estimated 189.684 billion USD (in 2019) while the year before it was 196.276 billion USD (CIA World Factbook, 2021). The main economic indicators of Taiwan are shown in Table 2.

Table 2: Taiwan's Main Economic Indicators between 2015 and 2019

	2015	2016	2017	2018	2019
Population (million)	23.5	23.5	23.6	23.6	23.6
GDP per capita (USD)	22,941	23,161	25,154	25,750	25,893
GDP (USD bn)	539	545	593	607	611
Economic Growth (GDP, annual variation in %)	1.5	2.2	3.3	2.8	2.7
Unemployment Rate	3.8	3.9	3.8	3.7	3.7
Inflation Rate (CPI, annual variation in %)	-0.3	1.4	0.6	1.4	0.6
Exports (USD billion)	284	279	315	334	329
Imports (USD billion)	236	229	257	285	286
International Reserves (USD)	426	434	452	462	478
External Debt (% of GDP)	29.5	31.6	30.7	31.5	30.2

Source: author's own compilation on the basis of data published by FocusEconomics (2021).

Taiwan has its own currency, the New Taiwan Dollar (TWD or frequently used as NT\$), the exchange rate of which is determined by market forces. However, when seasonal or irregular factors disrupt the market, the bank of issue (the Central Bank of the Republic of China /Taiwan/, CBC) may intervene to maintain an orderly foreign exchange market. Otherwise, CBC promotes financial liberalization and internationalization. The management of capital movements is market based. In general, capital can flow freely in and out of Taiwan (CBC, 2017).

The developmental state continues to impact Taiwan's post-war transformation and remains critical for its future economic, social, and political development (Schubert, 2016).

Analysts referred by FocusEconomics claimed that Taiwanese economy was rebounded strongly in the third quarter of 2020, contrasting the marginal contraction in the second quarter, marking the best result in two years. The turnaround was spearheaded by firmer export growth, chiefly thanks to soaring

demand for Taiwanese electronic goods from PRC and the US. In terms of the domestic market, consumer demand showed signs of recovery in Q3, contracting at a much milder pace than in Q2. Furthermore, government spending bounced back in the third quarter, solidifying the overall economic recovery in turn. The economic growth was seen to pick up steam in 2021, as the constraining effects of the pandemic were gradually wearing off. The increasing foreign demand for merchandise goods seems to support the external sector, while recovering consumer demand is set to boost domestic activity. However, uncertainty over the timing of a Covid-19 vaccine and geopolitical tensions with PRC shaded the outlook. Experts of FocusEconomics forecasted GDP growing by 3.4 percent in 2021 (FocusEconomics, 2021).

### 3. The Main Challenges of Taiwan

#### 3.1. Combatting against Covid-19

Looking back on 2020, it started with an outbreak of the Covid-19 pandemic that quickly spread out and wreaked havoc on the global economy and world trade. Hampered by the resulting demand weakness both at home and abroad, Taiwan's economic growth slowed to 0.35 percent in the second quarter, the lowest since the second quarter of 2016. However, the pace picked up further and further in the latter half of the year amid economic reopening overseas and the introduction of consumption stimulus policies domestically. The annual growth rate of GDP reached 5.09 percent in the fourth quarter, the highest since the second quarter of 2011. For the year as a whole, the economy expanded by 3.11 percent, also higher than the past two years. Similarly, domestic inflation was affected by the pandemic as softer international demand for raw materials dragged down energy prices and hospitality services (such as travel and hotels) launched promotional price cuts. The annual growth rate of CPI dropped to -0.23 percent, the lowest since 2016, while that of the core consumer price index (CPI) (excluding fruit, vegetables, and energy) fell to 0.35 percent, a record low unseen for more than a decade (CBC Annual Report, 2020).

Among the GDP expenditure components, net foreign demand became the driving force behind the economic growth of 2020, with a significant contribution of 2.73 percentage points. This was mainly due to export growth supported by shipments of advanced semiconductor chips and rising demand for new tech applications and products associated with remote working. Regarding domestic demand,

private consumption came under strain because of border controls and international travel bans during the Covid-19 outbreak. On the other hand, fixed capital formation recorded solid growth, because semiconductor firms increased capital outlays for advanced production, the government's major investment incentives went through robust implementation, and public projects gathered steam. In all, domestic demand contributed 0.38 percentage points to GDP growth.

