Dr. Iakov M. Mirkin

Decoding the Taiwan Economic Miracle:

Leveraging its Experience and Best Practices for the Enhancement of Trade and Economic Cooperation between Taiwan and Post-Soviet States, and Advancing their Integration within the Asia-Pacific Region and on a Global Scale

2024

Contents

Preface 9

Part I. Decoding the Taiwan Economic Miracle 11

1. Concepts, Time Frame, Methods 12
2. Taiwan: Dynamics of Society 15
   - 2.1. Life Expectancy 15
   - 2.2. Dynamics of Real GDP 16
   - 2.3. Dynamics of GDP (PPP) per capita 17
   - 2.4. Export-Oriented Economy 18
3. The Periodization of Reforms / Phases of Economic Development 19
4. Basis / Initial Conditions 20
   - 4.1. Japanese Legacy 20
   - 4.2. Impact of World War II 20
5. Chinese / Confucian Culture 21
   - 5.1. Philosophy of Life 21
   - 5.2. Effective Hierarchies 22
   - 5.3. Family and Economic Development 24
   - 5.4. "The Rule of Men" Compared to the "Rule of Law" 25
6. Ideology (Model of Society) 25
   - 6.1. “People’s Principles” (Sun Yat-sen) 25
   - 6.2. Anti-communism 26
   - 6.3. Militarization of Ideology (to Survive) 27
   - 6.4. Authoritarianism. Long-term Restrictions on Human Rights 27
7. Elite Ethics 27
   - 7.1. Personal Interest 27
   - 7.2. Politician: Meaning of Life 28

8. Economic Ideology 29
8.1. Goal Setting 29
8.2. Developmental Economics. Developmental State 30
8.3. Pragmatism. Situational Leadership 30
8.4. Mixed Economy 31
8.5. Evolution, no Shocks, towards Liberalization 31
8.6. Economic Development with Stability 32
8.7. Denial of Copying 32
9. Economic Policy 33
9.1. Real (not Formal) Goals of Economic Policy 33
9.2. Formula for the “Economic Miracle” 33
9.3. Personalization of the Major Projects 36
9.4. Risks of Government Power Overconcentration 37
10. Human Capital 37
10.1. Chinese Community in the USA 37
10.2. Rapid Growth of Population 39
10.3. A Lot of Highly Skilled Migrants 39
10.4. Collective Behavior 39
10.5. Labor Intensity 40
10.6. Pragmatism, Materialism as a Chinese National Trait 41
10.7. Desire to Be an Owner 41
10.8. Adaptibility 43
10.9. Patience 43
10.10. Obedience to the Law 43
10.11. Working Hours 47
10.12. High Savings / Investment Rates 48
10.13. High Share of Unskilled Migrants 50
10.14. Low Human Development 50

10.15.	"Dependency Burden"	50
10.16.	Ranking of Businessmen in Society	50
10.17.	Socio-Cultural Traditions	51
10.18.	Irregularities in Elite Behavior	52
11.	Foreign Aid (1951 – 1965)	52
12.	External Environment	54
13.	Engines of Economic Miracle	55
13.1.	Role of the State	55
13.2.	Private / Public Sectors. Structure of Ownership	55
13.3.	Industries	56
13.4.	State Enterprises / Monopolies	59
13.5.	Small and Medium Business	59
14.	Formula for Miracle: Mechanism of Implementation. Economic Policy	61
14.1.	Overconcentration of Power	61
14.2.	The Architects of the Economic Miracle	64
14.3.	Discussions around Ideology of Development	66
14.4.	Minimum of Unpopular Reforms, Maximum of Popular Ones that would be Advantageous to the People	69
14.5.	Systems Analysis	70
14.6.	Problem-Oriented Policies, the Evolution of Politics Depending on the Nature of the Problems that Arose	70
14.7.	Administrations of Development: Year after Year	72
14.8.	Macroeconomic Planning	74
14.9.	Major National Projects, Public Works (Infrastructure)	75
14.10.	Development Institutions	76
14.11.	Direct Government Intervention in the Prices of the Most Important Goods	77
14.12.	Economic Liberalization	77
14.13.	Privatization	78

14.14. Maximum Incentives for Exports, Investment and Savings 78

14.15. Protectionism, Import Controls 80

14.16. Export Processing Zones 81

15. Formula for Miracle: Mechanism of Implementation. Financial Policy 82

15.1. General Outlines of Financial Policy Aimed at Stimulating Economic Growth 82

15.2. Non-confiscatory Monetary Reform 83

15.3. Monetary Policy, Interest Rates 84

15.4. Exchange Rate / Currency Regime 90

15.5. Interest Rate Policy 93

15.6. Credit Policy. Preferential Loans 94

15.7. International Reserves 94

15.8. Budget / Tax Policy 97

15.9. Customs Policy (Customs Duties) 101

15.10 Government Investment 103

Part II. Leveraging Taiwan's Experience and Best Practices. Ideology and Policies to Stimulate Economic Growth in Post-Soviet States 104

1. Established Models of Post-Soviet States 105

1.1. Post-Soviet States 105

1.2. The Common Features of Post-Soviet States 105

2. Basics of the Policy of Transition to the Group of Developed Economies 109

2.1. Scheme of Transition 109

2.2. Developmental State 109

2.3. «Developmental Dictatorship» 110

2.4. Mixed Economy 112

2.5. Fast Growing Economy 112

2.6. Social Market Economy 112

2.7. Principles of Transition 115

2.8. Sequence of Reforms 118

3. Catch-up Modernization. Superfast Growth 121

3.1. Catch-up Modernization 121

3.2. Superfast Growth: Countries That Have Gone Through It 122

3.3. Catch-up Modernization and Dirigisme 124

3.4. External Support 126

3.5. “Boosting” of Developmental State 127

4. Authorship of the Economic Miracle 129

5. The Ideology of the Economic Miracle 133

6. The Ethics of the Economic Miracle 135

7. The Formula for Rapid Growth 137

7.1. The Formula for a Post-Soviet Country 137

7.2. Taiwan: The Formula for an Economic Miracle 141

8. Superfast Growth: Quantitative Parameters of Economies 142

8.1. Standard Parameters 142

8.2. Measuring Taiwan's Economy 143

9. The Administrative “Boosting” of Developmental State 144

9.1. Macroprogramming / planning 144

9.2. Development Administration 145

9.3. Community of Advisors and Experts 146

9.4. Areas of Superfast Growth 147

10. Financial Systems of Superfast Growth Economies 148

10.1 Financial Deepening (Monetization) 148

10.2 Growth of Savings Rate / Investment Rate 151

10.3 Financial Deepening (Domestic Debt) 154

10.4 Normalization of Interest Rates 156

10.5 Killing Inflation 160

10.6 Weakening Domestic Currency 161

10.7 Dynamics of Government Final Consumption Expenditures. Low Tax Burden 164

11. Financial "Boosting": An Extended Overview 168

11.1 What is Financial Boosting 169

11.2 Financial Dirigisme 170

11.3 Financial Development and Economy 170

11.4 "Developmental" Central Bank 175

11.5 The "Repressed" Financial System: From Creation to Departure from the Scene 179

11.6 Financial Policy to Stimulate Economic Growth 180

12. Financial Tools for Stimulating Superfast Growth 181

12.1 Accelerated Growth of Monetization 181

12.2 Interest Rate Management 182

12.3 Credit Management 183

12.4 Financial Institutions (Owned or Majority-owned by the State) 183

12.5 Tax and Quasi-tax Incentives for Superfast Growth 184

12.6 Exchange Rate Regime 188

Conclusion 190

Bibliography 192

Preface

Taiwan's economic miracle did not appear out of thin air. It was based on the national values and collective behavior of those who lived in Taiwan, as well as the values, talents, goals and personal behavior of the politicians who exercised control over society. The basis of the miracle in Taiwan were the ideas of a “developmental state”, a “welfare state”, a “social market economy” (in the interpretation of Sun Yat-sen and the leaders of Taiwan), and a “model society” as an image for all of China. The key goals were the growth of the welfare of the people, not in words, but in deeds, and the survival of the country in conditions of high military risks (conflict with mainland China).

The miracle was created by approximately the same incentives and tools as in other super-fast growth economies, but in the sequence and in the combination that the situation specifically in Taiwan required. In this sense, the Taiwan miracle represents a combination of systems analysis, creative thinking, skillful macroeconomic engineering and successful crisis management. Simply put, this miracle is a testament to the exceptional talents of its authors (they are known by name).

Every society and every economy is unique, which is why the miracles of Taiwan, other Asian economies, or post-war European countries cannot be copied literally. However, the ideology of the "miracle" (super-fast growth, technological modernization, improvement of people's welfare, transformation into a developed economy), its goals, main ideas, policies, techniques, incentives, and tools of macroeconomic engineering – all of this constitutes a technology that can be multiplied and adapted to the specific characteristics and current situation of a particular country.

First and foremost, this applies to post-Soviet countries, which have yet to achieve their own "miracle." It is for these countries that technical guides should primarily be offered, consolidating the experience of 15-20 economies that managed to transition to super-fast growth after World War II. This report is dedicated to addressing this task.

The research was conducted as part of the "MOFA Taiwan Fellowship" program (Ministry of Foreign Affairs, Taiwan, 2024).

The author expresses deep gratitude to Dr. Baiku Wei, Director of the Institute of Russian Studies (National Chengchi University) and Dr. Kong-Ping Chen, Distinguished Research Fellow (Institute of Economics, Academia Sinica). Without their help and advice, this research could not have been carried.

The author extends heartfelt thanks to the hosting institutions – the Institute of Russian Studies (National Chengchi University) and the Institute of Economics, Academia Sinica, for providing their organizational resources and databases essential for this research.

The deepest gratitude goes to the Center for Chinese Studies (National Central Library, Taiwan) for serving as the "project manager" during the research, and to its staff member, Mindy Fang, who consistently and attentively made all necessary organizational efforts to ensure the success of the research.

Part I. Decoding the Taiwan Economic Miracle

1. Concepts, Time Frame, Methods

Objectives. The economic miracle in Taiwan occurred more than half a century ago. It was truly a miracle, transforming from a semi-destroyed poor country into a developed, industrial nation with a very high life expectancy. This miracle happened thanks to the intelligent macroeconomic policies of a group of technocrats, who fully considered the national character, as well as the economic, social, and political situation of the time. Over several decades, this group of technocrats initiated a series of popular reforms, each of which was welcomed by the authoritarian government and energetically supported by the population. The result was exceptionally high rates of economic growth, stability, technological modernization, and an increase in the well-being of the people.

It might seem that too much has changed since then to consider how to use this experience in macroeconomic engineering in the current situation. But that is not the case.

Firstly, many countries, including most post-Soviet economies, need to successfully address the same task that was solved in Taiwan from the 1950s to the 1980s – the transition from a developing economy to an industrialized, developed state.

Secondly, the art and techniques of macroeconomic engineering can be generalized, taught, and should be taught. They can be replicated, not as exact copies of what was done in Taiwan (which is impossible), but as adaptations to the different conditions and situations specific to each country.

An analogy is the art of painting. The same basic techniques are taught, but they are applied very differently, depending on the talent and feelings of each artist.

In this context, the policies that led to the economic miracle in Taiwan are of immense value and can be "replicated" and "multiplied" in their core ideas and techniques in other countries – yesterday, today, and tomorrow.

The aim of the research is to generalize the main ideas and techniques used in Taiwan to apply them as a basis for manuals and books on macroeconomic engineering (primarily for post-Soviet countries) and within the framework of development economics.

Taiwan's experience and best practices will be summarized in a way that allows them to be fully utilized to enhance trade and economic cooperation between Taiwan and post-Soviet states, and to promote their integration within the Asia-Pacific region and globally.

The timeframe of the research is from the late 1940s to the early 1980s. This period is generally considered to be the time of the economic miracle.

Background / Literature Review. In the 1970s - 2020s, dozens of books and articles were published on the model of Taiwan's economic miracle in the context of a comparative analysis of the policies of rapid industrial and financial development in East Asia. Research reports and papers developed by international institutions were among the important sources. There have been sporadic attempts to recommend the experience of Taiwan to other developing countries.

At the same time, there is a lack of knowledge in terms of 1) rethinking the miracle of Taiwan from the point of view of the modern economy and the international division of labor that has developed by the 2020s, 2) a detailed, technical analysis of the institutional, economic and financial mechanisms on which the Miracle of Taiwan was based, 3) adapting the experience of Taiwan for use in the post-Soviet states.

Methodology. Development economics (incl. comparative analysis of national models of accelerated economic growth); behavioral economics (cross-cultural studies, national values impact); multivariate statistical analysis of economic and financial accelerated growth on macro level.

Project content:

The mechanisms underlying Taiwan's economic miracle from a long-term retrospective view:

● Ideological foundations of Taiwan's economic miracle

● Stages of economic, financial, and social dynamics

● Shifts in collective behavior and national values during the transition to a developed nation status

● Impact of demographic changes on economic growth, unique aspects of the labor force, and sociology of reforms

● Major reforms, their sequencing, and the key results brought about by these reforms

● Institutional developments including new institutions and approaches to manage the process of development, macro-programming, legislative/regulatory environment, ownership rights protection, anti-corruption framework

● Restructuring and diversification of ownership, with special attention to land ownership, corporate ownership, the role of small and medium businesses, privatization, government ownership and its role in the economy

● Key contributors to the Taiwanese economic miracle, including their personal views, roles, positions, competencies, functions, and biographies

● Economic development strategies including industrial policy, anti-monopoly framework, product diversification, development of new industries, investments in the real sector and infrastructure, establisments promoting industrial development and technological innovation; management culture rooted in national values and traditions

● Financial development / deepening (financialization, inflation, exchange rate dynamics, national currency, foreign exchange regime, capital account regime, budget / tax / monetary / credit / interest rate / exchange rate policies during the economic miracle, and the establishment of financial markets)

● International aspects of the economic miracle, including protectionism, customs policy, special economic zones, foreign investments regime

● Comparative analysis of the accelerated growth policies (1950s - 2020s) in other Asian economies

● The most significant factors that ensured Taiwan's success

● Reference materials, key publications, information sources, and databases

Dissemination of best practices developed during the Taiwanese economic miracle in post-Soviet states, to provide technical guidelines for their governments and central banks. The guidelines will cover:

● Development of a new ideology and policies for the accelerated growth in post-Soviet states, taking into account local models of collective behavior and national values, as developed in the 1990s - early 2020s (including institutional, economic, financial, social structures/policies, role in the international division of labor, etc.)

● Adaptation strategies for post-Soviet states to enhance trade and economic interaction between Taiwan and these states, fostering their integration at both the Asia-Pacific region and global levels.

New contributions to development economics based on adapting Taiwan's experience to the reality of post-Soviet states, and for the enhancement of trade and economic cooperation between Taiwan and Post-Soviet States, and advancing their integration within the Asia-Pacific region and on a global scale.

2. Taiwan: Dynamics of Society

What has be done? K.T. Li:[1] "Transforming the structure of Taiwan from a poor, isolated, backward, agricultural economy into a prospering, modernizing, urbanizing, internationally oriented economy" (Li, Kuo-Ting, 1976, p.157).

2.1. Life Expectancy

Increasing life expectancy and improving the well-being of families should be the main goal of any social and economic reforms. If "no", it is known that they will fail. An "economic miracle" is always an increase in life expectancy.

In this sense, the "miracle" of Taiwan was extremely successful. From 1950 to 1967, the mortality rate in Taiwan decreased by more than half (Li, Kuo-Ting, 1976, p. 263). During the most active period of reforms (1950s–1980s), life expectancy in Taiwan increased from 55.7 years in 1950 to 73.9 years in 1990 (**Table 1.1**). More than 18 years! And it continued to grow further.

Table 1.1. Dynamics of Life Expectancy*

Year	Life expectancy, years (at birth)	
	Taiwan	Russia
1950	55.7	57.2
1960	62.5	68.3
1970	69.2	67.7
1975	70.9	67.2
1980	72.0	66.3
1990	73.9	68.5
1995	74.6	64.1
2000	76.2	65.3
2010	79.2	69.4
2020	80.9	71.3

*United Nations Revision of World Population Prospects 2022; https://database.earth/population/china-taiwan-province-of-china/life-expectancy; ttps://database.earth/population/russian-federation/life-expectancy. Date of access: March 15, 2024

Comparing with Russia. In 1950, life expectancy in Russia was higher than in Taiwan by 1.5 years, in 1960 – by almost 6 years (**Table 1.1**). The 1950s are a time of exceptionally rapid economic growth and a post-war increase in the well-being of families in Russia (USSR).

[1] K.T. Li (Li Kuo-Ting) (1910 – 2001) – influential economist and policymaker, one of the authors of the economic miracle in Taiwan.

Subsequently, long-term stagnation in the dynamics of life expectancy begins in Russia. In 1990, before the start of market reforms in Russia, life expectancy was approximately the same as in 1960. By this time, life expectancy in Taiwan had reached 73.9 years, exceeding by more than 5 years this figure in Russia. Taiwan is ahead of Russia (**Table 1.1**).

During the active market reforms of the 1990s, life expectancy in Russia dropped significantly below the level of 1990, and it was only by 2010 that it surpassed the level of 1990. The rise in global prices for oil, gas, and other natural resources in the 2000s led to an economic boom in Russia and, consequently, an increase in well-being of families. However, this was followed by stagnation (**Table 1.1**).

As a result, life expectancy increased in Russia from 68.5 years in 1990 to 71.3 years in 2020, while in Taiwan - from 73.9 years to 80.9 years. The gap in this indicator between countries has increased from 5+ years to 9+ years (**Table 1.1**). These dynamics clearly demonstrate how unsuccessful market reforms have been in Russia. In 2019, Russia ranked approximately 100th in the world in terms of life expectancy, while Taiwan ranked 20th (UNDP).

2.2. Dynamics of Real GDP

Another goal of the reforms is to accelerate economic growth and technological modernization. During the most active period of reforms in Taiwan (1950s - 1980s), over 40 years, the real GDP grew by 33 times from $9.25 billion (USD) in 1951 to $304.1 billion (USD) in 1990. In the 1950s, the average real GDP growth rate was 8.5%, in the 1960s - 10.3%, in the 1970s - 10.4%, and in the 1980s - 8.2%. These rates are exceptionally high. Then, as expected, the average growth rates normalized: in the 1990s - 6.7%, in the 2000s - 4.2%, in the 2010s - 2.9% (**Table 1.2**).

Comparing with Russia. The results of the reforms are the opposite (**Table 1.2**). This is an economic “anti-miracle”. In the 1990s, during the period of the most active market reforms, real GDP fell in 2000 to 67% of the 1990 level (average rate of decline - (-3.9%)). This was followed by a period of expansion caused by rising world prices for oil, gas and other natural resources. Real GDP in 2010 was 60% higher than in 2000 (average growth rate - 4.8%). Then a sharp slowdown. Real GDP in 2019 amounted to +15% compared to 2010 (average growth rate - 1.6%). Real GDP growth over 29 years is +24%.

Table 1.2. Dynamics of Real GDP*

Year	Real GDP, in 2017 prices			
	Taiwan		Russia	
	Bln USD	% to the preceding period of time	Bln USD	% to the preceding period of time
1951	9.25	n/a	x	x
1955	13.39	145	x	x
1960	19.26	144 (208, 1951 = 100)	x	x
1970	51.19	266	x	x
1975	81.33	159	x	x
1980	138.3	170 (270, 1970 = 100)	x	x
1990	304.1	220	3265.6	x
1995	436.6	144	2027.5	62
2000	581.3	133 (191, 1990 = 100)	2194.9	108 (67, 1990 = 100)
2010	877.5	151	3517.4	160
2019	1128.0	129	4052.2	115

*University of Groningen. Penn World Table – international comparisons of production, income and prices 10.0. Available: https://febpwt.webhosting.rug.nl/Dmn/AggregateXs/PivotShow. Date of access: March 15, 2024.

2.3. Dynamics of GDP (PPP) per capita

GDP (PPP) per capita is one of the key indicators of growth in the well-being of the population.

During the most active period of reforms in Taiwan (1950s - 1980s), over 40 years, GDP per capita at PPP increased 11 times from $1235 international dollars in 1951 to $13638 international dollars in 1990. From 1990 to 2019, it further increased by 2.4 times to $32105 international dollars (**Table 1.3**).

Table 1.3. Dynamics of GDP (PPP) Per Capita*

Year	GDP (PPP) per capita, 2005 international dollars			
	Taiwan		Russia	
	2005 international doll.	% to the preceding period of time	2005 internation al doll.	% to the preceding period of time
1951	1235	n.a.	x	x
1955	1564	127	x	x
1960	1861	119 (151, 1951 = 100)	x	x
1970	3539	190	x	x

Table 1.3. (Continued)

Year	GDP (PPP) per capita, 2005 international dollars			
	Taiwan		Russia	
	2005 international doll.	% to the preceding period of time	2005 international doll.	% to the preceding period of time
1975	4932	139	x	x
1980	7424	151 (210, 1970 = 100)	x	x
1990	13638	184	12608	x
1995	18542	136	8085	64
2000	23065	124 (169, 1990 = 100)	8522	105 (68, 1990 = 100)
2010	32105	139	15068	177

*Fred Economic Data (St. Louis Fed). Penn World Table 7.1. Available: https://fred.stlouisfed.org/series/RGDPCHTWA625NUPN, https://fred.stlouisfed.org/series/RGDPCHRUA625NUPN. Date of access: March 16, 2024.

Comparing with Russia. There was no miracle in Russia (1990 - 2010). In 1990, GDP per capita at PPP in Taiwan (13638 international dollars) and Russia (12608 international dollars) were comparable. In 2010, GDP per capita at PPP in Taiwan (32105 international dollars) was 2.1 times higher than in Russia (15068 international dollars). In the 1990s, during the most active market reforms in Russia, this indicator fell significantly below the 1990 level (**Table 1.3**).

2.4. Export-Oriented Economy

Taiwan has become one of the most export-oriented countries in the world. Despite lacking natural resources and having a small domestic market, it has overcome these limitations by relying heavily on imports, a skilled workforce, and specialization in international division of labor, a process that has been ongoing for over 60 years (shifting from exporting primary goods to products with extremely high added value) (**Table 1.4**). Taiwan is one of the "world workshops."

All of this has been achieved through strong export-oriented economic policies starting from the early 1960s, as well as successful business strategies implemented by individual companies (for example, TSMC).

In 1962, the share of primary agricultural, fishing, food, textile, and similar products in Taiwan's exports was 80% (Statistical Yearbook of the Republic of China, 1975). By 2022, this share does not exceed 2%. Electronic, information, and communication products accounted for 62% of the total export value in 2022 (Statistical Yearbook of the Republic of China, 2022).

Table 1.4. The Role of Exports and Imports in the Economy of Taiwan*

Year	Export / GDP, %	Import / GDP, %
1951	8.8	13.7
1960	11.5	19.0
1965	19.3	22.3
1970	30.3	30.4
1975	39.6	42.9
1980	52.5	53.7
1990	46.8	41.8
2000	52.9	50.8
2010	73.6	66.8
2022	72.0	59.1

*Data for 1951: Economic Growth and Structural Change in Taiwan. The Postwar Experience of the Republic of China. Ithaca: Cornell University Press, 1979, p. 350; Data for 1960 – 2022: Statistical Yearbooks of the Republic of China (2002 – 2022)

Comparing with Russia. From the 1990s to the 2020s, Russia has become an economy deeply dependent on raw material exports. The indicator "Exports of Goods / GDP" amounted to 26.7% in 2021 (Russian Statistical Yearbook, 2023; IMF World Economic Outlook April 2024).

The main pattern of external trade: exchange of raw materials and products of their primary processing for food, semi-finished products, equipment, and technologies. In the years 1992-1995, the share of machinery, equipment, and vehicles in exports was 6-9%, mineral products - 40-50%, metals - 16-31% (Russian Statistical Yearbook, 1996). In 2021, the respective shares in Russian exports were 6.5%, 56.4%, and 16.8% (Russian Statistical Yearbook, 2023). The components of economic policy aimed at expanding the share of exports of highly processed products turned out to be much weaker than the incentives shaping the export of primary products.

3. The Periodization of Reforms / Phases of Economic Development

Standard classification of reforms in Taiwan: 1950-1962 - import substitution (primary products); 1962-1980 - export-oriented phase; since the early 1980s - scientific, technological phase (Fei, 1995, p. 31).

The liberalization of the economy / the reduction in the size of state intervention was gradual and lasted for decades, as market forces became stronger and as the needs of the economy changed during the transition to the next phase of economic development.

Comparing with Russia. The 1st phase - the shock liberalization, the most active wave of reforms, occurred in the 1990s. In the 1990s, rapid economic liberalization and the establishment of market institutions became an end in itself, regardless of the destructive consequences that such speed had for both the economy as a system and the living standards of the population. In simpler terms, the Russian economy was "pushed off the cliff" rather than being carefully and gradually restructured with caution, "on the brakes."

The 2nd phase - from the mid-2000s until the beginning of the 2020s, there has been a gradual slowdown in reforms, with sporadic, piecemeal reforms being implemented, a gradual transition to counter-reforms, and an increasing strengthening of the role of the state in the economy (growing share of the government as owner in business and the financial sector, overregulation, deliberalization, super-concentration of assets in the upper echelons of the hierarchy).

The 3rd phase – from the beginning of the 2020s. Transformation into the “Iranian model” of the economy + into a “mobilization economy”.

4. Basis / Initial Conditions

Positive factors.

4.1. Japanese Legacy

On the eve of World War 2, Taiwan had a more developed economy and a higher standard of living than most other regions in China (due to the Japanese governance of the island from 1895 to 1945).

“The legacy of the Japanese colonial period was a strategic determinant of the rapid race of Taiwan’s development after 1951. The most important part of this legacy consisted of human attitudes, skills and institutions favorable to development. The balance was physical capital in infrastructure, mills, mines, factories and irrigated fields” (Jacoby, 1966, p. 21).

Negative factors.

4.2. Impact of World War II

After World War II, the island's economy was devastated. Transportation operated at only half capacity, there was a severe shortage of basic necessities, and inflation was extremely high. In 1945, the production of sugar, rice, and pork was only 64%, 6.3%, and 41% of the peak levels achieved during the Japanese administration, respectively. Coal production was at 37%, fertilizers at 32%, and steel at 17%. In

1945, wholesale prices were 14.5 times higher than in 1942, and by June 1949, they were 5.6 times higher than in 1945.[2]

Additionally, Taiwan's economy could be described as follows: “a surplus of labor and a shortage of capital» (Li, Kuo-Ting, 1976, p. 2). Low investment and savings rates, high proportion of financing through the "curb market" (family connections, informal financial institutions). Even in the early 1970’s «borrowing from such sources was estimated to account as much as one-fifth of the domestic capital supply” (Li, Kuo-Ting, 1976, p.125).

Another feature of Taiwan's economy is the practical absence of natural resources. “The only significant resource is our people” (Li, Kuo-Ting, 1976, p.150).

5. Chinese / Confucian Culture

Positive factors.

5.1. Philosophy of Life

Confucianism (discipline, structured life in hierarchies, a culture of subordination, loyalty, prudence, industriousness, the superiority of public/collective interests over private ones, a strong state). However, in case of authorities' mistakes resulting in a sharp decline in the population's living standards, catastrophic social upheavals are unavoidable.

The views of **Chiang Ching-kuo**, the son and "successor" of Chiang Kai-shek, the 3rd president of Taiwan (1979-1988): “The Chinese accept only their own cultural tradition based on the spirit of loyalty, filial duty, benevolence, love, faith, justice, harmony and peace”. This spirit is furthered by the Three Principles of the People… this cultural tradition is represented by the Republic of China” (Ching-kuo, Chiang, 1984, p. 261).

“Confucianism advocates investigation of everything, total knowledge, sincere thinking, rectification of the heart, personal cultivation, family harmony, the orderly government of states and peace in the world. This is Chinese culture in practice” (Ching-kuo, Chiang, 1984, p. 190).

Protestantism (its inherent cult of labor). Ubiquitous in Taiwan. The share of Christians in the population is not high - 6 - 6.5%.[3] At the same time, Chiang Kai-

[2] The Story of Taiwan – Economy. Composed by the Government Information Office in Taiwan. Access: http://www.taiwan.com.au/Polieco/History/ROC/report04.html.
[3] World Values Survey, http://www.worldvaluessurvey.org. WV6_Results Technical Records v.2016.01.01 (Taiwan 2012).

shek, Chen Cheng, Chiang Ching-kuo, K.T. Li (Guoding Li) - the initiators and authors of the economic miracle - were Christians, combining their commitment to Chinese culture with Christianity.

Comparing with Russia. Centuries-old culture of subordination, living within strict hierarchies and hyper-concentrated personal power (a strong state), and the rapid adaptation of the people to the ideologies on which they are built. Russian Orthodox Christianity (as both a "corporation" and ideology) integrated with autocracy. Concurrently, there is chaotic, vibrant, and anarchistic behavior among individuals at the lower echelons of hierarchies, in efforts to attain maximal personal freedom and to skirt the rules and limitations imposed "from above". This underpins the significant unpredictability of society and it's propensity for extremes.

Simultaneously, one of the branches of Orthodoxy ("Old Believers") bears resemblance to Protestantism (with a developed culture of entrepreneurship). The Old Believers established the wealthiest families in Russia during the 19th century, who controlled a significant portion of the local industry.

5.2. Effective Hierarchies

Taiwan is recognized as a "collectivist" society (its opposite being an "individualist" society) (Hofstede G., Hofstede G. J., Minkov M., 2010, p. 103). When "we" comes first in the mind rather than "I". This implies a habit of living within hierarchies, according to the rules of hierarchies, including centralized decision-making, a clear distribution of powers, responsibilities and functions “from top to bottom”, obedience, loyalty, control of the implementation of decisions and punishment for non-fulfillment, etc.

Such societies tend to have a propensity for authoritarianism. If a leader focused on development emerges at the top of the hierarchy, society thrives. However, if the "social elevators" bring to the top someone inclined towards confrontation, aggression, war, then in this case, society is at risk of stagnation or even degradation and destruction.

The quantitative analysis (**Tables 1.5-1.6**) was conducted using the database from the international sociological project "World Values Survey (WVS)" (www.worldvaluessurvey.org).

Teams of sociologists carry out surveys (with identical questions) in over 100 countries (in cycles spanning 10-15 years). Surveys have been ongoing in Taiwan since 1995.

Table 1.5. Patterns of Collective Behavior (Attitude Towards Autocracy)*

Question V127 (Sum of responses "very good" and "fairly good")	Share of respondents, %				
	Russia	Germany	Sweden	USA	Taiwan
"Having a strong leader who does not have to bother with parliament and elections". How is it as a way of governing this country?	67.0	20.7	26.3	34.1	61.5

*World Values Survey, http://www.worldvaluessurvey.org. WV6_Results Technical Records v.2016.01.01 (Taiwan 2012, Sweden 2011, Germany 2013, Russia 2011, USA 2011)

High ratings given to autocracy in Taiwan and Russia (the culture of subordination, acceptance of strict hierarchies, and the experience of strong leadership in the 20th century, widely regarded as positive) stand in stark contrast to the very low ratings found in countries of the "continental model" of market economies (Germany, Sweden) and the Anglo-Saxon model (USA) (**Table 1.5**).

Let's verify the positive evaluation of autocracy (Taiwan, Russia) by comparing it with surveys conducted at different times. The surveys display consistent results (**Table 1.6**).

Table 1.6. Patterns of Collective Behavior in Dynamics (Attitude Towards Autocracy)*

Question V127 (Sum of responses "very good" and "fairly good")	"Having a strong leader who does not have to bother with parliament and elections". How is it as a way of governing this country?" Share of respondents, %			
	1995	2006	2012	2017
Taiwan	x	58.7	61.5	66.4
Russia	x	46.5	67.0 (2011)	50.2

*World Values Survey, http://www.worldvaluessurvey.org. WV3_Results. Taiwan ROC Technical Record Study # WVS-1995 v20201117; WV5_Results. Technical record Study #Taiwan 2006_v20180912; WV6_Results. Technical record Study #Taiwan 2012_v20180912; World Values Survey Wave 7 (2017-2020). Taiwan ROC Study # WVS-2017 v3.0; WV3_Results. Russian Federation Study # WVS-1995 v20201117, WV5_Results Study #Russian Federation 2006_v20180912, WV6_Results Study # Russia 2011_v20180912, World Values Survey Wave 7 (2017-2020) Russian Federation Study # WVS-2017 v2.0. The question number corresponds to WV6_Results. Technical record Study #Taiwan 2012_v20180912. If the question was not asked, the symbol “x” is indicated.

Chiang Kai-shek, who led Taiwan for a quarter of a century (1950-1975), as an authoritarian leader, turned out to be the one committed to economic development, striving to build Taiwan into an model province for the whole of China.

5.3. Family and Economic Development

Family, family development, reputation within the family, position in the family hierarchy, encouragement from the family, and a sense of "we, the family" instead of "I, myself" are all key values for the Chinese (and one of the consequences of Confucianism) (The Handbook of Chinese Psychology, 1996, p. 303).

In turn, "family as a value" serves as a strong stimulus for economic development. Competition between families, the need to maintain the "face of the family," the desire to ascend higher in the family hierarchy, the necessity to acquire resources to support the family (and fulfill obligations towards those unable to work), the ambition to raise its living standards, and to maintain stability and proper order within family - all of these drive every family member to strive to be "further, greater, faster" particularly in the economy.

The exceptional value of family for the Chinese living in Taiwan is well demonstrated by sociological survey data (**Table 1.7**).

Table 1.7. Patterns of Collective Behavior in Dynamics (Family Importance)*

Question V4 How important is family in your life?	Share of respondents, %				
	Russia	Germany	Sweden	USA	Taiwan
Response "It is very important"	85.0	77.6	89.2	90.9	90.9

*World Values Survey, http://www.worldvaluessurvey.org. WV6_Results Technical Records v.2016.01.01 (Taiwan 2012, Sweden 2011, Germany 2013, Russia 2011, USA 2011)

The data taken over time confirm how important family is for Chinese people living in Taiwan (**Table 8**).

Table 1.8. Patterns of Collective Behavior in Dynamics (Family Importance)*

How important is family in your life?	Taiwan, share of respondents, %			
	1995	2006	2012	2017
Response "It is very important"	77.7	91.7	90.9	90.8

*World Values Survey, http://www.worldvaluessurvey.org. WV3_Results. Taiwan ROC Technical Record Study # WVS-1995 v20201117; WV5_Results. Technical record Study #Taiwan 2006_v20180912; WV6_Results. Technical record Study #Taiwan 2012_v20180912; World Values Survey Wave 7 (2017-2020). Taiwan ROC Study # WVS-2017 v3.0

Negative factors.

5.4. "The Rule of Men" Compared to the "Rule of Law"

K.T. Li: "The characteristic of Chinese culture is «the Rule of Men”. Compared to the Rule of Law in the West, Chinese style of the management based upon the rule of men has many disadvantages. However, it is not without any advantage… In a society governed by the rule of men, "personal relationships" are the focus of attention. Its standard is particularism that applies to specific individuals, such as fathers and sons, husbands and wives, brothers and brothers, friends and friends and kings and officials. These relationships are what the Chinese emphasize and term as the "five personal relationships"… "The "five personal relationships" are the ethical standard of an agricultural society. They are not applicable to an industrial and modern society" (Lutao Sophia Kang Wang, 2006, p. 225).

Comparing with Russia. The prevalence of the "Rule of Men" over the "Rule of Law" is also a feature of Russia. It is a common conviction that "an agreement can always be reached" (for instance, with government officials) to bypass the law. Entrepreneurs often act on this belief when breaking the law.

6. Ideology (Model of Society)

Positive factors.

6.1. “People’s Principles” (Sun Yat-sen)

Two of the three "people's principles" include "Nationalism" (focusing primarily on the development of the local economy, grounded in national interests, which naturally results in reasonable protectionism); and the principle of "People's Livelihood" (a social state, "government for the people", aiming to "achieve happiness for China" (Sun Yat-sen), founded on social justice/equality of opportunity for individuals, on a more equitable distribution of income and addressing the basic needs of the populace, but not predicated on socialism or the nationalization of "everything").

Comparing with Russia. Russian nationalism was suppressed during the over 70 years of socialism (1917 – 1990), being supplanted by "proletarian internationalism" / "socialist internationalism" (uncompensated resource exports from the Soviet Union in efforts to expand its global influence). As a result, the mistakes of the 1990s occurred: the premature opening of the local economy, a lack of reasonable protectionism, and uncompensated economic assistance to post-Soviet and other countries in attempts to retain geopolitical influence.

"Improving the people's well-being" has long been a tenet of communism. In the 1970s and 1980s, it became a mere formal slogan, unheeded in practice (due to the growing inefficacy of the planned economy, and the overconcentration of resources to sustain superpower status and to compete with the United States). "Improving people's well-being," though officially declared, was never the genuine aim of economic policy from the 1990s through the 2020s. Had it been otherwise, Russia today would be a different country.

6.2. Anti-communism

Fierce competition with communist ideology, when it is necessary to prove superiority over it on an ongoing basis. The command economy (adopted in socialist countries) could not be copied.

As a consequence, an economy that combines private and public ownership.

Comparing with Russia. Communism / socialism as an ideology is still positively perceived by a significant part of the Russian population ("back to the USSR") (**Table 1.9**).

Table 1.9. Signs of Commitment to the Ideas of Communism / Socialism*

Statements in survey	Sum of 3 best views, share of respondents, %				
	Russia	Germany	Sweden	USA	Taiwan
"Incomes should be made more equal". Question V96	55.9	42.0	32.4	21.8	19.0
"Government ownership of business and industry should be increased". Question V97	41.3	11.0	15.5	6.8	14.4
"The government should take more responsibility to ensure that everyone is provided for". Question V98	64.3	34.1	21.3	19.4	26.3

*World Values Survey, http://www.worldvaluessurvey.org. WV6_Results Technical Records v.2016.01.01 (Taiwan 2012, China 2013, Sweden 2011, Germany 2013, Russia 2011, USA 2011)

Ratings provided in a survey carried out in Russia (**Table 1.9**) on topics like income equality, governmental social responsibility, and the significance of state ownership in the economy score much higher (it means being "closer to socialism") compared to the ratings provided in responses to the same questions in countries associated with the "continental model" of capitalism (Germany, Sweden), the "Anglo-Saxon model" (USA), and the "Asian model," if we decided that Taiwan belongs to it.

Negative factors.

6.3. Militarization of Ideology (to Survive)

Focus on the "battle against communism" and "communist bandits" reflects the ideology of a society under abnormal conditions, teetering on the edge of survival, facing the imminent threat of war. This situation often leads to the subjugation of economic development to militarization objectives, characterized by excessive military expenditures, the militarization of the economy and budget, and the allocation of a significant portion of the workforce to military service. This issue was partially mitigated by substantial military assistance from the United States.

Comparing with Russia. The ideology is highly militarized due to perceived constant high risks of war and a strategy of military presence in key regions of the world for geopolitical reasons. Russia maintains high military spending. A significant part of the economy, as well as the budget, is militarized in order to maintain the status of a “great power”, as well as to strengthen national defense, given the ever-present threats of war, as perceived by the authorities.

6.4. Authoritarianism. Long-term Restrictions on Human Rights

Strict limitations invariably suppress people's energy and creativity broadly. At the same time, in Taiwan, such restrictions were weakened by a gradual expansion of personal economic and financial freedom over many years, along with the development of social rights and guaranties (general education, medicine, social insurance, health). Society is given the opportunity to “grow up”, to become more “advanced” in personal and collective behavior.

Ultimately, in the 1950s - 2000s, the trend of transition from authoritarianism to real democracy in a developed country became increasingly evident.

Comparing with Russia. The process was reversed. In the 1990s - 2020s there was a strong trend of transition from the real (but anarchic) democracy of the early 1990s to an increasingly strict autocracy.

7. Elite Ethics

Positive factors.

7.1. Personal Interest

“Government's commitment to fulfilling social expectations” (Li, Kuo-Ting, 1995, p. 60).

“The land reform was a success due largely to the fact that government leaders had no vested interest in land” (Li, Kuo-Ting, 1995, p. 66). The same is stated in the well-known report on the utilization of US aid to Taiwan: "Land reform was expeditiously carried out, partly because those in charge of policy did not have vested interests in the land" (Jacoby, 1966, p. 51).

At the same time, it is clear that the real story could be somewhat different from the ideal one.

Comparing with Russia. There is a convergence between the state and large corporations. Multiple cases in which the vested interests of government and municipal officials were satisfied by breaking the law (expanding their ownership of land, real estate, and businesses). This has led to significant corruption (**Table 1.10**).[4]

Table 1.10. Corruption Deepening*

	Corruption Perceptions Index, Country Rankings				
	1995	2006	2012	2017	2023
Taiwan	29	34	37	29	28
Russia	47 (sample of 54 countries and territories)	121 (sample of 160 countries and territories)	133 (sample of 176 countries and territories)	135 (sample of 180 countries and territories)	141 (sample of 180 countries and territories)

*Corruption Perceptions Index. Transparency International (www.transperancy.org)

7.2. Politician: Meaning of Life

Chen Cheng, a trusted aide of Chiang Kai-shek (governor of Taiwan, prime minister, and vice president, etc.), the key political supporter of the group of technocrats who shaped Taiwan's economic miracle.

This is what he writes about his attitude towards reforms (using land reform as an example): "As the author comes from a rural family, he knows the hardships and miseries of the people. Being a faithful disciple of Dr. Sun Yat-sen, he was sorry that he could not put Dr. Sun's teachings on the equalization of land rights in practice" (mainland China) (Cheng, Chen, 1961, p.19).

Here's how he set personal goals for himself when he was appointed governor of Taiwan in 1949. "At that juncture the general situation on the mainland was deteriorating fast, the morale of the people on Taiwan was low, economic confusion and social unrest were rampant, and it looked as though anything might happen. To safeguard the island as a base of operations for national recovery, we required social stability, and the first prerequisite had to be satisfactory solution of

[4] However, the author reserve the right to consider the rankings of Russia (Transparency International) to be inadequate. Corruption in Russia is not that bad compared to a large group of developing (low-income) countries.

the problem of the people's livelihood. Social and economic conditions of Taiwan still rested on an agricultural basis. Farmers constituted more than three-fifths of the population, and the number of tenants was more than two-thirds of all farm families. Social stability, improved people's livelihood and economic development could take place only through land reform" (Cheng, Chen, 1961, p. X).

These are absolutely moral goals of a politician at the highest levels of hierarchy who simultaneously intends to fulfill the tasks set by Sun Yat-sen: "the principle of People's Livelihood", "every family and every individual should have the ability to support themselves", "equalization of land rights", "land belongs to those who cultivate it", "land - to – the tiller", "government for the people" (Cheng, Chen, 1961, pp. 11 - 16).

K.T. Li (one of the authors of the economic miracle in Taiwan, Minister of Economy, Minister of Finance, etc.). The favorite prayer of K.T. Li:

"Today I pray to the Lord

> that I will put justice ahead of success and interest,
>
> that I will put others ahead of myself,
>
> that I will put everything related to the soul ahead of that related to the body,
>
> that I will put the achievement of lofty goals ahead of the enjoyment of happiness at present,
>
> that I will put the principles ahead of fame,
>
> that I will put You ahead of everything else" (Lutao Sophia Kang Wang, 2006, p. 227).

Comparing with Russia. Improving the well-being of the people was not a real goal of the political elite in Russia, at any time from the 1990s through the 2020s, although formally it was always declared as such. Instead, various other objectives took precedence: to create as soon as possible a market economy similar to developed countries (its institutions and instruments); to achieve economic, social, and political stability; to preserve the nation's status as a major power; and to fulfill personal ambitions.

8. Economic Ideology

Positive factors.

8.1. Goal Setting

K.T. Li, one of the authors of the economic miracle in Taiwan expressed it best: "After the Province of Taiwan was returned to the Republic of China following World War II my Government set out to make it a model province through dynamic economic and social development. From the earlies days we were determined to establish a viable, growing economy in which there would be true freedom, equal opportunity, and a fair distribution of the benefits of prosperity. To accomplish this has required – and still requires – both a strong sense of purpose and a willingness to respond an adapt to the changing conditions and constraints of the world around us. In terms of natural resources and classic economic advantages, the task facing us seemed to be an impossible one" (Li, Kuo-Ting, 1976, p.146).

Comparing with Russia. During the 30 years of Russia's transition to a market economy, the authorities did not have such goal-setting (not in words, but in deeds), pursuing other goals in practice (in the 1990s - to create market institutions so that the market itself would "decide everything", in 1990s - 2010s - economic stabilization, fight against inflation, as a more important goal in comparison with economic growth, in the 2010s - 2020s - import substitution, as a means of combating sanctions, and increasing defense capability, as a way to confirm Russia's status as a great power).

But they solved this task.

8.2. Developmental Economics. Developmental State

Key efforts of the government, the central bank and other public institutions, as well as the regulatory environment, were focused on development.

Comparing with Russia. Russia (as well as its authorities) has not become a "developmental state." Economic growth and technological modernization were sacrificed to combate inflation (it has been high for over 30 years) and to accumulate excess reserves by the government and central bank. The mantra from the 1990s to 2013 was: "Russia is a raw material economy, we will purchase everything else on the world market."

8.3. Pragmatism. Situational Leadership

"Hand-made" reforms that are designed depending on what windows of opportunities open up + to respond on current problems. Do not artificially imitate the mainstream in economic theories.

K.T. Li: "Taiwan economic development in the past 4 decades was built upon pragmatism. It was a progressive development. It never aimed at anything higher than its ability. Taiwan always adopted the appropriate policies at the appropriate time" (Li, Kuo-Ting, 1976, p. 223).

"Practitioners… although guided by a framework of ideas, are almost bound to be more problem- or crisis-oriented, with a sense of immediacy and practicality as they respond to urgent issues and constraints.

