# SUSTAINABLE GROWTH: THE CASE OF SINGAPORE

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**Abstract**: Singapore's economic success over the past 50 years constitutes a valuable example for other countries worldwide. In the beginning the Republic of Singapore had a weak economy and no hinterland. Its sustainable growth has been achieved through the strong leadership of Lee Kuan Yew, the faith maintained between the government and its people, the hard working and commitment of a multiracial society. The aims of our paper are to briefly present and analyze the evolution of Singapore's economic growth. The methodological approach is based on a case study.

*Keywords*: economic growth, Singapore, Lee Kuan Yew, government. *JEL Classification*: 04.

#### 1. Introduction

Since the 1960s several East Asian countries have witnessed an impressive economic growth. Policymakers, government planners, economists and researchers all over the world showed great interest to the economic strategies designed, implemented and developed by the so-called 'four Asian Tigers' or 'four Dragons', namely Hong Kong, Singapore, South Korea and Taiwan (Chen, 1979; Berger and Hsiao, 1988; Lall, 1996; Chowdhury and Islam, 1997; Leipziger, 2000; Davis and Gonzalez, 2003; Paldam, 2003; Asien, 2015). There are several similarities among the Asian Tigers such as their location, their political regimes of 'developmental dictatorship' or soft authoritarianism, their export-oriented economies, their relationships with the United States, their languages (the spread and influence of the Chinese language), their religions (mostly Confucianism and Buddhism) and their strong educational systems (Kanatsu, 2015). They succeeded in upgrading and diversifying their economies and in reaching similar living standards with Western prosperous societies (Wade, 2004). Thus, they have become valuable models for the newly emerging economies (Arora and Ratnasiri, 2015).

Along with the other Asian Tigers, Singapore has experienced a rapid pace of economic growth. Its sustainable growth has been achieved over the past few decades through the strong leadership of Lee Kuan Yew, the faith maintained between the government and its people, the hard working and commitment of a multiracial society. In spite of the fact that this tiny heterogeneous city-state lack both natural resources and a hinterland of any sort, it possesses two key assets: its people and its geography (Krause, 1988). This is why Singapore has become one of the most significant exporters of labor-intensive goods in the world economy.

The aims of our paper are to briefly present and analyze the evolution of Singapore's economic growth. The methodological approach is based on a case study.

#### Achieving sustainable economic growth: the case of Singapore

After World War II Singapore joined the Federation of Malaya in 1963, but two years later separated to turn into the independent Republic of Singapore. The British colonialism and the Chinese expansion have produced together a cosmopolitan society (Table no. 1) which encourages the openness and rapid adaptability to changes. Since gaining its full independence, Singapore has obtained a remarkable socio-economic performance (Tan, 2007). The city-state has become a transport, financial and technological hub, and a regional educational, communication and biomedical science centre (Heng and Yam, 1998; Asien, 2015).

|  | able no. 1. Socio-economic indicators of Singapore  |
|--|---|
| Indicator  | Value   |
| Area   | 697 sq km   |
| Population   | 5,781,728 (July 2016 estimation)  |
| Ethnic groups  | Chinese 74.2%, Malay 13.3%, Indian 9.2%, other 3.3% (2013 estimation)   |
| Languages  | Mandarin (official) 36.3%, English (official) 29.8%, Malay (official) 11.9%, Hokkien 8.1%, Cantonese 4.1%, Tamil (official) 3.2%, Teochew 3.2%, other Indian languages 1.2%, other Chinese dialects 1.1%, other 1.1% (2010 estimation)  |
| Religions  | Buddhist 33.9%, Muslim 14.3%, Taoist 11.3%, Catholic 7.1%, Hindu 5.2%, other Christian 11%, other 0.7%, none 16.4% (2010 estimation)  |
| Age structure  | 0-14 years: 12.94% (male 382,479/female 365,595); 15-24 years: 17.02% (male 484,355/female 499,940); 25-54 years: 50.45% (male 1,420,833/female 1,496,125); 55-64 years: 10.34% (male 299,446/female 298,562); 65 years and over: 9.24% (male 243,418/female 290,975) (2016 estimation) |
| Life expectancy at   | Total population: 85 years; male: 82.3 years; female: 87.8 years  |
| birth  | (2016 estimation)   |
| Unemployment rate  | 2.1% (2016 estimation)  |
| Gross Domestic<br>Product (GDP) at<br>purchasing power<br>parity (PPC) | \$486.9 billion (2016 estimation)   |
| GDP per capita at PPC  | \$87,100 (2016 estimation)  |
| GDP composition<br>by sector of origin                                 | agriculture: 0%; industry: 26.6%; services: 73.4% (2016 estimation)   |
| Labor force  | 3.661 million   |
| Labor force by occupation  | agriculture: 1.3%; industry: 14.8%; services: 83.9% (2014)  |
| Inflation rate   | -0.8% (2016 estimation)   |
|  | lligence Agency 2017  |

| Table no. | 1. | Socio-economic | ind | icators | of | Singapore |
|-----------|----|----------------|-----|---------|----|-----------|
|-----------|----|----------------|-----|---------|----|-----------|