As the severe economic impacts from the coronavirus pandemic caused international raw material (including crude oil) prices to slump, Taiwan's wholesale price index dropped by 7.79 percent over the previous year. Of the components, domestic sales—excluding imports, imported goods, and exported goods—recorded year-on-year declines of 5.71 percent, 10.28 percent, and 7.21 percent, respectively. Consumer prices were also affected by the pandemic, mainly reflected in reductions of domestic fuel and gas prices amid an international oil plunge and promotional discounts of local tourism and accommodation services. Consequently, the consumer price index dropped by 0.23 percent for the whole year, the first decline since 2016. Nevertheless, the core CPI (excluding fruit, vegetables, and energy items) rose by 0.35 percent, albeit the most modest increase since 2010.

The unemployment rate went up at the start of 2020 amid the coronavirus pandemic and reached 4.07 percent in May, before dropping on account of a domestic economic pickup towards the end of the year and registering 3.68 percent in December. It averaged 3.85 percent for the year as a whole, the highest since 2017. The average labor force participation rate edged down by 0.03 percentage points to 59.14 percent, the first decline since 2010. The average number of employed persons merely increased by four thousand, or 0.03 percent, to 11.50 million. The services sector hired 30 thousand more persons, representing a 0.44 percent increase mainly accounted for by increases in the healthcare and social work sectors. On the other hand, employment of the industrial and agricultural sectors decreased by 16 thousand, or 0.39 percent, and by 11 thousand, or 2.03 percent, respectively.

In terms of wages, non-farm (industrial and services sectors) monthly earnings per employee averaged 54,320 NT\$ with a smaller year-on-year increase of 1.24 percent. Nevertheless, real monthly earnings (adjusted for inflation) rose by 1.47 percent to a historical height of 53,094 NT\$<sup>1</sup> (CBC Annual Report, 2020).

<sup>1</sup> 1 USD = approx. 27.9 TWD (NT\$) (Bloomberg, August 3, 2021).



A study published in 2020 focused on the fact that the recovery rate of Covid-19 patients in Taiwan was 83 percent, much higher than the global average of 34 percent, while the death rate of Covid-19 in Taiwan was about 0.3 per million population, against a global average of 36 per million population. The outstanding statistics may be explained by the hard lessons learned from the formerly experienced SARS pandemic in 2003. For this reason, Taiwan's response was swift and effective to Covid-19 in 2020, furthermore, Taiwan's exclusion from the World Health Organization (WHO) further increased the government's and individuals' mental preparedness for fighting a pandemic independently (Chiang, 2020).

### 3.2. Regional Alignment in the Asia-Pacific Region – Enhancing NSP or the Cross-Strait Relations?

Taiwan's economy has been experiencing a downturn since the breakout of the global economic crisis in 2008, although the Covid-19 pandemic hit Taiwan to a lesser extent than other economies in the world. The Taiwanese economy has been vulnerable due to its excessive overdependence to the exportation. Both investment and consumption in Taiwan are growing at a slow pace. There are three main factors contributing to Taiwan's economic growth: investment, export, and consumption. Regarding the investment sector, the Taiwanese government has faced the sovereign debt ceiling, which restricts its capacity for raising public debt. The private investment sector shows limited growth potential. Furthermore, there is little progress in negotiations for FTA (Free Trade Agreement) as well as ECFA (Cross-Straits Economic Cooperation Framework Agreement) follow-up agreements. Negotiations, however, have been started for a cross-strait trade in goods agreement under the ECFA framework (Wang, 2015).

The relationship between the two sides of the Taiwan Strait is complex and unique. In the 1990s, there was no official contact between the two sides, and the government's public power could not directly handle it. However, the transactional issues arising from cross-strait exchanges must be carried out by the government's designated private institutions through an intermediary role. In order to maintain the technical and business issues between Taiwan and mainland China, the Straits Exchange Foundation (SEF) was established by the Taiwanese government in March 1991. The SEF is the only government-established institution in accordance with Article 4 of the "Regulations on People's Relations between the Taiwan Area and the Mainland Area" (referred to as the "Regulations on Cross-Strait Relations"). The operating organization, with the Mainland China Council as the

competent authority, receives authorization from the government to contact and negotiate with Mainland China on matters involving the exercise of public power (SEF, 2021). The SEF is technically a private foundation, however, in fact, it is funded by the Taiwanese government and controlled by the Mainland Affairs Council of the Executive Yuan (the executive branch of the Taiwanese political leadership). Its role is in fact, a kind of de facto embassy to mainland China, to not officially acknowledge the latter's sovereignty over Taiwan.