The armchair academician is prone to imagine that the world of action proceeds according to a well–thought-out master plan following some a priori theorizing. The practical policymaker (in this case a very high and influential official at the ministerial level)… responds instinctively and often innovatively to the problem at hand" (Ranis G., 1995, p. v – vi). This is exactly how the New Deal arose in the United States - from trials and errors, and not as a logical system following from Keynesianism (Ranis G., 1995, p. vi).

Comparing with Russia. Economic policy was not pragmatic, as it would have been if it had been subordinated to such goals as a) improving the well-being of the people, b) achieving rapid economic growth, c) fostering technological modernization, d) developing a modern, highly diversified economy that is focused on export of products with high added value. The pattern of trade between Russia and countries - its largest trading partners: exchange of oil, gas, metals, fertilizers, etc. on technology and equipment (with the notable exception of arms exports from Russia).

8.4. Mixed Economy

"Planned market economy" 1950s - 1970s ("to achieve a balance between market forces and planning, fostering the more desirable aspects of capitalism while avoiding its excesses" (Li, Kuo-Ting, 1995, p. xiii)).

Comparing with Russia. Similar concepts ("2-sector economy") were rejected in the late 1980s and early 1990s. The prevailing approach favored accelerated (or even shock) liberalization, rapid destruction of the command (socialist) economy, and the replication, as soon as possible, the institutions and regulatory infrastructure of developed economies (USA, European Union).

8.5. Evolution, no Shocks, towards Liberalization

The gradual nature of changes/reforms, their evolutionary approach in small, logical steps, primarily aimed at the liberalization and depoliticization of the economy (a gradual move away from crony capitalism), alongside the parallel democratization of society (Li, Kuo-Ting, 1995, pp. 20 - 21)).

Comparing with Russia. Everything – in reverse. Rapid (even shock) liberalization / privatization and an accelerated transition to an open economy in the 1990s were not accompanied by a significant inflow of foreign direct investments and technology transfers, as was the case in Eastern Europe. This led to the rapid (over 10–15 years) destruction of local industry + the transformation of Russia into a “raw materials economy” + the emergence of “crony capitalism” + the development of a predominantly speculative financial market dependent on non-residents. Imports have crushed local production (tens of thousands of products with high added value).

As a result, a strong reverse trend emerged (late 1990s – 2020s) towards a sharp expansion of the state’s share in the economy, towards nationalization of “everything”, overregulation, and the transformation of institutions and instruments of a market economy into formally existing ones.

8.6. Economic Development with Stability

Development (rapid growth, heating of the economy, risks, potential for high volatility) must be combined with economic stability (moderate inflation, non-expressive dynamics of the exchange rate and its fluctuations, as well as interest rates, money supply, taxes and quasi-taxes, with a healthy state of public finances, social stability, etc.). At the same time, the welfare of the population should constantly increase.

This approach was consistently implemented in Taiwan's economic policy from the 1950s to the 1980s (Li, Kuo-Ting, 1976, pp.164 - 178). "Keep the economy from going to extremes".

Comparing with Russia. A different approach. The last 30 years (1990s - early 2020s) have been, first of all, a struggle for economic stability with suppressed potential for growth, development, investment, which, in turn, resulted in extremely high volatility of the economy and finances, as well as regular crises.

8.7. Denial of Copying

"…To transplant the laws of a developed country to a developing economy without making necessary alterations would be absurd and impractical… Economic development is a time consuming process. While some of achievements of the advanced countries may be readily adapted for application in a developing country, there are things which can not be acquired in a short space of time" (Li, Kuo-Ting, 1976, p.16).

Comparing with Russia. One of the issues of Russia's 30-year transition to a market economy is the literal copying of laws and regulations from developed economies for use in Russia.

9. Economic Policy

Positive factors.

9.1. Real (not Formal) Goals of Economic Policy

Dramatically improve the welfare of the people.

To survive as a society / state.

To be ahead of Chinese mainland (effectiveness in various areas of life, science, technology, industrial power, military capability, standards of living, etc.).

Rapid development while maintaining stability.

Comparing with Russia. The real goals of economic policy were: to create as soon as possible a market economy copied from developed countries (its institutions and instruments), to destroy the command ("socialist") economy; to achieve economic, social, and political stabilization; to maintain great power status; to pursue the personal interests of elite / bureaucracy.

9.2. Formula for the "Economic Miracle"

The formula for the "economic miracle":

the hyper-concentration of political and managerial power (autocracy, Emergency Decree, "one party – one state", imperfect institutions), which is subordinated to survival of the state, modernization and will gradually develop into real democracy only over several decades

+ the authors of an economic miracle who had real power / influence (K. Y. Yin (Zhongrong Yin), K. T. Li (Guoding Li), other ones)

+ minimum of unpopular reforms, maximum of popular ones that would be advantageous to the people

+system analysis of the current conditions, imbalances, trends and development needs of the economy, macroeconomic engineering

+ problem-oriented policies, the evolution of politics depending on the nature of the problems that arose

+ long-term phases of development (10 – 15 years and longer), in each of which specific tasks are solved and for which its own economic and financial policy is developed and implemented

+ macroeconomic / industrial / regional planning[5] + administration (agency / informal team) of development + industrial / technological policy (real, not formal), export – import policy, protectionism, major national projects[6], public works (infrastructure), development institutions

+ institutional policy (establishment of the missing institutions of a market economy + ensuring they are not merely formal, but effectively operational, examples include central bank, stock exchange, development banks, etc. + institutions should be development-oriented, "developmental")

+ state monopolies in key industries (systemically important companies)

+direct government intervention in the prices of a certain number of key goods

+ economic liberalization (reforms from “above”, developmental economics, developmental state, privatization, increasing the mass of incentives aimed at economic growth, as well as at technological modernization and increase in well-being of people and their life expectancy)

+ intensive financial development / financial deepening + financial policy, the purpose and nature of which is to stimulate growth and modernization (interest rates, exchange rates, tax rates, customs duties, money supply growth rates, preferential loans, government investments, etc.), while at the same time ensuring financial stability and balanced state budget

+ maximum incentives for medium and small / family businesses, as the “engine” of ultra-fast growth

+ maximum incentives for domestic investments and savings

+ maximum incentives for foreign direct investments

+ maximum that is possible for the development of science and professional education, well-educated manpower

+ expansionist social policy in favor of the population (general education + medicine + social security + expansion of social rights and benefits + regulation of prices for basic foodstuffs), welfare state

+ cheap well-skilled labor, undervalued human resources, suplus labor, low production costs in comparison with world markets

---

[5] But not the “Gosplan-Gossnab” of the Soviet-style command economy, not total direct planning and distribution of material resources.

[6] «Ten Major Construction Projects» (during 1970s) to develop national infrastructure (highways, railways, ports, airport, steel mill, shipyard, oil refinery, nuclear power plant); «New Ten Major Construction Projects» (2003) (universities, research centers, theaters and cultural centers, communications, metro system, highways, sewers, etc.).

+high saving / investment rates.

Comparing with Russia. The formula of the economic policy (1991 – 2013):

overconcentration of political and managerial power

+ the authors of economic policy (Yegor Gaidar, Alexey Kudrin)

+ minimum of popular reforms, maximum of unpopular ones that would be disadvantageous to the people

+ economic policiy aimed at stabilization, which poorly respond to real development problems (growth, modernization, industrial diversification)

+ development phases (10-15 + x years), each of which addresses specific tasks for which its own economic and financial policies are developed and implemented, are not tracked

+ macroeconomic planning? There were no 4-5 year plans, they were replaced by medium- and long-term strategies/concepts that usually were not supported by resources. The set goals were constantly not achieved;

+ there was no development administration (agency / “team”) that would have real power;

+ industrial / technological / science policies, etc. were verbalized in medium- and long-term strategies / concepts that usually were not supported by resources. The set goals were constantly not achieved;

+ there was no de facto export-import policy. Protectionism was weakly expressed. The prevailing ideology was “we are best able to produce raw materials, all other goods can be bought on the world market”

+ major national projects, public works (infrastructure), development institutions. Became significant only in the 2010s

+ the 1990s saw accelerated (premature) economic liberalization (reforms from "above"), shock privatization, and a transition to an open economy ahead of its time. At the same time, there was a minimum of incentives, the goals of which were economic growth, technological modernization, growth in well-being and life expectancy. Such incentives were limited. Reasons: new incentives would reduce budget revenues, they would be used to bypass the law, evade taxes, and transfer capital abroad. Since the late 1990s, deliberalization and overregulation have increased sharply. “Economy of punishments” instead of “economy of incentives”. The developmental state / developmental economics did not exist in Russia

+ stabilization policy (finance) for 30+ years, which was an obstacle to economic growth and modernization. It was characterized by ultra-high interest rates, very heavy taxes, sharply limited money supply (low ratios of “Money / GDP”), overvalued ruble, extremely volatile exchange rates, high inflation for 30+ years, dollarization, small speculative financial market, dependent on the inflow and outflow of capital from non-residents and showing very high volatility, capital flight, restrictive policy of the central bank, very slow financial “deepening”

+ lack of incentives for medium and small/family businesses, as the “engine” of ultra-fast growth, with a very high regulatory burden in this segment of the economy. The share of medium and small businesses did not exceed 20–22% of GDP

+ continuous reduction of social guarantees provided by the state, “optimization” of medicine, education, culture, social security, social insurance (reduction of government responsibilities and budget expenditures)

+ not cheap labor, long-term increase in production costs (high inflation, overvalued ruble).

9.3. Personalization of the Major Projects

The major projects that were turning points in Taiwan's economic development were initiated as personal agreements, person-to-person transactions between politicians and investors. As a result, projects were quickly implemented, with maximum preferences, opening the way for “an influx of similar projects” that quickly changed the industrial structure of the economy.

As a case study, the project of the American corporation "General Instrument", the first U.S. company - an electronics manufacturer, which in May - November 1964 opened a plant in Taiwan and sharply reduced its production costs, using cheap skilled labor and receiving maximum benefits from the local government. This project was a signal for investment by other American companies operating in the electronics industry. At the same time, this project was a personal arrangement between an investor (Mozes Shapiro, president of "General Instrument") and a politician (K.T. Li) (Lutao Sophia Kang Wang, 2006, pp. 151 - 152).

Another case: TSMC (Taiwan Semiconductor Manufacturing Company) is the world's largest semiconductor manufacturer. The company was “hand – made” by the government of Taiwan (K.T. Li) (1987). The government entered into a deal with Phillips to transfer technology and equipment in exchange for a stake in TSMC capital (27%). The state became the largest investor in TSMC (49%). Taiwan's richest families received calls from the government inviting them to invest in TSMC (with some arm-twisting). As a result, part of the capital (24%)

was obtained from local private investors (Formosa Plastics (5%), Sino-American Petroleum (4%), the rest - 1% each). K.T. Li personally invited Morris Chang (Chang Tsung-mo), a renowned Chinese-American engineer and corporate executive, to become the head of TSMC (Constance Squires Meaney, 1994, p. 182 – 183). The result was a stunning success.

One more case is the privatization of a plastic (polyvinyl chloride) production plant in the 1950s. One of the architects of the economic miracle ("great economists"), K. Y. Yin, who was the head of the Industrial Development Commission among his other positions, asked the Bank of Taiwan (which performed central bank functions) to report which private individual had the largest bank account in the country. It was personally offered to him (Yongqing Wang, a rice merchant) from "above" to privatize the enterprise, and this was done (Lutao Sophia Kang Wang, 2006, p. 95).

Comparing with Russia. A similar practice applies to projects that were a priority for the state.

Negative factors.

9.4. Risks of Government Power Overconcentration

Risks of wrong decisions resulting from overconcentration of power.

Imperfect legal infrastructure, too strict law enforcement system, lack of independent courts, incomplete protection of property rights.

10. Human Capital

Positive factors.

10.1. Chinese Community in the USA

A significant number of prominent Sino-American scientists, engineers, managers and investors who lived in the United States were willing to work in Taiwan, relocate to Taiwan, or advise the government and private investors in Taiwan, both in order to help their homeland ("New China"), and in personal interest.

The Taiwanese government actively invited top names from the United States and formed Sino-American teams that made outstanding contributions to Taiwan's development. "The ROC government occasionally invited Chinese economists teaching in the United States, including T.C. Liu, S.C. Tsiang, Anthony Koo, John

Fei, and Gregory C.C. Chow for consultation on policy or specific economic problems" (**Table 1.11**) (Li, Kuo-Ting, 1995, p. 64).

Table 1.11. Taiwanese Authorities Consultants

Chinese-American economist	Career	Ideas, consulting	Books, papers
Ta-Chung Liu	Professor, Johns Hopkins University, Cornell University, IMF, Taiwanese bodies established to promote economic reforms	Export-oriented growth, foreign exchange reform, 1954 -1958 (Irwin, Douglas S., 2021, p. 5), tax/ custom duties reform in 1960s, quantitative methods and econometric model of the Taiwan economy, research program in economics between the USA and Taiwan (Lutao Sophia Kang Wang, 2006, pp. 168 – 171, 182 - 185).	The Collected Economic Papers of Professor Ta-chung Liu. Institute of Economics, Academia Sinica, 1976 In memory of him: Economic Growth and Structural Change in Taiwan. N.Y.: Cornell University Press, 1979
Sho-Chieh Tsiang	Professor, University of Rochester, Cornell University, IMF, Academia Sinica, Taiwan think tanks (Taiwan Institute for Economic Research, Chung-Hua Institution for Economic Research)	Price-index-escalated saving certificates, 1947 (Haggard, Stephan, Pang, Chien-Kuo, 1994, p. 59), export-oriented growth, foreign exchange reform, 1954 -1958 (Irwin, Douglas S., 2021, p. 5), etc.	"Taiwan's economic miracle: lessons in economic development," in A.C. Harberger, editor, "World Economic Growth; Case Studies of Developed and Developing Countries", Institute for Contemporary Studies, San Francisco, CA, 1984
Anthony Y.C. Koo	Professor, Michigan State University, Florida State University, Academia Sinica	Consultations on policy or specific economic problems	Land Reform in Taiwan. Michigan State University, June 1970; The Role of Land Reform in Economic Development: A Case Study of Taiwan. New York: Praeger Publishers, 1968
John Fei	Professor, Yale University, Cornell University, Chung-Hua Institution for Economic Research, Academia Sinica	Consultations on policy or specific economic problems	Development of the Labor Surplus Economy: Theory and Policy (with Gustav Ranis), The Economic Growth Center, Yale University, 1964
Gregory C.C. Chow	Professor, MIT, Cornell University, Princeton University, Academia Sinica	Consultations on economic policy (1960s – early 1980s)	Interpreting China's Economy Singapore: World Scientific, 2010.

"There is a large number of well-trained Chinese engineers and technicians residing in the United States… I feel certain that here is a reservoir of high-caliber manpower… They are bilingual and bi-cultural… They can be very helpful… by improving communications and understanding between the partners, which is so important in a partnership in any business undertaking" (Li, Kuo-Ting, 1976, p. 139).

Comparing with Russia. Russians, Jews and other ethnic minorities born in Russia are quickly assimilated in the West (and Israel). Since the 1990s, there has not been a significant group of Russian-American / Russian-Western economists, investors, managers, and specialists who would return to Russia to contribute to the development of the country. Sizeable capital did not arrive from those who emigrated from Russia before the 1990s. Only a few cases are known.

10.2. Rapid Growth of Population

High birth rate, post-war "baby boom", decrease in mortality – a factor of rapid economic growth.

Comparing with Russia. Russia's population has decreased from 148 mln people in 1991 (beginning of reforms) to 146.3 mln in 2000 and 142.8 mln in 2009. In 2021, 145.6 mln people lived in Russia (IMF World Economic Outlook, October 2023). The natural decrease in population (replenished by migrants) amounts to several hundred thousand people a year.

10.3. A Lot of Highly Skilled Migrants

Of the 1.5 - 2 million people who emigrated to Taiwan in the late 1940s, an estimated 35 - 40% were professionals, intelligentsia, intellectuals (engineers, administrators and other civilian specialists) with high level of education.

10.4. Collective Behavior

Emigrants. A significant part of society consists of emigrants, those who are willing to take on higher risks in conditions of uncertainty. Those who are ready to survive, do the maximum possible for this.

Not emigrants. "Some of the foundations of further development had been laid by Japan, including (a) a well-trained, disciplined, adaptable and economically – motivated population, (b) an efficient agriculture practiced by farmers receptive to other improvements" (Jacoby, 1966, p. 21).

The effect of "post-war reconstruction". The great desire of the majority to achieve a good, well-organized life as quickly as possible.

It is necessary to prove every day the right to independent existence, to sovereignty (especially after the diplomatic recognition of Chinese mainland), which is a source of special energy for the elite and society

Intense competition with Chinese mainland. To survive as a society, it was necessary to outpace the mainland in economic and technological development and personal well-being.

10.5. Labor Intensity

Ability to work hard and intensively (**Table 1.12 – 1.13**), openness, cooperativeness, willingness to immediately help others, positive attitude towards competition, desire to compete, love of being an owner, desire to own the business (small and medium-sized businesses), habit of working well in hierarchical structures that limit personal freedom, tolerance.

Table 1.12. Patterns of Collective Behavior (Hard Work) *

Importance work in life. Question V8	Share of respondents, %				
	Russia	Germany	Sweden	USA	Taiwan
The highest grade – "Very important"	45.0	39.4	50.3	35.6	60.2
"Rather important"	29.3	40.5	34.6	44.3	29.9
Sum of grades	74.3	79.9	84.9	79.9	91.1

*World Values Survey, http://www.worldvaluessurvey.org. WV6_Results Technical Records v.2016.01.01 (Sweden 2011, Germany 2013, Russia 2011, USA 2011)

The study of collective behavior models shows that for respondents in Taiwan, work is of higher importance than in the countries of the “continental model” (Germany, Sweden) and the Anglo-Saxon model (USA). Work has the lowest importance for respondents in Russia (**Table 1.12**).

The conclusion about the very high importance of work for those living in Taiwan is confirmed by surveys from other years (**Table 1.13**). For Russians, the importance of work is lower compared to that of Taiwanese; moreover, the importance of work decreases over time (while it increases in Taiwan) (**Table 1.13**).

Table 1.13. Patterns of Collective Behavior in Dynamics (Hard Work)

Importance work in life. Question V8	Taiwan, share of respondents, %			
	1995	2006	2012	2017
The highest grade – "Very important"	44.4	62.7	60.2	60.3

Table 1.13. (Continued)

Importance work in life. Question V8	Taiwan, share of respondents, %			
	1995	2006	2012	2017
"Rather important"	45.8	27.3	29.9	32.3
Sum of grades	90.2	90.0	90.1	92.6
Importance work in life. Question V8	Russia, share of respondents, %			
	1995	2006	2011	2017
The highest grade – "Very important"	48.6	48.4	45.0	40.7
"Rather important"	34.1	31.2	29.3	33.3
Sum of grades	82.7	79.6	74.3	74.0

*World Values Survey, http://www.worldvaluessurvey.org. WV3_Results. Taiwan ROC Technical Record Study # WVS-1995 v20201117; WV5_Results. Technical record Study #Taiwan 2006_v20180912; WV6_Results. Technical record Study #Taiwan 2012_v20180912; World Values Survey Wave 7 (2017-2020). Taiwan ROC Study # WVS-2017 v3.0; WV3_Results. Russian Federation Study # WVS-1995 v20201117, WV5_Results Study #Russian Federation 2006_v20180912, WV6_Results Study # Russia 2011_v20180912, World Values Survey Wave 7 (2017-2020) Russian Federation Study # WVS-2017 v2.0. The question number corresponds to WV6_Results. Technical record Study #Taiwan 2012_v20180912. If the question was not asked, the symbol "x" is indicated.

10.6. Pragmatism, Materialism as a Chinese National Trait

The collective desire for high standards of living and the physical possession of material values is a stimulus for rapid economic growth. Wealth is a surrogate for security, a guarantee of high appreciation of a person by his family.

"The Chinese were economically successful in Southeast Asia not simply because they were energetic emigrants, but more fundamentally because in their quest for riches they knew how to handle money, and organize men in relation to money" (Freedman, M., 1979, p. 25).

A strong desire to be an owner is part of the collective behavior of the Chinese (see below). Such a desire is one of the manifestations of their materialism and "familism", the desire to keep the family on the surface and occupy a high position in both the social and family hierarchy (see **paragraph 4.3.**) (Redding, Gordon, Wong, Gilbert Y.Y., 1986, p. 290).

10.7. Desire to Be an Owner

The strong, persistent desire to be an owner, as a characteristic trait of national values, is fully reflected in the statistics of small and medium-sized enterprises (**Table 1.14**).

Table 1.14. Dynamics of small and medium-sized enterprises *

	1994	2000	2022	Dynamics, 1994 – 2022, %
Small and medium-sized enterprises, million units.	0.548	0.646	1.63	+197 In 3 times
Population of Taiwan, million people	21.18	22.28	23.27	+10
Share of small and medium-sized enterprises in the total number of enterprises in Taiwan, %	95.8	98.1	98.9	x
Employed in small and medium-sized enterprises, million people	n.a.	7.41	9.13	x
Share of those employed in small and medium-sized enterprises in the total number of employed, %	n.a.	78.1	80.0	x

*IMF World Economic Outlook Database. October 2023; White Paper on Small and Medium Enterprises in Taiwan, 2004 – 2023. Available: https://www.sme.gov.tw/list-en-2572. Date of access: 05.04.2024

With the population of Taiwan increasing by 10% from 1994 to 2022, the number of small and medium-sized enterprises (SMEs) has tripled. The share of those employed by SMEs in the total workforce has reached 80% and continues to grow steadily. For every 14 individuals living in Taiwan, there is approximately 1 SME. For every 5-6 individuals employed in the national economy, there is 1 SME (**Table 1.14**).

All of this is possible under one condition – the strongest personal desire for economic independence, a desire to be a) an owner, b) to depend on oneself, c) to be independent both in income and its management, without relying on anyone at the next hierarchical levels.

How do social psychologists interpret the "desire to be an owner" in Chinese culture? "A young man can go out and earn – not his fortune, but a family fortune. The respect to him within the family for such endeavors may well be as important as the material advantages themselves"(Ryan E.J., 1986, p. 290).

"The crucial requirement of this value is that each adult male should have his own business in which the responsibility for risks and loss and the possibilities for profit are borne by the individual. This value is of tremendous importance in shaping the form of the economic units which make up the economy… As a result small business units multiply… Persons who work for others and who do not have the capital to operate as independent business men fall into the lower rungs of the prestige scale and have, in actuality, little voice in community affairs" "(Ryan E.J., 1986, p. 290).

10.8. Adaptibility

Superfast growth is a continuous flow of changes with high intensity, largely borrowed from other countries. These changes inevitably include not only new technologies, goods, equipment, but also societal values, culture, and the very way of life. A nation is capable of generating superfast growth only if it possesses a strong ability to adapt, to quickly absorb and incorporate into its living space everything new and previously unknown.

The speed at which economic and social changes have occurred in Taiwan themselves demonstrate how adaptive the Taiwanese (and Chinese in general) are. Anyone who has lived in Taiwan can personally attest to the depth of the cultural integration - Chinese and Western - in both the way of life and the economic model that have proven successful in Taiwan.

The most crucial question is whether changes have occurred in Chinese psychology. The answer: yes, they have. Several studies unequivocally confirm this (Yang, Kuo-Shu, 1996, p. 479 – 498). Roughly speaking, there is "more individualism, less collectivism," while traditional Chinese and Western values can coexist in the collective consciousness, complementing each other.

10.9. Patience

Willingness to endure hardships today for success tomorrow, as one of the traits of national values, is one of the conditions for an "economic miracle." In 1966, in Taiwan, there were 1.87 people per room, and in 1970, it decreased to 1.71 people (Statistical Yearbook of the Republic of China 1975, p. 252, 255).

Such housing conditions were much worse than the social standards accepted even for developing countries. This means that in the 1950s to the early 1960s, housing conditions were even worse, most likely significantly worse. Today, it is estimated that housing conditions are comparable to countries with high income levels (within 1 - 1.7 rooms per person) (South Korea - 1.5 rooms per person, Japan - 1.9 rooms per person, Russia - 1 room per person).[7]

10.10. Obedience to the Law

Personal security, a culture of compliance with laws, protection of ownership rights - all this is the basis for sustainable economic growth and creates a favorable investment climate. You can invest over long time horizons, you can do everything

[7] OECD Better Life Index Data. Available: https://www.oecdbetterlifeindex.org/topics/housing/ Date of access: 6.04.2024.

to make your business grow, without thinking that it can be forcibly taken away, and you are exposed to personal risks that affect the very foundations of the existence of you and your family.

In this regard, authoritarian Taiwan as a developmental state has provided a favorable environment for anyone willing to be an entrepreneur. It can be assumed that otherwise there would not have been ultra-fast economic growth (1950s – 1980s).

What is meant?

"Chinese People are preoccupied with a concern for maintaining social order. This order is created through the hierarchical structuring of relationships underlying Confucian social philosophy" (Bond M.H., Hwang K., 1986, p. 262). "Among Chinese, one of the responsibilities of those in positions of power is to anticipate and defuse potential confrontation… The overall leader is the master puppeteer carefully balancing contending parties. In Chinese culture, one uses position power to enforce order" (Bond M.H., Hwang K., 1986, p. 262).

One of the elements of Chinese culture is to avoid direct aggression and "loss of face" whenever possible. "Chinese strategies… for resolving conflicts… are characterized by strategies geared to short-circuit open conflict – the use of indirect language, middlemen, face-saving ploys, a long-range view, flexibility, and so on… Strategies such an open debate, which require direct confrontation, are avoided" (Bond M.H., Hwang K., 1986, p. 262).

All these assumptions are well illustrated by the low level of violence in Taiwan since the early 1950s (**Table 15**).

Table 1.15. Criminal Dynamics in Taiwan

Year	Homicide cases per 100.000 people
1946	0.6
1972	5.9
1981	7.0
1991	9.7
2001	5.4
2011	3.5
2022	1.1

* Statistical Yearbook of the Republic of China 1975, p. 4; Statistical Yearbook of the Republic of China 2002, p. 133; Statistical Yearbook of the Republic of China 2022? p. 6, 63

Surveys show a relatively high level of law-abiding behavior in Taiwan, along with a clear tendency to adhere to moral norms (**table 1.16 – 1.17**).

Table 1.16. Patterns of Collective Behavior (Morality, Law)*

Response (the top 3 negative grades, 10 – “Never justifiable”, 9, 8)	Share of respondents, %				
	Russia	Germany	Sweden	USA	Taiwan
"Never be justified"					
Cheating on taxes if you have a chance. Question V201	62.1	n.a.	80.8	83.4	83.4
Someone accepting a bribe in the course of their duties. Question V202	79.1	88.0	84.8	84.9	88.2
Stealing property. Question V200	86.8	95.7	84.9	85.5	90.8
Avoiding a fare on public transport. Question V199	48.8	85.7	72.4	71.3	75.1
Claiming government benefits to which you are not entitled. Question V198	61.4	86.3	76.6	77.1	55.5

*World Values Survey, http://www.worldvaluessurvey.org. WV6_Results Technical Records v.2016.01.01 (Sweden 2011, Germany 2013, Russia 2011, USA 2011)

It is obvious that respondents in Taiwan, overall, give more negative assessments of violations of law and moral standards compared to the USA and Sweden (but not Germany) (**Table 1.16**).

Let's check the evaluations of law violations and moral standards by respondents (Taiwan), comparing them with surveys from other years (**Table 1.17**). The data confirms that they are extremely negative.

Table 1.17. Patterns of Collective Behavior in Dynamics (Morality, Law), Taiwan*

Response (the top 3 negative grades, 10 – “Never justifiable”, 9, 8)	Taiwan, share of respondents, %			
	1995	2006	2012	2017
"Never be justified"				
Cheating on taxes if you have a chance. Question V201	x	84.4	83.4	90.4
Someone accepting a bribe in the course of their duties. Question V202	x	92.9	88.2	93.4
Stealing property. Question V200	x	x	90.8	95.5
Avoiding a fare on public transport. Question V199	x	84.1	75.1	81.0

Table 1.17. (Continued)

Response (the top 3 negative grades, 10 – "Never justifiable", 9, 8)	Taiwan, share of respondents, %			
	1995	2006	2012	2017
Claiming government benefits to which you are not entitled. Question V198	x	71.6	55.5	65.4

*World Values Survey, http://www.worldvaluessurvey.org. WV3_Results. Taiwan ROC Technical Record Study # WVS-1995 v20201117; WV5_Results. Technical record Study #Taiwan 2006_v20180912; WV6_Results. Technical record Study #Taiwan 2012_v20180912; World Values Survey Wave 7 (2017-2020). Taiwan ROC Study # WVS-2017 v3.0. The question number corresponds to WV6_Results. Technical record Study #Taiwan 2012_v20180912. If the question was not asked, the symbol "x" is indicated.

Comparing with Russia. Surveys conducted in Russia show that, as a rule, it is much easier to violate laws and moral norms in Russia than in Taiwan (**Tables 1.16 - 1.18**). Over the past 10 years of observation (2006 – 2017), the denial of laws and rules in Russia has increased. The response to overregulation is always the desire to circumvent the law, not to comply with it.

As mentioned earlier, in Russia, a centuries-old culture of obedience is combined with chaotic, energetic, anarchic human behavior "below," in attempts to achieve maximum personal freedom and circumvent rules and restrictions imposed "above".

Table 1.18. Patterns of Collective Behavior in Dynamics (Morality, Law), Russia*

Response (the top 3 negative grades, 10 – "Never justifiable", 9, 8)	Russia, share of respondents, %			
	1995	2006	2011	2017
"Never be justified"				
Cheating on taxes if you have a chance. Question V201	x	61.5	62.1	55.6
Someone accepting a bribe in the course of their duties. Question V202	x	83.5	79.1	75.7
Stealing property. Question V200	x	x	86.8	77.8
Avoiding a fare on public transport. Question V199	x	49.7	48.8	36.2
Claiming government benefits to which you are not entitled. Question V198	x	64.9	61.4	50.1

*World Values Survey, http://www.worldvaluessurvey.org. Russian Federation Study # WVS-1995 v20201117, WV5_Results Study #Russian Federation 2006_v20180912, WV6_Results Study # Russia 2011_v20180912, World Values Survey Wave 7 (2017-2020) Russian Federation

Study # WVS-2017 v2.0. The question number corresponds to WV6_Results. Technical record Study #Taiwan 2012_v20180912. If the question was not asked, the symbol “x” is indicated.

10.11. Working Hours

One of the factors of rapid economic growth is the exceptionally large number of working hours (**Table 1.19**). As Taiwan's economy became more mature, the number of working hours decreased. However, even today, the number of working hours in Taiwan is estimated to significantly exceed this indicator in other developed countries. [8]

Table 1.19. Working Hours, Manufacturing*

Year	Taiwan	
	Average Working Hours per Month	Average Working Hours per Week
1951	266	66.5
1955	237	59.3
1960	242	60.5
1965	237	59.3
1970	231	57.8
1974 (December)	230	57.5
1980	221	55.3
1985	205	51.3
1990	202	50.5
1995	202	50.5
2000	199	49.8
2005	189	47.3
2010	189	47.3
2015	182	45.5
2017	176	44.0

*Statistical Yearbook of the Republic of China 1975, p. 45; Statistical Yearbook of the Republic of China 2002. P.56; Statistical Yearbook of the Republic of China 2012, p. 56; Taiwan Statistical Data Book 2018 (National Development Council), p. 41. 1951 – 1974 – data on male employees.

There are cultural differences in the approach to long working hours between the West (generally, "individualists") and the East (generally, "collectivists"). Taiwan continues to be seen as predominantly a "collectivist" society (Hofstede G., Hofstede G. J., Minkov M., 2010).

"The individualists view the needs of the self and the family as distinct, thus perceiving time and energy at work as competing with their duties to family, and vice versa. As a result, when long working hours are demanded, individualists may

[8] OECD Stat. Average annual hours actually worked per worker. Available: https://stats.oecd.org/Index.aspx?DataSetCode=ANHRS. Date of access: 03/21/2024.

interpret this as work interfering with the family life, thus will experience heightened job dissatisfaction. In contrast, collectivists such as Chinese view work as a means to further family welfare, and are more tolerant of hardworking, even when it sacrifices family life... Thus, even though Chinese employees are working more hours than they personally prefer to, their work attitudes will not be affected due to the conviction that such diligence is benefiting the family and their families support their behaviors… Devotion to work is a highly praised Confucian virtue…" (Lu, Luo, 2011, p. 254).

Comparing with Russia. The average number of working hours per week in 2023 is 34 hours (Rosstat). This is significantly less than in Taiwan.

10.12. High Savings / Investment Rates

Taiwan's high propensity to save has underpinned long-term growth in the savings rate and, on this basis, the investment rate.

"The secret of their (newly industrialized countries) success must be sought in the area of their policy experience through which system’s institutional environment was able to mobilize creative energies of their population as hard work, saving propensity, entrepreneurial strength, and the capacity to engage in risk-taking activities" (Ranis G., 1995, p. 3).

In the 1950s, the low savings rate was partially compensated by American economic aid. In the 1960s through the 1980s, the savings rate continuously increased as Taiwan's economy heated up, reaching its peak in the 1980s and, along with the influx of foreign capital, creating conditions for a higher investment rate and, consequently, high rates of economic growth (**Table 1.20**).

Many authors have analyzed the reasons for Taiwan's high savings rate. Among them: rapid growth of real GDP/income per capita, low inflation, large state savings, an undeveloped social security system, a tradition of frugality in Chinese culture, a strong desire to create your own family business (and accumulate savings for this), real positive interest on deposits , tax exemption on interest on deposits and other incentives (Shea Jia-Dong, Yang Ya-Xwei, 1994, p. 205); changes in the demographic structure, the age profile of the population, the increase in the share of the active, working-age population in Taiwan, the reduction in the share of dependents in families, and the decline in birth rates by the 1970s – 1980s) (Deaton Angus S., Paxson Christina, 2000, pp. 141 – 173); the extent to which the economy is mature, along with other factors (Athukorala Prema-Chandra, Tsai Pang-Long, 2003, pp. 65 – 88); saving money to give children a better education than their parents, which is a high value in Taiwan (Yuan-li Wu, 1985, p. 115).

Table 1.20. Savings / Investment Rates*

Year	Taiwan		Russia	
	Savings rate, % GNP / GDP	Investment rate, % GNP / GDP	Savings rate, % GDP	Investment rate, % GDP
1952	≈15	≈16	x	x
1960	18.4	21 - 22	x	x
1965	20.7	23 - 24	x	x
1970	25.7	26 - 27	x	x
1975	26.7	30 - 31	x	x
1980	32.1	34.1	x	x
1985	35.2	20.8	x	x
1990	31.9	25.5	14.3 (1994)	17.3 (1994)
1995	29.8	28.0	21.7	19.5
2000	29.6	27.2	32.7	16.4
2005	29.5	24.6	28.5	18.2
2010	34.1	25.1	24.8	20.7
2015	36.6	21.7	27.1	22.1
2020	40.3	24.2	25.8	23.5

*IMF World Economic Outlook April 2024; Deaton Angus S., Paxson Christina. Saving, Growth, and Aging in Taiwan // Studies in the Economics of Aging. Chicago: University of Chicago Press, January 1994, p. 332; Athukorala Prema-Chandra, Tsai Pang-Long. Determinants of Household Saving in Taiwan: Growth, Demography and Public Policy // The Journal of Development Studies, June 2003, Vo1.39, No 5, p. 68. The ratios were defined from 1952 to 1975 as a percentage of GNP, and from 1980 to 2020 as a percentage of GDP.

Comparing with Russia. In Russia, the savings rate and investment rate are generally lower than in Taiwan (with the investment rate significantly lower) (**Table 1.20**). Reasons include: negative real interest rates, high inflation, capital flight, high risks of loss of savings/investments over the long term (due to very high economic/social volatility), low rates of economic growth/income growth in the 1990s to 2020s, low life expectancy ("we'll get by in our lifetime", high mortality). A very high share of families have no opportunity to save: incomes are too low, they are entirely spent on current needs.

Another reason is that "thriftiness" as a value is weakly present in Russian culture. In the 20th century, each generation of Russians lost its assets, and a new one started life from scratch. Only 1-2% of the assets of a Russian family are capable of surviving 3-4 generations (20th – 21st centuries). "It's pointless to save too much."

Negative factors.

10.13. High Share of Unskilled Migrants

Of the 1.5 - 2 million people who emigrated to Taiwan in the late 1940s, an estimated 65 - 75% were military personnel, as well as those who had yet to find their place in life, including get a professional education. Mostly young people. Together they were a huge problem for the labor market.

10.14. Low Human Development

In 1950s lack of education (including illiteracy) of the absolute majority of the population of Taiwan, a sharp predominance of the rural population, low life expectancy. There was an acute shortage of specialists with modern professional knowledge.

Comparing with Russia. In the early 1990s (the start of reforms), Russia was in 33rd place on the UNDP Human Development Index (out of 160 countries) (UNDP Human Development Report 1992).

10.15. "Dependency Burden"

With such an age structure of the population (**Table 1.21**), the superfast growth in Taiwan in the 1950s-1970s indeed seems miraculous. For every 10 people of working age, there were 8-9 dependents.

Table 1.21. Age composition and "Dependency Burden" in Taiwan*

Year	(0 – 14) 1	(15 – 64) 2	(64 and over) 3	"Dependency Burden" (1 + 3) / 2
1950	41.42	56.07	2.51	78
1955	43.40	54.13	2.47	85
1961	45.85	51.66	2.49	94
1965	44.88	52.47	2.65	91

* The table is taken from a book: Li, Kuo-Ting. The Experience of Dynamic Economic Growth in Taiwan. Taipei: Mei Ya Publications, Inc., 1976, p. 264.

10.16. Ranking of Businessmen in Society

K.T. Li: "Chinese used to despise businessmen due to the fact that, in traditional Chinese society, merchants ranked the lowest in the four classes of "gentry, peasantry, workers and merchants". This has caused tremendous difficulty in investment and trade for businessmen. This also has become a barrier to economic development" (Lutao Sophia Kang Wang, 2006, pp. 224 – 225).

Comparing with Russia. A culture of disdain for money (what is hard to earn is easily spent), animosity towards businesspeople ("they are all speculators," "they exploit the masses," fraudsters). The eradication of entrepreneurs (private owners) as a social class was a goal of the communists (October Revolution of 1917, over 70 years of socialism).

10.17. Socio-Cultural Traditions

Surprisingly, K.T. Li, one of the authors of the economic miracle, complained about the socio-cultural traditions in Taiwan, which "are not very advantageous to the development of private industry" (Li, Kuo-Ting, 1976, p. 314).

Among them:

"Lack of Enterprising Spirit. Most entrepreneurs in Taiwan lack an enterprising and risk-taking spirit which is essential a pioneering a new industry. They do not have the courage to accept new things. Enveloped by an agricultural society and its culture for centuries, people in general are apt to be content with the age-old ways of living and production techniques. They have little desire to improve their material life by raising productitvity.

Lack of Cooperating Spirit. In an agricultural society, cooperation in production is limited to that within the family circle. This tradition is still in existence and the organization of many enterprises is limited to sole-proprietorships or partnerships within the family circle. Only a few are organized in the form of a corporation. This is a big stumbling block on the road toward developing large-scale enterprises" (Li, Kuo-Ting, 1976, pp. 314 - 315).

The first remark ("lack of enterprising spirit") seems exaggerated; otherwise, such extremely high rates of economic growth could not have been achieved. It is attributed, in assessment, to the natural desire of a prominent politician to "urge" everyone in the economy: "faster, faster, faster".

As for the second remark ("lack of cooperating spirit"), although it contradicts traditional views of the collectivist nature of Chinese society, which are more related to the "individual-state" line, it aligns well with the extremely widespread presence of small and medium enterprises in Taiwan's economy and the high value that competition holds in Taiwanese society.

Comparing with Russia. Complaints from the intelligentsia that the Russians do not have an “entrepreneurial spirit”, “about the slavish nature of the people”, that “the people are not what we need” have a 200-year history. However, many cases, including in the last 30 years, show that if given strong administrative and economic incentives, the Russian people react very quickly to them, adapt to them, immediately creating entrepreneurial networks and dramatically increasing production in a short time.

10.18. Irregularities in Elite Behavior

High corruption. Opposition to innovations; wrong decisions (not in favor of development, not in the interests of the population), which are inevitably generated by the “bureaucracy class”, as a social group with its own interests (first of all, not to give up political power and related benefits).

11. Foreign Aid (1951 – 1965)

Positive factors.

US economic and military aid was enormous. "The U.S. financed a “heavy” program of economic aid to Free China. It involved annual obligations almost $100 millions over the fifteen-year period 1951 – 1965, and annual deliveries averaging about $80 millions over the 18-year period 1951 – 1968. Aid was almost $10 per capita per annum, averaged 6.4 percent of Taiwan’s GNP, formed 34 percent of its gross investment, and covered 91 percent of its aggregate net import surplus of goods and services” (Jacoby, 1966, p. 7).

A "developmental approach" (real, not formal), which was carried out by managers and experts working within the framework of the economic aid.

US initiative in carrying out key reforms that transformed Taiwan into a developed economy. «In 1960 the U.S. took a more assertive approach and engaged Taiwan in a very aggressive policy dialog. The U.S. government offered Taiwan a $45 million grant, followed by $10 million two months later, with the condition that it undertake a comprehensive reform program focusing on export-promotion and private sector development. The strategy worked» (Principles from East Asia, 2003, p. 3).

As cases, land reform of the late 1940s and early 1950s (Tang, Hui-sun, 1954, pp. 19 – 21); in the early 1950s the goods supplied as part of American aid were used to reduce inflation (increase in the supply of goods on the market, freezing of cash receipts from the sale of these goods in accounts at the Bank of Taiwan); tax initiatives of the 1950s (Haggard, Stephan, Pang, Chien-Kuo, 1994, p. 60); privatization in the early 1950s; the “19 Points” Program of 1958. The USA initially proposed 10 points, and the Taiwanese authorities added 9 more points (Principles from East Asia, 2003, p. 4).

«Acceptance of the “19 Points” became the primary condition the U.S. imposed before disbursing aid» ((Principles from East Asia, 2003, p. 4).

+ US willingness to transfer technology and equipment to Taiwan.

+ US defense of Taiwan from cross-strait attack.

Outstanding consultants. In the successful land reform in Taiwan (late 1940s - early 1950s), Japanese experience was utilized. For this purpose, Wolf I. Ladejinsky, a key ideologue of Japanese land reform (born in the Russian Empire, emigrated to the USA in 1920), was invited. "Mr. Wolf I**.** Ladejinsky, the American expert on land problems, who had planned the post-war land reform in Japan, was invited by the Chinese Government and JCRR to come to Taiwan for several times to offer suggestions and comments. He gave of his very best by way of expert opinion" (Tang, Hui-sun, 1954, p. 21).

Wolf I. Ladejinsky – U.S. Department of Agriculture, U.S. State Department, World Bank, and others. Throughout his life, he was engaged in land reforms in Asian economies. His reforms saved and fed millions of people. Ladejinsky's publications, including those on land reform in Taiwan, are most fully reflected in a collection of his articles published by the World Bank (Agrarian Reform, 1977).

Comparing with Russia. In the early 1990s, the United States provided food aid to Russia. Together with international financial institutions, extensive expert assistance was provided (transition from a command (planned) economy to a market economy).

On the one hand, this aid is assessed positively (education, transfer of experience in creating market infrastructure). On the other hand, the assessment is sharply negative (economic and financial policy). This aid was not of a developmental nature, did not take into account the peculiarities of Russia. It formed a policy centered on: a) shock therapy and stabilization, rather than long-term development, b) the fastest transition to an open economy and free trade on world markets (“no to protectionism”), which obviously should have led to a crisis in domestic production with high added value, in which Russia was uncompetitive.

At the same time, restrictions on the transfer of technology and equipment to Russia remained. Large foreign direct investments did not come to Russia, which would mitigate the negative effects of accelerated liberalization (as was the case in Eastern Europe). On the contrary, Russia has become a country of massive export of brains and capital.

12. External Environment

Positive factors.

Worldwide growth, a boom that lasted for a quarter of a century, widespread improvement of living standards following the Second World War, rapid technological progress, and relative freedom of cross-border trade and technology transfer. "World industrial production increased by three and a half times between 1948 and 1973, an average rate of increase at 5% per year".[9]

Plus openness of the U.S. and Japan domestic markets - Taiwan's main trading partners. It is clear how the growth in the United States and Japan (1960s-1970s) supported the "economic miracle" in Taiwan (**Table 1.22**). In the 1980s-1990s, there was sustained significant demand from these countries for goods from Taiwan (35-50% of total export volume). Since the mid-1990s, Taiwan's exports have been redirected to mainland China and Hong Kong (the latter always held a significant share of exports) (**Table 1.22**).

Table 1.22. Taiwan's Export by Countries

Year	USA	Japan	Hong Kong	Mainland China
1952	3.5	52.6	7.7	x
1955	4.4	59.5	5.5	x
1960	11.5	37.7	12.6	x
1965	21.3	30.6	6.2	x
1970	39.5	15.1	9.5	x
1974	36.8	15.2	6.1	x
1990	32.4	12.4	12.7	-
1995	23.6	11.8	23.4	0.3
2000	23.5	11.2	21.1	2.8
2005	14.6	7.6	17.1	22.1
2010	11.4	6.7	11.8	28.0
2017	11.6	6.6	13.0	28.0

*Statistical Yearbook of the Republic of China 1975, pp. 138 - 141; Statistical Yearbook of the Republic of China 2002, pp. 212 - 213; Statistical Yearbook of the Republic of China 2018, pp. 221 - 225.

