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EE463 GLOBALIZATION AND INTERNATIONAL DEVELOPMENT
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~~The~~ Factors Leading Toward Taiwan's Rapid Economic Growth

GROUP 2

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Comprehensive and well-written report. Some elaboration on the issue section may be needed. The section on lessons learned should be shortened and made more concise. Also please provide a conclusion section.

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which

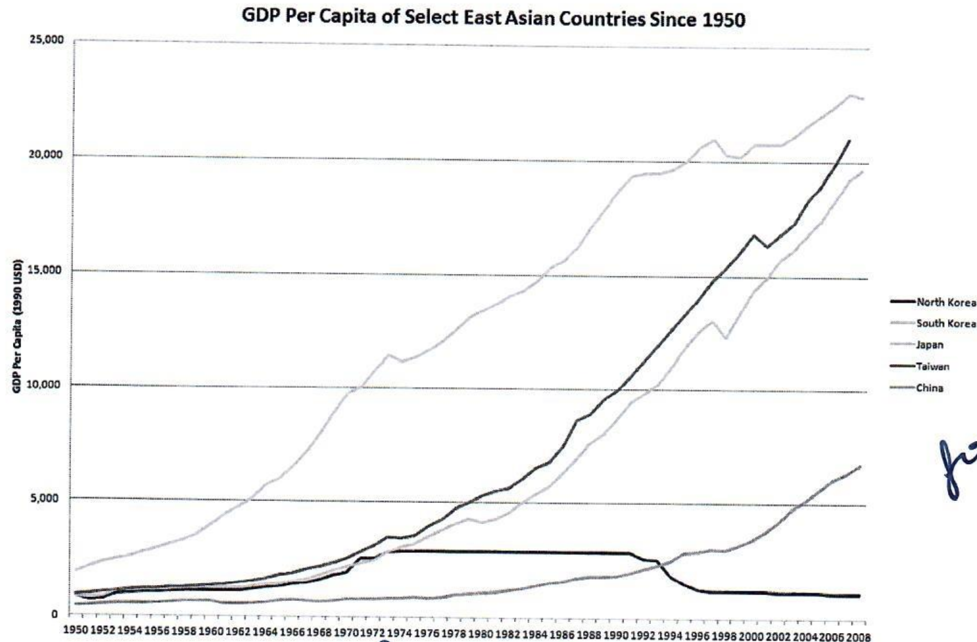
The end of World War II marks one of the darkest ages for humanity, cities were left in shambles, millions of lives were lost, and on top of that a crippling world economy. However, not long after this, enters the Golden Age of Capitalism otherwise known as the post-World War II economic expansion, Started in 1950 and lasted a little over two decades, where worldwide economic expansion was experienced. Throughout this period, many countries underwent rapid industrialization and experienced high growth, nonetheless, the growth rate of the Four Asian Tigers were not matched. The name " Four Asian Tigers" were given to the economies of South Korea, Taiwan, Singapore and Hongkong, which have maintained exceptionally high growth rates of more than 7 per cent per year. As of 2018, the combined economy of the Four Asian Tigers alone makes up 3.46% of the world's economy. Each country has shown remarkable growth and development ranging from Singapore's being one of the most prominent worldwide financial centres to Taiwan's economic miracle.

This paper examines the source of economic growth and development of Taiwan, from 1965 to 1982, also known as Taiwan's Economic Miracle. Located in the western Pacific Ocean and slightly off the coast of southeastern China, Taiwan had built itself as a developed capitalist economy, with its economy being the seventh-largest in Asia. Taiwan is also recognized as an advanced economy by the International Monetary Fund and a high-income economy by the World Bank. As of 2019, Taiwan's GDP per Capita and exceed its counterpart, mainland China, at $48,095 to $15,399.

Following the end of World War II, internal conflict between the ruling party in China, the nationalist government of the Republic of China (ROC) and the sole governing political party, the Communist PArt of China (CPC) resulted in the Chinese Civil War. The ROC government was driven out of mainland China and was forced to withdraw to Taiwan. Originally the island was ruled by the Japanese but after the official surrender of the military force, it was gifted to the ROC military as an official turnover.