It should be added that Taiwan nearly reached a stalemate in the cross-strait relations before the Covid-19 crisis, therefore this way was proven to be an unsuccessful option to break out of the diplomatic isolation. In the recent years, another 2-3 countries have left that "narrow club" of countries which still recognize Taiwan as an independent state, the tiny Eswatini (Swaziland) remained the only one in the African continent, and no significant economic and political powers can be found among the other countries neither (Holy See, Kiribati, Marshall Islands, Nauru, Palau, Solomon Islands, Tuvalu, Haiti, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Belize, Guatemala, Honduras, Nicaragua, Paraguay). Other attempts to get admitted into international organizations, like the World Health Organization (WHO) of the United Nations also failed. But, based on the robust exports, Taiwanese economy works well and from the point of view of the Southeast Asian countries Taiwan appears to be a success story: a developed and rich economy. Therefore, it is a promising partner for cooperation. For many ASEAN citizens Taiwan provides livelihood as they were allowed to arrive and stay as guest workers (several hundred thousand people from ASEAN, mainly from the Philippines, Indonesia, and Vietnam arrived so far). The Taiwanese environment is very welcoming as there is no discrimination against foreigners, especially against Moslems, no anti-migrant rallies etc. (Lórinicz, 2019a).

Under these circumstances, it was not surprising that Taiwan needed a firm diversification in its strategy for economic and foreign relations. The most logical choice was to diversify these relations by intensifying cooperation in the Asia-Pacific region which is in direct geographical proximity of Taiwan. In this context, Taiwanese President Tsai Ing-wen in her inaugural speech in 2016 emphasized the significance of the New Southbound Policy to improve Taiwan's stance and versatility in the international economy, pointing out that by this Taiwan should give up being reliant on a single market (PRC) and re-establish and intensify ties with other Asian economies. Taiwan's trade ties with ASEAN countries have gained rapid traction in recent years.

Taiwan still faces the dilemma to identify its relation and behavior within the cross-strait relations, not only due to the well-known political considerations and diplomatic isolation, but also, it is widely visible that Taiwanese investors and the Taiwanese government fears the possible implications of a trade war between the US and the People's Republic of China (PRC, hereinafter: Mainland China). Besides other reasons, this is the main motivation of the sudden outflow of the Taiwanese FDI from Mainland China. This huge amount of capital, however, merely does not return to Taiwan to create new jobs and develop new, high value-added containing industries, but rather goes to Southeast Asia where it still focuses on the low-cost labor-intensive manufacturing sector. Besides other, non-industrial fields, the present Democratic Progressive Party (DPP)-based Tsai-administration fosters its New Southbound Policy (NSP), which is partially implemented under the umbrella of a special NGO, the Taiwan-Asia Exchange Foundation (TAEF). The 18 target countries of NSP comprise the full ASEAN, plus South Asia, Australia, and New Zealand. However, from among the target countries, Taiwan has the most intensive investment and trade relations with the ASEAN region (mostly with Vietnam, the Philippines, Thailand, Malaysia, and Indonesia) (Neszmélyi, 2020). As the elections in January 2019 reinforced DPP and the Tsai-government in power, it could be expected that Taiwan would not revert the focus from NSP to the improvement of the cross-strait relations. The political stance of Beijing, including an implicit threat of a military-solution for the re-unification definitely does not help the cross-strait business relations. In a recent research, Chen and Shih (2021) clarified that from the PRC's point of view the share of the bilateral trade between the PRC and Taiwan has been falling steadily, because of China's rapid economic growth, the steady expansion of the size of the Chinese market and the ongoing rise in China's overall exports. Nonetheless, the modest results of Taiwan's NSP had to reflect to reality: the PRC has still been, and most likely will remain far the biggest export market of Taiwan.