[9] The Economist (December 28 – January 3, 1975). P. 48. Quoted from: Li, Kuo-Ting, 1976. P. 164 - 165.

13. Engines of Economic Miracle

13.1. Role of the State

The state as a lever for launching superfast economic growth and technological modernization. In the early stages, state interventionism in the economy is inevitable, along with step-by-step increasing economic liberalization in those areas where it is effective. In the future, a long-term, decades-long trend of economic liberalization (establishment of a market environment) and weakening of interventionism as the economy becomes "new industrial", "developed".

This is a state in which all policies, ways of thinking, and activities are subordinated to development (superfast growth, increased prosperity and life expectancy, technological modernization, competitiveness in the world). "Development government", "central development bank", "development finance ministry", etc. Catch up with developed countries, move into the group of developed economies.

13.2. Private / Public Sectors. Structure of Ownership

The rapid economic growth was primarily driven by the private sector. The share of the private sector in industrial production grew vigorously, while the share of the public sector continuously declined (**Table 1.23**). The same trend was observed in manufacturing production (Chu, Wan-wen, 1999, p. 30). This was caused by two factors: 1) higher growth rates in the private sector (the leading factor), and 2) privatization.

Table 1.23. Structure of Ownership in Industrial Production*

Year	Industrial Production	
	Share of Private Sector, %	Share of Public Sector, %
1952	43.4	56.6
1955	48.9	51.1
1960	52.1	47.9
1965	58.7	41.3
1970	72.3	27.7
1975	81.2	18.8
1980	81.8	18.2
1985	82.31	17.69
1990	83.16	16.84

* Chu, Wan-wen, 1999, p. 30.

Growth rates in the private sector were significantly higher than in state-owned enterprises, especially in manufacturing (**Table 1.24**) (Chu, Wan-wen, 1999, p. 31).

Table 1.24. Growth Rates of Production*

Years	Average Growth Rates, %			
	Industrial Production		Manufacturing Production	
	Private Sector	Public Sector	Private Sector	Public Sector
1953 - 1960	15.29	9.53	17.18	9.09
1961 - 1969	21.87	9.34	23.84	8.85
1970 - 1986	12.99	9.28	13.68	8.79
1987 - 1997	5.05	4.08	5.09	1.70

* Chu, Wan-wen, 1999, p. 31.

Apparently, private businesses had more energy and a greater drive for expansion compared to state-owned enterprises.

13.3. Industries

Which industries were the driving force behind the rapid growth? This can be judged by the changes in the industrial structure of Taiwan's economy (**Table 1.25**).

Table 1.25. Changes in the Industrial Structure of Taiwan's Economy (aggregated)*

Year	Composition of GDP, %		
	Agriculture	Industry	Services
1951	32.3	21.3	46.4
1955	29.1	23.2	47.7
1960	28.5	26.9	44.6
1965	23.6	30.2	46.2
1970	15.5	36.8	47.7
1975	12.7	39.9	47.4
1980	7.7	45.7	44.6
1985	5.8	46.3	47.9
1990	4.1	42.5	53.4
1991	3.7	42.5	53.8

* Li, Kuo-Ting, 1995, p. 271.

The share of the agricultural sector in GDP structure decreased from 32.3% in 1951 to 12.7% in 1975 and 3.7% in 1991. Correspondingly, the share of industry in GDP increased from 21.3% in 1951 to 39.9% in 1975 and 42.5% in 1991. Services accounted for 46.4% of GDP in 1951, approximately the same share in 1975 (47.4%), but quickly increased their share to 53.8% in 1991.

It is clearly visible how Taiwan transformed from an agrarian country in the 1950s to an industrial country in the 1960s-1980s, and later to a post-industrial country in the 1990s, rapidly increasing the share of services in the GDP structure.

The mentioned trends are well supported by the extended data on changes in the sectoral structure of Taiwan's GDP (**Table 1.26**) – with a sharp decline in the agricultural sector and an exceptionally rapid growth in the manufacturing industry (its share in GDP was 15.5% in 1951-53 and 37.9% in 1971-73) and the associated increase in the share of infrastructure (electricity, gas, water, transportation, storage, communications).

Table 1.26. Changes in the Sectoral Structure of Taiwan's Economy (Extended Data)*

	Taiwan's GDP						
	1951-53	1954 - 57	1958 - 60	1961 - 63	1964 - 67	1966 - 70	1971 - 73
Agriculture and related industries	33.2	27.8	27.2	24.9	22.4	16.5	13.1
Mining and quarrying	1.8	2.1	2.5	2.2	1.8	1.4	1.1
Manufacturing	**15.5**	**19.6**	**21.4**	**23.0**	**26.7**	**32.3**	**37.9**
Electricity, gas, and water	1.0	1.1	1.5	1.9	2.0	2.3	2.2
Construction	3.8	4.6	3.8	3.9	4.0	4.1	4.1
Transport, storage, communication	4.1	4.4	4.6	5.1	5.4	5.9	6.0
Commerce	17.8	17.4	16.2	15.4	14.3	13.1	11.1
Finance, insurance, real estate	8.5	8.3	8.0	8.1	8.0	8.6	8.9
Community, social, and business service (incl. hotels and restaurants)	5.2	4.8	4.7	4.9	5.2	5.1	5.5
Government services	9.1	9.9	10.1	10.6	10.2	10.7	10.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Kuznets, Simon, 1979, p. 56

The analysis of changes in the product structure of Taiwan's economy demonstrates the same trends within the manufacturing industry (**Table 1.27**). In the 1950s, the economy was dominated by food and beverages, textiles, and clothing (import substitution phase). In the 1960s to early 1970s (export-oriented phase), there was a sharp decline in their share, accompanied by an intense increase in the share of chemicals, metals, and metalworking.

Table 1.27. Changes in the Product Structure of Taiwan's Manufacturing Industry*

	Taiwan's GDP in manufacturing by origin in major branches						
	1951-53	1954 - 57	1958 - 60	1961 - 63	1964 - 67	1966 - 70	1971 - 73
Food, beverages, and tobacco	47.1	48.3	46.3	43.0	34.8	26.3	18.6
Textiles and clothing	17.9	19.0	15.0	13.8	14.3	14.2	18.1
Wood and paper products	10.1	9.3	10.1	10.1	8.7	8.4	8.2
Chemical, incl. coal, petroleum, plastics	13.3	9.9	10.0	14.7	18.4	21.5	21.5
Metals (basic and others), incl. misc.	11.6	13.5	18.6	18.4	23.8	29.6	33.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Kuznets, Simon, 1979, p. 57

All the changes discussed above are fully reflected in the restructuring of Taiwan's exports (**Table 1.28**). In 1952-54, low value-added products based on agriculture accounted for 91% of exports, but by 1973-75, they made up only 16%. Conversely, high value-added products (machinery, transportation equipment, and other manufactured goods) constituted only 5% of exports in 1952-54, but by 1973-75, this share had risen to 82%.

Table 1.28. Changes in the Product Structure of Taiwan's Exports *

	Composition of Export, %	
	1952 - 54	1973 - 75
Agriculture, forestry, fishing, food, +beverages, and tobacco	91	16
Minerals (mainly, fuels)	4	2
Machinery and transport equipment (includes electrical machines and apparatus)	0	23
Other manufactures	5	59
Total	100	100

*Scott, Maurice, 1979, p. 352.

Since the 1980s, there has been a boom in the microelectronics, information technology, and communications industries, which immediately impacted Taiwan's GDP and export structure.

The engine of Taiwan's rapid growth in both sectoral and product structure was driven by: 1) the transition from one decade to another towards the production of goods with increasingly higher added value, and 2) the continuously expanding diversification of the economy, transforming it into a multi-product system.

Comparing with Russia. In the 1990s to 2010s, the resource-based nature of the Russian economy intensified. For many groups of goods with high added value, there developed a dependency on imports ranging from 80% to 100%. The economy became significantly less diversified. The share of machinery, equipment, and transportation vehicles in Russia's exports was 8.9% in 1993 and decreased to 6.5% in 2021 (Russian Statistical Yearbook 2023, p. 599, Russian Statistical Yearbook 1996, p. 345).

13.4. State Enterprises / Monopolies

Part of the superfast growth landscape, one of the ingredients of interventionism, are the largest, systemically important businesses, the ownership of which is in the hands of the state. With proper direct management by the government, they can stabilize the economy and be one of the engines of its growth.

Cases are the banking system of Taiwan, Taiwan Sugar Corporation, Chinese Petroleum Corporation. The Government operates the biggest shipyard on the island (Li, Kuo-Ting, 1976, 425 – 428, 443, 445).

The share of state-owned enterprises (SOE) in GDP in 1951 was 5%, in 1981 – 12.1%, in 2005 – 7.6%; the share of SOE in the formation of domestic capital in 1951 was 24.2%, in 1981 – 31%, in 2005 – 10.2%. In the early 1980s, more than 80 SOEs operated in the market in Taiwan. By 2005, 21 SOEs were operating in the Taiwanese economy (5 – manufacturing, 3 – public utilities, 1 – construction, 7 – telecommunications and transportation, 2 – insurance, 3 – banks) (Pao Huei-Wen, Wu Hsueh-Liang, Pan Wei-Hwa, 2008).

13.5. Small and Medium Business

There is much indirect evidence[10] that small and medium-sized enterprises (SMEs) played a very significant role (acting as the "engine") in the rapid economic growth of Taiwan, particularly in the 1950s and 1960s. In 1983, the share of SMEs in the total number of companies in Taiwan was 99% (Chu, Wan-wen, 1999, p. 5), and at the beginning of the 1990s, it was over 95%. The share of those employed by SMEs in the total workforce was estimated to be more than 70% (see **Table 1.14** above). All of this reflects the persistent, strong desire of those living in Taiwan to be owners (see **Section 10.7**).

Such high levels of participation by small entities in economic activities in the early 1980s-1990s are only possible if they were already significant in the 1950s-

[10] Separate statistics on small and medium-sized businesses have been maintained in Taiwan since the 1980s-1990s.

1970s. In 1961, the share of those employed by small and medium-sized enterprises with fewer than 100 employees was 58% of the total number of employees in the manufacturing industry. In the 1960s, this share ranged from 36% to 58% (Chu, Wan-wen, 1999, p. 8).

Additionally, a large number of "home-based productions" were not accounted for, where products are made by families in their homes or apartments, the small enterprise are not registered, and payments and loans occur through the informal, curb market (Chu, Wan-wen, 1999, p. 26).

Another indirect piece of evidence is the high and growing share of the private sector compared to the public sector in the 1950s-1960s (**Table 1.23**). The largest companies were state-owned, while small and medium-sized businesses were privately owned. The private sector outpaced state-owned enterprises significantly in growth rates (**Table 1.24**).

Third, Taiwan's "economic miracle" was largely associated with import substitution in the 1950s and the rapid growth of exports, especially in the late 1950s and 1960s. This was a period of import substitution / export based on labor-intensive products. These products were primarily concentrated in small and medium-sized businesses. In 1982, the share of small and medium-sized businesses in manufacturing exports was 70% (Chu, Wan-wen, 1999, p. 27). It can be assumed that this share was even higher in the 1950s-1960s, especially considering that Taiwan is characterized by informal networks of small and medium-sized enterprises, which often act as subcontractors for large companies, "Taiwan is known for its SME networks" (Chu, Wan-wen, 1999, pp. 10-13). Government regulation of SMEs in the 1950s-1960s was encouraging (Chu, Wan-wen, 1999, p. 20). Even in the early 1980s, informal financing, outside of banks, constituted 60-90% of the financial sources for small and medium-sized businesses (Veselka, Marco, 2005, p. 12).

Thus, it was the unleashed energy of small and medium-sized businesses (a growing population of small companies) and "home-based enterprises," operating in a lenient, informal environment with the government's encouraging attitude, that made a very significant contribution to Taiwan's extraordinarily high economic growth rates.

14. Formula for Miracle: Mechanism of Implementation. Economic Policy

14.1. Overconcentration of Power

The Kuomintang - the ruling party in Taiwan for over 50 years (1949-2000). Taiwan (Republic of China) - a one-party state (1949-1987). During this time, the Constitution was limited, and the country was governed by martial law (1949-1987). The Kuomintang was a "Leninist" type party (principles of organization, not ideology), with the highest concentration of power at the top.

Taiwan from 1949 to 1987 was an authoritarian state. Chiang Kai-shek was the unchallenged leader of the Kuomintang and the President of Taiwan from 1949 to 1975. He was succeeded by his son, Chiang Ching-kuo (President of Taiwan from 1978 to 1988), who initiated an accelerated political liberalization of the country in 1987.

Chiang Kai-shek:

Immediately after Chiang Kai-shek moved to Taiwan, all of his speeches were exclusively about war and returning to mainland China. Since 1950, the theme of Taiwan and its revival as a key task has been increasingly emphasized in them.

"We must make Taiwan the base for national recovery" (Kai-Shek, Chiang, 1952, p. 49). Taiwan must become "the lighthouse in the dark", "a strong fortress", "the center for the revival of our national spirit and 5000-year civilization" (Kai-Shek, Chiang, 1952, pp. 30, 49, 75).

Taiwan must become a model, a pattern for all of China. "We should not only defend Taiwan but also construct it as a model of the whole country" (Kai-Shek, Chiang, 1952, p. 63). "To safeguard Taiwan and to recover the mainland… is a great and hard task. I requires greater hardship, patience and austerity. It requires all of us to lead an austere living, and to increase production so that Taiwan can be rebuilt out of all difficulties and become a pattern for the future construction of the mainland" (Kai-Shek, Chiang, 1952, p. 68).

As a result, the slogans: "The reconstruction of Taiwan", "Labor First" (Kai-Shek, Chiang, 1952, pp. 30, 57). It is in Taiwan that Sun Yat-sen's "Three People's Principles" should be implemented (Kai-Shek, Chiang, 1952, p. 68). His position: defeat in mainland China is a consequence of the fact that the authorities did not fulfill the wishes of the people. Hence the understanding of the need for "economic stability" and "development of the national economy" in Taiwan, and the responsibility of the state for the improvement of the people's well-being (Kai-Shek, Chiang, 1952, pp. 60 – 61, 67, 85). And also – recognition of personal responsibility. "I cannot deny my personal responsibility for the loss of the mainland... Over my 49 years of political activity, I have never attempted to evade responsibility or acknowledge guilt" (Цзян Чжунчжэн (Чан Кайши), 2009, с. 383).

All this taken together should have made Chiang Kai-shek deeply interested and adaptive in matters of economic development of Taiwan. "According to K.T. Li… Chiang Kai-shek was clearheaded and hand a mind receptive to new ideas. He accepted most suggestions from technocrats" (Lutao Sophia Kang Wang, 2006, pp. 191 – 192). Judging by the results, the super-fast economic growth of Taiwan in the 1950s-1970s, along with maintaining economic stability, that's exactly what was happening.

Biographers attribute the economic miracle specifically to Chan Kai-shek. Among specialists who were directly involved in shaping economic policies in the 1950s to 1970s, there is an opinion that Chan Kai-shek delegated authority in this area to his "younger brother" Chen Cheng (see details below).

Chiang Ching-kuo: The key ideas largely echo the views of Chiang Kai-shek. Taiwan should be reconstructed as a model (model province) for China as a whole (Ching-kuo, Chiang, 1984, pp. 161, 187). "Dr. Sun Yat-sen’s Three Principles of the People have served us as the bible for China’s modernization… Taiwan’s economic success is the result of implementing the Three Principles" (Ching-kuo, Chiang, 1984, p. 200).

Society (the economy as part of it) is based on Chinese culture (including Confucianism) (Ching-kuo, Chiang, 1984, p. 190). Economic policy is in the interest of the people, aiming to improve living standards and reduce the gap between the rich and the poor (+ strong defense) (Ching-kuo, Chiang, 1984, pp. 163, 195, 204). The dynamics of Taiwan's economy = development, growth, boom while maintaining stability (Ching-kuo, Chiang, 1984, p. 170).

Tools of economic development include "strong presidential leadership," a government working in the interests of the people ("government belongs to the people"), long-term planning, education, large projects, scientific and technological orientation, balanced development of various economic segments that complement each other and enhance mutual demand, a favorable investment climate (credit liberalization, reduced interest rates, strong tax incentives, healthy public finance, etc.) (Ching-kuo, Chiang, 1984, pp. 142 – 143, 146, 147, 203 – 205, 208, 217, 245).

There are opinions about the peculiarities of his management style that leave an imprint on Taiwan's economic development, but it is unknown how objective they are.

"When Chiang Ching-kuo became the Vice Prime Minister in 1969, he also took over the responsibility of making economic policies. According to K.T. Li… Chiang Ching-kuo did not know much about economic affairs, but he was very stubborn. He made "price stability" an inflexible rule, and sometimes almost a superstition. In addition, he liked to invest in large public projects, but he refused to increase taxes. Consequently, how to make ends meet became a constant headache for his staff in charge of economic affairs and finance" (Lutao Sophia Kang Wang, 2006, pp. 191 – 192).

Chen Cheng, a trusted aide of Chiang Kai-shek (serving at various times as governor of Taiwan, prime minister, and vice president), was the initiator of economic reforms and politically patronized reformers. He can be recognized as the "father" of reforms in Taiwan. Despite conflicts with Chiang Kai-shek, he called him “my younger brother” (Chen, Hongmin, 2017, p. 92). "Chiang… conceded that he was not good at economic affairs and delegated the power of economic decisions to his associate, Ch’en Ch’eng" (Lutao Sophia Kang Wang, 2006, p. 85).

Chen Cheng was a military man “to the core,” an autocrat, but he behaved like an economic liberal, like a “man of development.” He is the one who carried out a successful land reform in Taiwan in favor of the peasants (started by him in 1949). Under his leadership, other significant economic reforms of the 1950s and 1960s were implemented, including the Foreign Exchange and Trade Reform, the '19 Points' program, and the Statute for the Encouragement of Investment (Lutao Sophia Kang Wang, 2006, p. 86). “Throughout his political career he placed particular emphasis on the link between economic development and political power and legitimacy, and was the key political supporter of the group of technocrats who shaped Taiwan's development strategy» (Haggard, Stephan, Pang, Chien-Kuo, 1994, p. 54).

He was the one who created this group of technocrats (44 policymakers influencing economic development in Taiwan, including 10 with particularly strong influence (among them C.K. Yen (education in the field of chemistry), K.Y. Yin (electrical engineering), Jizeng Yang (engineering), K.T. Li (physics), Guohua Yu (political science), O.K. Yui (English literature), Poyuan Xu (business), Monlin Chiang (education), T.N. Shen (agriculture)) (Lutao Sophia Kang Wang, 2006, pp. 86 - 87).

One of the characteristics of "super concentration of political power" in Taiwan is the heightened focus on economic development, on the growth of the people's prosperity, and on the gradual, over several decades, economic liberalization.

14.2. The Architects of the Economic Miracle

Without technocrats who would occupy the highest positions in the government hierarchy and wield political influence, the economic miracle would not have happened in Taiwan.

K. Y. Yin (Zhongrong Yin) - 1950s to early 1960s.

His responsibilities during various periods included agencies responsible for economic planning (Taiwan Production Board, Economic Stabilization Board, Council for United States Aid) (deputy director, director); Minister of Economy; Chairman of the Board of the Bank of Taiwan.

Education: Engineering (Electrical Equipment).

One of the "architects of the economic miracle" in Taiwan.

His ideas and policies included: the concept of "planned market economy" and its implementation (where the state determines key priorities "for the collective interest," national economic plans set goals, quantitative targets, incentives, and development tools, but not an equivalent of the Soviet Gosplan; enterprises are free in their activities); utilization of Japanese experience in economic development; prioritizing the welfare of the people in economic development ("the shortest way to people's hearts lies through their mouths"), sectoral priorities; industrialization (import substitution) from the early 1950s, development of private enterprises (including hand-made measures to establish textile, glass, cement, flour milling, sugar industries, feed and fertilizer production, plastics, oil refining based on supplies of goods and technologies from the USA, development of mining, steel production); stimulating exports within the import substitution policy; currency reform and changes in the foreign trade regime in the late 1950s; privatization policy in the 1950s (Lutao Sophia Kang Wang, 2006, pp. 90 – 91, 93 - 100); program "19 Points" (in coalition with USAID) (Principles from East Asia, 2003, p. 4).

His views – in book: K. Y. Yin. My Views on Taiwan's Economy. Taiwan: China Culture Publishing Foundation, 1953.

K.T. Li (Guoding Li) - mid-1960s to 1990s. Education - Physics (Cambridge, United Kingdom).

His responsibilities spanning different periods of time: agencies responsible for economic planning (Council for United States Aid) (Secretary General); Council for International Economic Cooperation and Development (Secretary General, Vice-Chairman); Minister of Economy; Minister of Finance, Minister without

Portfolio, Committee for the Development of Applied Science and Technology (Chairman), long-time senior adviser to the President (after resignation from ministerial posts).

One of the "architects of the economic miracle" in Taiwan, "Godfather of Science and Technology" (Lutao Sophia Kang Wang, 2006, p. 201).

His ideas and policies included: combining economic growth and, at the same time, economic and financial stability (prices, exchange rates, budget, etc.); widespread use of financial incentives to promote growth; ideologist and organizer of the 3rd phase of Taiwan's economic development - the transition to export-oriented production based on science and technology (1980s); export processing zones; the establishment of a large group of Chinese-American managers, scientists and engineers, who in the future became the core of Taiwan's technological modernization and the development of high-tech exports; extensive exchanges in the field of science and technology with the United States and the Chinese-American scientific community; "manual" construction of large export-oriented businesses; maximum assistance to promote the influx of foreign loans and FDI for investments in infrastructure and export-oriented industries (to replace the ceased US assistance); family planning (reducing unregulated population growth), vocational education reform (high qualified personnel for industry); implementation of tax / customs duties reforms of the 1960s – early 1970s, establishment of a system of tax administration and tax audit, a centralized reimbursing system (budget financing); creation of a system for financing large public projects (domestic bonds, foreign loans), etc. (Lutao Sophia Kang Wang, 2006, pp. 149 – 160, 170 – 172, 180, 189, 194 – 195, 202).

Author of the "Program to Develop Science and Technology" (goals - increased well-being of nation, economic growth, defense) and the system of measures thanks to which it was implemented (increased budget spending on science, preferences for "strategic industries" , international advisors with famous names (Science and Technology Advisory Group), support from foreign businesses, a sharp expansion of training programs for specialists and scientists of the "highest level", the creation of new scientific institutes, the development of a world-class electronics industry, the establishment of TSMC, etc.) (Lutao Sophia Kang Wang, 2006, pp. 202 – 203, 206, 212).

The person who had "been trying for some years to sell the idea to American businessmen of making Taiwan a manufacturing base for exports to compete in Asia" (K.T. Li, 1976, p. 138).

As Minister of Economy, he worked seven days a week, his only hobby was work; on average more than 1000 meetings with representatives of the business and political world per year; read more than 6.000 documents, participated in or chaired more than 300 meetings, delivered 50 to 80 public speeches, and had more than 200 formal dinners (Lutao Sophia Kang Wang, 2006, p. 162). His personal program of “economic diplomacy” created extensive overseas ties for Taiwan.

In his books, he created guides on economic and financial policies for developing countries focused on ultra-fast economic growth.

His personal views in books:

Li, Kuo-Ting (1995). *The Evolution of Policy Behind Taiwan’s Development Success.* 2nd Edition. Singapore: World Scientific.

Li, Kuo-Ting (1976). *The Experience of Dynamic Economic Growth in Taiwan*. Taipei: Mei Ya Publications, Inc.

Comparing with Russia. None of the elite technocrats serving as government members or central bank governors in the 1990s–2020s (all names are well known), was not successful in creating the “Russian economic miracle”. This miracle has simply not happened yet. The ideas of “stabilizing the economy” have always in practice (not in words) superiority over the “ideas of rapid economic development.”

14.3. Discussions around Ideology of Development

War or Peace? To compete or to fight? Taiwan in the 1950s-1960s was always at a crossroads, at a point of choice: war (mainland China's attack, attempts to regain the Kuomintang's control over all of China) or development (Taiwan's reconstruction, the aspiration to make it an exemplary society, to demonstrate to all Chinese, regardless of where they lived, the advantages of the 'Taiwan model' and the correctness of the Kuomintang's policies) (Chen, Hongmin, 2017, p. 95). The same choice applied to the economy and finance: either militarization or the prosperity of the people."

For Chiang Kai-shek, the choice was always clear: "A National Revolutionary War against communists in the Far East can lead to the defeat of the Soviet bloc, the destruction of the Iron Curtain, the restoration of world peace and the protection of human rights... For me personally, there is an unshakable faith in the revival of my country as a united and free state and in the final victory of freedom over slavery throughout the world above all" (Цзян Чжунчжэн (Чан Кайши), 2009, с. 375, 384).

National Revolutionary War… the victory of freedom over slavery throughout the world... above all! Nevertheless, realism – as a trend – invariably won. At the end of the 1950s the goals of “internal (Taiwan) development” finally became the main ones. If it is not possible to regain control over the entirety of China, then make Taiwan an exemplary economy, much better than the one being built on mainland China.

State or private sector? Historically, Chiang Kai-shek and the Kuomintang were focused on developing the state sector in the economy at the expense of private capital. "The mind should control the appetites, and there should be a rational machinery to enable each individual to sustain his life. A government, therefore, should be organized to satisfy the people's wants on the one hand, and to restrict them on the other. Once such rule are established and the necessary limitations made clear, the people will no longer find it necessary to resort to fighting, and society will not be impoverished for failing to satisfy the wants of individuals.

Aside from meeting or restricting human wants, there is a need for a government that manages the people's affairs. This is a basis of the philosophy of national economics. European laissez-faire economics holds that the government ought not to interfere with the people's economic activities. The Marxists, on the other hand, believe that the government must be controlled by the proletariat to eliminate personal economic freedom. From the standpoint of Chinese economic principles, neither is right. If a government does not impose restrictions on, or devise plans for the people's economic activities, and if it allows the people to drift into conflicts, the result will be social disorder and national poverty. If the government fails to control the people's wants and to protect their livelihood, it doesn't fulfil it's duties; the people will not be able to lie a comfortable life and there will be no increase in production" (Kai-shek, Chiang, 1947, pp. 266 - 267).

Such views can only lead to one consequence - state interventionism, a very high role of the government sector in the economy.

The first privatization deals began in the 1950s. There were passionate debates about whether the state or the private sector should play a larger role in this regard (Lutao Sophia Kang Wang, 2006, p. 86). In the 1960s, the authorities' enthusiasm for the public sector was diminishing, alongside a growing conviction that it was necessary to make way for private capital (**Table 1.29**). The role of the public sector increased again during the crisis of the 1970s, only to sharply decrease in the 1990s – 2000s (**Table 1.29**).

Stability or economic growth? The policy of rapid growth is based on risks, uncertainty, volatility, tax and customs incentives (risks of decreasing state revenues), monetary expansion, interest rate reduction, devaluation of the local currency (inflation may rise, the stability of the exchange rate may be disrupted), increased government investments (risks of budget deficit) and so on.

Table 1.29. Gross Fixed Capital Formation*

Year	Public sector, %			Private sector, %	Total
	Public Enterprises, %	General Government, %	Public sector, %		
1951	28.7	17.3	46.0	54.0	100.0
1960	33.5	13.9	47.4	52.6	100.0
1965	20.9	12.6	33.5	66.5	100.0
1970	29.4	13.4	42.8	57.2	100.0
1975	40.3	13.9	54.2	45.8	100.0
1980	34.1	15.0	49.1	50.9	100.0
1985	24.0	19.2	43.2	56.8	100.0
1990	24.5	24.7	49.2	50.8	100.0
1995	13.0	28.4	41.4	58.6	100.0
2000	10.0	21.7	31.7	68.3	100.0
2011	6.6	17.2	23.8	76.2	100.0
2022	5.5	10.1	15.6	84.4	100.0

* Statistical Yearbook of the Republic of China 2002, p. 162; Statistical Yearbook of the Republic of China 2022, p. 82

This means that at every turning point, when it comes to discussing how the economy should continue to grow, there are heated discussions between the politicians responsible for stability (say, the minister of finance, the governor of the central bank) and those who should stimulate the economy (the minister of economy, etc.).

This is exactly what happened in Taiwan.

In 1950s – 1980s the ideas of rapid and comprehensive economic development have always and invariably won in Taiwan.

Competitiveness of goods produced domestically in the global and domestic markets. Is it necessary to produce certain goods within the country if it is known in advance that they will not be competitive compared to similar goods produced in other countries? Such pessimistic viewpoints always arise in discussions of sectoral priorities. "We don't need to produce them ourselves - we can always buy them on the global market." "Our export of these goods is already known to be non-competitive in the global market."

In 1955 "my suggestion to promote textile exports provoked a heated debate. The prevailing opinion was that our textile industry could never compete with Japanese manufacturers, and that my proposal was not at all practicable. Nevertheless, after 16 years of development, our textile industry has now become the country's largest foreign exchange earner" (Li, Kuo-Ting, 1976, p.100).

Comparing with Russia. From the 1990s to the 2020s, at different times and on different occasions, the debates were dominated by points of view opposite to those that prevailed in Taiwan.

14.4. Minimum of Unpopular Reforms, Maximum of Popular Ones that would be Advantageous to the People

A popular reform is not so much about distributing privileges and preferences as it is about creating favorable conditions (access to resources, strong incentives) for active population groups to increase production, be innovative, implement new technologies, and most importantly, increase their contribution to the growth of prosperity and life expectancy of the entire population of the country.

An excellent example of a popular reform is the land reform in Taiwan. The reform took place in 3 stages (Cheng, Chen, 1961, Tang, Hui-sun, 1954):

Stage 1 (1949) - restriction and reduction of rent paid by tenants to landlords (rent was excessive), limitation of advance rent payments, transition from verbal to written lease contracts, protection of tenant rights, establishment of rent committees to settle conflicts between tenants and landlords;

Stage 2 (1951) – sale of public lands (formerly owned by Japanese owners) to farmers to help them create their own farms; sale of land primarily to those who already rent it; land valuation at 2.5 harvests; repurchase of land in 10 equal annual payments, similar to rent (25% of the annual harvest);

Stage 3 (1953) – limitations on land holdings of landlords, mandatory purchase of their lands by the state and resale of it to farmers ("land to those who cultivate it", "land - to – the tiller"). Instead of money, landlords received land bonds (70% of the amount) and shares of public enterprises (30% of the amount), which meant forced investment in industrial development. Four large public corporations were privatized for this purpose (Taiwan Cement Corporation, Taiwan Pulp and Paper Corporation, Taiwan Industrial and Mining Corporation, Taiwan Agricultural and Forestry Development Corporation) (Cheng, Chen, 1961, p. 68). To buy land from the state, farmers received various preferences (repurchase of land in annual payments, not exceeding the rent amount, over a 10-year period, low-interest loans to pay for the land, etc.).

Results? Before the 3rd stage of land reform, the share of land cultivated by owners was 61% of the total land fund, after the 3rd stage - 85% (Tang, Hui-sun, 1954, p. 138).

Everything in land reform was aimed at creating a large group of farmers - land owners with a more equal distribution of land. "The successful land reform benefited 467.00 farm families, who represent 60% of all farm families" (K.T. Li, W.A. Yeh, 1976, p. 31). In 1949 – 1955 agricultural production increased 1.4 times (Statistical Yearbook of the Republic of China 1975, p. 80).

14.5. Systems Analysis

Rapid and sustainable economic development is a product of clear systemic thinking that sees the country as a system: goals, structure, functions, dynamics, problems, needs of the people and the economy for development, imbalances, priorities in solving problems, available resources, resource shortages, sources of covering them, what needs to be done in the first, second, next stages, etc.

Development is also the ability to adapt internationally recognized practices to the realities of one's country, taking into account national values and historical traces.

The team of politicians making decisions that apply to the country as a whole must combine clear economic, engineering and political thinking without losing sight of the primary social objectives (improving living standards). Increasing the well-being of the people and life expectancy is precisely the No. 1 goal. Technological modernization and economic growth serve precisely these goals.

To be technocrats in the best sense of the word, to exercise common sense, not succumbing to any ideological influences, no matter how mainstream they may be, if their practical application to the realities of the country is of no use.

This approach could be called macroeconomic engineering. In order for it to be implemented, balanced teams of politicians with engineering, economic and socially oriented education are desirable.

For the best cases of such systems analysis/macroeconomic engineering, see the publications of K.T. Li (Li, Kuo-Ting, 1976, Li, Kuo-Ting, 1995).

14.6. Problem-Oriented Policies, the Evolution of Politics Depending on the Nature of the Problems that Arose

The beginning of the journey:

– **suppression of hyperinflation**, **currency reform** in **1949** (issuance of a new Taiwanese dollar, exchange of old Taiwanese dollars for the new currency); restoration of infrastructure (energy, water, roads, etc.);

– **land reform** (**1949 – early 1950s**). The reasons for it, why it needed to start with it – see **Section 7.2**.

To continue the journey:

Policy of import substitution (**1950 – 1962**) – to feed, clothe the population, improve livelihood (starting with light industry), get started (economic development), provide employment (jobs), fill the budget (always deficit), sharply reduce dependence on imports (produce ourselves, accumulate foreign currency, move away from a critical state of foreign exchange reserves), lower inflation, weaken critical dependency on foreign aid (USA), create initial stocks of savings and investments within the country. To "develop industry through agriculture and expand agriculture through industry" (K.T. Li, W.A. Yeh, 1976, p. 43).

Basic incentives and restrictions within the framework of import substitution: overvalued currency, low taxes, tax incentives for businesses producing value-added goods that replace imports, protective customs tariffs, administrative regulation of imports (bans on unwanted imports), government supplies of raw materials necessary for import substitution, into the domestic market, guaranteed state purchases of a number of goods produced within the country, administrative regulation of certain prices, low-interest loans provided by state-owned banks.

1958-1961 - a series of reforms, a turning point: currency devaluation (it was overvalued), liberalization of the trade regime (shifting the focus from import control to export promotion). **Policy to encourage investment and savings in the early 1960s** (Statute for the Encouragement of Investments (**1960**)) – to increase the investment rate / savings rate, intensify investments in industry.

The "19 Points" Program (1961–1964) aimed to remove excessive bans and administrative barriers established during times of high inflation; to create a standard market environment necessary for economic development, including infrastructure (central bank, stock exchange, banking supervision); economic liberalization (exchange rate, investments, tax incentives, privatization); improvement of public finance management (tax legislation, tax administration, control over budget expenditures (state enterprises, defense)), etc.

Export-oriented growth (1962–1980) aimed to diversify the economy (light and heavy industry); achieve greater prosperity for the people; combine economic stabilization with super-fast growth; increase employment; develop labor-intensive industries (in conditions of surplus of labor force and its low cost); expand markets for the Taiwanese industry (domestic markets are small); move away from dependence on US economic aid (expecting its termination in 1965); enhance defense capability; develop an economy capable of competing with other countries in the global market; expand Taiwan's product niche in global trade to maximize economic benefits from exports, thereby stabilizing and developing its own economy; significantly increase the import of technologies, equipment, and raw materials necessary for rapid economic growth; normalize public finances (achieve a surplus budget); eliminate the trade balance deficit (previously observed every year), and create strong currency reserves.

Results: "In 1966, the cotton textile industry exported 66% of its output; the glass industry, 47%, and the plastics industry, 44%. The ratio for cement was 39% and for steel products, 22%. In such heavily export orients industries as sugar, canned products and plywood, the ratios were higher than 90%" (Li, Kuo-Ting, 1976, p.21). To compare: "the export of sugar and rice accounted for more than 75% of total export in the early 1950's… In 1966 sugar and rice accounted for only 16.6% of total exports" (Li, Kuo-Ting, 1976, p.22).

"Taiwan made the best use of its comparative advantage by exporting to developed countries commodities with relatively high labor content" (Li, Kuo-Ting, 1976, p.170).

Basic incentives and constraints within export-oriented policy include: devalued currency, financial deepening (lower interest rates, increased monetization, growth in bank loans, establishment of securities market), relatively low taxes, tax incentives for businesses producing value-added goods for export, tax encouragement for domestic investments, customs incentives for export-oriented production, as well as for imported raw materials used for this purpose (customs duty rebates), reduction of import tariffs, regulatory liberalization, including the removal of a number of import restrictions, etc.

"The Economy of Science and Technology" (since the early 1980s) – the development of a modern knowledge-based economy; to surpass other countries in competitiveness and relying on the best achievements of science and technology; adapt to the increase in labor costs; integrate into the logistical chains of major international corporations; become one of the systematically important parts of the global economy; expand Taiwan's niche in the international division of labor; make a transition to the highest levels of human development (education, living standards); significantly strengthen defense capability.

14.7. Administrations of Development: Year after Year

As a rule, an "economic miracle" is impossible without a "development administration".

The development administration is an institution or a group of specialists (such as a commission, council, etc.) responsible for economic development. They are endowed with special powers, enjoy the trust of the highest officials in the country, are freed from current, short-term economic regulation functions, and are fully focused on medium- and long-term development tasks (overall goals and policies, planning, generating prospective solutions for the legislative and executive authorities, and oversight and control of the implementation of development policies).

The functions of the development administration also include a) resolving sectoral, regional, product, technological, and institutional imbalances and conflicts of interest, b) generation and coordination of major projects, c) crisis management (in case of an economic/financial crisis in the country).

To this end, the development administration may include representatives of all interested parties whose actions need to be coordinated in the future (including, or perhaps especially, high-ranking officials).

In this regard, the development administration may be tasked with resolving not only long-term but also current imbalances and conflicts of interest within various branches and bodies of government (harmonizing viewpoints, as well as key documents and legislative projects).

As a rule, the development administration is created as a special, separate institution that is not part of a particular ministry or government agency. The latter are usually overloaded with current functions (operational regulation of the economy) and lack resources for actions that would have a long-term perspective.

The first "development administrations" in Taiwan were the Council for U.S. Aid (CUSA, 1948) (considering the enormous importance of U.S. aid for Taiwan's economy and the role of the U.S. in shaping development and growth ideology) and the Taiwan Production Board (TPB, 1949). The latter was absorbed by the Economic Stabilization Board (ESB, 1953). In turn, CUSA incorporated the ESB in 1958, being transformed into the Council for International Economic Cooperation and Development (CIECD) in 1963 (restructured in 1969). In 1973, CIECD was replaced by a new institution, the Economic Planning Council (EPC), which in turn became the Council for Economic Planning and Development (CEPD) in 1977 (Tien, Hung-Mao, 1989, pp. 126-128).

K.T. Li, one of the architects of Taiwan's economic miracle, referred to the activities of the CIESD as the "national central planning agency" (Li, Kuo-Ting, 1976, p. 441).

“Technocrats in these agencies generally are well educated and professionally competent”. They are “cautious planners. They favor project-by-project approach to development to achieve stability. This approach can probably be attributed to their educational background. A study of 44 technocrats in Taiwan indicated that 97.7 percent of them have had a university education – about half with degrees in engineering and one-third in social sciences. Over 60 percent of then received graduate education in the United States and Western Europe. Their educational background appears to have contributed three important elements to their work style: a commitment to the market economy, a receptivity to modern management and a style of planning that emphasizes steady growth, reflecting in part their engineering and science backgrounds” (Tien, Hung-Mao, 1989, pp. 129).

When addressing more specific tasks, development administrations were created, focusing their activities on a particular sector or solving specific problems.

Examples: Industrial Development Commission (1953, leadership in the development of the textile industry); Industrial Planning and Coordination Group under the Ministry of Economic Affairs (1959, improvement of the investment climate and conditions for private investments); China Productivity Center (1955), later China Productivity and Trade Center (1959) (technical assistance to different industries, especially small and medium-sized businesses, in increasing productivity, reducing costs, and improving quality); Metal Industry Development Center (technical assistance in the development of the metallurgical industry); China Technical Consultants (attracting technical consultants for industrial development, including leading Chinese-American specialists); Industrial Development and Investment Centre (under the CUSA, later a division of the CIECD) – improvement of the investment climate and conditions for private investments (study and recommendations) (Li, Kuo-Ting, 1976, pp. 340, 341, 366, 372, 447-448).

Comparing with Russia. In Russia, starting from the 1990s, there has never been a development administration in the context in which it is considered in this section. "Development administrations" were created for the implementation of certain functions or the resolution of specific problems.

14.8. Macroeconomic Planning

From 1953 to 2024, Taiwan developed and implemented 18 national development plans (typically for a period of 4 years, or sometimes 6 or 10 years). During the period of rapid growth: 1953-1956 (Four-year Plan for Attainment of Economic Independence in Taiwan), 1957-1960, 1961-1964, 1965-1968, 1969-1972, 1973-1976, 1976-1981 (6 years), 1980-1989 (10 years), 1986-1989, 1991-1997 (6 years).

The plans encompassed major investments and established: a) general ideas of economic policy, b) priorities (sectoral, product, regional, technological), c) major projects, d) the coordination of sectoral and regional development and methods for addressing imbalances, e) the integration of public and private investment resources, f) macroeconomic goals to be achieved.

These were not plans following the "Soviet model," in which it was assumed that the plan directly set tasks for production, distribution, and consumption of resources (down to individual enterprises), as well as tasks for investments, allocation of financial resources, and forced labor movement.

Taiwan develops plans whose content boils down to macroeconomic programming. "…The plans since 1953 have served only as broad guidelines, rather than as detailed work programs with no flexibility" (Li, Kuo-Ting, 1976, p. 48). The plans combine a "project-by-project" approach with the use of econometric models of the economy at the macro level (Li, Kuo-Ting, 1976, pp. 88-90, 93, 107-108).

Comparing with Russia, since the early 1990s, Russia abandoned the five-year plans of the "Soviet model," replacing them with development strategies and concepts in specific areas, which were generally not backed by resources and whose goals were typically not fully achieved. Since the 2010s, there has been a shift towards creating economic and financial macro-forecasts for annual, five-year, and 10-15 year periods. Additionally, at the macro level, the technology of "national projects" was introduced, with specifically allocated resources and separate management systems for each of them.

14.9. Major National Projects, Public Works (Infrastructure)

Since the late 1940s, the state's priorities have been the creation of infrastructure (transport, utilities, social, etc.), public works, and government investments in infrastructure.

In the 1950s and 1960s, infrastructure and the traffic based on it grew at an annual rate of 5 to 15%, depending on the type of infrastructure (Li, Kuo-Ting, 1976, pp. 63–65).

As part of a program-targeted approach, complexes of major projects were developed, characterized by strictly limited time frames, resources specifically allocated for them, a unified management system, and special legislation.

Such programs of major projects served as catalysts for rapid growth, simultaneously "unblocking bottlenecks" in Taiwan's infrastructure.

"The Ten Major Construction Projects" (1974–1979) (announced in November 1973) aimed at creating a modern infrastructure necessary for economic development and transition to the group of developed countries (roads, railways, airport, ports, shipyard, nuclear power plant, steel industry, oil refining capacities); a public works program during crises (oil crises of the 1970s), creating new jobs, and stabilizing the economy in difficult times; "deepening" of economic development, strengthening the foundations for improving the welfare of the nation.

For the same purposes - the **"Twelve New Development Projects"** (announced in **September 1975**). "They are expansion of steel mill, installation of our second and third nuclear power plants, port expansion, the building of a railway link to complete the circumference of the island, the construction of cross-island highways, improvement of see dikes and river levees, development of new towns and housing, and the establishment of community cultural centres" (Ching-kuo, Chiang, 1984, p. 245).

The same approach (“major projects”) was used in more recent times, for example, “**Twelve Priority Projects**” (1994), "**New Ten Major Construction Projects**" (2003) (universities, research centers, theaters and cultural centers, communications, metro, highways, sewage system, etc.).

In comparison with Russia, the dynamics of infrastructure development and renewal significantly lagged behind the growing needs (with the exception of electronic communications). After 30 years of transition, by the early 2020s, Russia still requires deep modernization and development of all types of infrastructure. National programs for major construction projects of national significance, similar to the "Ten Major Construction Projects," were not announced (despite the fact that at any given time during these 30 years, Russia was implementing major construction projects such as ports, transportation, bridges, pipelines, spaceports, etc.).

14.10. Development Institutions

Financial institutions that are state-owned or under state control have been widely used as channels for preferential lending and financing of priority sectors, projects, companies, etc., in order to stimulate growth and modernization. They have been systemically important, genuinely influencing growth rates.

Case studies include the largest commercial bank, "Bank of Taiwan," which performed several central bank functions until the early 1960s. Since the late 1940s, it has been state-owned. The "Land Bank of Taiwan" (established in 1945) is a state-owned bank specializing in land and real estate transactions. The state-owned Bank of Communications resumed operations in 1959–1960 with the goal of assisting «investors in the creation of new industries and in the expansion of existing productive enterprises, mobilizing domestic capital», «to help mobilize domestic capital and to facilitate the inflow of foreign capital» (Li, Kuo-Ting, 1976, p. 341). At the end of the period of rapid growth, the state-owned "Export-Import Bank of the Republic of China" was established in 1979, focusing on foreign trade and investments.

Several development institutions were established in forms other than banks. For example, the Joint Commission on Rural Reconstruction, a Chinese-American organization (founded in 1948), managed 10% of U.S. aid (supporting the creation of new businesses in Taiwan). Another development institution was the Sino-American Fund for Economic and Social Development (1965). Its purpose was industrial development and technical assistance (Li, Kuo-Ting, 1976, pp. 152, 402-404).

In the mid-1960s, the number of headquarters and branches of private banks accounted for only 2.7% of the total on Taiwan (Lee Lawrence L.C., 1998, p. 18). Throughout the entire period of rapid growth, which lasted more than three decades, the banking sector in Taiwan was predominantly state-owned.

The liberalization/privatization of the financial sector should lag behind the liberalization/privatization of the real economy. Only in this way can financial resources be concentrated on development goals instead of massive capital outflows and speculative bubbles.