Source: Central Intelligence Agency, 2017

In the last sixty years Singapore has recorded significant economic growth rates (Table no. 2). With very few exceptions, the rates were positive and gave expression of the economic success story of Singapore.

| Table no. 2 | 2. The | GDP | growth rate | e of Singapore | in the | period 1965-2015 |
|-------------|--------|-----|-------------|----------------|--------|------------------|
|-------------|--------|-----|-------------|----------------|--------|------------------|

| Year | GDP growth rate (%) |
|------|---------------------|
| 1965 | 7.597               |
| 1970 | 13.886              |
| 1975 | 4.609               |
| 1980 | 10.027              |
| 1985 | -0.687              |
| 1990 | 10.044              |

| 1995 | 7.028 |
|------|-------|
| 2000 | 8.898 |
| 2005 | 7.489 |
| 2010 | 15.24 |
| 2011 | 6.207 |
| 2012 | 3.67  |
| 2013 | 4.675 |
| 2014 | 3.26  |
| 2015 | 2.008 |

Source: The World Bank, 2016a

The average economic growth rate was 8.5% from 1965 to 2005 (Richardson and Ong, 2012). In other words, economic growth remained consistently high for a long period of time (Haque, 2004). Consequently, with few exceptions, the GDP of Singapore increased continuously in the period 1965-2015 (Table no. 3).

 Table no. 3. The evolution of Singapore's GDP in the period 1965-2015

| Year | GDP (billion, current US\$) |
|------|-----------------------------|
| 1965 | 0.974,193,126               |
| 1970 | 1.92                        |
| 1975 | 5.633                       |
| 1980 | 11.893                      |
| 1985 | 19.138                      |
| 1990 | 36.152                      |
| 1995 | 87.89                       |
| 2000 | 95.834                      |
| 2005 | 127.418                     |
| 2010 | 236.422                     |
| 2011 | 275.221                     |
| 2012 | 289.269                     |
| 2013 | 300.288                     |
| 2014 | 306.344                     |
| 2015 | 292.739                     |
|      |                             |

Source: The World Bank, 2016b

The achievement of sustainable growth over a long period of time has allowed Singapore to become the second most competitive economy in the world (Table no. 4) since 2013 (Schwab, 2013; Schwab, 2014; Schwab, 2015; Schwab, 2016) and to be considered as one of the best place (Table no. 5) to live in the world (Klugman, 2011; Malik, 2013; Malik, 2014; Jahan, 2015).

| Country       | Overall index<br>2016-2017 |       | Overall index 2015-2016 |       | Overall index<br>2014-2015 |       | Overall index 2013-2014 |       |
|---------------|----------------------------|-------|-------------------------|-------|----------------------------|-------|-------------------------|-------|
|               | Rank                       | Score | Rank                    | Score | Rank                       | Score | Rank                    | Score |
| Switzerland   | 1                          | 5.81  | 1                       | 5.76  | 1                          | 5.70  | 1                       | 5.67  |
| Singapore     | 2                          | 5.72  | 2                       | 5.68  | 2                          | 5.65  | 2                       | 5.61  |
| United States | 3                          | 5.70  | 3                       | 5.61  | 3                          | 5.54  | 5                       | 5.48  |
| Netherlands   | 4                          | 5.57  | 5                       | 5.50  | 5                          | 5.49  | 4                       | 5.51  |

Table no. 4. The Global Competitiveness Index in the period 2013-2017

| Germany      |    | 5      | 5.57    | 4     | 5.53  | 8            | 5.45   | 8  | 5.42 |
|--------------|----|--------|---------|-------|-------|--------------|--------|----|------|
| Sweden       |    | 6      | 5.53    | 9     | 5.43  | 6            | 5.47   | 9  | 5.40 |
| United       |    | 7      | 5.49    | 10    | 5.43  | 7            | 5.46   | 7  | 5.47 |
| Kingdom      |    |        |         |       |       |              |        |    |      |
| Japan        |    | 8      | 5.48    | 6     | 5.47  | 4            | 5.50   | 3  | 5.54 |
| Hong Ko      | ng | 9      | 5.48    | 7     | 5.46  | 10           | 5.41   | 6  | 5.48 |
| SAR          |    |        |         |       |       |              |        |    |      |
| Finland      |    | 10     | 5.44    | 8     | 5.45  | 9            | 5.41   | 10 | 5.37 |
| <b>a a</b> 1 | 1  | 0010 ( | 1 1 1 0 | 11 01 | 1 001 | - <u>-</u> 1 | 1 2016 |    |      |