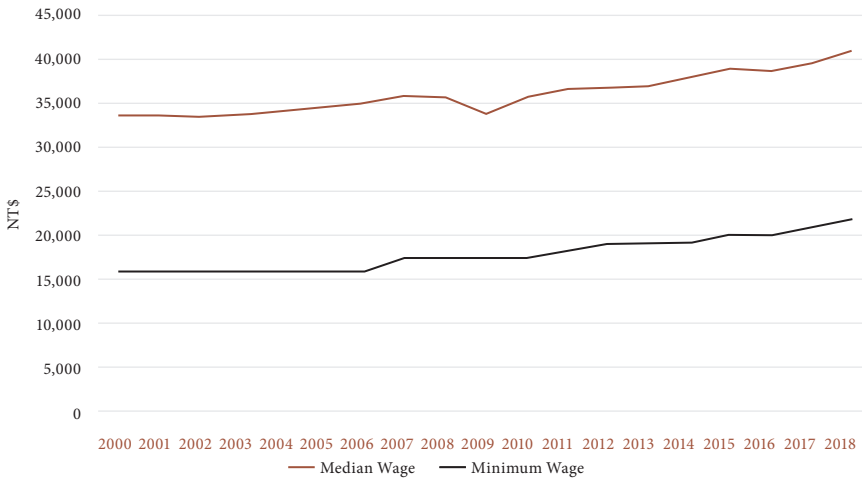
### 3.3. Dilemmas and Problems in the Taiwanese Society and Economy: Stagnant Salaries, Brain Drain, and Lack of New Jobs

Taiwan has a modern and developed economy with gradually shrinking government control on investment and foreign trade. Exports, led by electronics, machinery, and petrochemicals, provided the primary impetus on its economic development. This means strong dependence on exports that exposes the economy to fluctuations in world demand. Taiwan's diplomatic isolation, the low birth

rate, and the rapidly ageing population, stagnant salaries, brain drain, and the scarcity of new jobs are other major long-term challenges.

The real salary level has been stagnating for almost 20 years in Taiwan because of the imbalance of income distribution, not due to the lack of economic growth. Salary stagnation serves as an obstacle hindering Taiwan’s economic recovery. Although the speed of inflation in Taiwan is relatively low, the increase in salary is even lower (See Figure 1).

Figure 1: Taiwan’s Minimum vs Median wage between 2000 and 2018



Source: Ngerng (2020).

Comparing Taiwan with other economies with similar GDP per capita on the hourly compensation costs in manufacturing from 1996 to 2016 showed the same trend: Taiwan’s wages have barely grown, while South Korea (which until 1998 had similar wages as Taiwan) has seen its wages grow to more than twice as high as Taiwan. Even Argentina, which has less than 40 percent of Taiwan’s GDP per capita, has wages that have grown nearly twice as high. Countries in Central and Eastern Europe (CEE) like Estonia, Slovakia, and the Czech Republic, all of which used to have wages from a third to a half of that of Taiwan, have seen their wages grow to become higher than Taiwan’s, while Hungary and Poland were also catching up to Taiwan by 2016 (Ngerng, 2020).

Under such circumstances, Taiwan has been struggling to keep talent at home, but further reinforcing the diabolic circle of the low salaries (Wang, 2015). The young generation in Taiwan faces elementary problems establishing families because of the increasing gap between the growing real estate prices and the stagnating salaries, moreover, in the course of the last two decades, even cuts in salaries occurred (Cheng, 2017). Another scholar pointed out that 60 percent of college graduates in Taiwan are engineers, many of whom establish ventures and most of them become successful in the course of a couple of years (Chou, 2017). It was also revealed that the young generation (20-24 years old people) nowadays faces even bigger difficulties at the labor market than before. He reminded that Taiwan's labor market had gone through a major change over the past decade. In fact, unemployment among people aged 35 or above had declined since 2003, but joblessness of the 20-24 age group hit a new peak in 2013. He suggested that Taiwan should learn from the US and other OECD countries which use the so-called Active Labour Market Policy (ALMP) to structurally connect the youth to the labor market and also urged for more innovative strategies that systematically could bring back this underrepresented generation, whose members possess high educational attainment (Hsu, 2015). In addition, a note must be made about the fact that the role and activity of the labor unions are modest and weak, contrary to other economies, like South Korea, where they are strong and powerful (Neszmélyi, 2017), hence they are in strong bargaining position in terms of salaries and labor rights, while in Taiwan they are not in such a powerful position.