Unlike in Russia, Taiwan succeeded in achieving this.

14.11. Direct Government Intervention in the Prices of the Most Important Goods

State intervention in a disbalanced and not fully developed market inevitably means direct government regulation of some prices and tariffs, or influence over certain prices. These are usually prices for systemically important goods necessary to maintain living standards ("social justice"), as well as key resources that are crucial for the functioning of the economy, its growth, and modernization.

In the future, as the country progresses towards a "new industrial economy," these prices are gradually liberalized, administrative restrictions on prices are lifted, and price-setting increasingly takes place in the market.

Cases in Taiwan include interest rates in banks, exchange rates, prices for fertilizers, "fair prices" for rice (along with control over retail prices), and artificially increased prices for alcohol and tobacco (Li, Kuo-Ting, 1976, pp. 490–495). The government exerted strong influence on export and import prices through customs duties and taxes.

14.12. Economic Liberalization

As stated above, the liberalization of the economy / the reduction in the size of state intervention was gradual and lasted for decades, as market forces became stronger and as the needs of the economy changed during the transition to the next phase of economic development.

Economic liberalization began immediately, from the beginning of the 1950s, being cautious, carried out step by step, in order to consistently include:

privatization; weakening of direct management of the economy; establishment of new markets; development of a pro-market regulatory environment; development of market infrastructure; weakening government influence on prices (including interest rates and exchange rates); removal of administrative barriers; support for the establishment of private businesses; growth of the mass of incentives for private owners and investors, etc.

The process of economic liberalization gained particular strength from the end of the 1950s.

14.13. Privatization

Privatization rules were already approved in 1953. In 1954, 4 state-owned enterprises were sold (as a supplement to land reform) (Taiwan Cement Corporation, Taiwan Pulp and Paper Corporation, Taiwan Industrial and Mining Corporation, Taiwan Agricultural and Forestry Corporation). At this time, there was also a practice of establishing new businesses by the state and then reselling them to private investors (Syu Agnes, 1995, pp. 52–59; Li, Kuo-Ting, 1976, pp. 332–333, 362–363).

Within the Nineteen Points (the reforms of the late 1950s) was a privatization plan. In the early 1960s, along with the creation of a stock market, Taiwan Sugar Corporation was partially privatized. Its shares were later bought back by the government. In the early 1980s, Taiwan Metal Mining Corporation and Taiwan Aluminum Corporation were sold. By the late 1980s, the privatization process accelerated (Syu Agnes, 1995, pp. 52 – 54, 56–59).

In the early 1980s, there were more than 80 SOEs operating in Taiwan. By 2005, after the intensification of privatization processes, 21 SOEs were operating in Taiwan's economy (Pao Huei-Wen, Wu Hsueh-Liang, Pan Wei-Hwa, 2008). T

hus, SOEs played a major role in the transformation of Taiwan's economy into an "Asian Tiger". The truly significant privatization process began more than three decades after Taiwan began its transition to a "new industrialized economy".

14.14. Maximum Incentives for Exports, Investment and Savings

Export Incentives

Since the early 1950s, administrative controls over exports have been implemented, encouraging desirable exports and, conversely, restricting undesirable ones. Export controls have also included: a) export customs duties (and rebates on them) and tax incentives, b) manipulation of the local currency exchange rate by the government, c) export subsidies, d) export processing zones.

The characteristics of export customs duties that encourage or, on the contrary, restrict exports, as well as tax incentives are presented in **Sections 15.8** and **15.9**. Preferential customs tariffs and tax incentives were also used in export processing zones (see **Section 14.16**).

The local artificially overvalued currency (in a multiple rates system, where each group of goods had its own exchange rate) also contributed to protection against unwanted exports. And, conversely, the desired exports were stimulated by an artificially weakened local currency (see **Section 15.4**). To support exports, the government provided subsidies to industries (Irwin, Douglas S., 2021).

Since the late 1950s, there has been an accelerated liberalization of export controls in connection with the transition to an export-oriented economy and the use of devaluation of the local currency and a single exchange rate based on a market mechanism as a key policy instrument.

Incentives for Investment and Savings

Since the early 1950s, policies have been implemented to encourage domestic investment and savings: a) positive interest rates on deposits, b) government deals with wealthy families/top managers inside and outside the country, encouraging them to invest in the domestic economy, c) the government as an intermediary in receiving and distributing US aid (financial and real assets) for investment purposes (aid from the US accounted for a significant part of investment in Taiwan); d) preferential loans and credit guarantees; e) tax incentives, preferential customs duties; e) export processing zones, cheap access to land, industrial premises and infrastructure (since 1960s); f) technical assistance, etc.

In the early 1950s, in order to encourage investment and economic growth: a) the government supplied raw materials (e.g. raw cotton) at reasonable prices to industries (including export-oriented industries) that needed investment; b) the government guaranteed the purchase of goods from producers at reasonable prices if it was interested in increasing their production within the country; c) provided preferential loans and credit guarantees for obtaining loans from abroad; d) supplied risk capital, including through American aid (e.g. in coal mining); e) served as an intermediary in obtaining American financial aid (mining, food, textiles, pulp and paper, general chemical products, lumber, cement, iron and steel, machinery, electrical supplies); e) created technical assistance centers, etc. (Li, Kuo-Ting, 1976, pp. 155, 334, 335, 338 - 339, 341, 342, 363, 366).

A particularly active policy encouraging investment began in the 1960s. A special regulatory environment was created for this purpose: Statute for the

Encouragement of Investments (1960), Statute for Investment by Overseas Chinese (1955), Statute for Investment by Foreign Nationals (1954), Statute for Technical Cooperation (Li, Kuo-Ting, 1976, pp. 365 – 366, 374).

Taiwan's peculiarity, both in terms of domestic and foreign investment: a) personal selection of large investors - individuals for the establishment of new businesses and industries; b) negotiations with them, which were conducted by senior government officials; c) providing government preferences for a specific large project and to specific investors - individuals, in order to mitigate their risks; d) the first project could serve as a catalyst for a series of other projects in a given industry or region.

Here, for example, is how the creation of the electronics industry in Taiwan by investors from the USA is described: «General Instruments committed its resources when it set up an electronics factory near Taipei in 1964. The factory proved successful, and seven other American firms took the plunge that same year. Seventeen more made the decision to set up facilities in 1965. This was beginning. Within the next few years, in an expanding and ever more integrated global economy, Taiwan began to be seen as an attractive site for major investment. Its government officials, following the lead of the Americans, stressed that they would provide the potential investor with a variety of incentives and that their nation possessed a large, educated, disciplined, and cheap labor force. The Americans were soon joined by their Asian ally/rival, Japan, which now also saw the many advantages that its former colony offered» (Rubinstein, Murray A.,1994, p. 9).

14.15. Protectionism, Import Controls

«Commodities that are produced locally in adequate quantities are put on the controlled import list, thus protecting local factories from foreign competition on the domestic market» (Li, Kuo-Ting, 1976, p. 332). In the mid-1950s, only 48% of industrial products could be imported without restrictions (Li, Kuo-Ting, 1995, p. 82).

Both non-tariff barriers (administrative controls on imports) and protectionist import tariffs were used. An analysis of such tariffs is presented in **Section 15.9**.

Elements of import control also included: a) controlled import lists (as a case, at the beginning of 1950s textile goods), b) import licenses, c) rationing of the amount of foreign currency, c) advance payments of 100% of the value of imported goods, etc. (Irwin, Douglas S., 2021, Li, Kuo-Ting, 1976, p. 334).

The protection against unwanted imports was also facilitated by the local artificially weakened currency (in a system of multiple exchange rates, where each group of goods had its own exchange rate). And, conversely, the desired imports were stimulated by the artificially overvalued local currency (see **Section 15.4**).

As Taiwan transformed into a “new industrialized economy,” import restrictions were gradually eliminated. Import liberalization began in the late 1950s. In July 1970, 53% of items were imported without restrictions; two years later, this figure had risen to 82%. By the late 1980s, de facto import controls had ceased to exist. By December 1988, 98.5% of imports were imported without restrictions. Import tariffs were sharply reduced. The average nominal tariff fell from 31.04% in 1982 to 8.89% in 1992 (Li, Kuo-Ting,, 1995, pp. 86, 89 - 90).

14.16. Export Processing Zones

Export processing zones (free port + free trade zone + industrial park) have been established since 1965-1966. The objectives were rapid economic growth (EPZs as points of ultra-fast growth), vigorous development of production, technological modernization, investments, and new jobs.

The legal basis for EPZs was the "Statute for the Establishment and Administration of Export Processing Zones" (1965). EPZs were managed by a specially appointed administration responsible for businesses admission, issuance of permits, supervision, public and technical services, including tax collection, and development. Activities within EPZs included manufacturing, assembly, research and development, consulting, technical services, warehousing, transportation, loading and unloading, and repairs. Businesses had to be admitted into the EPZ and obtain EPZ resident status.

Basic benefits for companies that were residents of the export processing zone ("Statute for the Establishment and Administration of Export Processing Zones" (Article 13)) include:

- «Imported private machinery and equipment shall be exempted from import duties and dues, commodity tax, and business tax…

- raw materials, fuel, commodities, semi-finished products, samples, experimental animals and plants, and finished products for trans-shipment of trading and warehousing industries shall be exempted from import duties and dues, commodity tax, and business tax…

- newly-built standard factory obtained from the Export Processing Zone or buildings obtained from the Administration by laws shall be exempted from deed tax”

15. Formula for Miracle: Mechanism of Implementation. Financial Policy

15.1. General Outlines of Financial Policy Aimed at Stimulating Economic Growth

The best explanation of how the problem of stimulation of economic growth was solved under the numerous constraints faced by Taiwan in the 1950s-1970s is provided by K.T. Li, one of the authors of the economic miracle:

"The problem was solved basically through sound fiscal and monetary policies. It was necessary, first of all, to establish and maintain exchange rates, which would not overvalue our the currency - rates which would discourage unnecessary imports while facilitating exports. As a further deterrent to non-essential imports, high duty rates were imposed on items considered to be luxuries. Interest rates were set high enough to pull more savings into the banking system. This in turn meant high interest rates on bank loans which, at first glance, would seem to discourage investment and development. One effect, however, was to channel investment into the most profitable types of enterprises where additional capital could be formed, starting the expandind cycle which in time led to our economic take-off. The high interest rates, by attracting more savings into the relative safety of the banking system, deflated the disorganized black market lending operations which were demanding such high interest rates as to be confiscatory. Bank rates on secured loans were as high as 23.4% per annum in 1954 and then fell gradually in several steps to 11.25% in 1972… Although interest rates to borrowers are generally uniform, we have, upon occasion, extended lower rates to enterprises producing for export, to agriculture, and to essential capital-intensive infrastructure projects.

To prevent overvaluation of our currency, it was necessary on the early days to change exchange rates rather frequently. Four devaluations were required from 1954 to 1960 with the exchange rate going successively from NT$ 15.55 to US$1, to NT$21.55 to US$1, to NT$24.68 to US$1, to NT$36.08 to US$1, and finally, in 1960 to NTS 40 to US$1… The 40 to 1 continued without change until 1973. Last year we revalued the New Taiwan dollar to 38 to 1, a compromise between the revalued Japanese Yen and the devalued U.S. dollar, the currencies of our two major trading partners" (Li, Kuo-Ting, 1976, p. 151 - 152).

15.2. Non-confiscatory Monetary Reform

By the beginning of 1949, hyperinflation arose in Taiwan (its basis was hyperinflation in mainland China (impact on local prices and currency), destroyed economy, a shortages of commodities, and Taiwan's budget deficits, covered by an uncontrolled increase in the money supply ("money printing").

The answer was non-confiscatory currency reform (June 1949):

1) 40.000 Taiwan dollars were exchanged for 1 new Taiwan dollar,

2) a strict limit on money issuance was established for the Bank of Taiwan,

3) the money issuance was covered by government reserves in gold, silver and foreign currency evacuated by the Kuomintang from mainland China, as well as commodities,

4) a gold savings deposit program (deposits in gold or tied to the price of gold, in New Taiwan dollars) in order to freeze part of the money supply, reduce current demand, increase the savings rate, create long-term financial resources for investment,

5) limited convertibility of new Taiwan dollars into gold (purchase of gold at a fixed official rate, within strict limits), under the gold savings certificate program (last ended in December 1950),

6) since March 1950 - a program of preferential interest-bearing deposits (positive interest rates, higher than inflation) (Li, Shih-hui, 2005, pp. 195 - 200).

It is easy to see that the currency reform was not only non-confiscatory, but also created popular opportunities for people’s savings, fully took into account their interests and, ultimately, increased the investment rate.

Compared to Russia. In Russia, everything was done exactly the opposite of Taiwan. People's savings were considered a "monetary overhang" on the market that could be eliminated by a single government action. In January 1991, a confiscatory currency reform was carried out in Russia, which deprived the people of their savings (and, accordingly, "relieved" them of long-term financial resources for investments) just before the start of market reforms. Precisely when Russia especially needed long-term funds for investments to modernize its economy, they were destroyed.

The second currency reform, which was of a limited confiscation nature, was carried out in the summer of 1993.

As a result, public trust in government actions was lost, and currency reforms became one of the reasons Russia turned into a country of annual capital flights. The financial depth of the Russian economy sharply decreased, and it fell into deep dependence on foreign investments, primarily speculative ones (direct foreign investments were severely limited by Russia's country risks).

15.3. Monetary Policy, Interest Rates

The main trends associated with the "three vital parameters" of the economy – the growth of the money supply, interest rate, and exchange rate (Li, Kuo-Ting, 1995, p. 94), and the government policy that shapes them, are reflected in **Table 1.30**.

These trends can be expressed in the following statements:

- gradually accelerating growth in the monetization of the economy (financial depth, Money Supply / GDP), reaching ultra-high levels characteristic of Asian countries, against the backdrop of extremely rapid GDP growth,

- with the gradual, decades-long reduction of the central bank's discount rates (alongside the high interest rates in the 1950s – 1970s as a feature of interest rate policy),

- with a high positive real interest rate on savings and, as a consequence, a high savings rate / investment rate,

- with the gradual weakening of the New Taiwan Dollar against the US Dollar in the 1950s, reflecting currency policies that stimulate economic growth and exports, and the imbalance of exports over imports; followed by its stabilization in the 1960s, strengthening in the 1980s – 1990s, and then fluctuations within established bands,

- with a steady decline in the inflation rate over the decades, accompanied by occasional spikes of inflation (caused by local storms and floods, rising prices in the agricultural sector (1959), increases in world prices for essential imports for Taiwan (1974, 1980), etc.).

Table 1.30. Dynamics of Taiwan's Financial Aggregates

Year	Money Supply, bln TWD, end of year	GDP, bln TWD	Money Supply / GDP, %	Discount Rate of Central Bank, end of year, %	Exchange Rate, USD to TWD	Inflation (Consumer Prices), end of year, %
1951	1.14	17.25	6.6	19.8	10.25 – 15.85	32.0
1955	3.65	30.09	12.1	10.8	18.60 – 36.00	9.8
1960	10.83	62.81	17.2	14.4 (07.1961)	39.6 – 40.05	18.47

Table 1.30. (Continued)

Year	Money Supply, bln TWD, end of year	GDP, bln TWD	Money Supply / GDP, %	Discount Rate of Central Bank, end of year, %	Exchange Rate, USD to TWD	Inflation (Consumer Prices), end of year, %
1965	38.5	113.73	33.9	11.52	40.00 – 40.10	-0.1
1970	97.2	226.84	42.8	9.8	40.00 – 40.10	3.57
1975	339.8	589.65	57.6	10.75	37.95 (03/ 31/1975)	5.2
1980	975.9	1491.06	65.5	12.0	36.00	22.04
1985	2658.1	2473.79	107.4	5.25	39.85	-1.3
1990	6251.1	4307.0	145.1	7.75	26.89	4.56
1995	12810.9	7017.93	182.5	5.5	26.48	4.56
2000	19125.0	9731.2	196.5	4.625	31.23	1.64
2005	24766.0	11612.1	213.3	2.25	32.17	2.21
2010	31360.4	14215.1	220.6	1.625	31.64	1.23
2015	39884.0	17055.1	233.9	1.625	31.90	0.13
2017	42770.2	17983.3	237.8	1.375	30.44	1.22
2022	57508.6	22666.5	253.7	1.75	29.78	2.71

*IMF World Economic Outlook, October 2023; IMF International Financial Statistics (August 1960, August 1966, August 1972); Statistical Yearbook of the Republic of China (1975, 2002, 2012, 2022); Robert F. Emery. Monetary Policy in Taiwan, China. New York: Federal Reserve, November 1987. Money Supply = (Money + Quasi-Money, 1951 – 1960); Monetary Aggregates, Central Bank of the Republic of China. M2, 1965 – 2022, Historical Discount Rates (1951, 1955) – IMF International Financial Statitics, August 1960; Historical Discount Rates (1961 – 2022), access: https://www.cbc.gov.tw/en/cp-517-30010-B3A37-2.html; Exchange Rate = Interbank Spot Market Closing Rates, NTD/USD (1980 – 2022, period average), access: https://www.cbc.gov.tw/en/cp-480-1879-66035-2.html; Exchange Rate, NTD/USD (03/31/1975) – US Treasury Reporting Rates of Exchange as of March 31, 1975; Inflation = Change of Cost of Living (1951, 1955), Change of Consumer Prices Index (1960 – 2022). Date of access: 03/24/ 2024.

This is an unusual combination: a super-fast economic growth against a backdrop of decades-long high interest rates, with inflation rates, as a rule (with occasional spikes), being much lower than the interest rates (see **Table 1.31**).

Table 1.31. Dynamics of Interest Rates and Inflation Rates in Taiwan (Annual)

	1951	1952	1953	1954	1955	1956
Discount Rate of Central Bank, end of year, %	19.8	19.8	12.6	10.8	10.8	10.8
Inflation (Consumer Prices), end of year, %	32.0	28.8	17.6	2.0	9.8	6.3

Table 1.31. (Continued)

	1957	1958	1959	1960	1961	1962
Discount Rate of Central Bank, end of year, %	10.8	10.8	10.8	14.4 (07.1961)	14.4	12.96
Inflation (Consumer Prices), end of year, %	10.9	2.3	10.6	18.47	7.8	2.4
	1963	**1964**	**1965**	**1966**	**1967**	**1968**
Discount Rate of Central Bank, end of year, %	11.52	11.52	11.52	11.52	10.8	11.88
Inflation (Consumer Prices), end of year, %	2.2	-0.2	-0.1	2.0	3.4	7.9
	1969	**1970**	**1971**	**1972**	**1973**	**1974**
Discount Rate of Central Bank, end of year, %	10.8	9.8	9.25	8.5	10.75	12.0
Inflation (Consumer Prices), end of year, %	5.1	3.57	2.8	3.0	8.2	47.46
	1975	**1976**	**1977**	**1978**	**1979**	**1980**
Discount Rate of Central Bank, end of year, %	10.75	9.5	8.25	8.25	11.0	12.0
Inflation (Consumer Prices), end of year, %	5.2	8.5	7.0	5.8	9.8	22.04
	1981	**1982**	**1983**	**1984**	**1985**	**1986**
Discount Rate of Central Bank, end of year, %	11.75	7.75	7.25	6.75	5.25	4.5
Inflation (Consumer Prices), end of year, %	3.2	2.4	-1.2	1.6	-1.3	2.6
	1987	**1988**	**1989**	**1990**	**1991**	**1992**
Discount Rate of Central Bank, end of year, %	4.5	4.5	7.75	7.75	6.25	5.625
Inflation (Consumer Prices), end of year, %	1.9	1.1	3.1	4.56	3.9	3.4

* IMF World Economic Outlook, October 2023; IMF International Financial Statistics (August 1960, August 1966, August 1972); Statistical Yearbook of the Republic of China (1975, 2002, 2012, 2022); Robert F. Emery. Monetary Policy in Taiwan, China. New York: Federal Reserve, November 1987. Inflation = Change of Cost of Living (1951 - 1958), Change of Consumer Prices Index (1960 – 2022). Date of access: 03/24/ 2024.

During the period of super-fast economic growth in the 1950s to late 1960s, no correlation was found between the dynamics of central bank discount rates in Taiwan and the USA (see **Table 1.32**). The business cycles and financial markets of these countries were not linked. However, US financial aid in the 1950s significantly balanced Taiwan's budget, normalizing inflation, money supply, and credit.

What monetary policy lies behind these dynamics? What were the interest rate and exchange rate policies?

Below is one of the responses to these questions.

Table 1.32. Dynamics of Discount Rates (Taiwan, USA)

	1951	1952	1953	1954	1955	1956
Discount Rate of Central Bank, Taiwan, end of year, %	19.8	19.8	12.6	10.8	10.8	10.8
FRS Discount Rate, end of year, %	1.5	1.5	2.0	1.5	2.5	3.0
	1957	**1958**	**1959**	**1960**	**1961**	**1962**
Discount Rate of Central Bank, Taiwan, end of year, %	10.8	10.8	10.8	14.4 (07.1961)	14.4	12.96
FRS Discount Rate, end of year, %	3.0	2.5	4.0	3.0	3.0	3.0
	1963	**1964**	**1965**	**1966**	**1967**	**1968**
Discount Rate of Central Bank, Taiwan, end of year, %	11.52	11.52	11.52	11.52	10.8	11.88
FRS Discount Rate, end of year, %	3.5	4.0	4.5	4.5	4.5	5.5
	1969	**1970**	**1971**	**1972**	**1973**	**1974**
Discount Rate of Central Bank, Taiwan, end of year, %	10.8	9.8	9.25	8.5	10.75	12.0
FRS Discount Rate, end of year, %	6.0	5.5	4.5	4.5	7.5	7.75
	1975	**1976**	**1977**	**1978**	**1979**	**1980**
Discount Rate of Central Bank, Taiwan, end of year, %	10.75	9.5	8.25	8.25	11.0	12.0
FRS Discount Rate, end of year, %	6.0	5.25	6.0	9.5	12.0	13.0
	1981	**1982**	**1983**	**1984**	**1985**	**1986**
Discount Rate of Central Bank, Taiwan, end of year, %	11.75	7.75	7.25	6.75	5.25	4.5
FRS Discount Rate, end of year, %	12.0	8.5	8.5	8.0	7.5	5.5
	1987	**1988**	**1989**	**1990**	**1991**	**1992**
Discount Rate of Central Bank, Taiwan, end of year, %	4.5	4.5	7.75	7.75	6.25	5.625
FRS Discount Rate, end of year, %	6.0	6.5	7.0	6.5	3.5	3.0

* FRED Economic Data St. Louis Fred, Discount Rates Changes (1934 – 2002); IMF World Economic Outlook, October 2023; IMF International Financial Statistics (August 1960, August 1966, August 1972); Statistical Yearbook of the Republic of China (1975, 2002, 2012, 2022); Robert F. Emery. Monetary Policy in Taiwan, China. New York: Federal Reserve, November 1987. Inflation = Change of Cost of Living (1951 - 1958), Change of Consumer Prices Index (1960 – 2022). Date of access: 03/24/ 2024.

In the dynamics of Taiwan's economy from the 1950s to the 1970s, there are no signs of business cycles; there were no recessions until 1974 (in 1974, the oil crisis was "imported" into Taiwan from abroad). Maintaining stable economic growth required an expansionary monetary policy. Individual, particularly large spikes in the money supply from year to year are largely explained by factors outside the central bank's monetary policy (covering budget deficits, price increases due to natural disasters, rises in world prices, super-fast accumulation of foreign exchange reserves, etc.) (Lundberg, 1979).

As the economy became increasingly monetized and interest rates remained high, inflation rates fell from decade to decade (except for a spike in the 1970s), alongside simultaneous growth in employment. The usual cycles of short-term central bank policy (cooling and warming up the economy) are not visible. At the same time, the central bank has repeatedly raised and lowered the reserve requirements of commercial banks in anti-inflationary regulation. These actions meant little. In the early 1970s the central bank heavily manipulated its discount rate (to bring down inflation). Credit rationing and preferential interest rates were widely used (stimulating priority industries, savings, exports). The black credit market made up for the shortage of financial resources in small and medium-sized businesses (Lundberg, 1979).

Next to these observations, there are another explanation of monetary policy given by one of the authors of the economic miracle in Taiwan - Li, Kuo-Ting (K.T. Li).

In his opinion, in developing countries, monetary expansion is a tool of policy that stimulates economic growth. This is primarily its role, unlike in developed countries. (Li, Kuo-Ting, 1995, p. 96). The policy of monetary expansion enables investments in priority ("strategic") sectors that produce priority products. Essentially, this is a "directive" monetary policy (non-market "direct management" aimed at achieving economic development priorities) (p. 97). As a country approaches the "developed" stage, it gradually abandons this directive approach, and monetary policy becomes "neutral," market-oriented, and changes based on the trend of liberalization (p. 96).

The slogan of monetary/financial policy in Taiwan was to accelerate economic growth while maintaining stability of economy. To make this slogan a reality, at each specific period of time various regulatory measures were combined to achieve certain economic goals, which changed depending on the current situation (p. 99).

In particular, a unique element of monetary/interest rate policy in Taiwan was the deliberate, directive high interest rates on savings deposits to provide depositors with a significant positive real interest rate. This quickly brought down inflation and created high savings / investment rates. (p. 98). In 1950, interest rate on such deposits reached 7% per month, “equivalent to an annual rate of 125%” (Li, Kuo-Ting, 1995, p. 105).

Comparing with Russia: The economic dynamics of Russia over 30 years (from the 1990s to the early 2020s) show a deep crisis in the 1990s, followed by growth in the 2000s based on high world commodities prices, and then stagnation starting from 2012-2014.

An economic miracle did not occur.

One of the key reasons for this is a tight monetary policy (not expansionary) in order to combat high inflation (periodically double-digit), with extremely high interest rates (usually double-digit interest rates on loans), with a large-scale weakening of the ruble provoking high inflation, and extremely high financial instability (several financial crises, the largest fluctuations in the financial market every year) (**Table 1.33**).

Behind all this is the central bank's long-term struggle against inflation, the victim of which was the growth of the Russian economy.

This policy is essentially the opposite of Taiwan's practice. For 30 years, from the beginning of the 1950s, the financial depth of Taiwan's economy (Money Supply / GDP) has grown almost 10 times (**Table 1.30**), in Russia over 30 years - less than 3 times (**Table 1.33**). The ruble depreciated against the US dollar by more than 200 times, in Taiwan the local currency weakened against the US dollar by 3.5 times. For 30 years, inflation in Taiwan was generally lower than in Russia (**Tables 1.30, 1.31, 1.33, 1.34**).

Table 1.33. Dynamics of Russia's Financial Aggregates

Year	Money Supply, bln rubles, end of year	GDP, bln rubles	Money Supply / GDP, %	Discount Rate of Central Bank, end of year, %	Exchange Rate, USD to RUB	Inflation (Consumer Prices), end of year, %
1993	40.98	172	23.8	n.a.	0.415	840.1
1995	275.8	1540	17.9	160.0	4.64	160.0
1998	628.7	2741	22.9	60.0	20.65	84.4
2000	1560.0	7306	21.4	25.0	28.16	20.2
2005	7221	21617	33.4	12.0	28.78	10.9
2008	16277	44350	36.7	13.0	29.38	13.3
2010	23791	49757	47.8	7.75	30.48	8.8
2015	51370	83233	61.7	11.0	72.88	12.9
2020	75280	107.66	69.9	4.25	73.88	4.9
2023	111071	171041	64.9	16.0	89.69	7.4

*IMF World Economic Outlook, October 2023; IMF International Financial Statistics 2000 – 2023, World Bank Open Data, Bank of Russia; 1993 – 2000 – Money + Quasi-Money, 2005 – 2023 – Broad Money; 1995 – 2013 – Bank of Russia Refinancing Rate, 2014 – 2023 – Bank of Russia Key Rate; IMF World Economic Outlook, October 2023; Bank of Russia Database, access: https://www.cbr.ru/hd_base/keyrate/; date of access – 03/25/2024.

The main trend in Russia's monetary/interest rate policy is de-liberalization (unlike Taiwan), with a sharp increase in state interventionism and an increasingly noticeable restrictions on market forces. Financial assets are increasingly concentrated in state-owned banks. Credit rationing and preferential interest rates have been actively used since the late 2000s. This trend is the opposite of Taiwan's in the 1950s - 1970s.

Table 1.34. Dynamics of Interest Rates and Inflation Rates in Russia (Annual)

	1993	**1994**	**1995**	**1996**	**1997**	**1998**
Discount Rate of Central Bank, end of year, %	n/a	n/a	160.0	48.0	28.0	60.0 (150.0 – 05/28/1998.).)
Inflation (Consumer Prices), end of year, %	840.1	214.8	131.3	21.8	11.0	84.4
	1999	**2000**	**2001**	**2002**	**2003**	**2004**
Discount Rate of Central Bank, end of year, %	55.0	25.0	25.0	21.0	16.0	13.0
Inflation (Consumer Prices), end of year, %	36.6	20.2	18.6	15.1	12.0	11.7
	2005	**2006**	**2007**	**2008**	**2009**	**2010**
Discount Rate of Central Bank, end of year, %	12.0	11.0	10.0	13.0	8.75	7.75
Inflation (Consumer Prices), end of year, %	10.9	9.0	11.9	13.3	8.8	8.8
	2011	**2012**	**2013**	**2014**	**2015**	**2016**
Discount Rate of Central Bank, end of year, %	8.0	8.25	8.25	17.0	11.0	10.0
Inflation (Consumer Prices), end of year, %	6.1	6.6	6.5	11.4	12.9	5.4
	2017	**2018**	**2019**	**2020**	**2021**	**2022**
Discount Rate of Central Bank, end of year, %	7.75	7.5	6.25	4.25	8.5	7.5 (20.0 – 03/01/ 2022)
Inflation (Consumer Prices), end of year, %	2.5	4.3	3.0	4.9	8.4	12.2
	2023	**x**	**x**	**x**	**x**	**x**
Discount Rate of Central Bank, end of year, %	16.0	**x**	**x**	**x**	**x**	**x**
Inflation (Consumer Prices), end of year, %	7.4	**x**	**x**	**x**	**x**	**x**

* 1995 – 2013 – Bank of Russia Refinancing Rate, 2014 – 2023 – Bank of Russia Key Rate; IMF World Economic Outlook, October 2023; Bank of Russia Database, access: https://www.cbr.ru/hd_base/keyrate/; date of access – 03/25/2024.

15.4. Exchange Rate / Currency Regime

The trend in the dynamics of the New Taiwan Dollar in the 1950s-1960s was its weakening in the 1950s (as a result of inflation and exchange rate manipulation to stimulate growth and import substitution), followed by stabilization of the exchange rate in the 1960s (see **Table 1.30** above).

In the 1950s, during the import substitution phase, the exchange rate regime was characterized by the following: (Li, Kuo-Ting, 1995, pp. 109 – 111):

- Trade deficit, with imports exceeding exports, leading to a currency shortage;
- Administrative management of the exchange rate, making it non-market and artificial;
- The New Taiwan Dollar is pegged to the US Dollar;
- Multiple exchange rates;
- Different exchange rates for exports and imports, and for specific groups of these;
- the New Taiwan Dollar was selectively overvalued, excessively strengthened:

    1) in relation to the import of goods, semi-finished products, and equipment considered necessary by the state for domestic use in Taiwan's economy, as well as within the framework of American aid (to develop import substitution and encourage it);

    2) in relation to exports deemed undesirable by the state (with the goal of restricting such exports);

- the New Taiwan Dollar was selectively undervalued, excessively weakened:

    1) In relation to the import of goods, semi-finished products, and equipment not considered necessary by the state for domestic use in Taiwan's economy (hindering import substitution, with the goal of restricting such imports);

    2) In relation to exports deemed desirable (with the goal of stimulating exports);

- all foreign currency is held by the central bank; mandatory sale of foreign currency earned by exporters to the central bank at an administratively set exchange rate;
- for import purposes, purchasing foreign currency from the central bank at the administratively set exchange rate;
- absence of a financial market where the exchange rate could be established;
- in conditions of a severe currency shortage, a system of "exchange settlement certificates" (ESC) was introduced. 20% of the exporter's revenue was exchanged for local currency (New Taiwan Dollars), while 80% was exchanged for certificates. These certificates could later be sold to other

businesses or sold back to the central bank (the Bank of Taiwan fulfilled this function).

Subsequently, during the export-oriented phase and the technological phase of Taiwan's economy, the currency regime gradually liberalized (Li, Kuo-Ting, 1995, pp. 112 – 115).

The liberalization of the currency regime occurred very gradually over decades, to the extent that conditions matured for it.

Since the end of 1958, there was a transition to a unified exchange rate («Programme for Foreign Exchange and International Trade»):

- the New Taiwan Dollar was pegged to the USD;

- the number of exchange rates was reduced from 10 to 2; since August 1959, a unified exchange rate was established; and in September 1963, the "exchange settlement certificates" were abolished.

- at the turn of the 1960s, the New Taiwan Dollar was stabilized and devalued. The devaluation stimulated rapid economic growth and exports, while the stabilization of the exchange rate served the goal of "economic growth while maintaining stability."

- until July 1978, the New Taiwan Dollar had a fixed exchange rate to the US Dollar;

- then the next stage of foreign exchange liberalization occurred; the New Taiwan Dollar was administratively revalued against the US Dollar and was decoupled from the US Dollar (as the US Dollar had become too volatile, its fluctuations hindered price stability in Taiwan) (Emery, Robert F., 1984, p. 9). A floating exchange rate system was introduced (with strict limits on daily fluctuations), and from 1979 a centralized forex market began operating as a unified broker for several banks (interbank forex transactions);

- since the end of 1990, the New Taiwan Dollar has been freely floating on the financial market, influenced by the Central Bank's exchange rate policy (Li, Kuo-Ting, 1995, pp. 112-115), as a necessary component of an open and developed economy where directive exchange rate management has become obsolete.

Comparing with Russia. The exchange rate policy in Russia was the opposite of that implemented in Taiwan. The basic idea was to create a market, its institutions, and instruments as quickly as possible, without considering the consequences for the economy.

Already in the early 1990s, during the initial years of the transition to a market economy, a floating / market exchange rate for the ruble was introduced in Russia, determined by the financial market ("Moscow Interbank Forex Exchange"). The Central Bank of Russia actively influenced the exchange rate of the ruble, using tools more characteristic of a developed economy rather than a transitional developing economy in its early years.

The basic trend of the ruble over 30 years has been significant, poorly managed weakening, greatly exceeding the decline in the exchange rate of the New Taiwan Dollar over the same period. Additionally, the ruble's exchange rate has shown extremely high volatility, punctuated by financial crises. The reasons for this include high inflation in Russia, large fluctuations in world commodity prices (as Russia depends on the export of oil, gas, and other raw materials), and a small financial market whose dynamics largely depend on speculative investors engaging in large-scale carry trade transactions.

15.5. Interest Rate Policy

Basic Trends:

1. Economic growth amid high interest rates (encouraging high savings rates, "killing" inflation, positive real interest rates on deposits);
2. Gradual, slow reduction of interest rates over decades, as well as narrowing the spreads between interest rates on deposits and loans (interest rate policy to stimulate economic growth) (Emery, Robert F., 1984, p. 13);
3. Administrative intervention in the interest rates of commercial banks;
4. Wide use of credit rationing (limits on loans, "credit plan") and preferential interest rates for privileged loans (loans to priority sectors/priority businesses/state-owned companies/projects for export-import/to produce priority commodities) (Li, Kuo-Ting, 1995, p. 106);
5. Gradual liberalization of interest rate policy over decades, weakening of interventionism / directive management carried out by the state / central bank;
6. Operational management of the interest rates, which is provided by the central bank, during flashes of inflation and crises (Li, Kuo-Ting, 1995, pp. 107 - 108).

In particular, the central bank set upper limits for deposit interest rates and ranges for bank loan interest rates (Emery, Robert F., 1984, p. 12). It was only from 1989 that interest rates became truly market-driven (Li, Kuo-Ting, 1995, p. 105).

15.6. Credit Policy. Preferential Loans

One of the inevitable elements of a policy of rapid growth and, consequently, the expanded intervention of the state in the economy is credit rationing (the direct administrative allocation of part of the loans issued to businesses) and artificially low (preferential) interest rates, with the aim of providing financial resources to priority companies/industries/projects/production of goods that are strategically important. Such a policy particularly thrived in the environment of extremely high interest rates that took root in Taiwan's economy in the 1950s-1970s.

"Government assistance to private enterprises... Low-interest loans were extended by the Bank of Taiwan to the island's industries to alleviate their shortage of capital." Other banks and specially created sectoral funds were also used for this purpose. Loans were not only monetary but also in the form of goods (providing goods on credit or for barter) (Li, Kuo-Ting, 1976, p. 331).

There are numerous examples. Loans were issued to coal mines, textile mills, shipyards, metalworking enterprises, agricultural businesses, exporters, and vital capital-intensive infrastructure projects (Li, Kuo-Ting, 1976, pp. 151, 331, 332, 489, 491-492). The poorest groups could obtain preferential loans for private housing construction (Li, Kuo-Ting, 1976, pp. 71-72). Credit preferences were given to medium and small enterprises, including through a specially created credit guarantee fund for them (Li, Kuo-Ting, 1976, pp. 499-501). There is a known practice of the central bank purchasing preferred shares so that a company could pay off its debts (Emery, Robert F., 1987).

15.7. International Reserves

Since the early 1960s (transition to the export-oriented phase of economic growth, emergence of a consistent trade surplus), Taiwan has been steadily accumulating increasing international reserves (**Table 1.35**).

At the same time, according to K.T. Li, one of the architects of Taiwan's economic miracle, the accumulation of excessive reserves is a poor decision; the surplus should be invested. This, he argues, is the correct financial policy (Li, Kuo-Ting, 1976, pp. 8 - 9).

One of the standard benchmarks for determining a sufficient level of international reserves is to cover three months' worth of imports. In developing economies with limited access to world financial markets, the size of international reserves should also take into account the volatility of the capital account (Roger, Scott, 1993, p. 70).

Table 1.35. Dynamics of Taiwan's International Reserves (Foreign Exchange)*

Year	International Reserves (Foreign Exchange), bln USD, end of year	Imports, bln USD	International Reserves (Foreign Exchange) / Imports, %
1961	0.09	0.32	28.1
1965	0.25	0.56	44.6
1970	0.5	1.52	32.9
1975	1.07	5.95	18.0
1977	1.34	8.74	15.3
1980	2.2	19.7	11.2
1981	7.24	21.2	34.2
1985	22.56	20.1	112.2
1987	76.75	35.0	219.3
1990	72.44	54.7	132.4
1995	90.31	103.6	87.2
2000	106.74	140.0	76.2
2005	253.3	182.6	138.7
2010	382.0	255.8	149.3
2015	426.0	236.4	180.2
2020	529.9	286.1	185.2
2022	554.9	428.0	129.6

* Statistical Yearbook of the Republic of China (1975, 2007, 2010, 2022); Li, Kuo-Ting, 1976, p. 522; Foreign Exchange Reserves. National Statistics. Republic of China. Accessible: https://eng.stat.gov.tw/Point.aspx?sid=t.10&n=4209&sms=11713. Date of access: 15.06.2024.

The first two decades of Taiwan's rapid growth (1950s – 1960s) were a period of trade deficits (Li, Kuo-Ting, 1976, p. 522), with international reserves being small, covering only a few months' worth of imports. In the 1970s, trade balance surpluses began to emerge, but the reserves remained about the same, covering a few months' worth of imports (**Table 1.35**). Foreign exchange reserve policy was only possible on a 'residual basis,' with no access to major financial markets, and the possibilities for exchange rate liberalization were extremely limited.

Since the early 1980s, the situation reversed. Taiwan established itself as an export-oriented country. A sharp increase in trade surpluses and, consequently, international reserves was observed. From the mid-1980s, the volume of reserves consistently exceeded the annual value of imports. This is typical for a successful export-oriented country. In the 1980s, real opportunities for exchange rate liberalization emerged.

According to a simplified assessment, the amount of foreign exchange reserves exceeding 100% of imports is considered excessive (especially for a country classified as a developed economy). Since the mid-1980s, Taiwan has been accumulating excessive foreign exchange reserves, which, to the extent that they exceed the necessary size, constitute a "deduction" from economic growth.

Comparing with Russia. For three decades, Russia accumulated foreign exchange reserves, consistently increasing 'import coverage by reserves' to values significantly exceeding 100% (while periodically losing part of the reserves during financial crises, covering the flights of short-term speculative capital from Russia) (**Table 1.36**). Approximately $350 billion in foreign currency reserves were frozen from February – March 2022.

Table 1.36. Dynamics of Russia's International Reserves*

Year	International Reserves (Foreign Exchange), bln USD, end of year	Imports, c.i.f., bln USD	International Reserves (Foreign Exchange) / Imports, %	International Reserves (Gold), bln USD, end of year
1994	3.98	50.52	7.9	2.5
1995	14.26	60.95	23.4	2.8
1997	12.77	73.66	17.3	4.9
1998	7.8	63.82	12.2	4.4
2000	24.26	49.13	49.4	3.7
2005	175.69	137.98	127.3	6.3
2007	466.38	245.84	189.7	12.0
2008	410.7	321.17	127.9	14.5
2010	432.95	273.6	158.2	35.8
2013	456.45	377.28	121.0	40.0
2014	327.8	337.77	97.0	46.1
2015	309.39	212.2	145.8	48.6
2017	346.51	237.8	145.7	76.6
2018	371.7	248.9	149.3	86.9
2020	444.5	240.1	185.1	138.8
2021	468.1	301.0	155.5	133.1
2022	417.8	276.5	151.1	136.1

* IMF International Financial Statistics 1995 – 2024; Bank of Russia Database, accessible: https://www.cbr.ru/hd_base/mrrf/mrrf_m/?UniDbQuery.Posted=True&UniDbQuery.From=12.1994&UniDbQuery.To=06.2024. Date of access: 06/16/2024.

Since the early 2000s, international reserves have been excessive, significantly exceeding both imports and the amount of reserves necessary to cover capital account fluctuations and meet unexpectedly high demands for replacing ruble assets with foreign currency (**Table 1.36**).

These funds (estimated at $100-200 billion since the early 2000s), originating from the export revenues of Russian companies, could have been used for importing technologies and equipment if the necessary incentives had been created. Financial resources immobilized in reserves represent a deduction from economic growth. It was the excessiveness of the reserves that led to such a significant portion (approximately three-quarters) being frozen.

An increasingly significant portion of the reserves is held in gold, which has much lower liquidity than foreign currency. 'Immobilized,' less liquid gold, accumulated in ever larger amounts, also represents a deduction from economic growth when gold is stockpiled on such a scale (**Table 1.36**).

15.8. Budget / Tax Policy

A characteristic feature of Taiwan's financial policy has been the low tax burden on the economy (**Tables 1.37-1.38**), which created (and apparently continues to create (**Table 1.38**) favorable conditions for rapid economic growth. The tax burden is half that of developed countries with low economic growth rates.

The low tax burden was combined with strong tax incentives for technological modernization, import substitution, and expansion of export (see analysis below).

Table 1.37: Tax Policy and Budget Expenditures Policy in Taiwan

Year	Net Budget Revenue (all government levels), bln TWD	GDP, bln TWD	Net Budget Revenue (all governme nt levels) / GDP, %	Net Budget Expenditures (all government levels), bln TWD	Net Budget Expenditu res (all governme nt levels)/ GDP, %	Budget Surplus (+), Budget Deficit (-)
1951	2.32	17.25	13.4	2.43	14.1	-0.11
1955	6.69	30.09	22.2	6.54	21.7	+0.15
1960	12.11	62.81	19.3	12.19	19.4	-0.08
1965	23.38	113.73	20.6	22.39	19.7	+1.01
1970	51.22	226.84	22.6	49.15	21.7	+2.07
1975	127.08	589.65	21.6	119.54	20.3	+7.54
1980	368.92	1491.06	24.7	345.4	23.2	+23.52
1985	576.04	2473.79	23.3	563.73	22.8	+12.31
1990	1203.17	4307.0	27.9	1166.75	27.1	+36.42
1995	2102.74	7017.93	30.0	2074.93	29.6	+27.81
2001	2348.13	9506.6	24.7	2348.13	24.7	0.0

* Statistical Yearbook of the Republic of China (1975, 2002); Li, Kuo-Ting. The Experience of Dynamic Economic Growth in Taiwan. Taipei: Mei Ya Publications, Inc., 1976, p. 519.

In the early 2000s, the methodology was changed, and net budget revenues and expenditures were recalculated. According to the IMF World Economic Outlook April 2024, the shares of net government revenues / expenditures in GDP is shown in **Table 1.38**. This share still remains very low.

Was the low fiscal burden a deliberate policy of the Taiwanese government? Or was it a result of weak tax collection capabilities? The answer to the first question is yes! The answer to the second question is no (except perhaps in the early 1950s).

“During the initial stage of a county’s economic development, its fiscal revenue is usually very limited but its expenditures are generally very heavy. This imbalance leads to large budget deficits and serious financial difficulties. Under such circumstances, one may be inclined to make increased taxation the sole objective of fiscal policy. However, placing too much emphasis on increasing tax revenue is detrimental to economic development, and without economic development there can be little increase in national income. This in turn makes it impossible to enlarge tax revenue and to attain the revenue objective of fiscal policy. It is imperative, therefore, that in pursuit of the revenue objective of fiscal policy adequate consideration be also given to what it can do in the promotion of investment and trade as a means of stimulating rapid economic development and growth. Only when national income is on the rise the people afford to pay more taxes" (Li, Kuo-Ting, 1976, p. 470).