Toward the end of the 1940s, Taiwan had experienced a period of hyperinflation as a result of the overprinting of the Taiwanese dollar against the previous Taiwanese yen. The ROC government realized that there was a need for a new and stable currency. Alongside the financial aid of $4 billion and soft credit provided by the USA, the new laws and land reforms contributed to the restoration of its economy. In addition to that, in 1959, a 19-point program of Economic and Financial Reform was drafted to help attract foreign investments and capitals.

good overview of the topic



good use of graph

From 1952 to 1982, the annual economic growth was approximately 8.7% and the gross national product grew by 360% from 1965 to 1986. By 1986, Taiwan controlled over 2% of the global export and its global industrial production output grew by 680% between 1965 and 1986. What distinguishes Taiwan from other rapid industrialized countries is the inequality. The income inequality, measured by the Gini coefficient of family income, has been on the decline since the 1950s and hit an all-time low at less than 0.33 in the early 1960s. In 1953, the top 20 per cent had 20 times more than that of the bottom 20. In 1980, the number decreased to 4.2 times.

Taiwan's economic miracle refers to the rapid industrialization and economic growth of Taiwan in the second half of the 20th century. This was the result of sound policies and reforms, focusing on capital accumulation, macroeconomic factors, and investment by foreign investors. On top of that, the contradiction whereas an economy grows, the inequality will increase accordingly.

Section II: Identification of Key Issues

Taiwan's growth miracle between 1950-2000 has been caused mainly by the accumulation of human and physical capital. Moreover, the country's growth is also the consequence of other factors, such as history determinants. Taiwan has some advantages from the Second World War incidents, like a favorable endowment left behind by Japan and aids from the USA. Yet, the country faced hyperinflation and other economic situations, which it can briefly recover.

After the Second World War, Taiwan had turned from a colonial economy under Japan to a national or independent economy as a result of the surrender of Japan at the end of the war, leading to termination of the Japanese colonial ties. However, the physical capital left behind by Japan could facilitate Taiwan to boost its economy. Taiwan's infrastructure such as the South-North railroad and the modern ports, highway system, postal and communications system as well as hydroelectric power plants were built by Japanese during the colonization. The railroad was designed for transport sugar cane harvested across the island to sugar mills for processing, and to ship rice and processed sugar to Japan.

The US also has influence on higher education and the economy after the Second World War. Taiwan contributes to the American educational system and human capital accumulation. Taiwanese students study in US universities. Each year from 1960 to 1967 approximately 15 percent of Taiwan"s college graduates went to the US for postgraduate study, two-thirds of them in science and engineering, but only 45 percent of them returned each year. Ranis 1995 stated that in the beginning of the 1970s the Taiwanese government started an active campaign to encourage these high-talent workers to return to Taiwan, actively recruiting in such locations as California's Silicon Valley. By 1986 more than 90 percent of these highly trained graduates returned. (Ranis, 1995: 529) This has contributed significantly to the growth of Taiwan"s high-tech industry. American influence on Taiwan economically by implementing the first in a series of six-year and four-year economic plans in 1953.

One of the reasons behind Taiwan's economic growth is the accumulation of human capital over time. Toward the end of the Chinese Civil War, The Kuomintang party and many civilians fled to Taiwan. In 1949, approximately 5,000 refugees entered Taiwan each day (Rubinstein, 1999: 299), flooding the capital and human resource to the island with mainland China's legacy and intellectual elites. According to Samuel Ho, the high quality of Taiwan's bureaucracy resulted from a large group of mainland Chinese bureaucrats who had considerable administrative skills and experience took refuge on the island in the late 1940s and the early 1950s.

any conflict betwen refugees and indigenous Taiwanese?

Besides, benefit from the great retreat in 1949, Taiwan has increased the quantity of human capital related to demographic bonus and Increased female participation in the salaried workforce (Braaten, 2010). Demographic bonus is a condition that the productive age population is more than the non-productive population. The population in the age group 15-64 increased from 52.5% in 1965 to 66.7 in 1990 (Crafts 1998:20). The demographic change related to decreasing death and birth rates also made an essential contribution to the increase of household savings. According to Chin-fen Chang, Taiwan has an impressive improvement in the rate of female labor force participation. In 1978, the percentage of women over 15 were in the labor force is only 38 %, but today it's over more than 50%.

To enhance the workforce's quality, the Taiwanese government has invested heavily in education as high levels of labor force cognitive skills permitted better adoption and mastery of foreign technology. In 1994, the Educational Reform Master Plan was launched to increase the number of public high schools and universities to accommodate the greater societal need for schooling and relieve high school and university entrance examination competition and pressure. Moreover, there has been a shift in higher education toward engineering and the natural sciences in Taiwan. Between the mid-1960s and late 1980's enrolments in the graduate engineering and material science programs virtually doubled to 40 % of total graduate enrolments(Ranis, 1995:528).