Taiwan's case reflects the fact that the low salary level cannot be a helpful competitive advantage for too long time. It definitely helped the economic growth during the take-off period, but after a time, it will be a constraint to catching up. There must be other driving factors, like innovation, Research and Development (R&D)-intensive industries to create more value added. Otherwise, there will always be competitive economies which invest more into their own, domestic R&D and innovation, thus in the longer run, such countries will be able to pay higher salaries. The author thinks Taiwan should follow this way. There will always be another place in the world—like PRC—where the salary level will be lower, but to deploy manufacturing industries to a bigger extent to such places, it may be too risky. There was a reason why, for example, Donald Trump, former president of the United States campaigned and strived for returning the manufacturing capacities of American companies (Bradner, 2017), which went long ago abroad to benefit from lower wages and more beneficial taxation.

Salary stagnation has been a very timely issue in Taiwan for the recent decade as well. In this respect, the weak position and activity of labor unions have to be underlined as well. This is also one reason why the salary level could not catch up, even though Taiwanese economic performance would enable significantly higher salaries by now. This would be of key importance to slow down or even turn back the brain drain, as it was mentioned, many young Taiwanese people who study abroad, rather remain there for better job opportunities and livelihood. In some specific professions (like semiconductor industry), brain drain strongly exists and may even accelerate if the government does not make sufficient efforts in this field. Till Taiwanese companies prefer keeping their manufacturing units in mainland China, the Taiwanese wages will not grow. If this stagnation continues, it will have an adverse impact to the economy and will be a hard constraint for future development.

### 3.4. The Issues of Sustainability in Reflection of the Taiwanese Economic Endeavors

The environmental load of the economies and climate change have increasingly necessitated green investments, financed by the so-called green bonds, invented by financial markets. The green goals to be achieved by issuing green bonds as market instruments, and the structuring of funding in terms of risks and cash-flows, through specific cases in progress (Sági, 2020).

Taiwan launched a Sustainable Bond Market (SBM) in May 2021, listing its first three tranches of social bonds, as part of its efforts to promote corporate sustainability. According to officials of Taipei Exchange (TPEX), social bonds are debt instruments that raise money for social projects such as gender equality initiatives, while sustainability bonds are a combination of green bonds and social bonds and are used to finance projects that bring environmental and socio-economic benefits. “Sustainable development has become a universal value that is a remedy to lead human beings to a better future” as it was underlined in a statement of TPEX, adding also that “this dedicated market is designed to provide detailed information to promote sustainability, to develop sustainable finance and to enhance the international visibility of Taiwan.” The first green bonds on the TPEX were listed in May 2017, and the first sustainability bonds in November 2020. In May 2021, the first three tranches of social bonds on the SBM were issued by CTBC Bank, SinoPac Bank and KGI Bank. CTBC Bank sold 1 billion NT\$ (35.71 million USD) in social bonds, which will be used to facilitate projects

related to socioeconomic advancement and empowerment. SinoPac Bank and KGI Bank issued 1 billion NT\$ and 700 million NT\$ worth of social bonds, respectively, and said that they will use the proceeds to increase job opportunities, fund affordable housing, and help mitigate the severe socioeconomic impact of the Covid-19 pandemic (Han – Huang, 2021).

Taipei Exchange specified the categories of Eligible Green Projects, in accordance with the TPEX Operational Directions for Green Bond, categories of potential eligible Green Projects are disclosed and specified (see below). These projects must bring about substantial improvement and benefit to the environment. The eligible green projects are as follows:

- Development of renewable energy and energy technology.
- Improvement of energy efficiency and energy conservation.
- Greenhouse gas reduction.
- Waste recycling or reuse.
- Agricultural and forestry resource conservation.
- Biodiversity conservation.
- Pollution prevention and control.
- Water resource conservation, purification, or reclamation, recycling, and reuse.
- Other climate change adaptation or matters approved by the TPEX.

It was also added that the green investment plan shall not be a fossil fuel power generation project, but it is not limited to those that meet the technical selection criteria set by the green bond standards adopted in customary practice in international financial markets (TPEX, 2021).