Table 1.38. Fiscal Burden on Taiwan's Economy (1980 – 2023)

Year	General Government Revenues / GDP, %	General Government Expenditures / GDP, %
1980	21.4	24.8
1985	20.9	23.4
1990	24.4	28.4
1995	21.1	27.9
2001	18.7	24.3
2005	18.4	20.9
2010	15.0	20.1
2015	15.6	17.4
2023	15.9	16.4

*IMF World Economic Outlook April 2024

What should tax policy serve? A) Transformation of the sectoral structure; b) Financing of infrastructure development; c) Selective, targeted incentives; d) Modernization of the tax structure, elimination of emerging problems and imbalances; e) Elimination of excessive incentives and expansion of the revenue base for social development expenditures (Li, Kuo-Ting, 1976, pp. 478 - 484).

Within the framework of the economic liberalization policy (which continued in Taiwan for decades), the inevitable reduction of government final consumption in relation to GDP size was observed (**Table 1.39**). This trend was largely determined by a moderate budget expenditure policy, their low share in GDP (**Table 1.37, 1.38**).

Table 1.39. General Government Final Consumption

Year	General Government Final Consumption, % GDP
1951	17.8
1955	19.0
1960	19.1
1965	17.2

Table 1.39. (Continued)

Year	General Government Final Consumption, % GDP
1970	18.3
1975	15.8
1980	15.9
1985	16.1
1990	17.2
1995	14.2
2001	13.0
2005	12.5
2010	12.1
2015	13.9
2022	13.8

*Statistical Yearbook of the Republic of China (1975, 2002, 2012, 2022)

Comparing with Russia. Analysis shows (**Table 1.40**) that from the very beginning of market reforms, even during the shock transition and deep crisis of the early 1990s, the fiscal burden in Russia was significantly higher than in Taiwan (not only during the period of its rapid economic growth but also when Taiwan's economy stabilized and functioned as a "developed" one).

Naturally, this factor, along with many others, worked against the growth of Russia's economy.

Table 1.40. Fiscal Burden on Russian Economy (1992 – 2023)

Year	General Government Revenues / GDP, %	General Government Expenditures / GDP, %
1992	26.0	29.5
1993	27.1	31.4
1994	26.4	35.3
1998	32.3	39.7
2000	33.8	30.7
2005	37.1	29.5
2010	32.3	35.5
2015	31.9	35.3
2020	35.2	39.2
2023	34.5	36.8

*IMF World Economic Outlook April 2024 (1992 – 2022); Rosstat Database (general government revenues and expenditures). Accessible: https://rosstat.gov.ru/bgd/regl/b11_13/IssWWW.exe/Stg/d5/22-03.htm, Date of access: Jule, 6, 2024

Tax Incentives (Taiwan). The incentives were continuously expanded through a series of successive tax reforms. All possible types of tax incentives were utilized to stimulate economic growth (plus technological modernization, investments, savings, export growth, import substitution) as many as could be devised by the imagination of financial engineers.

An effective approach is a "single strike," a special legislative package that simultaneously initiates a large number of investment incentives (taxes, customs duties, etc.). For example: Statute for the Encouragement of Investments (1960, with subsequent amendments).

Cases of tax incentives, although certainly not an exclusive list, are given below Li, Kuo-Ting, 1995, pp. 76 - 79, Li, Kuo-Ting, 1976, pp. 475, 490 - 491):

1) Corporate income tax rates were lower than personal income tax rates (encouraging businesses creation) + the ability to deduct losses from the past 4 years from the taxable income of the current year + accelerated depreciation;
2) Reduced tax rates for farmers, exemptions from certain taxes;
3) Exemption from corporate income tax for newly established companies, as well as businesses increasing their capital, for a period of several years (5 years);
4) Businesses that invest retained earnings into fixed capital (plant and equipment) can reduce their taxable income by an amount up to 25% of total income for the year;
5) Exemption for businesses from taxes on income derived from investments in other local corporations in cases where the latter are not eligible for tax exemptions or deductions;
6) Income derived from issuing shares at a price above their nominal value was exempt from corporate income tax;
7) Income from stock transactions was exempt from taxation;
8) Income from interest on bonds and dividends on stocks issued in certain industries was exempt from income tax;
9) Interest income from deposits with a term of two years or more was excluded from the consolidated income tax (the tax base included all main types of personal income);
10) Income derived from exports is exempt from sales tax; reduced rates or exemptions on other taxes;
11) Two percent of the income received from exports is exempt from income tax;
12) “Reimbursement of the import duties, harbor dues, defence surtax and commodity tax paid on imported or locally produced raw materials” (Li, Kuo-Ting, 1976, p. 32), if the raw materials are used to produce export goods;

13) Exemption from property tax for those who built factories for rent in industrial zones;
14) Special tax regimes in export processing zones (**see Section 14.16**), et cetera.

The restrictive role of taxes: curbing excessive production and consumption of goods that lack public interest. The case: higher indirect taxes on luxury goods (Li, Kuo-Ting, 1976, p. 474).

15.9. Customs Policy (Customs Duties)

The customs duty policy was dictated by reasonable protectionism:

1) The policy varies depending on the phase of economic development (import substitution, export orientation, phase focused on the development of science and technology, etc.);
2) The general trend is the gradual liberalization of foreign trade over the decades (as increasingly intensive economic development occurs and a transition to consistent trade balance surpluses is achieved), with cautious, step-by-step reduction/elimination of tariff and non-tariff barriers, including import-export controls;
3) Prohibitive customs duties on the import of goods that were subject to "import substitution" and which Taiwan's economy was expected to produce (and even export) independently. For example, customs duties on sugar (one of the main export goods in the 1950s) ranged from 100% to 130% from 1948 to 1976. (Scott, Mariuce, 1979, p. 323);
4) Low customs duties on essential goods whose demand is not fully met by Taiwan's economy (and will not be met in the near future). For example, in 1972, these included wheat, barley, sorghum, soybean oil, peanut oil, and for industrial use – pig iron, scrap iron, caustic soda, vinyl chloride, etc. (Li, Kuo-Ting, 1976, pp. 491-492);
5) High customs duties on luxury goods aimed at generating additional revenue for the budget. For example, import duties on alcohol ranged from 120% to 200% from 1948 to 1976, on cigarettes from 100% to 192%, and on perfumes and cosmetics from 120% to 156% (Scott, Maurice, 1979, p. 323);
6) Encouraging (maximally low) customs duties (or even their absence) on the import of goods (raw materials, semi-finished products, equipment, etc.) necessary for import substitution, the development of science and technology, or provided as economic aid. This includes minerals that are

not available in Taiwan and whose extraction is impossible. For example, customs duties on iron ore were 5-6% from 1948 to 1965, and 0% in the 1970s; on the import of agricultural machinery from 1948 to 1976, they were 7-12%; and on crude oil for refining purposes, they were 7.5-10% (Scott, Maurice, 1979, p. 323);

7) Encouraging customs duties (or their absence, or the application of duty rebates) on goods whose export is stimulated by the government;

8) Prohibitive customs duties on goods whose export is not encouraged by the government;

9) “Neutral” customs duties, as a source of budget revenues, on the import of goods that cannot be produced (or are not produced) in Taiwan but are among the common components of "normal" personal and industrial consumption;

10) Encouraging exports by providing tariff rebates on imported raw materials used for the production of export goods (Li, Kuo-Ting, 1995, p. 74);

11) Exemption of manufacturers from paying customs duties on imported machinery and equipment (Li, Kuo-Ting, 1995, p. 79);

12) Creation of export processing zones with specially reduced customs duties (or their absence) to stimulate exports.

A detailed analysis of customs duty policy for specific goods is contained in several publications (Li, Kuo-Ting, 1995, pp. 81-87, 89-90; Scott, Maurice, 1979, pp. 313-349). The downward trend of import tariffs in Taiwan is presented in **Table 1.41**.

Table 1.41. Dynamics of Import Tariffs in Taiwan's Economy *

Custom Duty Tariff	Percentage of Taxed Import Goods (%)			
	1949	1959	1973	1988
Above 90%	10.10	8.08	14.51	5.71
From 60% to 90%	8.10	7.45	11.62	
From 30 to 60%	28.1	27.70	34.02	
Below 30%	53.17	56.77	39.81	84.17 (From 1 to 30%)

* Li, Kuo-Ting, 1995, pp. 81 – 82, 87

15.10. Government Investment

During the period of the "economic miracle," the state's participation in the formation of fixed capital was very significant, fluctuating from 46% in 1951, 47% in 1960, then 34% in 1965, and 43% in 1970, reaching a peak of 54% in 1975 (the last year of Chiang Kai-shek's rule) (see **Table 1.29** above). Subsequently, with economic liberalization, there was a steady decline in the state's share of investments in fixed capital formation: 49% in 1980 and 1990, 32% in 2000, and 16% in 2022 (**Table 1.29**, the figures are rounded).

The largest budget investments were made in Taiwan's infrastructure and public works (power generation, fertilizer production, highways and railways, telecommunications, harbors and ports, water, gas, and oil supply, warehouses) (Li, Kuo-Ting, 1976, pp. 75–76, 86). Additionally, there were investments in airports, the steel industry, sea and river dams, social infrastructure, and more (Ching-kuo, Chiang, 1984, p. 245). Export processing zones were established at the expense of the state (see **Section 14.16**). Investments by state-owned companies in their own development played a significant role, with the share of the public sector in industrial production exceeding 50% in the 1950s, over 40% in the 1960s, and fluctuating around 20% in the 1970s (see **Section 13.2**).

In government investments, the following approaches were used: a) a problem-oriented approach, to built where there were "bottlenecks" (Li, Kuo-Ting, 1976, pp. 85–86), and b) programs of major construction projects, such as the "Ten Major Construction Projects" (1974–1979), the "Twelve New Development Projects" (announced in September 1975), “New Ten Major Construction Projects” (2003) among others. For a detailed description, see **Section 14.9**.

Part II. Leveraging Taiwan's Experience and Best Practices. Ideology and Policies to Stimulate Economic Growth in Post-Soviet States

1. Established Models of Post-Soviet States

1.1. Post-Soviet States

Post-Soviet states (excluding the Baltic countries) – Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

1.2. The Common Features of Post-Soviet States

Institutions. Common features among them include: 1) a collectivist behavioral model, 2) an increased role of the state, 3) strong central authority (presidential republics), 4) nation-states (Russia being a multiethnic state), 5) nationalism as the mainstream ideology, 6) most states are authoritarian, with the "irremovable leader" model being prevalent, 7) Christianity (Orthodoxy) and Islam as key religions, 8) a rejection of the Soviet past (1917-1991), distancing themselves from it.

Post-Soviet states are either **autocracies** or **flawed democracies**. According to the 2024 Democracy Index by the Economist Intelligence Unit, the rankings are as follows: Armenia – 84th place in the world, Azerbaijan – 131st, Belarus – 151st, Georgia – 89th, Kazakhstan – 121st, Kyrgyzstan – 110th, Moldova – 68th, Russia – 144th, Tajikistan – 155th, Turkmenistan – 162nd, Ukraine – 91st, and Uzbekistan – 149th (out of 167 countries and territories). While these rankings may be contested, they do provide a general impression.

Level of Development. All of the aforementioned countries are classified as developing economies, with none of them being considered developed countries.

Human Development. According to the Human Development Index (HDI) from the UNDP Human Development Report 2023-24, the rankings are as follows: Armenia – 76th place in the world, Azerbaijan – 89th, Belarus – 69th, Georgia – 60th, Kazakhstan – 67th, Kyrgyzstan – 117th, Moldova – 86th, Russia – 56th, Tajikistan – 126th, Turkmenistan – 94th, Ukraine – 100th, and Uzbekistan – 106th (out of 192 countries and one territory).

In 1990, the former USSR ranked 25th in the world in terms of human development (HDI, UNDP Human Development Report 1990).

Wealth. The nominal GDP per capita, in current prices, in USD (IMF World Economic Outlook Database April 2024), with projections for 2024, ranks the countries as follows: Armenia – 85th place, Azerbaijan – 90th, Belarus – 91st, Georgia – 84th, Kazakhstan – 64th, Kyrgyzstan – 152nd, Moldova – 92nd, Russia

– 65th, Tajikistan – 163rd, Turkmenistan – 73rd, Ukraine – 111th, and Uzbekistan – 138th.

GDP per Capita by PPP, in current prices, in international dollars (IMF World Economic Outlook Database April 2024), with projections for 2024, ranks the countries as follows: Armenia – 77th place, Azerbaijan – 88th, Belarus – 71st, Georgia – 72nd, Kazakhstan – 58th, Kyrgyzstan – 139th, Moldova – 92nd, Russia – 55th, Tajikistan – 146th, Turkmenistan – 85th, Ukraine – 104th, and Uzbekistan – 120th.

Life Expectancy (2023, a component of the Human Development Index, HDI, UNDP Human Development Report 2023-24) ranks the countries as follows: Armenia – 96th place, Azerbaijan – 110th, Belarus – 109th, Georgia – 108th, Kazakhstan – 111th, Kyrgyzstan and Moldova – 141st, Russia – 119th, Tajikistan – 132nd, Turkmenistan – 148th, Ukraine – 118th, and Uzbekistan – 127th.

Corruption Perceptions Index (2023, Transparency International) ranks the countries as follows: Armenia – 62nd place, Azerbaijan – 154th, Belarus – 98th, Georgia – 49th, Kazakhstan – 93rd, Kyrgyzstan – 141st, Moldova – 76th, Russia – 141st, Tajikistan – 162nd, Turkmenistan – 170th, Ukraine – 104th, and Uzbekistan – 121st. (A higher ranking indicates worse corruption perception, meaning higher levels of perceived corruption.)

Ease of Doing Business (2019, World Bank, Ease of Doing Business rank, where 1 = most business-friendly regulations) ranks the countries as follows: Armenia – 47th place, Azerbaijan – 28th, Belarus – 49th, Georgia – 7th, Kazakhstan – 25th, Kyrgyzstan – 80th, Moldova – 48th, Russia – 29th, Tajikistan – 106th, Turkmenistan – n/a, Ukraine – 64th, and Uzbekistan – 69th.

It is evident that post-Soviet countries rank as follows across various indicators:

- **Human Development Index (HDI)**: Between 56th and 126th place out of 192 countries.
- **Nominal GDP per capita**: Between 64th and 163rd place.
- **GDP per capita (PPP)**: Between 55th and 146th place.
- **Life Expectancy**: Between 96th and 148th place.
- **Corruption Perceptions Index**: Between 49th and 170th place (higher rankings indicate worse corruption perception).
- **Ease of Doing Business**: From 7th to 106th place.

Post-Soviet countries are in desperate need of modernization.

Economic Model. Post-Soviet countries are characterized by:

1. Market economies.
2. Predominantly resource-based economies.

3. Deindustrialization compared to the Soviet past.
4. Economies that are open to varying degrees.
5. Dependence on imports of high-value-added products.
6. A greater role of the state in the economy compared to developed countries (in terms of ownership, share in industrial production and investments, over-regulation, and in some countries, a high level of government consumption) (**Table 2.1**).
7. High concentration of assets in the capitals.
8. Monopolies/oligopolies as the foundation of the economy.
9. A large informal or "grey" economy.
10. A significant role of the budget, particularly the central government budget.
11. Low levels of financial development/monetization of the economy (**Table 2.1**).
12. High volatility, with financial crises occurring 1–2 times every 10–15 years.
13. Persistent high inflation in some countries (**Table 2.1**).
14. Constantly high interest rates (**Table 2.1**).
15. "Stakeholder capitalism" rather than "shareholder capitalism."
16. A long-term trend of weakening national currencies (**Table 2.1**).
17. Small financial markets (**Table 2.1**).
18. A corporate financing model based on banks (bank-based) rather than financial markets (market-based).
19. Low investment rates (except for Uzbekistan) and low savings rates in some countries (**Table 2.1**).
20. Over-regulated and repressed financial systems.

Table 2.1. Economic Parameters of Post-Soviet Countries *

	Broad Money, % GDP (2023)	Market Capitalization of Listed Domestic Companies, % GDP (2022)	Inflation (Consumer Prices, End of Year), % (2022)	Total Investment, % GDP (2022)	Gross Savings, % GDP (2022)
World	**140.0**	**106.2**	**8.9**	**27.5**	**28.0**
Armenia	54.5	1.3	8.3	21.6	22.4
Azerbaijan	36.6	1.9	14.4	12.6	38.8
Belarus	30.7 (2021)	3.4	12.9	22.0	25.4
Georgia	53.8	n/a	9.8	24.1	19.5
Kazakhstan	32.1	20.3	20.3	24.9	28.1
Kyrgyzstan	43.5	n/a	14.7	22.7	-20.9

Table 2.1. (Continued)

	Broad Money, % GDP (2023)	Market Capitalization of Listed Domestic Companies, % GDP (2022)	Inflation (Consumer Prices, End of Year), % (2022)	Total Investment, % GDP (2022)	Gross Savings, % GDP (2022)
Moldova	49.7	n/a	30.2	24.6	8.8
Russia	69.9 (2020)	23.4	11.9	22.8	33.2
Tajikistan	30.2	n/a	4.2	17.5	33.1
Turkmenistan	n/a	n/a	3.0	n/a	n/a
Ukraine	47.1	3.4 (2018)	26.6	12.6	17.6
Uzbekistan	19.9	7.5 (2021)	12.3	39.3	38.5

* World Bank Open Data – Broad Money, % GDP, Market Capitalization of Listed Domestic Companies, % GDP; IMF World Economic Outlook Database April 2024 - Inflation (Consumer Prices, End of Year), %, Investment Rate, Savings Rate, %

At the same time, these countries have achieved a relatively high level of banking and financial technologies.

Table 2.1. Economic Parameters of Post-Soviet Countries (Continued)*

	Central Bank Policy Rate, % (2023)	Lending Rate, % (2023)	Weakening of Domestic Currency to USD, 2023 / 2010, times	Government Consumption Expenditure (Nominal)/ GDP, % (2023)
Benchmark (USA)	**5.38**	**3.25** (2021)	**x**	**13.7**
Armenia	9.25	12.39	1.1 times	14.1
Azerbaijan	8.00	13.96	2.1 times	14.0
Belarus	9.50	9.96	10.6 times	17.2
Georgia	9.50	13.51	1.5 times	12.7
Kazakhstan	9.00	n/a	3.1 times	12.2
Kyrgyzstan	13.00	19.11	1.9 times	22.2
Moldova	4.75 (Treasury Bills – 9.11)	12.33	1.4 times	18.0
Russia	11.58 (Government Bonds)	11.62	2.9 times	18.5
Tajikistan	12.25 (2019)	23.55 (2019)	2.5 times	n/a
Turkmenistan	n/a	n/a	n/a	n/a
Ukraine	n/a	22.11	4.8 times	38.2
Uzbekistan	14.00	22.15	4.4 times	16.9

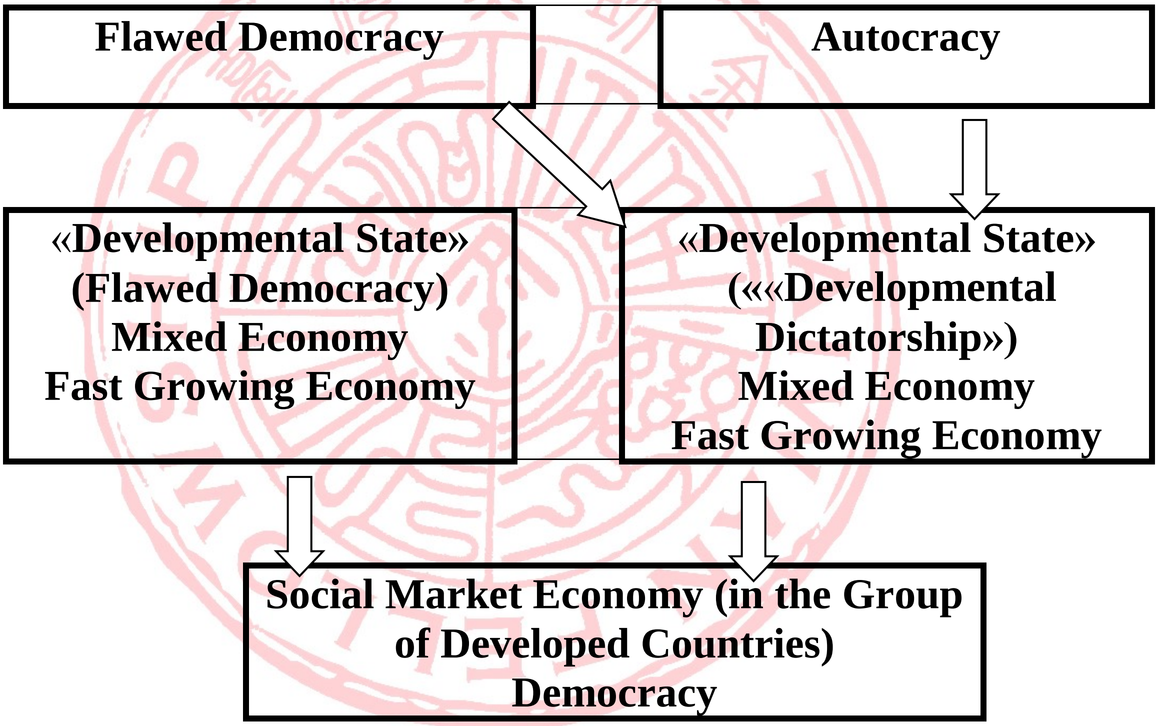
* IMF International Financial Statistics – Central Bank Policy Rate, Lending Rate, Treasury Bills Rate, Government Bonds Rate, GDP (Nominal), Government Consumption Expenditure (Nominal)

2. Basics of the Policy of Transition to the Group of Developed Economies

2.1. Scheme of Transition

The scenarios of transition are reflected in **Scheme 1**. As mentioned above, all post-Soviet countries are classified as either flawed democracies or autocracies

Scheme 1. Transition scenarios to the group of developed economies for post-Soviet countries



2.2. Developmental State

This is a state in which all politics, concepts, and activities are dedicated to development (super-fast growth, welfare and life expectancy, technological modernization, global competitiveness). Concepts like "Developmental Government," "Developmental Central Bank," "Developmental Ministry of Finance," etc., are used. The concept of a developmental state has an extensive literature dedicated to it (including Johnson, Chalmers, 1982, Caldentey, Esteban

Pérez, 2008). Catch up with developed countries, move into the group of developed economies.

Metaphor: a person in the midst of a run, where everything is dedicated to running (breathing, blood pressure, pulse, muscle strength, etc.).

It can exist as:

- A democracy. Cases: Israel, Ireland in the 1990s–2000s, Germany in the 1960s, Japan in the 1960s, Italy in the late 1950s to early 1960s;
- A flawed democracy. Cases: a) Malaysia, India, b) countries under external governance (Japan in the late 1940s–1950s, Germany in the late 1940s–1950s, Hong Kong in the 1960s–1970s);
- An autocracy. Cases: Taiwan, the USSR in the 1920s–1930s and 1950s, Spain in the 1960s, Taiwan in the late 1940s–early 1980s, South Korea in the 1960s–early 1980s, Singapore in the 1960s–1980s, China from the late 1970s to the 2020s.

A more detailed description of the "developmental state" is provided below.

2.3. «Developmental Dictatorship»

Developmental dictatorship is a society/state with an extremely high concentration of power, which has entirely (or largely) subordinated its activities to the goals of economic and social development.

A "rags to riches" scenario.

Cases include the USSR in the 1920s, Spain in the 1960s, Taiwan in the late 1940s to early 1980s, South Korea in the 1960s to early 1980s, Singapore in the 1960s to 1980s, and China from the late 1970s to the 2020s.

Characteristics:

1. **Extreme concentration of power and restrictions on freedoms.** Political liberalization typically begins only after several decades. There are rigid hierarchies in place. For example, in the case of Taiwan: "one leader – one party – one state."
2. **Goals:** super-fast growth, technological modernization, increased life expectancy, and improved quality of life. Additionally, the focus is on defense capabilities and global competitiveness. These goals are genuinely prioritized, not just in words but in practice. Economic and social policies, as well as any decision or action taken by the authorities, are aligned with these objectives.
3. **The leader is deeply committed to achieving these goals.** For example, in the case of Taiwan (Chiang Kai-shek), there was a strong personal desire to build an exemplary economy as a model for all of China, to prove his superiority, and to seize a "second chance" after losing power on mainland China in the late 1940s.

4. **Imperfect institutions.** There is a lack of genuine protection for ownership rights, an independent judiciary, and a free press. There is a monopoly on power by a single ideology, with dissent being suppressed. An independent judiciary, protection of property rights, a competitive environment, and fully developed democracy in the continental European style might be expected to take another 30 - 50 years to develop, if at all. Economic miracles can be achieved even with imperfect institutions. This is the reality.
5. **Repressive laws and law enforcement that exclude any decentralization initiated "from below."** For example, in the case of Taiwan, this included the enforcement of emergency laws and martial law for three decades, which were introduced in the late 1940s.
6. **Rule of technocracy.** This refers to a group of the most capable and educated specialists, along with the outstanding consultants, investors, and managers they attract, who often have foreign citizenship but "native" roots. In Taiwan's case, these "attracted" individuals were Americans of Chinese descent.
7. **The creators of the "economic miracle"** occupy the highest positions in the establishment, enjoying the full support of those who hold all the power—or they hold that power themselves. These individuals typically have unique backgrounds, character, talents, and education.
8. **"Developmental State."** A state in which all politics, ways of thinking, and activities are subordinated to development (growth rates, quality of life, life expectancy, technological modernization, the country's competitiveness in the global market). A "Developmental Government," "Developmental Central Bank," "Developmental Ministry of Finance," etc.
9. **"Development Administration."** A group of specialists or a separate agency that is fully focused on development tasks and enjoys special support and trust from the highest authorities. It operates alongside the government, which is often overwhelmed with current functions and unable to focus on long-term perspectives. Another option could be one of the government's ministries or agencies.
10. **Mixed economy, in which the state plays a significant role** (public sector, government investments, major construction projects in various industries and infrastructure funded by the government, overregulation of virtually everything).

2.4. Mixed Economy

Mixed economy – a two-sector transitional economy that combines a strong public sector with both the market and a private sector, whose role gradually increases. It exists as the foundation of a "developmental state", a "developmental dictatorship."

A case is Taiwan's "planned market economy" of the 1950s-1970s, which aimed "to achieve a balance between market forces and planning, encouraging the most desirable aspects of capitalism while avoiding its excesses" (Li, Kuo-Ting, 1995, p. xiii).

2.5. Fast Growing Economy

Developing economies (emerging markets), which undergo catch-up modernization (see below), are usually classified as part of the group of fastest growing economies, "tiger economies," "economic miracle" countries, newly industrialized countries (NICs), or countries undergoing industrial or post-industrial revolutions.

Over 300 years, the Russian Empire/USSR went through three catch-up modernizations (early 18th century, late 19th century, and the 1930s-1950s).

2.6. Social Market Economy

The goal of the "economic miracle" policy is to create an open, social market economy (the "continental model"), universal (not just resource-based), grounded in the production of high value-added goods, technologically modernized, and capable of maintaining a high quality and life expectancy comparable to the top 20 economies in the world. This is an economy that transitions into the group of developed countries.

Analogous cases include the 15-20 economies that experienced rapid growth after World War II.

The **"social market economy" (or "continental model")** is an economy genuinely dedicated to: a) life expectancy and quality of life, following the formula 80+; b) growth; and c) modernization. It combines a free market (albeit more regulated by the state than in the Anglo-Saxon model) with extensive social support networks. It aims to be a "welfare state" as envisioned by Ludwig Erhard, while acknowledging that life inherently involves hierarchies, income inequality, and competition among families and individuals. Its foundation lies in **ordoliberalism** (Germany).

The social market economy is particularly well-suited for post-Soviet countries due to their collectivist culture and the German heritage of the Russian Empire prior to 1917, where many aspects, such as philosophy, law, education, and science, had German roots. Germany was the largest trading partner of the Russian Empire until 1914 and continued to be a major partner for Russia in the 1990s and early 2010s.

The **social market economy** is the model of continental Europe, encompassing countries like Germany, Austria, Czechia, Slovakia, Poland, Slovenia, and others. Variants of the continental model include the **"Mediterranean model"** (Spain) and the **"Scandinavian model"** (Sweden and other Scandinavian countries).

A comparative analysis of the models of economies is provided in **Table 2.2**.

Table 2.2. Comparative Analysis of the Social Market Economy (Continental Model) and the Anglo-Saxon Model

	"Shareholders" Anglo-Saxon Model "Emigrant" Model	"Stakeholders" Continental Model Social Market Economy
	USA, Anglo-Saxon countries	Germany, Austria, Czechia, Slovakia, Poland, Sweden, etc.
Model of Collective Behavior	Higher risk-taking Higher mobility Lower inclination towards protectionism and inclusion in hierarchical structures	Lower risk-taking Lower mobility Higher inclination towards protectionism and inclusion in hierarchical structures
Social Support Networks	Far less intense than in the continental model State involvement to a lesser extent than in the continental model Endowment funds Charitable foundations Memorial contributions (hospitals, museums, universities, etc.)	Significantly more intense than in the Anglo-Saxon model The state plays the largest role compared to private social support networks Much less developed
Model of Economy	Shareholder capitalism (multiple ownership by shareholders of all sizes, primarily retail and institutional investors; financial markets accumulate their savings)	Stakeholder capitalism (controlling shareholders, holders of large blocks of shares)

Table 2.2. (Continued)

The Role of the State in the Economy	To a large extent limited	The economic role of the state is significantly higher than in the Anglo-Saxon model (state ownership, public sector, investments, government contracts, etc.)
Law	Precedent (Anglo-Saxon) law	Continental (Romano-Germanic) law
Model of Company	Increase in market Capitalization Higher market capitalization	Access to financial resources and cash flows. Capitalization – predominantly in the M&A market
Model of Corporate Finance	Equity capital first, then debt	Predominantly debt-based
Model of Financial System	Market-based[11]	Bank-based
Innovation Financing Model	"American Model" Private Venture with Subsequent Capitalization in Markets, Small-Cap Companies	Expanded state involvement at the venture stage. Typically, there is no subsequent capitalization in the stock market.
Markets of Financial Innovations	Highly developed, rapidly growing	Limited in their development, catching up with the "Anglo-Saxon model"

[11] The bank-based system of financing—a synonym for the "continental" (German) financial model—is primarily centered around banks and debt. In this system, stock markets and financial innovations play a secondary role, with banks holding 70-90% of a country's financial assets. This model is characteristic of what is known as "stakeholder capitalism," where the interests of various stakeholders, including large shareholders, are prioritized.
In contrast, the market-based system of financing is synonymous with the "Anglo-Saxon model." Here, equity, public market capitalization, and stocks take precedence over debt and loans in company financing. In this model, banks typically hold 25-40% of the country's financial assets, with the remainder managed by securities institutions and institutional investors. This system is characteristic of "shareholder capitalism," where the primary focus is on maximizing shareholder value.

Table 2.2. (Continued)

Forms of Collaboration in Business	Equity capital – a large number of small shareholders. Investment and pension funds, other non-banking financial institutions – representatives of many small investors	To a greater extent, the state and institutional investors (corporations, banks, and non-banking financial institutions) controlled by stakeholders

2.7. Principles of Transition

Easy to understand, easy to proclaim – difficult to achieve. Even partial implementation can lead to success.

1. "Everything for the people." Not just in words, but in reality. The national idea is quality of life, 80+.
2. Goals: superfast growth, technological modernization, increased life expectancy, quality of life. Plus, adequate defense (military). Plus, global competitiveness.
3. The state serves everyone. The state is a servant. Not just in words, but in reality.
4. "Development economics" as an ideology of economic life is a special branch of economic theory and practice. Ideas and theories used to regulate stabilized and more mature economies may not be applicable to economies that are "on the move," in a stage of "rapid growth" and modernization.

   Simply put, you cannot manage the national economy in Moscow, Astana, Minsk, or Tashkent as if you were sitting in Washington, London, or Paris. This is an economy driven by incentives, in a stage of rapid growth ("on the move"). Maximum incentives. Maximum encouragement of investments. The parameters of such an economy and examples of "rapid growth formulas" will be provided below.
5. In "development economics," all incentives must be applied together, systematically (not selectively), in a balanced and cautious manner to avoid shocks, heightened risks, and disruptions to stability.
6. Evolution, not revolution. Reforms from the top. For post-Soviet countries, there can be no chaos in a region packed with nuclear weapons capable of destroying the entire world. In several countries, there is negative demographic growth, immense fatigue from the losses of the 20th century, an

aging population, and a low proportion of passionate young people in the population.

7. Compete, but do not get drawn into war. Do not replace competition with military thinking and war concepts. Others are competing with us, not fighting. Compete with the entire world for growth rates, for quality and expectancy of life, for technologies, for better products, for ideas.

8. Popular reforms. There should be no "unpopular reforms." Every macroeconomic decision must be evaluated in terms of its impact on life expectancy in the country and the quality of life for families. The impact should be positive. This is exactly how reforms were conducted in Taiwan, and since the late 1970s, in mainland China.

   An "explosion" of positive, warm energy from the people, small and medium-sized businesses, with confidence in the future, believing that low risks lie ahead, and that everything is being done so that every family can build increasingly better living conditions year after year. The associations of "reform equals losses" and "if it's a reform, it's unpopular" no longer exist in the public consciousness.

9. A combination of rapid development and stability. Implementing a policy that ensures there are no social upheavals or crises, and no high volatility in the economy and finance. No economic shocks (the peoples of post-Soviet countries, after the losses of the 20th and early 21st centuries, can no longer endure them).

10. No to copying. No to imitation. But yes to understanding and considering international practices in creating ultra-fast economies. Accelerating the economy to high speeds is a technical and project-based task. There are well-known technologies to achieve this. It's a matter of skilled macroeconomic engineering. However, the unique characteristics of the country must be fully taken into account: traditions, culture, patterns of mass behavior, demographic trends, resources, accumulated capital, the current economic and social situation, and the trends that need to be either reversed or supported.

11. Gradual, very cautious economic liberalization (reducing the role of the state, decreasing regulatory burdens, and gradually unleashing market forces in a balanced way). This process can take decades (as seen in Taiwan). It should precede political liberalization. First, the economy is freed while maintaining stability, and then, based on the growth of prosperity and the maturity of the economy, liberalization in political and social life follows. For example, in Taiwan, there were three decades of economic liberalization (1950s to 1980s), followed by political liberalization (beginning in the late 1980s), which started after Taiwan was recognized as an "Asian tiger" and a "newly industrialized country."

12. Minimally necessary military expenditures. The model of rapid development with "low military spending under the umbrella of a superpower" (Germany, Japan) is not feasible for post-Soviet countries. Superfast growth, technological modernization, and rising living standards are possible even with high military expenditures (as seen in Taiwan and Israel).

13. Liberalization/privatization of the financial sector should lag behind the liberalization/privatization of the real sector of the economy. Only in this way can financial resources be concentrated on development goals instead of massive capital outflows and speculative bubbles.

14. Time management. The transition may take from 10-15 to 30 years. Have patience.

15. International support (highly desirable). Access to technology, equipment, open markets for export-import, and attracting capital (following the saying "a gentle calf sucks from all cows"). A reset of relationships (if necessary). However, ultra-fast growth can also begin without international support, relying on internal incentives and resources. Support will come later—it's impossible not to invest in an economy growing rapidly, like yeast.

16. Prudent isolationism, but without closing the economy. "Our country first." An open economy—but primarily "for our benefit." A policy of common sense.

17. Freezing regional conflicts. A reset of relations with the "West" (developed countries) and the "East" (Asian economies). Maximizing incentives to attract direct investments and increase the supply of technologies, equipment, and high value-added semi-finished products into the country, essential for superfast growth and modernization.

18. As in any crisis management, there must be ideas—smart ideas—about what to do, what to prioritize first, second, and so on, what provides the greatest competitive advantages now and in the future, what the country's economy should look like in 5, 10, 15 years, and how these goals should be achieved.

19. Growth rates, technological modernization, and improving living standards as national goals must not "fall victim" to extremes in specific policies, excessive ministerial or regional interests, or ideological misconceptions.

For example, the well-known phenomenon of decades-long "fights against inflation" (tight monetary policy, high interest rates, overvalued local currency, etc.) often results in undermining any attempts at rapid growth. Conversely, under the banner of ultra-fast growth, there should not be a disregard for financial constraints, leading to large-scale crises. Caution, the talent to find balance, and the ability to "walk a fine line" are essential.

The "economic miracle" (achieved by 15–20 countries after World War II) is not only a technological challenge but also an art of macroeconomic engineering. It is a triumph of talented and intelligent technocrats.

Intelligence, rationality, balance, energy, thoughtful decision-making, and a chess-like strategy are key to this success.

2.8. Sequence of Reforms

Each country must have a sequence of reforms that aligns with its economic model, patterns of collective behavior (traditions, history and culture, religion), and the current social, economic, and financial situation (public demand for reforms, imbalances, key problems that need to be solved). This sequence should also take into account what is happening in the global market and the ideas of reformers (the country's place in the global division of labor, how to accumulate resources, etc.).

Many developing countries began by establishing heavy industries, and this often proved to be an unsuccessful experience. A more standard approach is export orientation, leveraging the country's cheap resources (raw materials, labor) so that export revenues can be used for investments and to stimulate growth. Another approach is the large-scale transfer of production from developed countries, with a focus on attracting direct investments, relying on cheap resources and an investment climate that allows to increase business profitability with acceptable risks.

Taiwan

The beginning of the journey:

– Suppression of hyperinflation, the 1949 monetary reform (introduction of the New Taiwan Dollar, exchange of old Taiwan dollars for the new currency); restoration of infrastructure (energy, water, roads, etc.).

– Land reform (1949 – early 1950s). Equalization of land rights, land buyouts, and investment of buyout proceeds into the manufacturing industry.

The continuation of the journey:

Import substitution policy (1950–1962) aimed to:

- Feed and clothe the population, improving living standards (starting with light industry).
- Kickstart economic development, create jobs, and boost employment.
- Increase budget revenues (which were consistently in deficit).
- Dramatically reduce dependency on imports (produce domestically, accumulate foreign currency, and build up international reserves, which were minimal).

- Reduce inflation and lessen critical dependency on foreign aid (primarily from the USA).
- Begin accumulating savings and investments within the country.

The guiding principle was to "develop industry through agriculture and expand agriculture through industry" (K.T. Li, W.A. Yeh, 1976, p. 43).

Basic incentives and restrictions within the import substitution framework included:

- Overvalued currency.
- Low taxes and tax incentives for businesses producing value-added goods that replace imports.
- Protectionist customs tariffs.
- Administrative regulation of imports (bans on undesirable imports).
- Government supplies of a certain portion of raw materials necessary for import substitution to the domestic market.
- Guaranteed government purchases of certain domestically produced goods.
- Administrative regulation of certain prices.
- Preferential low-interest loans provided by state-owned banks.

1958–1961: A series of reforms marked a turning point: currency devaluation (it had been overvalued) and the liberalization of the trade regime (shifting the focus from import control to export promotion). The investment and savings promotion policy of the early 1960s (Statute for the Encouragement of Investments, 1960) aimed to increase the investment/savings ratio and stimulate industrial investments.

The "19-Point Program" (1961–1964) aimed to remove excessive restrictions and administrative barriers created during periods of high inflation. It focused on creating a standard market environment necessary for economic development, including infrastructure improvements (central bank, stock exchange, banking supervision), economic liberalization (exchange rate, investments, tax incentives, privatization), and enhancing public finance management (tax legislation, tax administration, control over government expenditures, including state-owned enterprises and military-industrial complex), among other measures.

Export-Oriented Growth (1962-1980)

- Diversify the economy (both light and heavy industries), achieve greater public welfare, increase the number of jobs, and combine economic stabilization with ultra-fast growth.
- Develop labor-intensive industries (given the surplus and low cost of labor).

- Expand markets for Taiwanese industries (as domestic markets are small).
- Move away from dependence on U.S. economic aid (anticipating its termination in 1965).
- Enhance military strength.
- Develop an economy capable of competing with other countries in the global market.
- Expand Taiwan's product niche in global trade, maximizing economic benefits from exports while stabilizing and developing its own economy.
- Significantly increase imports of technology, equipment, and raw materials necessary for rapid economic growth.
- Normalize public finance (achieve a surplus budget), eliminate the trade balance deficit (which had been constant), and build strong foreign currency reserves.

Basic Incentives and Constraints within Export-Oriented Policy:

- Devalued currency.
- Financial deepening (lower interest rates, increased monetization, growth in bank lending, creation of a securities market).
- Comparatively low taxes.
- Tax incentives for businesses producing value-added goods intended for export.
- Tax incentives for domestic investments.
- Customs incentives for export-oriented products, as well as for imported raw materials used in their production (customs duty rebates).
- Reduction of import tariffs.
- Liberalization of regulations, including the removal of import restrictions, among other measures.

"Economy of Science and Technology" (since the early 1980s):

- Develop a modern knowledge-based economy that surpasses other countries in competitiveness and relies on the best achievements in science and technology.
- Adapt to the rising labor costs.
- Integrate into the supply chains of major international corporations.
- Become a systemically significant part of the global economy.
- Expand Taiwan's niche in the international division of labor.
- Achieve the highest levels of human development (education, standards of living).
- Significantly develop military strength.

3. Catch-up Modernization. Superfast Growth

3.1. Catch-up Modernization

Economic modernization refers to the transition (breakthrough) into the next wave of Schumpeterian development (or a new technological paradigm, according to Russian terminology). It involves a radical renewal of productive capacity, characterized by a leapfrogging process, marked by a sharp acceleration in economic growth rates, profound changes in the economic and financial structure of society, and an increase in life expectancy and living standards.

Catch-up Modernization. This is the process of modernization undertaken by a country lagging behind developed nations, with the aim of "catching up" to their level of development. Such a country typically experiences a period of superfast economic growth.

Situations Creating Demand for Modernization:

- **Major changes in the political system**: This includes shifts in the social structure, ownership composition, and the replacement of elites, especially when there is significant lagging behind leading countries or benchmark nations.

- **Competition among nations**: Countries compete for survival, resources, and spheres of influence (economic, political, scientific, technological, cultural, etc.), often in the face of impending war.

- **Intense external pressure**: This may come in the form of a cold war, hot conflicts, economic defeats, sanctions, or widening gaps in human and technological development.

- **Post-war economic reconstruction**: Rebuilding the economy on a new technological foundation following a war.

Limitations. Modernization and the financial policies associated with it in administrative (centrally planned) economies—such as the USSR, China until the late 1970s, and other socialist countries—are not the subject of analysis. Additionally, the analysis does not cover the modernization of social, political, legal, religious, or other societal structures, nor does it address changes in ideology and value orientations.

3.2. Superfast Growth: Countries That Have Gone Through It

In all cases of catch-up modernization, countries experience superfast growth.

Generally speaking, a real GDP growth rate exceeding 4-5% per year can be considered ultra-fast. Annual growth rates of 7-8% or even higher are not uncommon. Periods of such rapid growth within the context of catch-up modernization are often referred to as an "economic miracle."

Since World War II, up to 15-20 countries have been able to create an "economic miracle." In the 2010s, the number of such countries expanded significantly. A vast body of literature is dedicated to the practices and mechanisms of superfast growth and, consequently, the "economic miracle."

Which countries have experienced superfast growth?

Superfast growth repeats itself over and over again. Growth spurts have been evident throughout the centuries. Technological revolutions or attempts to "catch up" are always associated with it. After World War II, up to 15-20 countries experienced such growth.

Table 2.3. Fast Growing Economies (1950s – 1960s)*

Country	GDP per Capita at Constant Prices, National Currency, as a Percentage of the Base	
	1960 / 1950	1970 / 1960
Taiwan	**197**	**168**
Japan	207	244
Singapore	204	157
Germany	198	141
South Korea	190	212
Hong Kong	184	167
Austria	176	149
Italy	169	164
For comparison		
USA	118	133
United Kingdom	125	124
France	143	155

* Calculations of GDP per capita based on Historical Statistics for the World Economy, Angus Madison Project, www.ggdc.net (University of Groningen, Groningen Growth and Development Centre). Rounded to whole numbers

The widely recognized cases of successful modernization ("economic miracles") include: Taiwan (1950s–1980s), Japan, Germany, Austria, Italy (1950s–1960s), Spain and Portugal (1960s–early 1970s), Greece (1950s–early 1970s), Brazil (late 1960s–1970s), Chile, Ireland (1990s–2000s), South Korea, Singapore, Hong Kong (1960s–1980s), and China (1980s–2010s). A special case is Israel's transformation into one of the most innovative economies in the world. These countries consistently maintained high growth rates.

To these, one should add growth spurts in Thailand, Indonesia, Vietnam, Laos, and around the 2010s in India, Cambodia, and Laos. In the late 2010s, superfast growth began in several African countries. Data on several "superfast" countries that pursued a strategy of catch-up modernization are presented in **Tables 2.3-2.5**.

By the end of the 20th century, the club of major economies in the global "top 15" in terms of growth rates began to be dominated by Asian countries (see **Table 2.4**). Only those economies that experienced continuous growth over three consecutive decades (1980–2000) are included.

Table 2.4. Fast Growing Economies (1980s – 2000s)*

Country	GDP per Capita at Constant Prices, National Currency, as a Percentage of the Base	
	1990 / 1980	2010 / 1990
China (Mainland)	210	622
South Korea	225	247
Taiwan	**183**	**234**
Singapore	170	209
Thailand	177	207
Hong Kong	169	176
Vietnam	145	313
Indonesia	140	188
India	138	252
Malaysia	136	199
Sri Lanka	135	222
Laos	133	234
Ireland	129	196
Chili	113	206
Bangladesh	112	200
For comparison		
Japan	149	116
United Kingdom	129	136
USA	125	133
Germany	122	129
France	120	123

* Calculations of GDP per capita based on IMF World Economic Outlook (1980 – 2010), for 140 countries. Population – UN Department of Economic and Social Affairs. Rounded to whole numbers

The group of ultra-fast-growing countries in the 2010s remained significant. Post-Soviet countries began to appear in this group (see **Table 2.5**).