Taiwan has faced hyperinflation during 1945 to 1949. It was fueled by large budget deficits and exceedingly high rates of money expansion (Burdekin and Whited, 2001). Makinen and Woodward stated that a hyperinflation was then in progress on the mainland, the legacy of war with Japan financed mainly by currency issues, a method of finance continued during the ensuing civil war. Taiwan's banks were forced to buy huge debt from Japan during WWII to finance Japan in the war. The money supply, which consisted mainly of notes issued by the Bank of Taiwan, increased by 807% between December 1940 and Japan's surrender in August 1945. As reported by Burdekin and Whited, the Taiwan provincial government inherited a budget deficit resulting from previously made (forced) bad loans to the Japanese government and diminishing real resources after the war. In order to stabilize and eliminate the hyperinflation, Taiwan was using three dimensions, an elimination of inflationary psychology by implementation of monetary reform, an absorption of money supply by manipulation of interest rate and other measures, and lastly the maintenance of a balanced government budget which was implemented in 1949-1958.

According to Braaten,a large share of Taiwan's economic growth in the second half of the 20th century can be contributed to the accumulation of physical capital through high investment rates which were enabled by the island's high savings rates. The World Bank emphasizes on fundamental macroeconomic policies in explaining the high savings and investment rates of the East Asian tigers. Policies intended to create a stable macroenvironment, conducive to saving and investment. Taiwan was able to avoid volatile real interest rates on deposits and ensure that real interest rates were largely positive by keeping inflation low. The expectation of a stable price could lead to a significant contribution to the high saving rate. The Taiwawnese government employed some kind of foreign exchange control up until the late 1980. In 1987, the Central Bank withdrew most of its influence on the exchange market. The government's regulations of the foreign exchange market contributed to the massive build-up of foreign exchange reserves (Hwang 1991). According to the world bank, Econometric studies indicate that rapid economic growth boosts saving rates as a household acquire resources faster than they increase consumption. However, Taiwan's high saving rates are partially an outcome of high growth rates rather than cause. As stated in theories of savings based on the life cycle, societies with a high proportion of prime-age workers will save more than those with higher proportions of young or old people. Therefore, Taiwan with a larger number of prime-age workers tends to save more. However, in Taiwan, savings in the elder households are also remarkably high and stable due to relatively poor public support systems for the elderly and declining in family support systems. (Mason, Kinugasa 2008). The most evident and direct way for the government to enhance saving rates is through public savings. The savings rates of Taiwan have been quite high, and the increase in the savings rate in the early 1960s coincided with the sharp increase in the government saving after 1961. Establishment of government-run postal saving systems to attract small savings. Along with utilizing the tax system to promote saving.

Sum up

~~Are~~ were there any structural / economic challenges facing Taiwan in ~~[illegible]~~ terms of

- exports (tariffs, barriers to entry)
- infrastructure?
- integration of mainland Chinese with indigenous Taiwanese?
- developing its industries / agricultural transformation?

Section III: Government/State Strategies, Policies and Legislation

In Taiwan, the government played a large role in the country's rapid export led growth, both directly and indirectly. Directly, the government influenced the private sector production and investment decisions through their control over credit allocation, tax incentives, and trade facilitation. Indirectly, they offered guidance and supported the development of human capital. The following are some examples of instruments the government used leading up to the period of Taiwanese Miracle in 1965-1986.

1) Enhancing Investment Climate

- Exchange Rate Reform: A single official exchange rate and the New Taiwan dollar (NT$) were adopted instead of the multiple exchange rate system. Before 1960, the domestic currency was overvalued and overly complicated, therefore the government decided to adjust in several steps downward and bring the rate down to a more realistic value. Also, the exchange rate for exports was lower in public than private enterprises. As a result of the devaluation policy, the NT dollars depreciated from 24.58 dollars in 1958 to 36.08 in 1959 to 40.04 in 1960 (Wu,2016)

- Trade Openness, Foreign Direct Investment (FDI), and Establishment of Export Processing Zones: The Statute for Encouragement of Investment was passed in 1960 to attract FDI through tax incentives and foreign exchange entitlements. Export-Processing Zones were opened, first in the port of Kaohsiung, then in Nantze and Taichung, in order to provide low-priced land, infrastructure, and tax incentives to specific export industries. Some of the benefits received by enterprises included reducing the maximum business income tax from 32.5% to 18% of annual income, extending the tax holiday for new investments from 3 to 5 years, granting tax exemption to undistributed dividends for reinvestment, stamp tax and deed tax exemption for "productive" real estate. Also, these benefits were further extended in 1965 when prioritized manufacturing sectors (basic metals, electrical machinery and electronics, machinery, transportation equipment, chemical fertilizers, petrochemicals and natural gas pipe) received complete tax exemption from import duties