## 4. Taiwan with Hungarian Eyes

### 4.1. The Antecedents: the History of the Bilateral Economic Relations

The basis of the Hungarian-Taiwanese relations—from the political point of view—is that Hungary follows the One-China Principle, which means that it does not maintain diplomatic relations and official inter-governmental cooperation with Taiwan. However, beyond this frame, Hungary is interested in the development of relations in the fields of economy, culture, education, science and technology, and human relations.

The relations date back slightly more than a quarter of century now. As a starting point, the year 1990 can be considered, when the Hungarian Chamber of Economy (MGK)—with the consent of the Hungarian government—and its Taiwanese partner agreed to open a trade representation in Budapest (called Taipei Trade Office) functioning on the basis of the private international law. The intention and the objective were the improvement of the economic relations, tourism, and other fields. This office was the very first Taiwanese mission in Central and Eastern Europe. In 1995, it changed its name to Taipei Representative Office. For the same reasons and motivations and under similar conditions, the Hungarian Trade Office was opened in Taiwan on July 23, 1998 (Hungarian Trade Office, 2017).

The economic relationship, including the turnover in trade between Taiwan and Hungary, is relatively modest. The bilateral trade in 2015 was 1.6 percent of the total EU-Taiwan turnover (EU-Taiwan Factfile, 2016). According to the data of the Hungarian Central Statistical Office, (HCSO) in the year 2016, the value of Hungarian exports to Taiwan was 174.3 million USD (156.9 million EUR), however, it was an increase of 6 percent compared to the preceding year.

#### 4.2. The Economic Relations between Taiwan and Hungary in Recent Years

In 2018, Taiwan was the sixth biggest export market for Hungary in Asia. According to the Hungarian Statistical Office (HCSO), the sum of the total Hungarian exports sent to Taiwan in 2018 was 176.6 million USD. This amount is similar in range to the exports of 2016 but less than the exports were in 2017 by 19 percent. On the other hand, according to the Taiwanese statistical office, it was 292 million USD which would mean a 5 percent growth compared to 2017. The vast majority of the Hungarian exports were machinery (36 percent), motor vehicles (32 percent) and food products (13 percent). The Taiwanese import ban imposed because of the African swine fever epidemic that appeared in Hungary in 2018 harmfully affected (-12.8 million USD) the Hungarian food exports to Taiwan which, in March 2018, still had a positive impetus due to the extension of the list of approved meat factories. The value of Hungarian poultry exports to Taiwan was 0.5 million USD, on which the negative impacts of the bird flu epidemic (2017) can also be seen (in 2016 the poultry meat exports were 2.5 million USD). However, the feather exports could further grow to 13.3 million USD. From animal products, after Japan and Mainland China, Taiwan is the third biggest export market for Hungary. The exports of plant-based food products (mainly



frozen vegetables) shrank by 30 percent since 2016. However, the exports of machines grew (+29 percent), while of motor vehicles decreased (-46 percent), the amounts in USD were 63.3 million and 56.8 million, respectively. In motor vehicle exports, Taiwan is still the fourth biggest export market for Hungary in Asia (after Mainland China, Japan and the Republic of Korea). The mentioned product categories (food products, machines, and motor vehicles) provided 81 percent of Hungarian exports to Taiwan. According to the HCSO data, Hungary's imports from Taiwan amounted 557.5 million USD in 2018, which was 19 percent less than in 2017. The total turnover was 734.1 million USD, the balance for Hungary was -380.9 million USD, both are the lowest values for many years (See Table 3) (Lőrincz, 2019b).

Regarding the structure of the Hungarian exports to Taiwan, it can be said that many years ago more than two thirds of the exports derived from the supplies of machines and motor vehicles, however, their proportion reversed. Since 2014, the ratio of the animal products has been increasing continuously and this trend still continues in spite of the import limitations in 2017-18. Moreover, during the recent years, from the category of "other goods", several groups of products became significant with gradually increasing proportion within the exports, like chemical products, medical and other precision instruments (Lőrincz, 2019b).