Table 2.5. Fast Growing Economies (2010s)*

Country	GDP per capita at constant prices, national currency, as a percentage of the base, 2020 / 2010
China (Mainland)	184
Ireland	172
Bangladesh	166
Vietnam	165
Myanmar	164
Laos	160
Cambodia	162
Mongolia	156
Lithuania	155
Georgia	152
Uzbekistan	148
India	147
Turkey	146
	For comparison
Taiwan	**131**
Japan	105
United Kingdom	100
USA	113
Germany	108
France	100

* Calculations of GDP per capita based on IMF World Economic Outlook (2010 – 2020), for more than 190 countries. Rounded to whole numbers

3.3. Catch-up Modernization and Dirigisme

Modernization of economy is typically carried out in a catch-up mode, involving expanded state intervention (dirigisme, interventionism) instead of organic changes. This intervention alters the trajectory of economic development through both administrative and market methods.

Degree of State Intervention

It varies, though it is invariably significant.

State intervention is most extensive:

a) In developing economies when superfast growth is initiated (e.g., Asian countries), particularly in the poorest economies.

b) In administrative (command, centrally planned) economies.

c) In mixed and transition economies, especially when modernization coincides with the transformation from a planned to a market economy.

d) In occupied economies under external control during their post-war reconstruction.

Dirigisme will take softer forms during the transition to accelerated growth:

a) In small developed economies seeking to acquire a new specialization in the global division of labor (e.g., Ireland).

b) In small developing economies "absorbed" by larger developed ones, with the influx of substantial foreign investments (e.g., Eastern Europe after the Velvet Revolutions).

c) In a market economy undergoing modernization based on a large influx of foreign investments, mass immigration (of those who are the most active and willing to take high risks), and the development of new territories (e.g., the United States in the 19th century).

d) In large developing economies with a medium level of financial development and distorted semi-market finance (e.g., Italy in the 1960s).

Softer forms of dirigisme could be observed in post-war Europe, where the transition to superfast growth occurred in already developed economies, within a technologically advanced environment with long-standing market traditions (e.g., Germany).

Why dirigisme?

Primarily direct intervention and dirigisme are necessary because the challenge of achieving ultra-fast growth, an "economic miracle," cannot be resolved solely by market forces operating under "normal" conditions or through "outpatient treatment" of the economy. The exception might be cases involving a massive influx of foreign investments, economic "absorption" (such as in Eastern Europe in the 1990s–2000s), or reintegration (as seen in Eastern Germany during the same period).

Why is that?

The gaps in poverty and technology compared to the developed world are too great (e.g., Taiwan, South Korea, Singapore, and other Asian countries). The economy objectively requires total restructuring (post-war Germany and Japan). The economy is too imbalanced, with deformations that can only be addressed through surgical means (e.g., Spain, Italy, post-Soviet countries). The country is under intense external pressure (e.g., Israel).

The analogies are very straightforward—drawn from medicine. It's a case that can no longer be treated on an outpatient basis. Surgery is required.

And then, after the surgical intervention—strengthening, transitioning to a normal mode. In economic terms, this means subsequent liberalization. Giving more space to market forces. Gradually reducing the level of state intervention in the economy. However, this should not involve premature liberalization, which could create conditions for numerous imbalances. Liberalization should only occur when the economic conditions are ripe for it.

Modernization and Authoritarianism

In the vast majority of known cases of "economic miracles" after World War II, catch-up modernization was carried out under the following conditions:

a) **Authoritarianism** with strict limitations on rights and freedoms,

b) A **"hard" state** with expanded top-down intervention,

c) **Imperfect institutions** where property rights were partially or completely unprotected, independent judiciary systems were lacking, and law enforcement was either repressive or excessively strict (with the exception of Israel).

This can be considered a universal rule. It's important to recognize that the "economic miracles" following World War II occurred under the following conditions:

a) In the poorest countries (e.g., Taiwan, South Korea, Malaysia, Singapore) that required a rapid transition;

b) In occupied states devastated by war, under the supervision of occupying authorities (e.g., Germany, Japan);

c) In administrative economies that were beginning to move towards a market system (e.g., China);

d) In totalitarian states on the verge of liberalization (e.g., Spain, Portugal);

e) In economies with traditionally strong state intervention that needed a technological leap (e.g., Italy);

f) Under intense external pressure, facing military challenges that threatened the very existence of the state (e.g., Israel).

3.4. External Support

Until the 2010s, all cases of "economic miracles" after World War II occurred with the partnership, support, and even at the expense of the United States (e.g., Japan's growth driven by orders for goods related to the Korean War) and other developed countries. This was particularly important from the perspective of "open doors" for technology transfer and the relocation of production to the countries experiencing rapid growth.

In the 2010s, the acceleration of growth in several Asian and African economies may be linked to investments from China. China is beginning to play the role of an "engine" in the zone of its economic "expansion."

3.5. "Boosting" of Developmental State

In all cases, the authorities acted as a "developmental state"—a state focused on development, with maximum concentration of resources and administrative leverage applied to businesses for the purpose of rapid growth.

The basic method for achieving an economic miracle is **acceleration**: a) administrative, b) financial, and c) economic. However, this is done without crossing the boundaries where the market ceases to exist. It combines acceleration with pro-market incentives for businesses to grow and modernize.

Administrative acceleration (boosting) through:

a) Ideology, generation of ideas, macroprogramming/planning, and popular reforms;

b) Development administration;

c) Points of ultra-fast growth (regions, industries, specialized zones, major projects);

d) Rational protectionism, non-tariff barriers (export-import);

e) Incentive-based law and enforcement ("economy of incentives" instead of "economy of punishments"), reduction of regulatory costs, and elimination of administrative barriers;

f) Effective antitrust control, creation of a market environment;

g) Combating corruption;

h) Direct management of national-scale projects and deals;

i) Teams of top-tier technocrats (managers, specialists, experts);

j) Creation of intellectual infrastructure for growth (science, education);

k) "Marketing" the country, promoting its image and brands in global and domestic markets.

Financial acceleration (boosting) through:

a) Financial development (credit, monetization, savings, financial markets);

b) Interest rates;

c) Exchange rate;

d) Financial account of the balance of payments, investments into and out of the country (with priority given to direct investments);

e) Taxes and quasi-taxes;

f) Customs duties;

g) Budget;

h) Public debt;

i) Government investments;

j) As a result, high investment rate / savings rate.

Economic acceleration (boosting) through:

a) Public works and government contracts (expansion);

b) The public sector (maximizing growth and investments, technological modernization);

c) Creation of physical infrastructure for growth funded by the state (transportation, roads, airports, ports, information and communications, energy, water, etc., development of special zones);

d) Public-private partnerships;

e) Privatization;

f) Affordable access to state-owned assets, land, and databases.

A detailed analysis of administrative, and especially financial and economic dirigisme—covering all the necessary tools aimed at stimulating growth—is provided below. Many of these tools were also used in the practices of post-Soviet states. However, at no point in time during the 1990s–2010s did these states possess such an "intense," highly concentrated combination of incentives that would drive the economy towards superfast growth, primarily through catch-up modernization, as was the case in the instances of "economic miracles."

From Acceleration (Boosting) to Liberalization

As countries advance toward becoming "new industrial economies," authoritarianism typically softens, leading to increasingly widespread liberalization:

a) Economic liberalization (diversification of ownership, reduction of state control, diminishing the role of the state as a producer and contractor, opening markets, and strengthening market forces instead of direct directive management);

b) Financial liberalization;

c) Administrative and regulatory liberalization;

d) Ultimately, political and social liberalization.

Greater room was given to market forces, and the extent of restrictions and direct or indirect state intervention decreased. This process involved normalization and exiting the acceleration mode.

This processes typically began after about 15–25 years in Asian economies and 10–15 years in European economies.

4. Authorship of the Economic Miracle

History shows that every economic miracle has an author. There is always a name associated with it. Bring the author to the stage! Who can achieve the coveted 5-6% growth per year? Or even 7-8%? And who were those who performed such miracles in their own countries? The kind where the population and its income didn’t decline but grew, and where the reforms were never "unpopular."

In Russia, it’s Alexander II (who recently turned 200 years old) and Stolypin. All other attempts at modernization (the time of Peter the Great, the 1930s, the early 1990s) were associated with a massive, irreparable loss of population.

The author of an economic miracle can be the head of state, who demands from their team a clear, precise mechanism of actions leading to rapid growth. Not just the creation of abstract "conditions for growth," but very tangible incentives that drive businesses to grow, change, modernize—and then grow again as quickly as possible.

Chiang Kai-shek – leader of Taiwan for a quarter of a century.

His son, Chiang Ching-kuo, was the third president of Taiwan for 10 years.

Lee Kuan Yew, the ruler of Singapore, served as its Prime Minister for over 30 years.

Shigeru Yoshida, Prime Minister of Japan (late 1940s – early 1950s).

Hayato Ikeda – Prime Minister of Japan (late 1950s – early 1960s).

Park Chung-hee, the leader of South Korea for 18 years.

Francisco Franco – the head of Spain for 34 years. The economic miracle in Spain began 20 years after he assumed leadership.

Mahathir bin Mohamad, the architect of Malaysia's miracle, served as Prime Minister for 22 years. Remarkably, in May 2018, at the age of 93, after a 15-year hiatus, he returned to power and was elected once again.

This can be the "father of the nation." Deng Xiaoping, at the age of 75, initiated China's economic miracle and continued to oversee its development for another 15 years. He did this not alone, but with a "band of strong elders" (Chen Yun, Xi Zhongxun, Ye Jianying). In China, no one associated the words "reforms" and "unpopular." Economic reforms in China were popular because they consistently brought about a new quality of life.

Who else? The author of "high speeds" could be a policymaker, under the patronage of the first person, enjoying his trust.

In 19th-century Russia, Stolypin initiated a significant leap forward. Loris-Melikov, the "dictator of Russia" during the final years of Alexander II's reign (a bad case).

After World War II.

In Taiwan, Chen Cheng, a trusted associate of Chiang Kai-shek (Governor of Taiwan, Prime Minister, Vice President, among other roles), was a key politician who supported the group of technocrats that created Taiwan's economic miracle.

Yin Zhongrong (K. Y. Yin), during the 1950s and early 1960s, served as Minister of Economic Affairs and held several other high-ranking positions in the government, playing a significant role in Taiwan's economic development.

Li Guoding (K.T. Li), from the mid-1960s to the 1990s, served as Minister of Economic Affairs, Minister of Finance, and held several other high-ranking positions.

Germany's fortune was Ludwig Erhard, under the guidance of Konrad Adenauer. Erhard served as Germany's Minister of Economics for 14 years, six years as Vice Chancellor, and three years as Chancellor. No matter what challenges arose along the way, the results speak for themselves.

Personality Types

Is it possible to try to find out what the authors of what is called the "economic miracle" have in common? What personality types?

Taiwan. **Chiang Kai-shek** is a "military bone", powerful, adaptive, receptive to new ideas, with a tendency to create his own ideology (Chiang Kai-shek, 1947). Military education in Japan, briefly studied in the USSR in the 1920s. Sent his two sons to get an education abroad, one in the USSR, the other in Germany. All his life he made political turns, showing miracles of flexibility.

Chen Cheng is a military man “to the core”, an autocrat, but he behaved as an economic liberal, as a “development man”. He created a group of technocrats (44 politicians influencing economic development in Taiwan, of which 10 have a particularly strong influence (C.K. Yen (education in chemistry), K.Y. Yin (electrical equipment), Jizeng Yang (engineering), K.T. Li (physics), Guohua Yu (political science), O.K. Yui (English literature), Poyuan Xu (business), Monlin Chiang (education), T.N. Shen (agriculture)) (Lutao Sophia Kang Wang, 2006, pp. 86 - 87).

Li Guoding (K.T. Li) is a physicist, a graduate of Cambridge (UK, studied under Rutherford, Sino-British scholarship). A lover of Western culture and ideas, he sought to combine the best of Chinese and Western cultures. Before Cambridge, he studied at a Chinese university (textbooks in English and German, two foreign languages, teachers who graduated from universities in the USA). Li Guoding is a Christian (Lutao Sophia Kang Wang, 2006, pp. 32, 44, 45, 59).

Other countries of the economic miracle. **Deng Xiaoping** studied and worked in France in his youth. **Lee Kuan Yew**, the ruler of Singapore – the London School of Economics, then Cambridge. **Shigeru Yoshida** (Japan), from a samurai family, born a geisha – former ambassador to London and Italy in the 1930s, a hidden Catholic, a lover of Western culture. **Park Chung Hee**, the master of South Korea, served in the Korean War under American command. Underwent military training in the USA. **Mahathir bin Mohamad** (Malaysia) – the son of the director of an English school, a doctor, graduated from King Edward VII College of Medicine in Singapore. **Ludwig Erhard** (Germany) – professor, liberal, student of Franz Oppenheimer, who fled from the Nazis to the USA.

All these are people who are capable of building bridges to Western society, to Western politicians, even with deep differences in “civilizational” views. All cases of economic miracle after the Second World War (even in Franco’s Spain in the late 1950s-1960s) until the early 2010s occurred with the support, first of all, of the USA. Usually, in opposition to the communists.

What is important is the "type of personality", the set of skills, the points of contact with Western society, the ability to negotiate and play with it to strengthen even when it seems that the country is far behind. All of them were ready to find a "window of opportunity", open chances to "turn the position around", to play either bridge or chess. It is never too late.

The ability to communicate with Western societies (and today with Asian ones, especially China) is also an opportunity for those "outside" to understand what is happening inside a country, often closed, when it begins to grow at a very fast pace.

Adaptability. **Ludwig Erhard** (Germany) during the Nazi era "was not a member of anything, did not join anything, did not participate in anything." During the war he "sat out" inside industrial structures, preparing analytical reports, and in between wrote a book about how to restore Germany after defeat (Mierzejewski, Alfred C., 2004, pp. 19 - 20). He became visible only after the occupation of Germany.

In the late 1950s, **Deng Xiaoping** was General Secretary of the Communist Party of China; in the mid-1960s, he was repressed during the Cultural Revolution and sent to work in a tractor factory. His son was tortured, thrown out of a third-floor building, and became disabled (Barach Denesh, 1987, p. 153). In the late 1970s, Deng became the leader of China.

Shigeru Yoshida (Japan) was dismissed in 1939 from the post of Japanese ambassador to Great Britain. The reason was anti-militarism. He continued to serve, even being appointed Minister of Armaments towards the end of the war. He was arrested in June 1945 for trying to organize an earlier capitulation. He managed to stay "on the surface" after the occupation of Japan. In 1948 he became Prime Minister.

Park Chung Hee (Korea), when he was 31 (in 1948), was sentenced to death by a military court for creating a communist cell in the army. Saved by senior officers. Expelled from the army. Returned as a major in the Korean War, in 1953 he was already a brigadier general. In 1961 he became the head of state (military coup).

All of these are miracles of adaptability. The ability to "stay on the surface," to negotiate, to find a compromise in vertical structures. The ability to become invisible and make a rapid leap. The ability to "turn over." **Park Chung Hee** was a communist, became an anti-communist. **Mahathir bin Mohamad** (Malaysia) was a Westerner, then invented his own teaching – Mahathirism. The ability to enter into personal unions, to be "in a pair," in a "troika." Extraordinary patience for risks, for everything that life brings. And also – miracles of personal energy. All of this is also a necessary condition for someone who makes an "economic miracle."

5. The Ideology of the Economic Miracle

Their own model, their own ideology. None of the authors of the economic miracle tried to forcibly introduce the Anglo-Saxon model in their country. All tried to find something market-based, but their own, something closer to the "national character", their traditions. But not hostile to the model that developed in the USA, Great Britain, Canada, Australia, New Zealand – with all their uniqueness.

Key ideas: subordinate domestic policy to economic development and growth of family well-being; take into account international practice, but do not copy it; rely on a model of collective behavior, history, traditions and culture of a given country; development and stability in one basket; "developmental dictatorship"; moderate nationalism that does not interfere with being open to the world; mixed economy (not directed, administrative); long-term trend - the first stage is interventionism, then - long-term economic liberalization; the state is a lever, the private sector is a driving force; macroprogramming; reasonable protectionism; the "striking fist" of incentives; administrative, financial and economic acceleration (boost); take the maximum from abroad (direct investment, technology, equipment, product niches); policy must be cautious, systemic, balanced, divided into stages, at each of which it is necessary to solve its own problems; generation of ideas, adaptability, the art of chess = the art of macroeconomic engineering.

Case of Taiwan[12]

Model of collective behavior: Confucian culture (hierarchies, culture of subordination within the state and in the family, cult of labor, supremacy of the individual in comparison with the law, loyalty, prudence, "saving face"; influence of Protestantism (some of the leaders were Protestants); collectivism (subordination of private interests to public ones); at the same time – widespread, intense desire to be owners; patience, high intensity of labor; pragmatism; law-abidingness; commitment to family, high value of reputation in the family, one of the highest number of working hours in the world.

Emigrant behavior pattern - a strong desire to achieve higher living standards (those who emigrated from mainland China in the late 1940s).

"Minority Behavior Model" (those who lived in Taiwan before 1949, indigenous people) - economic overactivity as a way to compete with those who emigrated to

[12] For details, see Part I of the Research Report.

Taiwan from China (with the privileged group of society), and also as a way to compensate for infringed political rights.

Ideology of the leaders – authors of the economic miracle (Chiang Kai-shek, Chiang Ching-kuo, etc.): make Taiwan a model for mainland China; take revenge for the defeat in mainland China; survive under the strongest external pressure; Sun Yat-sen’s “people’s principles” (nationalism, people’s welfare); preservation of ancient Chinese culture (Taiwan as its custodian); anti-communism; authoritarianism, emergency laws (“one leader – one party – one state”); inseparability of “I” and “we”; adaptability to new ideas; cooperation with the West, adopt Western science and technology (Chiang Kai-shek, 1947; Chiang Kai-shek, 1952).

International Practice

Ludwig Erhard's ideas - "social market economy". The legacy of the German economic school. Liberalism in Ordnung. By the way, at the very beginning, not only liberal reforms were carried out, but in practice - also directive management of the economy.

Deng Xiaoping's ideas - "socialism with Chinese characteristics". Mixed economy. "Combine the general truth of Marxism with the specific reality of the country, go our own way and build socialism with Chinese characteristics" (Deng Xiaoping, 1988).

Shigeru Yoshida (Japan) - "Yoshida Doctrine". Do not think about defense (military). The USA provides it. And subordinate all policy to the economy, its fastest recovery. By the way, the "occupiers" carried out reforms in Japan in the late 1940s according to the American model. Despite this, the "Japanese model" was still obtained.

Lee Kuan Yew (Singapore) – authoritarianism, meritocracy, paternalism, deeply limited freedoms, the most severe regulation. Deepest interference in privacy. He believed that without this, there would be no Singapore today. P

Park Chung Hee (South Korea) – totalitarianism, interventionism of the state, combined with economic reforms under the US military umbrella. Oligarchies. Anti-communism. Deepest interference in privacy.

Mahathir bin Mohamad (Malaysia) – invented his own teaching – Mahathirism. Nationalism, Islam, Japanese model, authoritarianism, US support (Mahathir bin Mohamad, 1999).

And what is there to imitate? How to get out of this mixture of ideas, densely mixed with the local way of life and national mentality? Very simple.

All of them are deeply “local”, based on national “models of collective behavior”. And that is why they are so successful. Although they are all market-based, albeit based on highly concentrated ownership and state interventionism.

The deepest question of the future of post-Soviet states is what ideology suits the peoples who hold one sixth of the land in their hands, with a very unique history and outlook on life? What suits them to settle down with a much better quality of life than before? Considering that they have tried a lot of different theories and "isms”.

Those who make an economic miracle in the post-Soviet states must be very "local". They must be those who express the model of a market-oriented society that most closely corresponds to the patterns of collective behavior in a given country.

6. The Ethics of the Economic Miracle

Behind all the throwing and ambiguous decisions of politicians there may be basic values. For example, love for the people to whom you belong. No one can deny them the right to love. And history itself will judge whether it was really love.

Taiwan

Chiang Kai-shek: Love people, production should be subordinated to man, and not vice versa; production should have as its basis the means of human existence, it should not dominate human nature; the state should manage material resources for the benefit of the people, instead of making them slaves of the means of production; this is precisely part of Chinese political philosophy (Chiang Kai-shek, 1947, pp. 277, 291).

K.T. Li, Kuo-Ting Li, one of the authors of the economic miracle in Taiwan, Minister of Economy, Minister of Finance, etc. His favorite prayer:

«Today I pray to the Lord

that I will put justice ahead of success and interest,

that I will put others ahead of myself,

that I will everything related to the soul ahead of that related to the body,

that I will put the achievement of lofty goals ahead of the enjoyment of happiness at present,

that I will put the principles ahead of fame, that I will put You ahead of everything else» (Lutao Sophia Kang Wang, 2006, p. 227).

It is a well-known fact that the success of land reform in Taiwan in the late 1940s and early 1950s, which launched the economic miracle, was largely due to the fact that politicians had no personal interest in the land and aimed their decisions at equal rights to land and the people's well-being.

A witness to this is one of the authors of the economic miracle in Taiwan, Chen Cheng, a trusted person of Chiang Kai-shek (governor of Taiwan, prime minister, vice president, etc.), a key politician who patronized a group of technocrats who created the economic miracle in Taiwan (Cheng, Chen, 1961, p. X, 11 – 16, 19).

International practice

Ludwig Erhard: "I do not regard myself as the representative of special interests, and certainly not as the representative of the interests of industry or trade. It would be quite wrong to assume that. To be responsible for economic policy means to be responsible to the people as a whole. I am deeply convinced that the difficult problems facing us can only be solved if in using the market economy we manage not to favour groups, but rather to secure a decent standard of living for all our people and continually increase it through hard work and higher output." (Erhard, Ludwig, 1958, p. 101).

"In my capacity as Minister for Economic Affairs, I should surely not be asked to become responsible for the spiritual wellbeing of all the people. In my job I have a particular task. I understand it to be to get enough out of the national economy in the way of energy and productivity for everyone to be able to live free from worry and want, and for everyone to be able to acquire property and thus become independent. In this manner, everyone will be able to develop his dignity as a human being to a greater extent, and so will no longer depend on the favour of others, or even on the favour of the State. It seems to me that with the achievement of such an aim the Minister for Economic Affairs will have made his full contribution to the overcoming of an apparent or actual materialism» (Erhard, Ludwig, 1958, p. 174).

Li Kuan Yew: "For my cabinet colleagues and me, our families were at the heart of our team efforts to build a nation from scratch. We wanted a Singapore that our children and those of our fellow citizens would be proud of, a Singapore that would offer all citizens equal and ample opportunities for a fulfilling future" (Kuan Yew Li, 1998, p. 9).

Deng Xiaoping: "...The Chinese people will achieve moderate prosperity. The goal we set may seem insignificant to developed countries, but for the Chinese people it is a grandiose goal, a bold daring" **(**Deng Xiaoping, 1988, p. 84).

Speechwriters' texts? But they did what they said! In my deep conviction, love for the people, distance from private interests, the desire to save, feed, preserve, and increase the ownership of families - this is what makes a smart, practical, tough politician - the father of the nation, achieving a "miracle".

7. The Formula for Rapid Growth

7.1. The Formula for a Post-Soviet Country

In the first stages of stimulating super-fast growth, the acceleration (boost, administrative, economic, financial), the growth of state interventionism in the economy, along with this - step by step increasing economic liberalization in those areas where it is effective. In the future, a long-term, decades-long trend of increasing liberalization (deepening the market environment) and weakening interventionism as the economy, striving to establish itself as a "new industrial", "developed", becomes more and more mature; reduction of current consumption of government and the share of the public sector in production and investment.

The Formula of Superfast Growth:

Administrative Acceleration (Boost)

+ A development administration that would be isolated from current functions;

+ a team of highly skilled technocrats (up to 5-6 senior officials) + 10-15 teams of the best specialists and experts, including those who have local roots but live and successfully operate in another country;

+ an ideology of superfast growth (a model of the future, what and how to do), based on: a) the ideas of "development economics", b) the ideology of "social market economy" or the ideas of the "Asian model"; c) based on the current situation in the country's economy, d) taking into account the established model of collective behavior, cultural patterns and traditions of this country, e) adapting the well-known international practice of stimulating superfast growth (not copying);

+ macroprogramming (plans – forecasts for 4-5 years for the country as a whole, development programs for a period of up to 10-30 years); plans for individual large projects (industries, regions, technologies, product niches, key construction projects, etc.);

+ structural reforms (creation of a competitive environment, strong antitrust regulation, protection of property, independent courts, etc.). Only those reforms that lead to improvements in the well-being of the population;

+ a sharp reduction in regulatory costs (accelerated elimination of administrative barriers for business (the “Doing Business” rating), as well as barriers to labor mobility); careful and balanced easing of the law and law enforcement in relation to economic offenses and crimes; incentive law ("incentive economy" instead of "punishment economy");

+ strengthening the fight against corruption;

+ 10 – 15 areas of superfast growth (regions, new industries, specialized zones, major projects);

+ reasonable protectionism, non-tariff barriers (export – import). Minimum barriers to direct investment (transfer of production within the country instead of deliveries of finished products from abroad), as well as to import of modern equipment, technologies and components with high added value, which are necessary for superfast growth. Maximum barriers to import of products, which should be produced within the country, and to export, which deprives the country of resources for rapid growth (including, if necessary, licenses and permits for export – import of products, for export of technologies (know-how, patents, etc.) and for export of capital);

+ direct management of projects and transactions on a national scale, + creation of intellectual infrastructure necessary for rapid growth (science, education);

+ "marketing" of the country, promotion of its image and brands in the global and domestic markets;

+ to establish actively operating development institutions with high operational capacity: investment promotion agencies, similar agencies for specific industries, establishments responsible for marketing, brand promotion, conferences, information centers, intermediaries in the distribution of foreign aid, managers of large projects, etc.).

Economic Acceleration (Boost)

+ strengthening the role of the state in the economy to the limits a) preventing it from developing into a command economy, b) increasing the rate of growth and technological modernization, c) allowing the implementation of projects inaccessible to private business. Subsequently, as the economy becomes more mature, liberalization, reducing the economic role of the state to the limits necessary at a particular stage of development;

+ active government interventionism in matters relating to prices and tariffs, a careful balance between market prices and prices in which the state intervenes (social prices, regulated or subsidized prices for resources necessary to stimulate economic growth and modernization);

+ to establish a system of state property management, the key goals of which are: a) growth, investment, technological modernization while ensuring economic efficiency (both from the point of view of individual business, to the extent possible, and from the point of view of the efficiency of the national economy), b) maintaining a competitive environment in which the public sector would not “squeeze out” private companies; c) maintaining a careful balance between the public and private sectors;

+ compensated nationalization – where it is economically effective; creation of conditions under which former owners would invest the funds they received from the buyout of their business in the development of the domestic economy;

+ at the same time, where it is economically efficient, privatization: a) in the interests of the middle class, small and medium businesses, and b) in the interests of the largest investors capable of creating new industries from scratch or implementing other national-scale projects (as was the case in Taiwan). No shocks in privatization, but consistently and with caution, stopping or even going back if the balance between the public and private sectors necessary at a given stage of economic development is disrupted;

+ development of public-private partnerships in key projects on which economic growth and the speed of technological modernization depend (with the largest foreign and domestic investors);

+ an expanded program of public works, expansion of state contracts - where it is economically efficient. On this basis and at the expense of the state, accelerated development of the material infrastructure necessary for rapid economic growth (transport, roads, airports, harbors, information and communications, energy, heat, water, special industrial zones, etc.);

+ cheap access to state property, land, databases owned by the state, etc. a) for priority projects, b) for small and medium-sized businesses, for the middle class starting their own business, c) for the largest investors who develop new industries, new product niches, technology transfers, etc.

Financial Acceleration (Boost)

+ rapid – and at the same time cautious, balanced – financial development (“financialization”), growth of the financial depth of the economy as an independent goal in the growth strategy (at the same time, subordinated to the main goals – growth, modernization, living standards);

+ financial dirigisme (to the extent that it does not lead to a command economy), with subsequent gradual liberalization;

+ moderately soft monetary policy; multiple (but gradual) growth of monetization of the economy, creating a "soft", stimulating monetary environment (but not free from restrictions); managing the dynamics of the money supply not only through changes in interest rates, but also through direct limits on the amount of money in circulation (the experience of China);

+ deeper penetration of debt assets into the economy; expanding the accessibility of credit (primarily in the regions); rationing of part of the loans provided to arears of economic growth and priority projects, industries and regions;

+ normalization (reduction) of interest rates (many tools to do this); partial direct administration of interest rates (balance of market and non-market interest rates on loans provided to areas of growth and priority projects, industries and regions);

+ suppression of non-monetary inflation (prices and tariffs regulated by the state);

+ moderately weakened exchange rate of the national currency, stimulating economic growth, export of goods and services, foreign investment in the country (while limiting import of goods and services and export of capital from the country);

+ deepening of financial markets, securitization of the economy (to the extent that this leads to accumulation of savings and growth of investment, but does not cause financial bubbles, large-scale carry trade[13] and high volatility in the financial market);

+ moderate restrictions on the financial account of the balance of payments, primarily with regard to portfolio investments in and out of the country, as well as direct investments abroad (later, gradual liberalization of direct and portfolio investments);

+ strong, simple tax incentives for growth and modernization;

+ accelerated depreciation;

+ maximum incentives for foreign direct investment;

+ transition to a cautious reduction in the overall tax burden (with excessively high taxes and quasi-taxes, economies do not grow quickly),

+ budget investments in the economy (including through the growth of public debt to 30-35% of GDP);

+ maximum incentives for the middle class in acquiring property, for investments in the social infrastructure of the regions;

+ maximum resources in the industry, regions, large projects –areas of growth, as well as in regions - "zones of national disaster";

+ creation of development institutions – financial intermediaries (specialized banks, insurance companies, investment funds, venture funds, etc.), possessing – in aggregate – the operational capacity necessary to stimulate economic growth;

---

[13] Carry trade transactions are the use of the difference in the profitability of financial assets in the country where they exist and abroad. Borrowing funds abroad at a low interest rate, converting into the national currency, placing them domestically at a higher interest rate with an open financial account of the balance of payments and a small currency risk (fixed - or located within narrow bands - exchange rate of the national currency). Then - reverse conversion into foreign currency, repayment of the loan in this currency, fixing the income. Borrowings abroad can be made both on the basis of regular debt transactions (bank loans, Eurocommercial papers, Eurobonds), and on the basis of swaps, repo and back repo.

+ as a consequence – a very significant increase (often 2-fold) in the investment rate and the savings rate.

Depending on the country, on the situation in it, the specified elements of formula can be expressed more clearly, more rigidly or weaker.

They can appear as a trend.

Different models of "administrative / economic / financial acceleration" can be formed. But in all cases of "miracle" acceleration is carried out.

Administrative / economic / financial acceleration in detail will be presented below.

7.2. Taiwan: The Formula for an Economic Miracle

The Formula for an Economic Miracle:

+ overconcentration of political and administrative power (state of emergency, autocracy, stability, “one party – one state”, imperfect institutions), which is subordinated to survival, modernization and will gradually develop into real democracy only after several decades;

+ the authors of the economic miracle, who had real power (president, vice-president, senior officials);

+ minimum of unpopular reforms, maximum of popular ones that are beneficial to the population;

+systemic analysis of the situation (imbalances, trends and development needs of the economy), macroeconomic engineering;

+ problem-oriented policies, evolution of policies depending on the “conveyor belt” of problem situations;

+ development phases (10-15 + x years), in each of which specific tasks are solved and for which its own economic and financial policy is developed and implemented;

+ macroeconomic/industry/regional planning/programming, development administration (agency/“team”), industrial/technological policy, export-import policy, protectionism, large national projects, public works (infrastructure), development institutions;

+ institutional policy (creation of missing institutions of a market economy + ensure that they are not formal, but actually operate, examples – a central bank, stock exchange, development bank, etc. + institutions must become development-oriented);

+ state monopolies in key industries (systemically important companies);

+ direct government intervention in the prices of individual key goods;

+ economic liberalization (reforms “from above”, developmental economics, developmental state, privatization, a growing number of incentives aimed at economic growth, technological modernization, growth in prosperity and life expectancy);

+ intensive financial development / “financial deepening”;

+ financial policy, the purpose and essence of which is to stimulate growth and modernization (interest rates, exchange rates, tax rates, customs duties, growth of the money supply, preferential loans, government investments, etc.), while at the same time ensuring financial stability and a balanced government budget;

+ maximum incentives for medium and small/family businesses as the “engine” of ultra-fast growth;

+ maximum incentives for domestic investment;

+ maximum incentives for foreign direct investment;

+ improve the workforce, achieving a high level of education and professional skills,

+ maximum possible for the development of science and professional education;

+ expansionist social policy in favor of the population (general education + medicine + social insurance + expansion of social rights + social benefits + price regulation of basic food products), welfare state;

+ cheap skilled labor, surplus labor, low production costs, undervalued human resources compared to world markets;

+ high investment rates / savings rates.

8. Superfast Growth: Quantitative Parameters of Economies

8.1. Standard Parameters

A person on the run has different “parameters” than a person in a calm, “normal” state (pulse, breathing, blood pressure, etc.). In the same way, an economy that performs a “miracle” and grows quickly (is on the run) has different parameters than an economy that is in a stable situation and is subject to slow changes and low growth rates.

The period of super-fast growth: from 10-15 to 25-30 years.

Annual growth rate (GDP, constant prices, national currency): 5 – 7%, sometimes higher.

Investment rate – 28 – 30 – 46% of GDP.

Tax burden – up to 31 – 32% of GDP.

Government final consumption is 18-19% of GDP, as it normalizes - 14-15%.

Monetization (M2/GDP) from 100-120% of GDP

Financial depth, measured by the indicator "Domestic credit / GDP" - from 90-100% of GDP and higher.

Inflation (retail prices) weakens to 2-4%.

Interest rates - up to 2-4%.

National currency - "moderately (up to 15-20%) weakened" against the dollar and euro.

Stock market capitalization - from 100-120% and higher (in countries that are able to provide sufficient volumes and liquidity of the stock market).

The role of the state - at the initial stages up to 30-40% of the economy. Higher is too much.

Gradual growth of the share of small and medium-sized businesses in GDP - up to 50-55% of GDP.

8.2. Measuring Taiwan's Economy[14]

The period of superfast growth: 25-30 years (1949 – late 1970s).

Dominant growth rate (real GDP, in constant prices, national currency): 7 – 10% (1950s – 1970s).

Investment rate (growth) – 16 – 22% of GDP (1950s), 22 – 27% (1960s), 27 – 34% (1970s), 32 – 34% of GDP (1980s).

Savings rate (growth) – 15 – 18% of GDP (1950s), 18 – 26% (1960s), 26 – 32% (1970s), 26 – 34% of GDP (1980s).

Low tax burden (Net government budget revenues / GDP, %) – 13 – 22% of GDP (1950s), 19 – 23% (1960s), 23 – 25% (1970s), 23 - 28% of GDP (1980s).

Final government consumption (declining) – 18 – 19% of GDP (1950s), 17 – 18% (1960s), around 16% (1970s - 1980s), 13 – 16% (1990s).

Monetization (M2/GDP) (multiple growth) – 7–12% of GDP (1950s), 17–43% (1960s), 43–66% (1970s), 66–145% (1980s).

Average inflation rate (retail prices), (declining): 13% (1950s), 5% (1960s), 10% (1970s, oil prices), 3.5% (1980s).

Interest rate (central bank discount rate, declining): 11–20% (1950s), 10–14% (1960s), 10–12% (1970s), 5–8% (1980s).

[14] Data – see Part I of the Research Report.

The national currency is the New Taiwan Dollar, which fell against the US dollar in the 1950s from 10.25 to 36.0, was devalued to 40.1 at the turn of the 1960s, and strengthened to 36 in the 1970s. Then it strengthened, with occasional drops in the exchange rate.

The role of the state – the share of the public sector in industrial production is 48 – 57% (1950s), 28 – 48% (1960s), 18 – 28% (1970s), 17 – 18% (1980s).

The share of small and medium-sized businesses in GDP is constantly growing. Small and medium-sized businesses are, first and foremost, the engine of superfast growth. At the beginning of the 1990s, the share of those employed in small and medium-sized enterprises in the total number of those employed was estimated to be more than 70%, in 2000 – 78%, later – over 80%.

9. The Administrative "Boosting" of Developmental State

9.1. Macroprogramming / planning

Macro-programming/planning was widely used within the framework of "economic dirigisme". Indicative plans (Taiwan, Japan, Korea, China, Malaysia, Singapore, Spain), concepts of "planned market economy" and "mixed economy" (Taiwan, Japan), "socialist planned commodity economy" (China), industrial policies (Taiwan, Japan, Korea, China).

These are not plans according to the "Soviet model," which assumed that the plan directly sets targets for the production, distribution, and consumption of resources (down to individual enterprises), as well as targets for investment, distribution of financial resources, and forced labor movement (with some exceptions in China).

These are plans whose content is reduced to macroeconomic programming. They can widely use econometric models.

Taiwan

From 1953 to 2024, Taiwan formulated and implemented 18 national development plans (usually for 4, 6 or 10 years). During the period of superfast growth: 1953-1956 (Four-year Plan for Attainment of Economic Independence in Taiwan), 1957-1960, 1961-1964, 1965-1968, 1969-1972, 1973-1976, 1976-1981 (6 years), 1980-1989 (10 years), 1986-1989, 1991-1997 (6 years).

The plans covered the largest investments and established: a) general ideas of economic policy, b) priorities (industry, product niches, regional, technological benchmarks), c) major projects, d) mutual coordination of the development of industries and regions, methods for regulating imbalances, d) coordination of public and private resources for investment, e) macroeconomic goals that need to be achieved.

9.2. Development Administration

As stated above, the development administration is a group of specialists or a separate institution that is fully focused on development tasks and enjoys special support and trust from the highest authorities. It is located next to the government, which is overloaded with current functions and often unable, due to a lack of resources, to focus on prospects.

Another option is one of the ministries / government agencies.

Plus a team of highly qualified technocrats (up to 5-6 high-ranking officials) + 10-15 teams of outstanding specialists and experts, including those who have local roots but live and successfully operate in another country.

The functions of the development administration may also include 1) the mitigation of industry, regional, product, technological, institutional imbalances and conflicts of interest, 2) the initiation of major projects, 3) anti-crisis management (in the event that there is an economic/financial crisis in the country.

In order to carry out all these tasks, the development administration may include representatives of all interested parties whose actions in the future need to be coordinated (including, or even primarily, senior officials).

When solving more specific tasks, specialized development administrations may be created. Their activities are concentrated in a specific industry or region, or on solving a specific problem.

Taiwan

The first "development administrations" in Taiwan were the Council for U.S. Aid (CUSA, 1948) (given the enormous importance of U.S. aid to Taiwan's economy and the U.S. role in shaping the ideology of development and growth) and the Taiwan Production Board (TPB, 1949). The latter was absorbed by the Economic Stabilization Board (ESB, 1953). In turn, CUSA absorbed the ESB in 1958, being transformed in 1963 into the Council for International Economic Cooperation and Development (CIECD) (restructured in 1969). In 1973, CIESD was replaced by a new institution, the Economic Planning Council (EPC), which in turn became the Council for Economic Planning and Development (CEPD) in 1977 (Tien, Hung-Mao, 1989, pp. 126–128).

“Technocrats in these agencies generally are well educated and professionally competent”. They are “cautious planners. They favor project-by-project approach to development to achieve stability. This approach can probably be attributed to their educational background. A study of 44 technocrats in Taiwan indicated that 97.7 percent of them have had a university education – about half with degrees in engineering and one-third in social sciences. Over 60 percent of then received graduate education in the United States and Western Europe. Their educational background appears to have contributed three important elements to their work style: a commitment to the market economy, a receptivity to modern management and a style of planning that emphasizes steady growth, reflecting in part their engineering and science backgrounds" (Tien, Hung-Mao, 1989, pp. 129).

International practice

Development administrations with special powers responsible for economic growth were created everywhere (for details on functions, see Mirkin, Zhukova et al., 2014, pp. 69-92):

- Japan - Ministry of International Trade and Industry, MITI (1949-2001), Economic Council Agency, ECA (1953-2003), Economic Council (1955-2001);
- South Korea - Economic Planning Board, EPB (1961-1994);
- Singapore - Economic Development Board, EDB (1961-present);
- China (mainland) - Commission for Restructuring the Economic System (1982-1998), National Development and Reform Commission, NDRC (1998-present);
- Malaysia - Economic Planning Unit, EPU (1961-present);
- Germany – Ministry of Economy (under L. Erhard, 1949 – 1963);
- Italy - Inter-ministerial Committee for Economic Planning (from 1967 to the present);
- Spain - Office of Economic Coordination and Planning (1957 – 1975).

9.3. Community of Advisors and Experts

Any reforms are impossible without the establishment of communities of foreign experts/advisers, technical consultants, potential investors: a) formal (commissions, councils, agencies, assistance centers, etc.) or informal, b) within the framework of assistance received from other countries, c) hiring under contracts or activities based on patriotic or charitable interests, d) from qualified specialists with local roots, but those who live and work in other countries.

In any case, it must be a systemically significant group of outstanding foreign specialists and investors who fully share the country's goals (prosperity, rapid growth, modernization) and are ready to make the maximum contribution to achieve these goals.

Such personal aspirations must prevail over their other interests (power, promotion of their names and brands, personal income in a country with a high "income/risk" ratio). In international practice, the opposite is quite common.

Taiwan

The community of foreign experts has made a vital contribution to creating the conditions for ultra-fast growth and modernization:

1) In 1949-1965, the US economic aid program (its experts, establishments that were created within its framework) was the key center of development and reform in Taiwan. All initiatives that came from the US aid program at that time were within the framework of “development economics” (in international practice of the 1990s-2010s, this is not always the case);
2) The community of Chinese-American experts and investors. There are several dozen experts from the United States who had Chinese roots and played a key role in “warming up” the economy to super-fast growth and in reforms in Taiwan. The same is true for investors. The practice of inviting such experts on a voluntary or contractual basis (or investors to make deals) was systematic and constant;
3) Centers for the promotion of industry development, universities, research institutes (Chinese-American experts - on supervisory boards, in management, among specialists working under contract).

9.4. Areas of Superfast Growth

At the initial stages of modernization, areas of superfast growth are introduced into an economic environment – special (“free”, “open”, “export processing”, “investment”, “industrial”, etc.) economic zones (Taiwan, Korea, China, Malaysia, etc.).

Taiwan

Export processing zones (EPZ) (free port + free trade zone + industrial park) were established since 1965. EPZs were managed by a specially appointed administration (admission of businesses to the zones, issuance of permits, control over their activities, public and technical services, including tax collection, development). Activities inside the EPZ: production, research and development, consulting, technical services, warehousing, transportation, loading and unloading, repair services). Businesses must be admitted to the EPZ, have the status of a resident of the EPZ.

Basic benefits for residents of the EZ are exemption from duties, taxes and fees in relation to exports and imports, as well as in relation to taxation of property located within the EZ.

10. Financial Systems of Superfast Growth Economies

10.1. Financial Deepening (Monetization

One of the strategies of catch-up modernization, as one of the key policies of the state, transferring the economy to superfast growth, is “financial development”, “financial deepening”, “financialization”.

Taiwan

The financial depth of Taiwan's economy (measured by the indicator «Money supply / GDP, %») during the period of ultra-rapid growth (1951 – 1980s) increased by 22 times (extremely low initial base), respectively, in the 1950s – by 2.6 times, in the 1960s – by 2.5 times, in the 1970s (global oil crisis) – by 1.5 times, in the 1980s – by 2.2 times (**Table 2.6**).[15]

Table 2.6. Dynamics of Monetary Aggregates, Taiwan*

Year	Money Supply / GDP, %
1951	6.6
1955	12.1
1960	17.2
1965	33.9
1970	42.8
1975	57.6
1980	65.5
1985	107.4
1990	145.1

[15] The shaded areas of the tables are the periods of the most rapid economic growth. The quantitative analysis is based on International Financial Statistics and Government Finance Statistics of the IMF (IFS, GFS IMF, 1950 – 2011).

Table 2.6. (Continued)

Year	Money Supply / GDP, %
1995	182.5
2000	196.5
2005	213,.3
2010	220.6
2015	233.9
2017	237.8
2022	253.7

*IMF World Economic Outlook, October 2023; IMF International Financial Statistics (August 1960, August 1966, August 1972); Statistical Yearbook of the Republic of China (1975, 2002, 2012, 2022); Emery, Robert F. (1987). Money Supply = (Money + Quasi-Money, 1951 – 1960); Monetary Aggregates, Central Bank of the Republic of China. M2, 1965 – 2022

International Practice

All cases of countries that have undergone successful modernization are associated with an accelerated, 2-5-fold increase in the financial depth of the economy (in comparison with GDP growth) (**Table 2.7**).

The key indicator of financial depth "Money supply / GDP" was used for the analysis. During the periods of catch-up modernization (accelerated economic growth), financial depth, ahead of GDP growth, was increased in Japan by 2.4 times (**Table 2.7**), in Korea - more than 5 times, in Singapore - 2.2 times, in Malaysia - 4.2 times, in India - 1.9 times. A multiple increase in financial depth in comparison with the dynamics of GDP is observed in Hong Kong (it is assumed that statistics are available since 1991).

In the US, which is not in a situation of “catch-up modernization,” financial depth (by M2) is stable (**Table 2.7**).

Is the accelerated growth of monetization only a phenomenon of the “economic miracle” in Asian economies? No, it is not.