- Import Quota and Tariff Reforms: Tariffs were greatly reduced, and the price of domestic goods was not allowed to be priced higher than their import costs by a certain margin. This was cut from 25 p.c. in 1958 to 10 p.c. in 1968. Several import items were also taken off the control list.

2) Direct Control of Investment Decisions

In Taiwan, it was common for the government to take the initial steps of establishing some industries. Some of the industries included plastic, Electronics, fibers, steels, and textiles.

- Plastics: Taiwan's first plastics plant for PVC was built directly under government administration and delivered it to a private entrepreneur in 1957. In 1966, 3 more private firms also started PVC production.

- Fibers: The government decided to start a rayon-making plant as part of the plan to diversify the textile industry from cotton fiber. With the help of the US, they formed an American synthetic fiber company with many local textile producers from public and private firms. In 1962, the same government-sponsored rayon company, together with a financial agency formed another company to make nylon. It began production in 1964. Private firms soon followed the step and began producing with synthetic fiber.

- Electronics: Instead of directly starting new industries, the government also started the publicly owned Electronic Research and Service Organization (ERSO) to transfer foreign technology to domestic firms. They built the country's first model shop for water fabrication and made a partnership with RCA for technology transfer agreement. They trained engineers who later moved to private firms.

3) Support for Public Enterprise

As we have seen, it was common for the Taiwanese government to establish some industries and hand them over to private entrepreneurs or operate as public enterprises. Leading up to the Taiwanese Miracle, the percentage of public enterprises accounting for a total GDP actually increased, as shown by the table below. These percentages were larger in Taiwan than in socialist economies at the time, for example, India (6.5% in 1966-1969) and Tanzania (12.7% in 1970-1973). These public enterprises usually received favorable credit allocations or direct allocations of the government budget.

The Importance of Public Enterprise in GDP

Year	Public Enterprise Share of GDP (%)
1954-1957	11.7
1958-1961	13.5
1962-1965	14.1

1966-1969	13.6
1970-1973	13.3

Sources: could put reference at end of paper

Jr., B. C., & Branson, W. H. (1987). Trade and Structural Change in Pacific Asia. National Bureau of Economic Research Conference Report, (First edition), 307-332. University of Chicago Press.

Rodrik, D., Grossman, G., & Norman, V. (1995). Getting Interventions Right: How South Korea and Taiwan Grew Rich. *Economic Policy, 10*(20), 55-107. doi:10.2307/1344538

Tsong-Min Wu (2016). From Economic Controls to Export Expansion in Postwar Taiwan: 1946-1960. Research Institute of Economy, Trade and Industry (RIETI).

This section could be more concise. Summarize the key points.

Section IV : Lessons Learned

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Taiwan's economic growth has currently been average. High-tech manufacturing is experiencing economic challenges,which might indicate that Taiwan needs to pursue a different approach to introduce change,rebuild the Taiwan miracle, and develop the economy of the island in the future.

- **Manufacture sector** ing

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1. Develop high value added and high quality goods:

Many Taiwanese producers have focused on the “low-cost strategy”, by shifting their manufacturing facilities to Southeast asia. Manufacturers' profits can be marginally boosted as a result of the lower-cost manufacturing sites,however,the cost benefit is just temporary. The extended approach emerges from the OEM/ODM model to manufacture high-quality goods using more advanced technologies and know-how to have higher profit margins and increasing competition creation.

2. The key to competitiveness is innovation:

Despite the fact that most Taiwanese SMEs have not prioritized costly research and development, innovation in goods and operations has become vital to their long-term survival.The most forward-thinking plan is to participate in innovation and R&D.In comparison to their counterparts in the US,just a few organizations are interested in R&D and innovation. Regardless of the fact that innovation and R&D are costly and risky activities for private businesses,the goods and services that originate from innovation are usually one-of-a-kind and challenging to duplicate. As a result, revenues will be plentiful and long-lasting.