Table 3: Figures of the Hungarian-Taiwanese trade turnover (million USD)

	2012	2013	2014	2015	2016	2017	2018
Hungarian exports to Taiwan	91.9	138.6	147.6	164.7	174.3	217.4	176.6
Hungarian imports from Taiwan	1,176.5	990.0	800.9	660.7	642.6	688.3	557.5
Total turnover	1,268.5	1,128.6	948.5	825.4	816.9	905.7	734.1
Balance	-1,084.6	-851.4	-653.3	-495.9	-468.3	-470.9	-380.9

Source: Lőrincz (2019b), on the basis of HCSO data.

The data of the Taiwanese statistical office (DGBAS) usually show 30-40 percent higher values in Taiwanese imports (Hungarian exports), however, in case of the figures for 2018, the difference was over 60 percent. According to this, in 2018, the Taiwanese imports from Hungary were 292 million USD (176.6 million USD according to the HCSO). Analyzing the Central European region (See Table 4), it can also be seen that the Visegrád Group's exports to Taiwan grew by 18 percent (the exports of the total EU28 grew by 7 percent). In 2018, Hungary's share in the total Visegrád Group's exports to Taiwan was 27 percent (Lőrincz, 2019b).

Table 4: Trade turnover of Hungary and several other Central-Eastern European countries to Taiwan according to the Taiwanese statistical data (million USD)

Country	2012	2013	2014	2015	2016	2017	2018
Czechia	199.7	193.8	217.2	239.9	239.8	286.6	338.8
Hungary	115.8	159.8	202.8	236.3	245.6	277.1	292.0
Poland	205.2	216.2	252.1	203.1	214.8	276.6	250.0
Slovakia	57.9	52.6	60.9	58.0	61.0	61.5	179.6
Visegrad 4	623.6	622.5	733.1	737.3	761.2	901.8	1060.5
Austria	461.8	474.3	516.8	497.9	499.5	522.4	658.1
Romania	58.0	67.0	83.6	96.0	91.345	106.5	115.3

Source: Lőrincz (2019b), on the basis of DGBAS data.

Hungary remained the fourteenth exporter to Taiwan within the European Union<sup>2</sup>, thus keeping the same position as in 2016 and 2017. Regarding the year 2018, there is an extremely huge gap between the Hungarian and the Taiwanese statistical databases: according to HCSO, Hungary's exports to Taiwan fell by 25 percent, while Taiwanese data show a 5 percent growth compared to 2017. It might make analysts confused as neither for the author nor for the source (Lőrincz, 2019a) it was clear what makes the differences between HCSO and DGBAS methodology. Anyhow, Taiwan and Hungary strive to mutually show gestures towards each other to broaden the chances of mutually beneficial trade activity. From January 2018, Hungary was authorized to export poultry meat to Taiwan again, and in March 2018, 11 further poultry and pork processing companies were registered to the list of approved companies by the Taiwanese quarantine authorities. These recently approved companies could potentially contribute to the Taiwanese food supply (and to the Hungarian food exports) in a value of 15-25 million USD. However, this favorable period was short as in April 2018, Hungary was put on the list of banned countries because of the swine fever, however, till then—in the first quarter of the year—Hungarian pork exports exceeded the amount of the six-month exports of the preceding two years. However, the potential of the market enlargement is still given as the main Hungarian suppliers of the meet exports to Taiwan (e.g., Pick, Pápa Meat) are located in non-infected areas and concluding negotiations on regionalization could bring a solution to this issue and the Taiwanese partner seems to be open for that (Neszmélyi, 2020 on the basis of Lőrincz, 2019b).

<sup>2</sup> After Germany, the Netherlands, France, Italy, Great Britain, Ireland, Estonia, Sweden, Austria, Belgium, Finland, Denmark and the Czech Republic.

According to the above-mentioned economic and business relationship, it can be underlined that both from Taiwanese and Hungarian point of view, the bilateral trade turnover is modest. By intensifying marketing promotion of a range of products, like high-quality foodstuffs, niches can be found in the Taiwanese market that could be beneficial for Hungarian exporters. However, it cannot be expected to be a spectacular success story. Rather, the bilateral cooperation should be extended and increasingly focused on those fields that can create wider and stronger fundamentals for the future between Taiwan and Hungary, like the cooperation in the field of higher education and research and development. It is worth mentioning that many Hungarian universities—including Budapest Business School University of Applied Sciences —have a mutually beneficial working relationship with Taiwanese universities.