The example of post-war Germany confirms this (**Table 2.8**). Monetization during the economic miracle (1951–1967) increased by 2.4 times; then it stabilized. This is a pronounced dynamic in comparison with the United Kingdom (a decrease in monetization), France (an increase of 1.5 times), and the USA (unchanged monetization during this period, see **Table 2.7**).

Table 2.7. Relationship between Changes in Financial Depth and Economic Growth during Periods of Modernization*

Year	Money Supply / GDP, %*							
	Japan	South Korea	Singapore	Malaysia	China (mainland)	Hong Kong	India	USA (for comparison)
1950	x	x	x	x	x	x	23.1	x
1955	45.4	7.8**	x	x	x	x	24.7	x
1959	57.4	x	x	x	x	x	24.9	58.8
1960	57.0	10.2	x	x	x	x	24.0	56.0
1963	65.0	10.7	53.0	x	x	x	22.9	63.6
1969	64.9	28.6	66.5	33.0	x	x	22.1	59.8
1970	65.1	28.0	66.4	34.7	x	x	23.2	60.4
1978	79.3	28.8	61.2	46.2	24.7	x	35.7	59.5
1980	81.5	34.6	64.1	52.5	36.4	x	37.3	57.4
1990	109.1	81.4	92.4	70.4	75.9	x	42.7	56.5
1991	106.7	80.4	93.2	71.1	82.4	179.4	44.0	56.4
2000	125.1	117.3	106.9	99.5	137.0	227.8	55.6	49.3
2009	159.1	147.4	139.2	145.5	182.0	329.8	76.9	60.5
2010	161.8	141.6	132.7	138.4	182.4	331.5	75.3	60.1

*IMF IFS 1950 – 2011. Japan - M2 (Seasonally Adjusted, Period Averaged), USA - M2 (Seasonally Adjusted), South Korea, Malaysia – M2, China (mainland), Hong Kong, Singapore, India - Money + Quasi-Money

** The Economy of Korea. Volume VI. Prices, Money and Credit. Wash.: International Bank for Reconstruction and Development, International Development Association. Report No FE-55a, p. 10. Ratios: (Money + Quasi-Money) / GDP, 1956, 1959.

Table 2.8. Financial Depth (Monetization) in Major Developed Countries, %*[16]

Year	Money Supply / GDP, %		
	Germany	United Kingdom	France
1951	23.9	56.7	42.1
1955	33.7	45.8	50.1
1959	44.3	41.6	48.0
1963	46.5	36.9	59.3
1967	57.9	36.2	62.8
1971	54.4	33.4	62,.5
1973	56.0	42.2	66.1

[16] The table was prepared by A.V. Komova.

*IMF IFS. Ratios: (Money + Quasi-Money) / GDP (United Kingdom); (Quasi-Money, Other Deposits + Demand Deposits + Currency Issued) / GDP (France, Germany). GDP – «Gross Domestic Product, Nominal, National Currency».

The dynamics of monetization in Italy before and during the economic miracle are characterized by the following. Money supply M2/GDP (average for the period) in 1948-1949 - 35.6%, in 1950-1957 - 45.7%, in 1958-1963 - 60.2%, in 1964-1970 - 75.0%. This is more than a twofold increase.[17]

The dynamics of the money supply in Spain, not as clearly visible as in Germany and Italy, also outpaced the European average (**Table 2.9**). The period of the "first economic miracle" (1960s – early 1970s) is associated with a noticeable financial deepening.

Table 2.9. Dynamics of Money Supply / GDP in Spain Compared to European States (Excluding Spain) *[18]

Money Supply / GDP, %	1948-1955	1956-1960	1961-1965	1966-1970	1971-1975
Spain	52.1	55.6	65.0	69.6	85.7
Average for European countries (excluding Spain)	58.2	56.7	55.7	59.0	59.8

*IFS IMF. Ratio: (Money + Quasi-Money) / GDP. GDP – Nominal, National Currency, Seasonally Adjusted. Austria, Belgium, United Kingdom, Germany, Greece, Denmark, Italy, Netherlands, Norway, Portugal, Finland, France, Switzerland, Sweden

The economic miracle in Israel in the 1950s – early 1970s. Monetization increased almost twofold. Average values of the indicator "Money / GNP" in 1952-1955 - 25.6%, in 1956-1961 - 28.9%, in 1962-1965 - 36.9%, in 1966-1967 - 43.6%, in 1968-1972 - 49.2%.[19]

10.2. Growth of Savings Rate / Investment Rate

During the period of accelerated modernization, the investment rate (measured by the indicator "Investment / GDP, %") increases sharply, which is a natural consequence of the action of the entire sum of incentives causing an increase in the savings rate ("Savings / GDP") and spurring economic growth. The growth of

[17] Calculations by K. Bakhtaraeva. M2 - Bank of Italy, ВВП - Baffigi A. Italian National Accounts. A Project of Banca d'Italia, Istat and University of Rome "Tor Vergata" / Economic History Working Papers. Banca d'Italia. n. 18. 2011.
[18] The table was prepared by T.V. Zhukova.
[19]Calculations by T.V. Zhukova. Money supply – «Non-standardized Presentation (Monetary Survey), Quasi-Money, Money plus Quasi-Money, National Currency». Источник: IMF IFS, 2015. ВНП - источник: Michaely M. Foreign Trade Regimes and Economic Development. Appendix A: Basic Statistical Data. Table A-2.

direct foreign investment coming into the country acts in the same direction. At the same time, the growth of the investment rate may not be so pronounced if informal finance plays a large role in financing, as was the case in Taiwan in the 1950s and is happening in a number of developing countries.

Taiwan

In the 1950s, the low savings rate was partly compensated for by American economic aid. In the 1960s and 1970s, the savings rate steadily increased as Taiwan's economy warmed up, reaching its peak in the 1980s and creating conditions, along with the inflow of foreign capital, for the growth of the investment rate in the 1950s – 1970s and, accordingly, high rates of economic growth (**Table 2.10**).

Table 2.10. Relationship between Changes in the Savings Rate/Investment Rate and Superfast Economic Growth*

Year	Taiwan	
	Savings Rate, %	Investment Rate, %
1952	≈15	≈16
1960	18.4	21 – 22
1965	20.7	23 – 24
1970	25.7	26 – 27
1975	26.7	30 – 31
1980	32.1	34.1
1985	35.2	20.8
1990	31.9	25.5
1995	29.8	28.0
2000	29.6	27.2
2005	29.5	24.6
2010	34.1	25.1
2015	36.6	21.7
2020	40.3	24.2

*IMF World Economic Outlook April 2024; Deaton Angus S., Paxson Christina. Saving, Growth, and Aging in Taiwan // Studies in the Economics of Aging. Chicago: University of Chicago Press, January 1994, p. 332; Athukorala Prema-Chandra, Tsai Pang-Long (2003). Determinants of Household Saving in Taiwan: Growth, Demography and Public Policy // *The Journal of Development Studies*, Vo1.39, No 5, p. 68. The ratios are defined in 1952–1975 as a percentage of GNP, in 1980–2020 as a percentage of GDP.

.

International Practice

The "economic miracle" countries show a significant increase in the investment rate during the period of superfast growth (**Table 2.11**).

Table 2.11. Relationship between Changes in the Savings Rate/Investment Rate and Superfast Economic Growth*

Year	Investment / GDP, %*							
	Japan	South Korea	Singapore	Malaysia	China (mainland)	Hong Kong	India	USA (for comparison)
1950	x	x	x	x	x	x	10.4	19.7
1955	19.4	10.6	x	9.2	x	x	12.5	20.5
1960	29.0	11.1	6.5	11.0	x	23.4	13.3	19.7
1965	29.8	14.9	21.3	18.3	x	34.3	15.8	20.2
1970	35.5	25.5	32.6	14.9	x	19.6	14.6	18.7
1975	32.5	26.8	35.1	25.1	x	21.5	16.9	18,.3
1980	31.7	32.4	40.6	31.1	28.8	19.3	19.3	21.0
1985	27.7	28.8	42.2	29.8	29.4	20.7	20.7	20.7
1990	32.1	37.3	32.3	33.0	25.0	22.9	22.9	18.3
1995	27.9	37.3	33.4	43.6	33.0	24.4	24.4	18.1
2000	25.2	30.0	30.6	25.3	34.1	22.7	22.7	20.3
2005	23.3	28.9	21.3	20.5	42.2	30.4	30.4	19.9
2009	20.6	29.3	27.9	20.4	46.7	30.8	30.8	15.7
2010	20.5	28.6	25.0	20.3	46.1	29.5	29.5	15.4

*IMF IFS 1950 – 2011. Hong Kong – 1961, «Gross Fixed Capital Formation / GDP, Current Prices, %»

From the initial values of the investment rate of 10-15% (the poorest countries in stagnation), sometimes up to 20% (**Table 2.11**), the accumulation rate reaches 28-46% during periods of modernization and ultra-fast growth. Then, "completing the circle", the investment rate moves to lower values, fluctuating around 18-22%. These levels are reached when the economy comes out of overheating into a "normal", less dynamic situation (at a higher level of maturity, like a "new industrial", with growth rates of up to 2-2.5%).

Analogues in post-war Europe are clearly visible. In Germany, during the period of normalization and stabilization (1948–1957), the investment rate was 20–25%. In the 1960s–early 1970s, the time of the economic miracle, it was from 25 to 30% (here and below – (Mirkin, Zhukova, 2018).

In Italy, the investment rate has been growing steadily, reaching its peak in the early 1960s, at the start of the "economic miracle". In 1947-1949, the investment rate in Italy was 18.5%, in 1950-1957 - 22.7%, in 1958-1963 - 26.8%, in 1964-1970 - 25.0%.

In Spain, the investment rate has been growing steadily, from 19.3% in 1959-1960 (average values), 21.1% in 1961-1966, 22.5% in 1967-1968, and finally to 24.9% in 1969-1973.

In Israel, the investment rate was sharply increased in 1952-1965. It fluctuated around average values from 27.2 to 30.4%. In the USA (sustainable development, technological leader, catch-up modernization was completed in the 19th century) in 1950-2000, the investment rate fluctuated around 20%.

10.3. Financial Deepening (Domestic Credit)

The growth of financial depth (monetization) greatly increases the ability of the financial sector to provide credit to the economy for modernization needs.

Taiwan

This pattern can be clearly seen in the example of Taiwan (**Table 2.12**).

Table 2.12. Relationship between Changes in Monetization and Domestic Credit during Periods of Modernization*

Year	Money Supply / GDP, %	Domestic Credit/ GDP, %
1951	6.6	13.3
1955	12.1	18.9
1960	17.2	19.5
1965	33.9	27.9
1970	42.8	31.9
1975	57.6	n/a
1980	65.5	n/a
1985	107.4	n/a
1990	145.1	n/a

* IMF International Financial Statistics (August 1960, August 1966, August 1972)

International Practice

The same pattern is clearly visible in international practice (**Table 2.13**).

Table 2.13. Relationship between Changes in Monetization and Domestic Credit during Periods of Modernization*

Year	South Korea		Singapore		China (mainland)		Hong Kong		India	
	Money Supply / GDP, %	Dom. Creditт / GDP, %	Money Supply / GDP, %	Dom. Creditт / GDP, %	Money Supply / GDP, %	Dom. Creditт / GDP, %	Money Supply / GDP, %	Dom. Creditт / GDP, %	Money Supply / GDP, %	Dom. Creditт / GDP, %
1950	x	x	x	x	x	x	x	x	23.1	15.6
1955	7.8**	x	x	x	x	x	x	x	24.7	18.9
1960	10.2	9.1	x	x	x	x	x	x	24.0	24.9
1963	10.7	16.6	53.0	7.2	x	x	x	x	22.9	25.8
1970	28.0	35.3	66.4	20.0	x	x	x	x	23.2	24.8
1978	28.8	38.4	61.2	30.7	24.7	38.5	x	x	35.7	36.4
1980	34.6	46.9	64.1	42.4	36.4	52.8	x	x	37.3	40.7
1990	81.4	57.2	92.4	61.7	75.9	86.3	x	x	42.7	51.5
1991	80.4	57.8	93.2	63.1	82.4	88.7	179.4	130.4	44.0	51.3
2000	117.3	79.5	106.9	79.2	137.0	119.7	227.8	136.0	55.6	53.0
2009	147.4	109.4	139.2	93.9	182.0	147.5	329.8	166.8	76.9	72.9
2010	141.6	103.2	132.7	83.9	182.4	172.3	331.5	199.0	75.3	76.2

* IMF IFS 1950 – 2011. To identify the size of credit within the economy, the "Domestic Credit" ratio was used (there is no data for Japan and Malaysia). The values of the "Money/GDP" indicator are taken from **Table 2.7**
****** The Economy of Korea. Volume VI. Prices, Money and Credit. – Wash.: International Bank for Reconstruction and Development, International Development Association. Report No FE-55a, p. 10. «(Money + Quasi-Money) / GDP»

Financialization of the economy (Domestic credit / GDP, %)[20] is growing multiple times ahead of GDP, strictly correlating with the growth of monetization. The ratio "Domestic credit / GDP" grew in South Korea more than 3 times (**Table 2.13**), in Singapore - 4.7 times, in China - 3.8 times, in India - 1.4 times. Multiple growth of this ratio is in Hong Kong.

Similar dynamics, although in a milder form (more advanced economies) were also clearly visible in post-war Europe. The ratio "Domestic credit to the private sector to GDP, %" was 22% in Germany in 1951, 37% in 1955, 44% in 1959, 57% in

[20] Domestic Credit - credit provided by residents for use in the domestic market of the country. Includes loans, investments in debt securities and other debt obligations of the central government, as well as regional and municipal authorities, public and private establishments. An indicator used in international financial statistics of the IMF until the late 2000s.

1963, 65% in 1967, 68% in 1971, and 73% in 1973.[21] Financialization (Domestic credit) grew more than threefold, at a rate significantly outpacing other developed countries.

In Italy, the average values of the indicator "Domestic Credit / GDP, %" grew from 16.3% in 1947-1949 to 28.3% in 1950-1957, 43.4% in 1958-1963 and 57.6% in 1964-1970. Multiple growth, more than 3 times.[22]

In Spain, the dynamics of financial deepening (Domestic credit/GDP) are very clearly demonstrated (**Table 2.14**). The growth is almost 3 times faster than the "European average".

Table 2.14. Dynamics of Domestic Credit / GDP in Spain Compared to European States (Excluding Spain) *[23]

Domestic Credit / GDP, %	1948-1955	1956-1960	1961-1965	1966-1970	1971-1975
Spain	29.6	33.6	42.4	52.2	76.2
Average for European countries (excluding Spain)	47.4	31.2	38.4	45.2	47.6

*IFS IMF. Ratio: Domestic Credit / GDP. GDP – Nominal, National Currency, Seasonally Adjusted. Austria, Belgium, United Kingdom, Germany, Greece, Denmark, Italy, Netherlands, Norway, Portugal, Finland, France, Switzerland, Sweden

The Israeli economy was also characterized by significant financial deepening. The average values of the indicator "Domestic credit to the private sector / GNP" in 1952-1955 were 18.1%, in 1956-1961 - 13.7%, in 1962-1965 - 19.2%, in 1966-1967 - 24.9%, in 1968-1972 - 30.2%. From the mid-1950s to the early 1970s, growth more than doubled.

10.4. Normalization of Interest Rates

Financial deepening (monetization, domestic credit) inevitably reduces the price of money in the economy.

Basic trends:

- interest rate decrease as financial deepening becomes more significant, in some countries - several times, along with weakening inflation;

- administrative intervention in commercial bank interest rates;

[21] Calculations by A.V. Komova (Mirkin, Zhukova, 2018).
[22] Calculations by K.B. Bakhtaraeva.
[23] The table was prepared by T.V. Zhukova.

- widespread use of preferential interest rates (loans to priority industries / priority businesses / state-owned companies / export-import projects / for the production of priority products);

- gradual liberalization of interest rates, year after year the transition to an increasingly market-based interest rate mechanism;

- one-off "flashes of growth" in interest rates during crises, financial infections, instability caused by the rapid growth of world prices for oil and other resources.

Taiwan

The underlying trends are clearly confirmed in Taiwan's finances (**Table 2.15**). The peculiarity is the long-term growth of the economy against the background of high interest rates. Such rates, according to the ideas of policymakers, stimulated a high savings rate, "killed" inflation, and caused positive real interest rates on deposits.

Table 2.15. Dynamics of Interest Rates and Inflation Rates in Taiwan*

	1951	**1952**	**1953**	**1954**	**1955**	**1956**
Central bank discount rate, end of year, %	19.8	19.8	12.6	10.8	10.8	10.8
Inflation, end of period consumer prices, percent change, %	32.0	28.8	17.6	2.0	9.8	6.3
	1957	**1958**	**1959**	**1960**	**1961**	**1962**
Central bank discount rate, end of year, %	10.8	10.8	10.8	14.4 (07.1961)	14.4	12.96
Inflation, end of period consumer prices, percent change, %	10.9	2.3	10.6	18.47	7.8	2.4
	1963	**1964**	**1965**	**1966**	**1967**	**1968**
Central bank discount rate, end of year, %	11.52	11.52	11.52	11.52	10.8	11.88
Inflation, end of period consumer prices, percent change, %	2.2	-0.2	-0.1	2.0	3.4	7.9
	1969	**1970**	**1971**	**1972**	**1973**	**1974**
Central bank discount rate, end of year, %	10.8	9.8	9.25	8.5	10.75	12.0
Inflation, end of period consumer prices, percent change, %	5.1	3.57	2.8	3.0	8.2	47.46

Table 2.15. (Continued)

	1975	1976	1977	1978	1979	1980
Central bank discount rate, end of year, %	10.75	9.5	8.25	8.25	11.0	12.0
Inflation, end of period consumer prices, percent change, %	5.2	8.5	7.0	5.8	9.8	22.04
	1981	**1982**	**1983**	**1984**	**1985**	**1986**
Central bank discount rate, end of year, %	11.75	7.75	7.25	6.75	5.25	4.5
Inflation, end of period consumer prices, percent change, %	3.2	2.4	-1.2	1.6	-1.3	2.6
	1987	**1988**	**1989**	**1990**	**1991**	**1992**
Central bank discount rate, end of year, %	4.5	4.5	7.75	7.75	6.25	5.625
Inflation, end of period consumer prices, percent change, %	1.9	1.1	3.1	4.56	3.9	3.4

* IMF World Economic Outlook, October 2023; IMF International Financial Statistics (August 1960, August 1966, August 1972); Statistical Yearbook of the Republic of China (1975, 2002, 2012, 2022); Emery, Robert F. (1987). Monetary Policy in Taiwan, China. New York: Federal Reserve, November 1987. Inflation = Change of Cost of Living (1951 - 1958), Change of Consumer Prices Index (1960 – 2022); accessed 24 March 2024

International Practice

The basic trends in the dynamics of interest rates during the period of extremely high rates of economic growth are clearly visible (**Table 2.16**).

The late 1950s and 1960s marked the height of the "economic miracle" in Germany, Italy and Spain.

In post-war Germany, the interest rate was stabilized. The Bundesbank discount rate fluctuated cyclically between 1950 and 1966. Its upper limit was reduced from 7% to 6%. The lower limit was from 3.75% to 4%. Within the framework of the central bank's policy, periods of discount rate reductions lasted twice as long as periods of its growth (Federal Reserve Bank of St. Louis. Economic Research Data Base. Interest Rates Series).

Table 2.16. Dynamics of Interest Rates during Modernization and Growth of Financial Depth of the Economy

Year	Lending Rate, %*							
	Japan	South Korea	Singapore	Malaysia	China (mainland)	Hong Kong	India	USA (for comparison)
1953	9.08	x	x	x	x	x	x	3.17
1960	8.17	x	x	x	x	x	x	4.82
1970	7.66	x	x	x	x	x	x	7.91
1980	8.34	18.0	11.7	x	5.04	x	16.5	15.27
1990	6.95	10.0	7.36	8.79	9.36	10.0	16.5	10.01
2000	2.07	8.5	5.83	7.67	5.85	9.5	12.29	9.23
2009	1.72	5.6	5.38	5.08	5.31	5.0	12.19	3.25
2010	1.60	5.5	5.38	5.02	5.81	5.0	-	3.25

*IMF IFS 1950 – 2011. Japan, USA, China, Hong Kong – Lending Rate, South Korea, Singapore – Minimum Lending Rate, Malaysia – Average Lending Rate, India – Commercial Lending Rate-Prime

In Italy, the interest rate was stabilized for years, and remained on a "slight" downward trend until the second half of the 1960s. In 1948–1949, it was (average values for the period, government bonds) 5.8%, in 1950–1957 – 5.9%, in 1958–1963 – 5.4%.[24]

Spain implemented a lower interest rate policy compared to other European countries (**Table 2.17**).

Table 2.17. The Discount Rate in Spain Compared to other European Countries *[25]

	1948–1958	1959–1962	1963–1973
Spain	3.5	4.7	5.1
Average for European countries (excluding Spain)	7.7	7.8	8.7

*IFS IMF 1948 - 1991. Ratio: Interest Rates, Discount, Percent per annum. Calculated using the arithmetic mean formula for a group of countries: Belgium, United Kingdom, Germany, Greece, Italy, Netherlands, Norway (since 1949), Portugal, Finland, Switzerland, Sweden (since 1949)

In Israel, the interest rate was stabilized, and in the second half of the 1960s, a downward trend emerged. Loans taken from banks for development purposes were provided at significantly lower interest rates (up to 2 times lower).

---

[24] Calculations by K.B. Bakhtaraeva.
[25] The table was prepared by T.V. Zhukova.

10.5. Killing Inflation

Despite significant financial deepening (increasing monetization, expansion of domestic credit, securitization) in all countries undergoing modernization (except India), after the surge in prices (1970s), there was a consistent decline in inflation (**Table 2.15** (Taiwan), **Table 2.18** (international practice)).
As stated above, Taiwan's average inflation rate (consumer prices, declining inflation rate) was: 13% (1950s), 5% (1960s), 10% (1970s, oil prices), 3.5% (1980s).

Table 2.18. Dynamics of Inflation during Periods of Modernization and Growth of Financial Depth of the Economy

Year	Inflation, End of Period, Consumer Prices, Percent Change, %*							
	Japan	South Korea	Singapore	Malaysia	China (mainland)	Hong Kong	India	USA (for comparison)
1953	6.6	x	x	-2.9	x	x	3.1	0.8
1960	3.6	8.1*	0.4**	0.1	x	x	0.0	1.5
1970	7.7	14.8	0.4	1.8	x	x	4.5	5.9
1980	7.8	28.8	8.5	9.0	x	10.9***	11.3	13.5
1990	3.1	8.6	3.5	2.6	3.1	10.3	8.8	5.4
2000	-0.8	2.3	1.4	1.5	0.3	-3.8	4.0	3.4
2009	-1.4	2.8	0.6	0.5	-0.7	0.6	10.9	-0.4
2010	-0.7	2.9	2.8	1.7	3.3	2.3	12.0	1.6

* IMF IFS 1950 – 2011. South Korea (1963, Seoul Consumer Price Index) - The Economy of Korea. Volume VI. Prices, Money and Credit. Wash.: International Bank for Reconstruction and Development, International Development Association. Report No FE-55a, p. 18
**Data for 1961
***Data for 1982

The trend towards lower inflation as the "economic miracle" warmed up was confirmed in post-war Europe (Mirkin, Zhukova, 2018). In Germany, inflation was unstable in the 1950s: from 7.7% in 1951 to zero and negative values in 1950, 1953-1954. In 1958-1968, inflation was in the range of 0.8-3.8%.

In Italy, it was possible to maintain a consistently low level of inflation: in 1950-1957 - 3.4%, in 1958-1963 - 3.1%, in 1964-1970 - 3.6%.

In Spain, inflation (average values for the period) consistently decreased from 9.8% in 1948-1955 to 7.7% in 1956-1960, 7.1% in 1961-1965, 5.1% in 1966-1970.

In Israel, it was possible to move from inflation values (average for the period) of 26.1% in 1952–1955 to 4.5% in 1956–1961, 7.2% in 1962–1965, and 4.8% in 1966–1967 (Mirkin, Zhukova, 2018).

10.6. Weakening Domestic Currency

Exchange rate policy during the "economic miracle" is usually associated with weakening the national currency against the world reserve currency No. 1 (the US dollar).

This maintains the profitability of exports (modernization strategy based on the "everything for export" policy), direct investment (cheap labor and other resources within the country when transferring business from abroad), and limits the export of capital, which can "bleed dry" the economy, depriving it of a significant part of the financial resources necessary for modernization.

Taiwan

The above trends are fully confirmed in Taiwan (**Table 2.19**).

The peculiarity was that in the first stage (1950s) the local currency was artificially overvalued against the US dollar (to promote the import of equipment and raw materials necessary for import substitution, to limit undesirable export of goods). And, conversely, at the same time it was artificially weakened against undesirable import of goods and against export which was considered desirable. For this purpose, multiple exchange rates set by the government (but not on the market) were used.

The currency was subsequently weakened to support exports and direct investment, and ultimately to stimulate growth. Since the late 1980s, as growth slowed and Taiwan's economy stabilized, the local currency has gradually strengthened.

Table 2.19. Dynamics of NTD Exchange Rate

Year	Exchange Rate, New Taiwan Dollar / USD
1951	10.25 – 15.85
1955	18.60 – 36.00
1960	39.6 – 40.05
1965	40.00 – 40.10
1970	40.00 – 40.10
1975	37.95 (March 31, 1975)

Table 2.19. (Continued)

Year	Exchange Rate, New Taiwan Dollar / USD
1980	36.00
1985	39.85
1990	26.89
1995	26.48
2000	31.23
2005	32.17
2010	31.64
2015	31.90
2017	30.44
2022	29.78

* IMF International Financial Statistics (August 1960, August 1966, August 1972); Statistical Yearbook of the Republic of China (1975, 2002, 2012, 2022.

International Practice

International practice confirms the basic trend during superfast growth: weakening of the national currency against the US dollar (**Table 2.20**). At the same time, the local currency rate can be supported as fixed against the dollar (Japan in the 1960s), and much less frequently (Singapore, Malaysia) - cases of strengthening of the national currency can be observed (**Table 2.20**).

Japan – fixed exchange rate regime from the 1950s to 1973, domestic currency weakened against the US dollar. Then – revaluation, which sharply slowed the economy. One can observe the path from total control over foreign exchange transactions (+ foreign exchange budgets drawn up by the government) in the 1950s – 1964 to the currency liberalization of the 1970s.

South Korea has an undervalued (weakened) national currency. This is a long-term policy (devaluations in 1961, 1964, subsequent decline in the exchange rate of the won to the US dollar) to stimulate exports.

China (mainland) – policy of a weak yuan compared to the US dollar (constant decline in the yuan exchange rate from 1980 to 1994, then “flat” in narrow bands, with a slow strengthening of the yuan since the summer of 2005 under the pressure of US accusations of currency manipulation).

Table 2.20. Dynamics of Domestic Currency Exchange Rate during Periods of Modernization and Growth of Financial Depth of the Economy

Year	Exchange Rate, Domestic Currency to USD*						
	Japan	South Korea	Singapore	Malaysia	China (mainland)	Hong Kong	India
1950	361.1	2.5	**3.06**	**3.06**	x	5.71	4.76
1955	**360.0**	**50.0**	**3.06**	**3.06**	2.46	5.71	4.76
1957	**360.0**	**50.0**	**3.06**	**3.06**	2.46	5.71	4.76
1960	**360.0**	63.1	**3.06**	**3.06**	2.46	5.71	4.76
1962	**360.0**	130.0	**3.06**	**3.06**	2.46	5.71	4.76
1965	**360.0**	266.4	**3.06**	**3.06**	2.46	5.71	4.76
1967	**360.0**	270.5	**3.06**	**3.06**	2.46	5.74	7.5
1970	**360.0**	310.6	**3.06**	**3.06**	2.46	6.06	7.5
1972	303.2	392.9	2.81	2.81	2.25	5.64	7.59
1975	296.8	**484.0**	2.37	2.39	1.86	4.94	8.38
1977	268.5	**484.0**	2.44	2.46	1.86	4.66	8.74
1980	226.7	607.4	2.14	2.18	1.5	4.98	7.86
1982	249.1	731.1	2.11	2.34	1.89	6.07	9.46
1985	238.5	870.0	2.20	2.48	2.94	7.79	12.4
1987	144.6	822.6	2.11	2.52	3.72	7.8	12.96
1990	144.8	707.8	1.81	2.70	4.78	7.8	17.5
1992	126.7	780.7	1.63	2.55	5.52	7,.74	25.92
1995	94.1	771.3	1.42	2.50	8.35	7.74	32.43
1997	121.0	951.3	1.48	2.81	**8.29**	7.74	36.31
2000	107.8	1131.0	1.72	**3.8**	**8.28**	7.79	44.94
2002	125.4	1251.1	1.79	**3.8**	**8.28**	7.8	48.6
2005	110.2	1024.1	1.66	3.79	8.19	7.8	44.1
2007	117.8	929.3	1.51	3.44	7.61	7.8	41.35
2009	93.6	1276.9	1.45	3.52	6.83	7.75	48.4
2010	79.8	1108.3	1.26	3.06	6.30	7.78	46.67

*IMF IFS 1950 – 2011, Market Rate Period Average. Malaysia – Official Rate Period Average, China (Mainland) - Principal Rate Period Average

The path from multiple exchange rates (since 1981) to a single rate of the yuan (mid-1980s) and its transfer to a market basis (unification of the official and swap rates of the yuan in the mid-1990s). Since the early 2000s - a controlled market rate within narrow bands, with an ever-wider penetration of the yuan in international circulation, along with the expansion of the domestic currency market.

Unlike other "economic miracle" countries, **Singapore** was committed to a stable/strong currency policy (a small open economy that encourages foreign capital inflows). However, since the mid-1980s, the exchange rate has been used for counter-cyclical policies. In 1985–1988 and 1997–2000, the local currency was weakened in order to stimulate the economy's recovery from the crisis.

Malaysia has gone through one exchange rate regime after another, moving from a rigidly fixed rate (1958–71) to pegs to the US dollar/basket of currencies, then to a major devaluation (1998) under the impact of the crisis, and back to a peg to the US dollar (1998–2005). Finally, to liberalization. The local currency has fluctuated within bands of approximately ±30% for half a century (in 2011–13, its rate was comparable to the 1958 exchange rate).

Germany. Fixed exchange rate regime (artificially weakened local currency), with rare corrections, with a gradual transition from the late 1950s to convertibility of the German mark (as exports grew and the economy strengthened). Revaluations were not supported by the authorities. The first revaluation was only 10 years later, in 1961. The second - in 1969. The undervalued German mark was used as a competitive advantage.

In **Italy** in the late 1940s there was a one-time devaluation, an artificially weakened exchange rate of the lira to the dollar was established. Subsequently, a fixed exchange rate of the lira existed for two decades, with minor variations. Since the late 1950s, a gradual transition to convertibility of the lira and its market-oriented exchange rate.

Spain. Fixed exchange rate regime (undervalued lical currency), with the transition to convertibility of the peseta since 1960. A series of planned, controlled devaluations pegged to the US dollar. The goals are the same - to stimulate economic growth and exports, to attract foreign capital.

Israel. Fixed exchange rate, with controlled devaluations aimed at taking advantage of the undervalued national currency. In the 1950s, a multiple exchange rate regime was used, with different rates for importers and exporters. Large devaluations in 1952, 1962, 1967. Then liberalization of the exchange rate.

10.7. Dynamics of Government Final Consumption Expenditures. Low Tax Burden

During periods of catch-up modernization, restrictions may be imposed on current government consumption. All resources are for investment. Fast-growing economies going through "catch-up modernization" usually maintain final (current) government consumption expenditures within certain limits (usually 8 - 14% of GDP) (see **Table 2.23** below).

As a consequence of limited government final consumption expenditures, "catch-up modernization" could be a time of low taxes ("General government revenues/GDP", "Taxes/GDP").

The share of financial resources left by the state to businesses after taxation for development purposes is significantly expanding.

What does tax policy serve in this situation? A) Transformation of the industrial structure, growth of production; b) financing of infrastructure development; c) selectivity in incentives; d) modernization of the tax structure, termination of the imbalances that have arisen in them; e) elimination of excessive incentives and increase of the financial base for expenditures on social development (Li, Kuo-Ting, 1976, pp. 478 - 484).

Taiwan

Taiwan presents a somewhat different picture – high government final consumption during a period of superfast economic growth (**Table 2.21**) with a very low tax burden (**Table 2.22**). The reason is estimated to be very high military expenditures (included in government final consumption), which were made possible by unprecedented levels of US economic aid. This aid averaged 6.4% of Taiwan's GNP (Jacoby, 1966, p. 7). In the 1970s, government final consumption expenditures began to decline.

Table 2.21. Government Final Consumption Expenditures

Year	Government Final Consumption Expenditure, % GDP
1951	17.8
1955	19.0
1960	19.1
1965	17.2
1970	18.3
1975	15.8
1980	15.9
1985	16.1
1990	17.2
1995	14.2
2001	13.0
2005	12.5
2010	12.1

Table 2.21. (Continued)

Year	Government Final Consumption Expenditure, % GDP
2015	13.9
2022	13.8

*Statistical Yearbook of the Republic of China (1975, 2002, 2012, 2022)

At the same time, Taiwan had (and continues to have) the lowest tax burden on businesses and individuals (**Table 2.22**), which inevitably should have become an incentive for superfast growth of economy.

Table 2.22. Fiscal Burden on Taiwan's Economy (1980 – 2023)

Year	Net Budget Revenues (all levels of government) / GDP, %	Net Budget Expenditures (All Levels of Government) / GDP, %	Budget Surplus (+), Budget Deficit (-)
1951	13.4	14.1	-0.11
1955	22.2	21.7	+0.15
1960	19.3	19.4	-0.08
1965	20.6	19.7	+1.01
1970	22.6	21.7	+2.07
1975	21.6	20.3	+7.54
1980	24.7	23.2	+23.52
1985	23.3	22.8	+12.31
1990	27,.9	27.1	+36.42
1995	30.0	29.6	+27.81
2001	24.7	24.7	0.0

* Statistical Yearbook of the Republic of China (1975, 2002); Li, Kuo-Ting. The Experience of Dynamic Economic Growth in Taiwan. Taipei: Mei Ya Publications, Inc., 1976, p. 519.

Was the low fiscal burden a deliberate policy of the Taiwanese government? Or was it a consequence of weak tax administration? The answer to the first question is “yes”! The answer to the second question is “no” (except perhaps in the early 1950s) (Li, Kuo-Ting, 1976, p. 470)

International Practice

During periods of superfast growth, the government final consumption expenditures are usually limited. In most cases, they are lower than the “standard” of 14-15% of GDP (**Table 2.23**). The end of superfast growth may lead to an increase in the share of GDP spent on government final consumption.

Table 2.23. Dynamics of Government Final Consumption Expenditures during Periods of Modernization and Superfast Economic Growth

Year	Government Final Consumption Expenditures / GDP, %*							
	Japan	South Korea	Singapore	Malaysia	China (mainland)	Hong Kong	India	USA (for comparison)
1950	x	x	x	x	x	x	5.7	12.6
1955	10.1	8.8	x	13.0	x	x	6.6	15.8
1960	8.0	14.8	9.3	12.4	x	8.4	6.6	15.8
1965	8.2	9.4	10.5	17.0	x	6.8	8.8	16.1
1970	7.4	9.1	11.9	18.3	x	7.1	8.9	18.3
1975	10.0	10.9	10.4	17.5	x	7.1	9.3	18.0
1980	14.1	11.7	9.8	16.5	14.7	6.1	9.6	16.7
1985	13.9	10.3	14.3	15.2	14.3	7.2	11.1	17.1
1990	13.3	10.5	10.1	13.8	13.6	7.3	11.6	16.6
1995	15.2	11.2	8.5	12.4	13.3	8.4	10.9	15.4
2000	16.9	12.0	10.8	10.2	15.8	9.1	12.6	14.3
2005	18.1	13.9	10.6	12.3	14.5	8.8	10.9	15.7
2009	19.8	16.0	11.0	14.3	13.6	8.7	11.7	17.1
2010	19.9	15.2	10.7	12.7	13.4	8.5	11.6	17.0

* IMF IFS 1950 – 2011. Hong Kong – 1961. According to the generally accepted methodology, government final consumption does not include expenses related to the formation of fixed capital, with the exception of capital expenditures in the field of defense (equipment, capital structures, construction). IFS Government Final Consumption Expenditures (since 2012 – Public Final Consumption Expenditures)

As soon as the economy leaves the modernization mode and returns to “normal” dynamics, in most cases the government final consumption expenditures grow in relative terms (**Table 2.23**, data for Japan 1995–2010, USA).

During modernization, as a rule, a low tax burden (taxes + quasi-taxes) is maintained (**Table 2.24**). It is up to 2-3 times lower than in developed countries (up to 50-55% of GDP, the USA - lower values). The consequence is a significantly larger volume of financial resources for business to use for development than in "normal" times.

Germany - during the "economic miracle" period - had a heavier tax burden than the US. According to estimates, tax revenues amounted to 29-37% of national income in the 1960s. In Great Britain - 35-38%, France - 33-36%, the US - 28-30%. They were at the usual level for the "continental model". At the same time - a lot of strong tax breaks stimulating growth.

Table 2.24. Dynamics of Tax Burden

Year	General Government Revenues / GDP, %*							
	Japan	South Korea	Singapore	Malaysia	China (mainland)	Hong Kong	India	USA (for comparison)
1955	x	x	x	x	x	x	x	x
1960	x	x	x	x	x	x	x	x
1965	x	x	x	x	x	x	x	x
1970	x	x	x	x	x	x	x	x
1975	x	x	x	x	x	x	x	x
1980	26.8	x	x	x	26.5	x	x	x
1985	29.3	x	x	x	25.3	x	x	x
1990	31.5	x	29.4	32.9	19.0	18.4	18.0	x
1995	29.0	17.3	32.4	27.6	10.7	16.7	17.7	x
2000	29.2	22.3	28.7	21.3	13.8	17.3	17.0	34.3
2005	29.3	21.8	20.2	23.7	17.2	18.7	19.1	33.0
2009	31.6	23.0	18.0	27.1	20.0	19.2	19.5	30.9
2010	29.6	22.7	22.0	24.8	20.2	22.5	18.8	31.7

*IMF Economic Outlook Database April 2012. Hong Kong – since 1991, China – 1982, USA – 2001. The ratio adopted as the general government revenues (tax and quasi-tax burden) is «Cash Receipts from Operating Activities, General Government».

In post-war Europe, the fiscal burden was lower in the 1950s and 1960s than in the late 20th and early 21st centuries (Mirkin, Zhukova, 2018).

In **Italy**, poor tax administration created a low fiscal burden on the economy. Tax revenues amounted to 27-30% of national income in the 1960s. This is lower than in Germany, France and the UK. Plus a significant package of tax breaks during the "miracle".

11. Financial “Boosting”: An Extended Overview

As stated above, everything that happens during the “economic miracle” with the financial system can be called “financial policy of catch-up modernization”, “financial acceleration”, “financial boosting”.

In this research report we will use these terms as synonyms.

11.1. What is Financial Boosting

"Economic miracle" means that the financial system must be “accelerated”, being specially organized to stimulate superfast growth. This looks like unstable finance, qualitatively different from the large, mature, low-volatility financial systems of developed economies, growing at rates of 1-3%.

What does financial acceleration consist of::

A) financial dirigisme;

B) accelerated financial development ("financialization" + mitigating imbalances in finance);

C) developmental central bank;

D) "repressed" financial system, then turning into a "liberal" one;

E) financial policy to stimulate economic growth.

Models of "Financial Acceleration"

Taking into account earlier studies (Mirkin, 2014; Mirkin, Zhukova, 2018), 2 models of financial acceleration can be traced:

- "Asian" (except Singapore). In the poorest economies, the strength of financial acceleration is significantly higher. The reason is their starting positions. Economies are less market-oriented, poorer, have less developed technologies, weaker social obligations (which means the tax burden may be lower), and foreign investments are less significant at the starting point. Financial acceleration, its dynamics are expressed more clearly;

- "Continental". Countries that are more developed economically and socially at the starting positions. More integrated into the group of developed countries. Since the start of superfast growth, a significant flow of foreign investment has been coming into the country, playing the role of "lubricant". The financial boost seems less prominent. Its individual ingredients may not be so noticeable. For example, one might expect low taxes, but in reality a fairly high tax burden arises (with strong benefits for growth and modernization). Or instead of undervaluing the national currency (although this always exists in practice), special attention is paid to its stabilization. This was the financial boost in post-war Europe, in Israel, in Singapore.

11.2. Financial Dirigisme

Financial dirigisme is an expanded government intervention in the financial sector compared to how it would exist based primarily on the influence of market forces and self-regulation.

How can this be seen?

Significant expansion of the scope of rules and regulations coming from monetary and financial authorities. Rationing of a significant part of loans. Exchange rates and interest rates set in whole or in part by administrative decisions. Very high administrative barriers to financial activities. Extended restrictions on the financial account of the balance of payments. A very significant role of banks and other financial institutions that are fully or partially owned by the state.

Financial dirigisme is closely related to the concept of a “repressed financial system” (see below).

In the “Asian” model, financial dirigisme is expanded, while in the “continental” model it is implemented in a softer form.

11.3. Financial Development and Economy

"Financial development", "financial depth" of the economy or "financial deepening", "financialization" are synonyms. This is the process of the "penetration" of money, financial instruments and financial institutions into the economy, plus the preferential growth of the financial sector in comparison with the real sector. This is securitization - an ever deeper "penetration" of securities, derivatives, structured products into the economy. Diversification of ownership creates a basis for significant investments. Indicators of financial depth - Money Supply / GDP, Financial Assets / GDP, Stock Market Capitalization / GDP, Domestic Credit / GDP, Derivatives at par value / GDP, etc.

The greater the financial depth, the more developed the economy. Better able to finance innovations, sustainable growth, to provide financial resources for the "economic miracle". Higher valued. The price of money is lower.

This pattern was first shown in the 1980s by the World Bank.

Financialization is an accelerating process. In 1960, the ratio “Broad Money / GDP, %” for the world as a whole was 51%, in 1990 - 87%, in 2000 - 99%, in 2010 - 108%, in 2023 - 140%. The ratio “Monetary Sector Credit to Private Sector / GDP, %” for the world as a whole in 1960 was 33%, in 1990 - 79%, in 2010 - 82%, in 2023 - 96%. The same coverage ratio “Market Capitalization of Listed

Domestic Companies / GDP, %” in 1990) – 51%, 2014 – 90%, 2022 – 106% (World Bank World Development Indicators Database).

Technological revolutions are always accompanied by a sharp increase in financial depth. This has been proven by the practice of the last 300-400 years. Financial booms regularly delivered money to those who made technological revolutions. An ever-increasing part of material (and even intangible) assets became liquid, turning into negotiable rights to them (securities and derivatives).

What comes first – economic growth, which in turn leads to “financial development”? Or, on the contrary, is financial development a stimulus for economic growth?

This is the same question as Jonathan Swift's dilemma - whether to break an egg from the sharp end or the blunt end. Economic growth and financial deepening are mutually related. Money, credit, debts are not passive, they are active substances that influence growth, modernization, well-being.

The interrelationship between financial depth and the maturity of the economy allows us to assume that one of the strategies for catch-up modernization, as one of the independent policies of the state, transferring the economy to super-fast growth, could be its “financial development”.

At the Start – the Lowest Financial Depth

Usually, the financial system at the start of modernization is on the periphery of global finance, forms an extremely insignificant share of global financial assets, less than the country's share in global GDP. The share of investments in GDP is insignificant. The economy is very poor in money, debt assets and other financial instruments (10 - 20% of GDP). The indicators "Money supply / GDP", "Domestic credit / GDP", "Stock market capitalization / GDP" are much smaller than in developed and "new industrial economies".

The financial system is unbalanced. Financial resources are in short supply. Domestic demand is limited. Modernization projects are faced with an acute shortage of long-term financial resources. The share of informal and offshore (if a financial account is open) finance is high. High risks within the country encourage capital flight. Financial business is focused on short time horizons.

Dollarization/euroization of finances is widespread (if foreign currency is admitted to domestic circulation). The exchange rate of the national currency is artificial. The share of cash and surrogate money in the money supply is high. The operational capacity to redistribute financial resources for the purposes of modernization, to cover the extremely high risks associated with it (venture, high-tech industries) is low. Interest rates are too high. The margins of financial intermediaries are excessively high. There is excessive dependence on non-resident investments (if they are admitted to the domestic market). Financial assets and markets are speculative (the "speculative model" of the financial system) or almost invisible (markets "on the frontier"). Capitalization of banks and other financial institutions is low. Inflation and volatility of the exchange rate are high (if it is not artificially fixed).

The financial system, primarily the financial account of the balance of payments and the currency regime, is overflowing with administrative restrictions and is largely non-market. The government is the majority owner of the largest financial institutions.

The role of private finance in the economy is insignificant. The tax burden is excessive. The budget usually shows deficits and is often dependent on financial aid from developed countries. There are high risks of financial crises associated with financial infections from abroad and local bubbles.

Financial Development Policy and Catch-up Modernization

The objectives of the financial development policy for the “fast and furious” development of developing economies:

- to achieve the level of financial development of “new industrial economies”;

- transition from the “speculative model” of the financial system, dependent on foreign capital (or financial aid), to an “investment-oriented” model based on strengthening the importance of domestic financial resources, focused on long-term investments and, accordingly, on modernization of the economy and financing of innovations.