3. Invigorate marketing and branding:

Taiwan companies must concentrate on developing and marketing their own brands, as well as extending their global presence.Companies should extend their existence elsewhere because Taiwan has a limited domestic market.Recently,most Taiwanese businesses depend on a few markets and a large number of technology suppliers are strongly aligned to the production of a few giant companies.Taiwanese businesses should broaden their customer bases.There is still space for growth, especially in emerging markets such as Brazil, India, and Russia. The marketing campaign would increase end-user awareness of Taiwan's manufacturing capability.

4. Improve after-sale services:

Customers outside of Taiwan may have trouble spotting after-sales service places to serve the commodity they have bought.The after-sales service places may motivate customers to buy related goods from businesses.Firms should spend on service infrastructure in order to become more prevalent and easily accessible.

5. Develop high-end services:

Taiwanese businesses should start offering higher-value-added services in order to draw foreign investment.For instance,with the growth of Big Data and Financial technology,Taiwanese companies should develop dependable, credible, and high-quality products in relation to data collection, database management, and services about finance

- **Government Sector**

1. Research and development stimulation:.

SMEs frequently lack the funds and resources needed to establish innovative R&D programs. Officials have presented proposals such as the Industrial Innovation Statute, but their efficiency is indistinct.The government should create policy mechanisms to enable private companies, research agencies, and the public at large to invest in R&D. Furthermore,the public sector should make it easier for industry to collaborate with publicly financed institutions or international research agencies.To develop higher-value-added goods and services, the government should make it easier to shift and apply know-how gained in education and the high-tech sector to other sectors. Each side will benefit from the others through this mechanism, which may help the private sector develop its R&D capability and turn research findings into sales.

2. Support enterprises and diversify industries:

Taiwan's economic growth has been fueled by technology exports such as cellphones and dynamic random-access memory semiconductors. Electronics demand, however, is subject to business cycles.Taiwan must promote other sectors to alleviate the danger of over-reliance on the technology industry.The government also should make it easier for big businesses to form or promote SMEs to form strategic partnerships with those organizations.

3. Establish institutional environment and a pleasing regulatory:

Taiwan's private companies, despite being mainly small to medium-sized, have a reputation for being able to learn and adapt. They are much better than the public sector at identifying emerging market dynamics and making prompt changes.So,the government should collaborate with firms on a regular basis and learn about their interests and the trends of their industries.Moreover,the government should provide regulatory and institutional frameworks that allow for accelerated industrial reform and the improving efficiency of private-sector procedures.In order to properly serve foreign businesses and investors, Taiwan must undertake institutional reforms.

4. Diversify and encourage the talent people:

Taiwan has a significant population of highly educated individuals.Universities and businesses have worked together to bind academic science and applied technologies. Despite this, a new study based on data from the Taiwan Education Panel Survey and Beyond identified that several college graduates struggle to apply what they learned in school to their careers.The government plays a crucial role in influencing Taiwanese higher education; it could promote collaborations between officials, enterprises, instructors, and learners to better align skills acquired by students with actual needs.Furthermore,to draw international talent, the government will need to implement forward-thinking measures.For example, simplified green-card policy that grants foreign employees permanent residency.

Conclusão?

References

Burdekin, R. C., & Whited, H. H. I. (2001). Multiple regime shifts and multiple ends of the Taiwanese hyperinflation, 1945-1953. Southern Economic Journal, 77-91.

Jinn-Yuh Hsu & Lu-Lin Cheng (2002) Revisiting Economic Development in Post-war Taiwan: The Dynamic Process of Geographical Industrialization, Regional Studies, 36:8, 897-908, DOI: 10.1080/0034340022000012324

Makinen, G. E., & Woodward, G. T. (1989). The Taiwanese hyperinflation and stabilization of 1945-1952. Journal of Money, Credit and Banking, 21(1), 90-105.

Michael C.Y. Lin and Perry Wong (June 2016) 'Recapturing the Taiwan Miracle', THE MILKEN INSTITUTE ASIA CENTER, pp. 4-10

Braaten, Ø 2010, What can explain Taiwan's growth miracle over the period 1950-2000?, Master thesis, Norges Handelshøyskole, Bergen.

Ranis, G. and Stewart, F (1995), "Another look at the East Asian miracle", World Bank Economic Review, Vol. 9, pp. 509-534.

Rubinstein, M. A. (1999). *Taiwan: A New History*. M E Sharpe Incorporated.

Samuel P.S. Ho, Pacific Affairs , Summer, 1987, Vol. 60, No. 2 (Summer, 1987), pp. 226-247