#### 4.3. Taiwan, as an Example for Facing the Middle-Income Trap

At the turn of the 1990s, when the political and economic system changed in the former socialist countries including Hungary, the main goals were to establish a market-oriented economy on the basis of merely privately owned corporate sector and—in parallel—to rapidly decompose the existing, state-owned and guided business entities. Even though in the Central and Eastern European (CEE) region the main obstacle of the development was the lack of domestic capital —therefore the need to involve FDI was urging—there were differences in the implementation of the privatization process, for example in terms of the involvement of the domestic stakeholders, like employees of the companies, or even the former owners or their descendants. As a heritage of the socialist system, heavy indebtedness, lack of working capital, inflexible and outdated economic structure were prevalent.

No need to say that the situation was considerably different from the one Taiwan (and other East Asian economies) faced after WWII, but the challenge was somewhat similar. Taiwan had also gone through a similar period around the 1970s and 1980s, when the socio-economic endowments enabled merely labor-intensive manufacturing with low level of added value. This period, even though it gave an impetus for a successful take-off for the Taiwanese economy, could not be kept for long, as low value-added containing goods cannot generate high returns and incomes. Rather, as it could be seen in case of several CEE countries, it may conserve the wage levels and the economic structure. Job manufacturing, assembly plants, attracting investors by low taxes and labor costs may mislead the way of

economic development. In principle, venture capital is not for charity but seeking for advantages, first of all, low wages and tax benefits while other purposes or points of view, like domestic market and purchasing power, developing knowledge-based, higher added-value containing industries were of secondary importance. This is the reason why even Taiwanese investors prefer going to PRC or Southeast Asia rather than investing at home. However, in the longer run, there is a paradox that investors prefer keeping wage levels low in order to save their production costs and maintain their competitiveness by that, they would be glad if the purchasing power increased which enabled them higher sales.

Taiwan—similarly to Japan and South Korea—has successfully shifted from sector to sector reaching the knowledge-intensive, higher added value containing industries (like semiconductors and many other IT products and parts) that is why Taiwan—in terms of its per capita GDP—belong to the wealthiest economies of the world. Should the wage level remain stagnant in the recent two decades as it was mentioned, but still significantly higher than in Hungary and in most of the CEE economies.

## 5. Conclusion

Taiwan has successfully gone through not only the take-off period of its specific developmental state-model, but also those challenges that are characterized by the newly industrialized Asian economies since the Millennium, that can be explained by the so-called middle-income trap. The robust performance of its economy, including electronic goods, parts, and semiconductors, underline the economic importance of the island. However, Taiwan faces serious social and economic difficulties at the same time. The phenomena of stagnant wage level and the brain drain process are most likely coupled, while the strongly limited sphere of action in the international environment gradually brings Taiwan closer to the PRC even if politicians of the incumbent governing party warn about its risks and try to foster other directions of external alignment of Taiwan, like in the framework of the New Southbound Policy. After all, the latter has not brought about noticeable success except for the cases of a few ASEAN countries (all of which have even much higher amounts of business and investment relations with PRC). Therefore, in the foreseeable future, Taiwan's major business partner will be the PRC (including Hong Kong), while Japan and the United States may still remain important partners but to a lesser extent compared to PRC. Other regions of the world, like the European Union or the rest of the developing world (like Africa,

Latin America etc.) will remain at the periphery in terms of Taiwan's business and investment partnership. The latter applies to Hungary as well, even though there are several fields that look promising in the field of bilateral trade. With more intensive marketing, Hungarian export may still be significantly increased to Taiwan, however, the dimension of the bilateral turnover is very little both for Taiwan and for Hungary as well. The best way is, therefore, to try to find market niches, inviting more Taiwanese investors to Hungary and focusing on other fields of cooperation that successfully work, like the academic field. Besides concrete cooperation in the field of business and investment, it is also worthwhile to learn from the experiences of Taiwan and how it could overcome the middle-income trap which is still an urging issue for Hungary.

## 6. Summary

Taiwan has a modern and developed economy with gradually shrinking government control over investment and foreign trade. Exports, led by electronics, machinery and petrochemicals provide the primary impetus to its economic development. This entails strong dependence on exports, which exposes the economy to fluctuations in world demand. Taiwan's diplomatic isolation, low birth rate and rapidly ageing population, as well as stagnant salaries, and brain drain are other major long-term challenges.

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