To achieve this, the following tasks are being solved (over a period of 20–30 years):

1) Financial deepening, overcoming major financial imbalances:

- "Catch-up changes" of key parameters of financial development (to the level of newly industrialized economies) - growth of monetization, reduction of interest rates, easing of access to debt assets; normalization of inflation; calming of extremely high volatility of financial markets and growth of their capitalization; weakening of "dollarization" / "Euroization"; mitigation of the gap between the real and nominal effective rates of the national currency (if it exists); transition to an undervalued local currency rather than an overvalued one; growth of the investment rate and the savings rate; recovery from the "Dutch disease" in public finances (in resource economies oriented towards export), reduction of the tax burden and regulatory costs; mitigation of other financial imbalances.

- "Financialization" of the economy – together with the growth of monetization – diversification of types of financial institutions, multiple growth in the number of financial intermediaries, as well as types of financial instruments and transactions, as well as specialized segments of financial markets.

- Transition from a "bank-based system to finance the economy" to a mixed model that includes elements of a "market-based system"

- Internationalization of the national currency, transition to its convertibility.

- Transformation from a country characterized by capital flight into a country that imports long-term capital, primarily focused on foreign direct investments (transfer of innovations, modern technologies, best management practices).

2) Growth of long-term investments in the real sector, in modernization, to ensure sustainable economic growth:

— Covering the financing needs of fast-growing sectors of the economy in all segments where modernization is taking place ("seed capital", venture financing, markets of small and mid caps, markets of high-tech companies, project financing based on development institutions, etc.).

— Increasing resources of government budget allocated for long-term investments in the real sector (through government participations in equity capital, through project financing, through the purchase of corporate bonds, etc.).

— The growth of foreign direct investments ahead of foreign portfolio investments, especially in its speculative component, the accumulation of large stocks of foreign direct investments inside the country.

3) Diversification of ownership as the basis of the financial system, a shift towards a financial market model based on the activities of many small shareholders and institutional investors whose clients are mainly individuals (the emergence of a middle class):

- Privatization for the benefit of the middle class, a move towards "people's capitalism" ("shareholder capitalism") instead of "stakeholder capitalism", greater share of retail investors in equity capitals, growth of securitized assets in the structure of people's long-term savings (tax incentives for investors, individual pension and investment accounts, investment clubs, etc.).

— Expanding the share of institutional investors representing individuals (investment funds, pension and charitable funds, corporate investment plans, endowment funds, insurance companies, employee option programs) in equity capitals;

— Development of ownership protection (corporate governance, information transparency, protection of investors' rights, fair valuation of assets, independent courts, etc.);

4) Improve the competitiveness of domestic finances relative to other emerging markets, preventing the flight of trading activity, issuers and investors abroad:

— Growth in domestic demand for long-term financial instruments (shares, corporate bonds, units and insurance policies of institutional investors), primarily due to retail savings;

— Weakening the dependence of domestic financial markets on speculative investments

-removing incentives for the carry trade, for manipulating markets from abroad;

- development of mechanisms to counteract bubbles (arising from hot money of non-residents); preventing financial infections from abroad (financial contagion), as well as unexpected slowdowns in the inflow of foreign capital (sudden stop) and panic flight of capital;

— Improving the efficiency of regulatory framework: to develop the operational capacity of regulators; to reduce excessive regulatory costs; to reorient regulators to the tasks of developing financial markets as a priority in comparison with daily supervision of financial markets;

— Improving the efficiency of domestic financial markets (to the level of new industrial economies):

-reduction of transaction costs;

- consolidation of liquidity, markets and their infrastructure, overcoming their fragmentation, development of "national", systemically important institutions (stock exchange, central depository, clearing and settlement center, rating agency, etc.); along with this, launching alternative markets (ensuring a competitive environment);

- providing information transparency, fair pricing, and investor protection (to the level of "newly industrialized countries");

— Reducing the systemic risk of financial markets, ensuring their stability, preventing financial crises and the shocks they cause in the economy:

- financial account policy of the balance of payments / exchange rate / tax / government budget / price policies on a national scale, counteracting systemic risks;

-development of macroprudential supervision, as well as a system of joint actions of financial regulators in emergency situations;

— Restructuring the financial sector, strengthening the financial stability of its institutions:

- overcoming excessive concentrations of ownership, liquidity, assets, weakening the influence of the state if it is excessive and distorts the market environment to the extreme; deoffshorization;

- weakening oligopolies if they significantly interfere with the functioning of the market, protection of the competitive market environment;

- growth of capitalization of financial institutions;

- introduction of risk management mechanisms that can prevent market overheating, suppress excessive volatility and appetites for extremely high risks in order to obtain short-term profits;

— Growth of capitalization of financial markets based on fundamental (instead of predominantly speculative) factors, gradual transition to national business having a valuation comparable to that of new industrial economies...

11.4. “Developmental” Central Bank

What role does the central bank play in a transition/developing economy that is faced with the goals of modernization and financial development?

A "passive" role, trying to stabilize prices, interest rates, exchange rates, financial markets, but unable to perform the function of promoting ultra-fast growth?

Or following “dirigisme”, stimulating sustainable growth, modernization, financial development, clearing up distortions in finance?

Or simply play the role of a technical, accounting system that has neither the incentives nor the resources to influence anything?

"Passive" model of central bank behavior. In times of "business as usual", in calm economic weather, the usual view of central banks is that their area of responsibility is price stability, as well as stabilization of the national currency exchange rate. After the crises of the late 1990s - 2000s, "financial stability" was added to these goals.

Activism, artificial intervention in the economy to accelerate it are not welcome. The maximum is "easy influence", small turns of the "steering wheel" to gently correct inflation today, tomorrow to correct the dynamics of the money supply by a few points and encourage or slow down the economy by a few steps. To correct the interest rate in the order of countercyclical regulation. To keep the economy in its usual state, without shocks.

Direct responsibility of the central bank for macroeconomic dynamics, for acceleration of the economy or for its structural restructuring of the economy is generally not recognized.

The "dirigisme" model emerges in periods of extreme change and during crises. "Easy adjustment" methods do not work. "Developmental central banks" enter the scene (Epstein, 2009).

It is necessary to protect the national economy on world markets - central banks start currency wars. It is necessary to bring down the crisis - the printing press is launched. It is necessary to finance preparations for war - the central bank automatically provides loans to industry, sometimes directly. The Central Bank behaves as an "activist", directly intervenes in the economy with available tools (control the supply of money, credit, interest rates, exchange rates, financial account of the balance of payments (its regime), regulatory environment, etc.).

The crises of 2007-2013 demonstrated this well. The Federal Reserve System and other central banks of developed countries decisively "entered" the economy (de facto nationalization of banks, their refinancing when they were almost bankrupt, "buying out" bad debts, quantitative easing (money printing), negative interest rates policy, weakening the national currency, etc.).

When the economy, as it was in Russia in the 1990s and 2000s, experiences a time of drastic changes in its model (revolutions, reforms, change of “isms”), and everything is transformed – property, institutions, regulatory environment, and finances are unbalanced to the point of collapse; if the economy degrades to a resource-producing one and this happens over decades, then the Central Bank must show its art of “interventionism”.

The same thing should obviously happen if a developing economy (mixed, in transition) is trying to create an “economic miracle” and is looking for tools to launch its acceleration.

The models of behavior of the central bank during the transition of a developing economy to catch-up modernization are reduced to the following:

- "shock" model (generation of shocks);
- imitation model (a type of passive behavior);
- "construction" model (dirigisme);
- "financial development" model (dirigisme).

Shocks. There is always a choice between successive, step-by-step transformations (with a horizon of 10-20 years) and shock therapies in finance (currency reform, one-time, deep devaluation, a “high” jump in the interest rates set by changes in the discount rate of the central bank, a currency war, etc.).

It is pointless to exclude shocks from the arsenal (they became fashionable in the early 1990s).

At the same time, as in medicine, they should be used only in exceptional, desperate situations, since they are capable of leaving the country's economy and finances in a situation of significant imbalances and risks for decades (case - Russia, early 1990s). As a metaphor, this is the same as "bringing down the temperature" instead of treating the entire economic organism, which is on the brink of existence.

"Imitation" model (pattern of passive behavior, worst choice). During the transition from an administrative to a market economy, the central bank builds standard market mechanisms to implement its policy (open market operations (government debt, forex, repo), bank refinancing tools, central bank interest rates, mandatory reserve requirements, international reserves, etc.).

Once these mechanisms are formally in place, the central bank imitates a “normal” monetary policy regime through “light adjustments,” similar to what happens in developed countries in non-crisis times. The refinancing rate is changed in small steps, inflation or the exchange rate is targeted (within moderately sized bands, which are then invariably revised during volatility explosions), liquidity transferred to the economy is increased or, conversely, reduced. The key parameter that the central bank influences (the exchange rate, the inflation rate) is targeted in order to maintain stability of the entire financial system. The central bank is not playing to get ahead, but rather to maintain the stability of the financial system, which is characterized by deformations and imbalances, in sizes that far exceed those in developed countries.

This task is, as is clear from the start, unsolvable. In a relatively small open economy (transitional, developing, at the lower stages of financial development), imbalances can only be stabilized on the basis of a large, sustainable net inflow of long-term foreign capital. This is more an exception (the EU's "absorption" of Eastern European countries) than a rule.

As a result, this model of the central bank's actions should invariably result in extremely high fluctuations in financial markets on the brink of crisis, an inability to support the transition of the economy to a zone of modernization and stable high growth rates. Pseudo-stability may be achieved, but only for a relatively short time.

There is no pragmatism in this model of the central bank's actions. It often follows myths and ideas that are relevant to other conditions, blindly copying the practices of developed countries. What is effective for some situations leads to disasters in others.

Case of the imitation model in the 1990s - 2020s - Russia.

"**Construction model" (dirigisme).** The central bank acts as an active builder of new institutional elements (financial markets, prudential supervision, information disclosure system, etc.), creates all the mechanisms of monetary / credit / exchange rate / interest rate policies, which are familiar to a developed economy. An increasingly complex market infrastructure is implanted, new financial institutions / instruments are initiated, ahead of the real needs of the economy and the market.

The risks of the "construction" model are a) overloading markets with excessive regulation; b) introducing developed market institutions ahead of schedule, before real needs for them arise, and as a result, deepening financial imbalances (Russia as a case study, early liberalization of the financial account of the balance of payments, which increased the size of capital flight from Russia); c) "running ahead", when the construction of institutions sharply outpaces the economy's ability to fill them with liquidity. They stand "empty" (the securities market of Kyrgyzstan in the second half of the 1990s, as a case study).

In all cases of superfast growth, central banks used the "construction model", combining it with other manifestations of dirigisme.

The "financial development" model (dirigisme, the best choice). Combined with the "construction model". The Central Bank consistently sets and solves the tasks of financial development (see above) based on a combination of dirigisme (direct influence on the money supply, credit, interest rates, exchange rates, financial account of the balance of payments) and indirect, market influence on them. This model operates within the framework of the "repressed financial system" (see below).

In order to stimulate super-fast growth, the central bank consistently increases financialization to the extent of the real needs of the economy, creates direct or indirect channels of targeted debt financing of priority areas of super-fast growth, with a simultaneous, careful and gradual reduction in interest rates and suppression of inflation.

As we move towards more mature financial development, "dirigisme" shrinks like "shagreen leather", and in its place increasingly comes the indirect, market-based policies of the Central Bank.

This is how central banks behaved in Asian economies (Taiwan, Japan, South Korea, China, Malaysia). Spain was close to this.

A more moderate approach was observed in Singapore, Germany, Israel. Less emphasis on dirigisme, more on central bank behavior as described in the “simulation model” (against a large flow of foreign investment/foreign aid).

11.5. The "Repressed" Financial System: From Creation to Departure from the Scene

In a transition/developing economy, a real market environment is usually not yet in place. It is full of oligopolies, over-concentrated ownership, and dominated by the state. The risks are too high. As a result, the financial system in such an economy is usually deformed, and the way it feels is very much like a sick person.

The cases (but not limited to) are: too high interest rates; manipulated exchange rates; non-monetary inflation based on non-market growth in prices and tariffs regulated by the government; monetization that is too low, creating a shortage of money in the economy (as a result of attempts to suppress inflation); a distorted stock market (preferences for government securities); a speculative financial account of the balance of payments; over-concentrations of problem loans in businesses related to the state, etc.

These sharp "built-in" deformations cannot be corrected by the market environment, because there is no such environment. In order to remove the deformations, expanded administrative intervention by the central bank ("ceilings", limits, bands, bench-marks, targets, a large (more than usual) number of rules and regulations, etc.) becomes inevitable.

As a consequence of this, in the policy of financial development it is necessary to carefully use elements of the “repressed financial system” (international term) (Chari V.V., Dovis A., Kehoe P.J., 2016), without crossing the boundaries of the market economy, without moving – in finance – into a command economy.

What is "repressed"? This is a financial system with an expanded - in comparison with a developed economy - use of administrative "ceilings", limits, bands, etc., established by directives by the regulator for financial variables at the macro- and micro-level.

How do dirigisme and "repression" manifest themselves in finance?

At the beginning of the path - in a financial system in which everything is distorted, it is impossible to influence only a separate parameter (exchange rate, interest rate, money supply). "If you stretch your tail, you will pull your nose" and vice versa.

What instead?

"Multi-targeting" (targeting not only inflation and/or the exchange rates, but also the money supply, the dynamics of domestic credit, interest rates, foreign exchange reserves, etc.). Partial rationing of credits at a preferential interest rates and under targeted refinancing of banks from the central bank. Restrictions on the financial account of the balance of payments (direct or indirect, through taxes). Temporary direct impact on interest rates in order to reduce them (ceilings, limits). Strong tax incentives in financial activities that accelerate growth and make long-term investments profitable, etc.

International experience of such adjustments of the financial system is huge. It is important that these adjustments are for "financial development" as the ultimate key goal. As financial development proceeds, and as the market environment in a transitional/developing economy becomes more mature, dirigisme should weaken. Financial liberalization (easing of "financial repression") begins. In practice, it can continue for decades.

11.6. Financial Policy to Stimulate Economic Growth

Acceleration is a painful, 10-20 year restructuring of the economy. Not sustainable economic growth, not gradual modernization, but rather a boost, an economy at its limits, catch-up modernization. For an airplane to set a record, its parameters - "prices and tariffs, interest rates, property, exchange rates, taxes, government spending" - everything that the government influences, must be set to supersonic speed.

All the countries that performed the "miracle" typically had a huge accumulation rate for decades. In Asian countries - from 30 to 45% of GDP on investments. In post-war Europe - from 25 to 30%, with greater investment efficiency (more return on each monetary unit invested).

For an economy to become a "race car", the fiscal burden must fluctuate at least around 30% of GDP. All "miracle" countries have gone through low taxes.

Plus a host of tax incentives encouraging investment in innovations, venture capital, key industries, and corporate securities as a tool for financing growth.

Typically, in countries at the stage of superfast economic growth, the government final consumption expenditures are 8-13% of GDP. The less the state “eats”, the more private investments, the higher the growth rate.

The countries that have achieved an economic miracle have, step by step, provided more and more significant financial depth. In a modern economy, when it accelerates, the indicators "Money Supply / GDP", "Domestic Sredit / GDP" should be more than 100%. In China, they are well over 200%. This is the result of many years of monetary and credit policy of the central bank.

In order for credit to be directed to key points of industrial development, “politically motivated loans” (policy loans) are widely used (including through credit rationing and the use of financial institutions under government control).

To achieve super-fast growth, it is necessary to normalize interest rates and suppress non-monetary inflation, the source of which are prices, which are influenced by oligopolies and the state. Typically, the "miracle" countries were able, while accelerating, to reduce interest rates by 2-3 times, bringing it to 3-5%.

The “economic miracle” strategy may be associated with a long-term, without jerks and revolutions, weakening of the domestic currency against the US dollar, as well as against a basket of world currencies.

An excellent case of an economic miracle and skillful and accelerated financial development is Taiwan, which survived under strong military pressure and in a few decades became an “Asian tiger”, a newly developed economy.

Case studies of Japan, China, South Korea, Singapore, and Malaysia demonstrate the success of the “financial acceleration” policy (Mirkin, 2014).

Similar policies, albeit in a less clear form, were implemented in Germany, Italy, Spain, and Israel (Mirkin, Zhukova, 2018).

The trends are the same. Despite all the local peculiarities, this experience is of great value for post-Soviet countries.

12. Financial Tools for Stimulating Superfast Growth

12.1. Accelerated growth of monetization

Administrative way of influence - targeting of money supply (South Korea, 1961 - 1988, China).

12.2. Interest Rate Management

Direct non-market management is most common when superfast economic growth starts. Then, as financial development and liberalization gain strength, it fades away.

Taiwan

Credit rationing was associated with the use of preferential interest rates (loans to priority industries/priority businesses/state-owned companies/export-import projects/for the production of priority products) (Li, Kuo-Ting, 1995, p. 106).

A unique ingredient of monetary/interest rate policy in Taiwan was the deliberate, policy-driven decision to raise savings deposit rates significantly in order to provide savers with a significant positive real interest rate (which quickly brought down inflation, creating a high savings rate/investment rate).

Command management of interest rates by the central bank during inflation outbreaks and crises (Li, Kuo-Ting, 1995, pp. 107 - 108). In particular, the central bank set upper limits for interest rates on deposits; "interest rate bands" for bank loans (Emery, Robert F., 1984, p. 12).

International Practice

The following were used: direct government control over the interest rate, low interest rate policy (Japan), interest rate cap set by law (South Korea), bank refinancing for certain purposes at a low (preferential) interest rate (South Korea), provision of interest-free or low-interest loans to priority sectors (Germany); administered interest rates below the inflation rate (stimulating demand for credit) (South Korea), preferential interest rates on loans to priority sectors (Japan, South Korea), interest subsidies (South Korea, China), interest rate cartel (Singapore, Italy), administrative benchmarks for interest rates on loans and deposits for banks ("ceilings", lower interest rates, spreads between interest rates on deposits and interest rates on loans) (Japan, China, Malaysia (before 1978), Germany in the 1960s, Spain until the second half of the 1970s, Israel); interest subsidies (Italy); subsidizing interest on export credits (Israel); setting a reduced interest rate (on long-term loans - Germany, on authorized loans and approved enterprises - Israel).

12.3. Credit Management

Credit rationing (direct administrative allocation of a portion of loans to businesses at preferential interest rates) is common during periods of super-fast growth. Combined with market-based bank loans and informal financing.

Taiwan

Rationing of loans issued by a) both banks and specially created industry funds, b) loans not only in money but also in goods, c) the use of credit guarantees as a benefit for obtaining loans on market terms, d) preferential loans to coal mines, textile factories, shipyards, metalworking companies, agricultural businesses, exporters, systemically important capital-intensive infrastructure projects, small and medium-sized companies for their development, the poorest families to build their homes, etc.

International Practice

Credit plan (Japan, China), credit rationing by industry, selective credit policy (Japan, Singapore), targeting credit to the economy (South Korea), credit limits (Japan, Singapore), credit quotas (China), government guarantees of bank loans (Japan), loans from state banks (Japan, China), central bank loans to commercial banks for specific purposes related to industrial policy, targeted loans to priority industries ("politically motivated loans", policy loans) (South Korea); limiting loans to the percentage of deposits (China); a mandatory structure of a bank's loan portfolio established from above, by industry (South Korea, China), credit recommendations (Singapore); direct regulation of the terms of certain types of credit (loan/value of collateral ratio, time periods for which loans are provided (Singapore)); direct lending by the central bank to the real sector (China); restrictions on short-term loans compared to the size of the long-term loan portfolio (Germany); division of banks into two types: commercial and industrial banks (Spain); special rediscount lines of the central bank for banks that lent to certain sectors of the economy (Spain); direct distribution of credit by the central bank through commercial banks (Israel); lending to priority sectors and approved enterprises on the basis of less demanding standards, authorization of preferential loans (Israel).

12.4. Financial Institutions (Owned or Majority-owned by the State)

Widely used as channels for preferential lending and financing of priority industries, projects, companies, etc., to stimulate growth and modernization. Must have sufficient capital and operational capacity, be systemically important, in order to actually stimulate rapid economic growth.

Taiwan

During more than 30 years of super-fast growth, Taiwan's banking system was under state control. In the mid-1960s, the number of private bank head offices and branches accounted for only 2.7% of the total in Taiwan (Lee Lawrence L.C., 1998, p. 18).

For example, the largest commercial bank, the state-owned Bank of Taiwan, which until the early 1960s performed some of the functions of a central bank. Since the late 1940s, it has been state-owned. The Land Bank of Taiwan (1945) is a state-owned bank specializing in land and real estate transactions. The Bank of Communications (re-entered the market in 1959-1960) is state-owned, its mission is to assist "investors in establishing new industries and expanding existing enterprises, mobilizing domestic capital, and activating the inflow of foreign capital" (Li, Kuo-Ting, 1976, p. 341). The Export-Import Bank of the Republic of China (1979) is state-owned and specializes in banking transactions in the field of foreign trade and investment from abroad.

A number of development institutions were not banks. For example, the Joint Commission on Rural Reconstruction, a Sino-American organization of 1948, managed 10% of the aid from the United States (assistance in creating new businesses in Taiwan). Another development institution was the Sino-American Fund for Economic and Social Development (1965). Its purpose was industrial development and technical assistance (Li, Kuo-Ting, 1976, pp. 152, 402-404).

International Practice

Specialized banks and financial institutions (development, export-import, investment-oriented, social funds) owned and controlled by the government (Japan, China, Korea, Singapore, Malaysia, Germany, Italy, Spain).

12.5. Tax and Quasi-tax Incentives for Superfast Growth

Strong tax incentives for growth and modernization are one of the key factors for ultra-fast growth. A common misconception is that tax incentives are just a deduction from budget revenues, and that companies and the population will not use the funds freed up from taxes for development purposes. Ministries of Finance often use these arguments in an attempt to prevent the introduction of new tax breaks.

Life shows the opposite. Taxes not only have a distribution function, but also a very strong function to stimulate the growth of economy and modernization.

Taiwan

Taiwan used a maximum of tax incentives (below is a far from complete list):

- special legislation (Statute for the Encouragement of Investments (1960, with subsequent amendments);

- corporate income tax rates are lower than personal income tax rates (to encourage new businesses) + the ability to deduct losses for the previous 4 years from taxable income for the current year + accelerated depreciation;

- reduced tax rates for farmers, exempting them from a number of taxes;

- exemption of newly established companies, as well as businesses increasing their capital, from corporate income tax for a period of several years (5 years);

- producers who invest retained earnings in fixed assets (buildings and equipment) can reduce their taxable profits by up to 25% of gross profits;

- tax exemption on income earned from business investments in other domestic corporations if the latter were not eligible for tax exemption;

- income received from the issue of shares at a price above par was exempt from income tax;

- income from transactions with shares was exempt from taxation;

- income from interest on bonds and dividends on shares issued in certain industries was exempt from income tax;

- interest income on deposits for a term of two years or more was excluded from the consolidated personal income tax (all main types of income were included in the tax base);

- income received from exports is exempt from sales tax; reduced rates or exemptions for other taxes;

- a fixed percentage of income received from exports is exempt from income tax;

- exemption from property tax for those who built factories for leasing in industrial zones; - special tax regimes in export processing zones;

- higher indirect taxes on luxury goods in order to prevent their excess production and consumption.

In terms of quasi-taxes (e.g. customs duties):

- prohibitive customs duties on the import of goods that were subject to "import substitution" and which the Taiwanese economy should be able to produce (and even export) independently. For example, on sugar (one of the main export goods in the 1950s), customs duties fluctuated between 100 and 130% in 1948-1976 (Scott, Mariuce, 1979, p. 323);

- low customs duties on essential goods, the needs for which are not fully covered by the Taiwanese economy (and will not be covered in the near future). For example, in 1972 these were wheat, barley, sorghum, soybean oil, nut oil, for industrial consumption - cast iron, scrap iron, caustic soda, vinyl chloride, etc. (Li, Kuo-Ting, 1976, pp. 491 - 492);

- high customs duties on goods considered "luxury items" in order to extract additional revenues for the benefit of the budget. For example, import duties on alcohol in 1948-1976 fluctuated within the range of 120-200%, on cigarettes - within the range of 100-192%, on perfumes and cosmetics - 120-156% (Scott, Mariuce, 1979, p. 323);

- incentive (the lowest possible) customs duties (or even their absence) on the import of goods (raw materials, semi-finished products, equipment, etc.) that are needed for import substitution, for the development of science and technology, or are supplied as economic aid. Including on minerals that are not available in Taiwan and cannot be extracted. For example, customs duties on iron ore in 1948-1965 were 5-6%, in the 1970s - 0%, on the import of agricultural machinery in 1948-1976 - 7-12%, on crude oil for oil refining purposes - 7.5-10% (Scott, Mariuce, 1979, p. 323);

- incentive customs duties (or their absence, or the use of discounts on customs duties) on goods whose export is stimulated by the state;

- prohibitive customs duties on goods whose export is not stimulated by the state;

- neutral customs duties, as a source of budget revenue, on the import of goods that cannot be produced (or are not produced) in Taiwan, but are one of the usual components of “normal” personal and industrial consumption;

- encouraging exports by providing discounts on tariffs on imported raw materials used in the manufacture of export products (Li, Kuo-Ting, 1995, p. 74);

- exemption of manufacturers from paying customs duties on imported machinery and equipment (Li, Kuo-Ting, 1995, p. 79);

- reimbursement of import duties, port charges, defense tax, and commodity tax paid on raw materials imported or produced within Taiwan (Li, Kuo-Ting, 1976, p. 32), if these raw materials are used to produce export goods;

- establishment of export processing zones with specially reduced customs duties (or their absence) to stimulate exports.

International practice

- Preferential taxation of strategic industries, full or partial tax exemptions (Japan, South Korea, Spain, Israel); regular reductions in individual taxes and the tax burden as a whole (Japan); countercyclical tax policy (after each crisis – a set of tax incentives stimulating growth) (South Korea);

- tax incentives encouraging mergers and relocation of production facilities to solve problems of overpopulation (Japan, South Korea); tax incentives for the repatriation of businesses located in other countries (Korea); reduced taxes on export income (Japan, South Korea, Germany); deductions from taxable profits received from the export of patents (Japan); linking the issuance of import licenses to subsidies for exports carried out by licensees (Japan); tax incentives for reserves created in companies to cover export risks (Germany);

- tax exemptions for investments in R&D; deductions of capital investments, investments in machinery and equipment from the income tax base (Japan, South Korea, Singapore); "investment" tax deductions (for investments in less developed regions, R&D) (Germany); tax incentives related to fixed assets most damaged by war and reparations (Germany); reduced tax rates on invested profits earned at low-profit enterprises (Italy);

- abolition of import customs duties on strategic equipment (Japan); lower import duties on equipment and raw materials that are recognized by the state as priorities (Spain); incentive import duties for investment goods, protective duties for imports that are not welcomed by the state (Israel);

- accelerated depreciation (Germany, Italy, Spain); acceleration of depreciation based on the accounting of export results (Japan); special extra-high depreciation rates for export production in order to make deductions from the tax base (South Korea); special accelerated depreciation regimes for small and medium businesses (South Korea);

- investment tax credits, tax credits for R&D (South Korea); depreciation bonus (accounting for expenses on the acquisition of fixed assets in the current tax period) (Germany);

- many types of reserve funds, contributions to which reduced the tax base, in support of exports and/or technological development (Japan, South Korea);

- tax incentives aimed at closing down unpromising industries (Japan); tax holidays, tax reductions for a certain period of time, which are provided to priority industries and projects, knowledge-intensive "pioneer companies", small and medium businesses, as well as for the production of systemically important goods (South Korea, Singapore); tax reductions for small and medium businesses (South Korea); tax incentives in housing construction (exemption from property tax, deductions of housing construction expenses from income tax) (Germany); tax incentives for organizations creating new jobs (South Korea); tax incentives encouraging overtime work (Germany), tax incentives stimulating energy efficiency (South Korea);

- abolition of capital gains tax (Malaysia); abolition/reduction of taxes related to securities (Italy); tax incentives on income from certain bonds (mortgages, municipal, housing construction, specialized development finance institutions) (Germany, Italy);

- tax incentives for people to increase domestic consumption (purchase of high-tech goods produced within the country), tax incentives related to savings and other financial products purchased within the country (Japan, South Korea);

- tax incentives for foreign investors (if they meet the requirements for the size of investment, for the manufactured products to be exported, and for them to invest in priority industries); establishment of a special tax regime for non-residents, sharply reducing the tax burden (South Korea); incentives for capital gains tax, accelerated depreciation for non-residents (Spain); tax incentives / abolition of taxes on non-residents' income received from investments in deposits and other debt products in Singapore (Singapore); tax incentives for royalties paid to non-residents and payments under licensing agreements (Singapore); exemption from personal income tax for 5 years for foreign technical specialists (South Korea); preferential taxation of foreign specialists (Malaysia); special tax incentives for the development of the international financial center (IFC) (taxes on financial products and IFC participants) (Singapore); tax incentives for the relocation of headquarters of international holdings (Singapore).

12.6. Exchange Rate Regime

The trend in the development of the exchange rate regime is a gradual (in no case premature) transition from the administrative mechanism of setting exchange rates to currency liberalization, to a market mechanism for finding the exchange rate, to the convertibility of the domestic currency, to the establishment of a domestic forex market and to the removal of restrictions on the purchase and sale of foreign currency in cash. It can last for decades.

As a result, gradual dedollarization of domestic finance.

Taiwan

In the early 1950s, establishment of multiple exchange rates, commanded by the state, both for artificial weakening and for artificial revaluation of the local currency (in cases where this is necessary for economic development). Since the late 1950s, a gradual transition to liberalization of the mechanism for establishing the exchange rate (step by step transition to a unified exchange rate, and then to a market-oriented mechanism for the emergence of the exchange rate, the establishment of a domestic forex market, first partial and then full convertibility of the local currency).

International practice

Japan – fixed exchange rate regime from the 1950s to 1973 (artificially weakened local currency). Then – revaluation, and in the 1970s – exchange rate liberalization. In 1950-1964 – total exchange rate control, forex budgets.

South Korea – artificially weakened national currency (devaluations of 1961, 1964, further weakening of the national currency).

China (mainland) – managed depreciation of the yuan in 1980-1994 (accusations of exchange rate manipulation by the US). Transition from multiple exchange rates (since 1981) to a single exchange rate for the local currency (mid-1980s), then unification of the official and swap rates of the yuan in the mid-1990s. Since the early 2000s – managed exchange rate within narrow bands with established limits for market fluctuations in the yuan exchange rate.

Singapore. In 1985-1988, 1997-2000 the local currency was weakened (to help the economy emerge from the crisis).

Malaysia: Fixed exchange rate (1958–1971); pegged to US dollar/basket of currencies; devaluation of local currency (1998); pegged to US dollar (1998–2005); then liberalized exchange rate mechanism.

Germany. Fixed exchange rate regime, artificially weakened currency, then liberalization from the late 1950s, gradual transition to convertibility of the German mark. First revaluation in 1961. Second in 1969.

Italy. Devaluation in the late 1940s, the lira to the dollar exchange rate was artificially weakened. Two decades of fixed lira exchange rate, with minor variations. Gradual currency liberalization since the late 1950s.

Spain. Fixed exchange rate regime (undervalued), since 1960 currency liberalization, transition to convertibility of the peseta. A series of planned devaluations against the US dollar.

Israel. Fixed exchange rate, with large controlled devaluations, artificially weakened national currency (1952, 1962, 1967). Then liberalization of the exchange rate.

Conclusion

There are no higher goals for the economy than achieving an increase in life expectancy, ensuring the well-being of every family, superfast growth, technological modernization, and transitioning into the group of developed economies.

Taiwan is a shining example of how to do this in 30 to 35 years, starting from a half-collapsed agrarian economy that had experienced all the disasters of World War II and civil conflicts, as well as continuous, multi-year external military pressure forcing it to bear very high military costs. Taiwan is also a shining example of how an economic miracle can be achieved when the path begins with economic, political and human shocks associated with the urgent evacuation of up to 2 million people from mainland China to the island. Finally, Taiwan is a shining example of how to become a developed country and a welfare state on an island with very limited natural resources, in a seismically active zone, and with a population in extreme poverty.

If we analyze the economic and social policies of Taiwan, we can see many similarities in the mechanisms of rapid growth and modernization that were applied in Japan, South Korea, and other Asian countries, particularly in China. It is important to remember that Taiwan was the second country, following Japan, in achieving its "economic miracle." The innovations implemented by its policymakers were, in many ways, pioneering efforts that were later replicated in many developing countries.

These economic and financial policies, as well as the instruments for their implementation, are examined in detail in the report, and a comparative analysis with the practice of other Asian and European countries is provided. Ultimately, this is a matter of “know-how” that can be offered to post-Soviet countries in their attempts to perform their own economic miracle. These are “standard” policies and instruments that certainly need to be adapted to the situation in one or another post-Soviet country. Relevant recommendations are given.

But the most important aspect of Taiwan's experience is its people—their goals, ideas, and talents. Their ability to conduct systematic analysis of the most complex situations at the macro level and find solutions consistently fueled the energy of the Taiwanese people, their desire to achieve higher living standards through entrepreneurship, through long hours of effective work, and through creativity rather than destruction.

The lessons in this area are especially valuable, and they are fully reflected in the report. The transformation of collective behavior models, both among the people and the elite, the complete consideration of their interests in policy, shaped by national culture, values, traditions, and a 5,000-year history, the emergence of a "developmental state," rapid growth while maintaining stability, and, most importantly, continuous changes based on new ideas that create new industries, new products, new markets, and new niches for Taiwan in the global division of labor—all of this is not only history but also another piece of "know-how" for any country aspiring to join the ranks of developed economies.

A remarkable lesson is that it’s not about mere imitation, which developing countries (including post-Soviet states) often fall into, but rather about adapting global practices. Another important lesson is that those who have the desire, power, and will, and those who are talented, can completely change the fate of their country.

There is no place for historical pessimism—there is always the possibility, within 3 to 4 decades, to rebuild a country by creating a developed market economy with deeply modernized institutions.

Bibliography

Agrarian Reform as Unfinished Business. The Selected Business of Wolf Ladejinsky (1977). Wash.: World Bank, Oxford University Press.

Athukorala Prema-Chandra, Tsai Pang-Long. Determinants of Household Saving in Taiwan: Growth, Demography and Public Policy. In *The Journal of Development Studies*, Vo1.39, No 5, June 2003.

Barach Denesh. Deng Xiaoping (1987). Moscow: International Relations [Барач Денеш (1987). Дэн Сяопин. М.: Международные отношения].

Bond M.H., Hwang K. The Social Psychology of Chinese People. In *The Psychology of the Chinese People* (1986). New York: Oxford University Press.

Caldentey, Esteban Pérez. The Concept and Evolution of the Developmental State. In *International Journal of Political Economy*, Vol. 37, No. 3, 2008, September 2008, pp. 27–53.

Chari V.V., Dovis Alessandro, Kehoe Patrick J. (2016). *Financial Repression: Evidence and Theory*. Federal Reserve Bank of Minneapolis. Economic Policy Paper 16 – 04.

Chen, Hongmin. The Relationship Between Chiang Kai-shek and Chen Cheng in Taiwan as Appears from Chen Cheng's Diary. In *Chiang Kai-shek and His Time. New Historical and Historiographical Perspectives* (2017). Venezia: Edizioni Ca' Foscari.

Cheng, Chen (1961). Land Reform in Taiwan. Taiwan: China Publishing Company.

Ching-kuo, Chiang (1984). *Perspectives. Selected Statements of President Chiang Ching-kuo. 1978 – 1983*. Taipei: Government Information Office.

Chiang Kai-shek and His Time. New Historical and Historiographical Perspectives (2017). Venezia: Edizioni Ca' Foscari.

Chiang Kai-shek (1947). *China's Destiny & Chinese Economic Theory*. New York: Roy Publishers.

Chiang Kai-shek (1952). *Selected Speeches and Messages of President Chiang Kai-shek (1949 – 1952).* Taipei: Office of the Government Spokesman.

Chu, Wan-wen (1999). *Industrial Growth and Small and Medium-sized Enterprises: The Case of Taiwan*. Taipei: Academia Sinica.

Constance Squires Meaney. State Policy and the Development of Taiwan's Semiconductor Industry. In *The Role of the State in Taiwan' Development* (1994). Armonk, New York: An East Gate Book.

Deaton Angus S., Paxson Christina. Growth, Demographic Structure, and National Saving in Taiwan. In *Population and Development Review*, Vol. 26, 2000.

Deaton Angus S., Paxson Christina. Saving, Growth, and Aging in Taiwan. In *Studies in the Economics of Aging* (1994). Chicago: University of Chicago Press.

Deng Xiaoping (1988). *The Main Issues of Contemporary China*. Moscow: Political Literature Publishing House (in Rus.). [Дэн Сяопин (1988). Основные вопросы современного Китая. М.: Издательство политической литературы].

Economic Growth and Structural Change in Taiwan. The Postwar Experience of the Republic of China (1979). Ithaca: Cornell University Press.

Emery, Robert F. (1987). *Monetary Policy in Taiwan, China*. New York: Federal Reserve, International Finance Discussion Papers, N 313.

Emery, Robert F. (1984). *Postwar Financial Policies in Taiwan*, China. New York: Federal Reserve, International Finance Discussion Papers, N. 252.

Epstein, Gerald. *Post-war Experiences with Developmental Central Banks: the Good, the Bad and the Hopeful*. UNCTAD, G-24 Discussion Paper Series, February 2009, No. 54.

Erhard, Ludwig (1958). *Prosperity through Competition*. New York: Frederick A. Praeger.

Fei, John C.H. A Bird's Eye View of Policy Evolution in Taiwan: An Introductory Essay. In *Li Kuo-Ting (1995). The Evolution of Policy Behind Taiwan's Development Success*. 2nd Ed. Singapore: World Scientific.

Freedman, M. (1979). *The Study of Chinese Society*. Stanford: Stanford University Press.

Haggard, Stephan, Pang, Chien-Kuo. The Transition to Export-Led Growth in Taiwan. In *The Role of the State in Taiwan' Development* (1994). Armonk, New York: An East Gate Book.

The Handbook of Chinese Psychology (1996). Hong Kong: Oxford University Press.

Hofstede G., Hofstede G. J., Minkov M. (2010). *Cultures and Organizations. Software of the Mind*. New York: McGrow Hill.

Irwin, Douglas S. (2021). *How Economic Ideas Led to Taiwan's Shift to Export Promotion in the 1950s*. Cambridge: National Bureau of Economic Research. Working Paper 29298.

Jacoby, Neil H. (1966). *An Evaluation of U.S. Economic Aid to Free China*. A.I.D. Discussion Paper No 11. Wash.: Agency for International Development.

Johnson, Chalmers (1982). *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925 – 1975*. Stanford, Stanford University Press.

Kai-shek, Chiang (1947). *China's Destiny & Chinese Economic Theory*. New York: Roy Publishers.

Kai-Shek, Chiang (1952). *Selected Speeches and Messages of President Chiang Kai-Shek. 1945 – 1952.* Taipei: Office of the Government Spokesman.

Kuan Yew Li (1998). *The Singapore Story*. USA: Prentice Hall.

Kuznets, Simon. Growth and Structural Shifts. In *Economic Growth and Structural Change in Taiwan. The Postwar Experience of the Republic of China* (1979). Ithaca: Cornell University Press.

Lee Lawrence L.C. (1998). The Developing of Banking in Taiwan: The Historical Impact on Future Challenges. Occasional Papers / Reprint Series in Contemporary Asian Studies. No 6 (149).

Li, Kuo-Ting (1995). *The Evolution of Policy Behind Taiwan's Development Success*. 2nd Edition. Singapore: World Scientific.

Li, Kuo-Ting (1976). *The Experience of Dynamic Economic Growth in Taiwan*. Taipei: Mei Ya Publications, Inc.

Li, Kuo-Ting, Yeh, W.A. Public Policy and Economic Development. In *Li, Kuo-Ting (1976). The Experience of Dynamic Economic Growth in Taiwan*. Taipei: Mei Ya Publications, Inc.

Li, Shih-hui (2005). The Currency Conversion in Postwar Taiwan: Gold Standard from 1949 to 1950. In *The Kyoto Economic Review* 74 (2). December 2005.

Lu, Luo (2011). Working Hours and Personal Preference among Taiwanese Employees. In *International Journal of Workplace Health Management*. September 2011.

Lundberg, Eric (1979). Fiscal and Monetary Policies. In *Economic Growth and Structural Change in Taiwan. The Postwar Experience of the Republic of China* (1979). Ithaca: Cornell University Press.

Lutao Sophia Kang Wang (2006). *K.T. Li and the Taiwan Experience*. Taiwan: National Tsing Hua University Press.

Mahathir bin Mohamad (1999). *The Way Forward*. UK: Weidenfeld & Nicolson Ltd.

Mierzejewski, Alfred C. (2004). *Ludwig Erhard: a Biography*. The University of North Carolina Press.

Mirkin, I. (2021). Financial Sector of Russia: 30 Years of High Volatility Inside Global Finance. *Outlines of Global Transformations: Politics, Economics, Law*, 14(5):119-142; DOI: 10.23932/2542-0240- 2021-14-5-6 (in Rus.). [Миркин, Я. (2021). Финансовый сектор России: 30 лет высокой волатильности внутри глобальных финансов. *Контуры глобальных трансформаций: политика, экономика, право.* 14(5):119-142].

Mirkin, I., Kudinova M., Levchenko A., Bunatyan A., et al. (2014). *Financial Strategies to Modernize Economy: International Experience*. Moscow, Institute of World Economy and International Relations, Magister (in Rus.). [Миркин, Я., Кудинова, М., Левченко, А., Бунатьян, А., др. (2014). Финансовые стратегии модернизации экономики: мировая практика. Москва, ИМЭМО РАН, Магистр].

Mirkin, I. (2024). Collective Behavior Models in Russia: Past and Future. *Social Sciences*, 55 (2): 49-65; https://dx.doi.org/10.21557/SSC.98116370.

Mirkin I., Suleimenov T., Hulhatchiev B., Zhukova T., Bakhtaraeva K., Komova A. (2017). *Eurasian Financial Markets: Structure, Dynamics, Future*. M.: Magister (in Rus.). [Миркин, Я. Сулейменов, Т., Хулхачиев, Б., Жукова, Т., Бахтараева, К., Комова, А. (2017). Евразийские финансовые рынки: структура, динамика, будущее. Москва, Магистр].

Mirkin I., Zhukova T., Bakhtaraeva K., Komova A. (2018). *Mechanisms to Stimulate Superfast Economic Growth: World Practice*. M.: Magister (in Rus.). [Миркин, Я., Жукова, Т., Бахтараева, К., Комова, А. (2018). Механизмы стимулирования сверхбыстрого роста: мировая практика. Москва, Магистр].

Pao Huei-Wen, Wu Hsueh-Liang, Pan Wei-Hwa (2008). The Road to Liberalization: Policy Design and Implementation of Taiwan's Privatization. *In International Economics and Economic Policy, Vol. 5, 2008, pp. 323–344*. . https://doi.org/10.1007/s10368-008-0118-8

Piketty T. (2014). *Capital in the 21st Century*. Harvard University Press.

Principles from East Asia: The Case of Taiwan (2003). Wash.: USAID Development Information Services.

The Psychology of the Chinese People (1986). New York: Oxford University Press.

Ranis G. The Evolution of Policy in a Comparative Perspective: An Introductory Essay. In *Li Kuo-Ting (1995). The Evolution of Policy Behind Taiwan's Development Success*. 2nd Ed. Singapore: World Scientific.

Ranis G. Prologue. In *Li Kuo-Ting (1995). The Evolution of Policy Behind Taiwan's Development Success*. 2nd Ed. Singapore: World Scientific.

Redding, Gordon, Wong, Gilbert Y.Y. The Psychology of Chinese Organizational Behavior. In *The Psychology of the Chinese People* (1986). New York: Oxford University Press.

Roger, Scott (1993). *The Management of Foreign Exchange Reserves*. Basle: Bank for International Settlements. BIS Economic Papers. No. 38.

The Role of the State in Taiwan' Development (1994). Armonk, New York: An East Gate Book.

Rubinstein, Murray A. (1994). The Taiwan Miracle. In T*he Other Taiwan. 1945 to Present*. Armonk, New York: M.E. Sharpe, 1994.

Ryan, E.J. The Value System of a Chinese Community in Java. Unpublished Doctoral Thesis. Harvard University, 1961. In *The Psychology of the Chinese People*. New York: Oxford University Press, 1986.

Scott, Maurice. Foreign Trade. In *Economic Growth and Structural Change in Taiwan. The Postwar Experience of the Republic of China* (1979). Ithaca: Cornell University Press.

Shea Jia-Dong, Yang Ya-Xwei. Taiwan's Financial System and the Allocation of Investment Funds. In *The Role of the State in Taiwan' Development* (1994). Armonk, New York: An East Gate Book.

Syu, Agnes (1995). From Economic Miracle to Privatization Success: Initial Stages of the Privatization Process in Two SOEs on Taiwan. Lanham: University Press of America, Inc.

Tang, Hui-sun (1954). *Land Reform in Free China.* Taipei: Joint Commission on Rural Reconstruction (JCRR).

Tien, Hung-Mao (1989). *The Great Transition. Political and Social Change in the Republic of China.* Stanford: Stanford University, Hoover Institution Press.

Veselka, Marco (2005*). Taiwan's Economic Development: The Role of Small and Medium-Sized Enterprises Beyond the Statistics*. Available at SSRN: https://ssrn.com/abstract=872387 or http://dx.doi.org/10.2139/ssrn.872387

Wu, Yuan-li (1985). *Becoming an Industrialized Nation*. New York: Praeger Publishers.

Yang, Kuo-Shu. The Psychological Adaptation of the Chinese People as a Result of Societal Modernization. In *The Handbook of Chinese Psychology* (1996). New York: Oxford University Press.

Цзян Чжунчжэн (Чан Кайши) (2009). *Советская Россия в Китае. Воспоминания и размышления в 70 лет*. М.: «Посев» (in Russian).