Sources: Schwab, 2013; Schwab, 2014; Schwab, 2015; Schwab, 2016

| Table no. 5. The Human Develo | opment Index (HDI) in the | period 2011-2014 |
|-------------------------------|---------------------------|------------------|
|-------------------------------|---------------------------|------------------|

| Tuble no. c. The Human Development Index (IDI) in the period 2011 2011 |          |       |          |       |          |       |          |       |  |
|--|----------|-------|----------|-------|----------|-------|----------|-------|--|
| Country  | HDI 2014 |       | HDI 2013 |       | HDI 2012 |       | HDI 2011 |       |  |
|  | Rank     | Value | Rank     | Value | Rank     | Value | Rank     | Value |  |
| Norway   | 1        | 0.944 | 1        | 0.944 | 1        | 0.955 | 1        | 0.943 |  |
| Australia  | 2        | 0.935 | 2        | 0.933 | 2        | 0.938 | 2        | 0.929 |  |
| Switzerland  | 3        | 0.930 | 3        | 0.917 | 9        | 0.913 | 9        | 0.903 |  |
| Denmark  | 4        | 0.923 | 10       | 0.900 | 15       | 0.901 | 14       | 0.895 |  |
| Netherlands  | 5        | 0.922 | 4        | 0.915 | 4        | 0.921 | 3        | 0.910 |  |
| Germany  | 6        | 0.916 | 6        | 0.911 | 5        | 0.920 | 7        | 0.905 |  |
| Ireland  | 6        | 0.916 | 11       | 0.899 | 7        | 0.916 | 5        | 0.908 |  |
| United States  | 7        | 0.915 | 5        | 0.914 | 3        | 0.937 | 4        | 0.910 |  |
| Canada   | 8        | 0.913 | 8        | 0.902 | 11       | 0.911 | 5        | 0.908 |  |
| New Zealand  | 8        | 0.913 | 7        | 0.910 | 6        | 0.919 | 5        | 0.908 |  |
| Singapore  | 9        | 0.912 | 9        | 0.901 | 18       | 0.895 | 23       | 0.903 |  |
| Hong Kong  | 10       | 0.910 | 15       | 0.891 | 13       | 0.906 | 11       | 0.898 |  |
| SAR  |          |       |          |       |          |       |          |       |  |

Sources: Klugman, 2011; Malik, 2013; Malik, 2014; Jahan, 2015

In order to analyze the evolution of Singapore's economic growth several key elements have to be taken into account. They belong to various domains as follows:

- The state autonomy. One of the main elements of the high economic performance of Singapore resides in its state autonomy, defined as "a combination of the "capacity" of the state to pursue developmentalist policies with its "insulation" from particularistic pressures, particularly those originating from large firms or unions" (Przeworski and Limongi, 1993, p. 56). State autonomy stimulates and enhances economic growth as state should play an active role in making the economy functions efficiently. In the case of Singapore, the postwar era witnessed the maximalist policies involving widespread state participation in economy but without neglecting the role of the market (Young, 1992; Huff, 1995). In fact, market-friendliness has been promoted by the interventionist economic policy (Khan, 2001).
- The strong political leadership of Lee Kuan Yew. Named the "founding father" of Singapore, he was the first Prime Minister of the country for more than three decades. A visionary man, Lee Kuan Yew established a unique Singaporean identity, maintained religious tolerance, advocated the creation of the Singapore Armed Forces and promoted racial harmony.
- The competitive economic system. There was a total commitment of Lee Kuan Yew and the government towards economic development. In this respect, an important role was played by the Economic Development Board a governmental

agency (Perry, 1992). In the beginning, they focused especially on the manufacturing industry. Later, Lee persuaded multinational corporations to heavily invest in industry, especially in electronics. Also, he transformed Singapore into an international financial centre and a technological hub.

- The favorable geographical position. Geography helped Singapore to become one of the biggest ports in the world and facilitated international trade (Huff, 1997). Trade has represented a growth engine for Singapore.
- The close relationships between the government and its citizens. They trust each other and work together with confidence. People understood the need to work hard under governmental guidance.
- The outstanding educational system. Singapore has built one of the best educational systems of the world because the developmental state has fully understood that its survival and prosperity depends on its human resources (Gopinathan, 2007).

## 3. Conclusion

As one of the Asian Tigers, Singapore has succeeded in achieving sustainable growth for many decades. Its impressive economic success was based on both economic and non-economic factors. On the one hand, the government has proved to play a fundamental role in ensuring the socio-economic development and stimulating sustainable growth. On the other hand, people have realized the importance of education and hard work in society.

The paper has shown that the economic success obtained by Singapore made this country a model for other nations around the world as other researches pointed out (Huff, 1995; Chua, 1997; Chua, 2011). Further researches might be carried on in order to identify and analyze other elements that led to the Singapore's economic growth.

### References

- 1. Arora, R.U. and Ratnasiri, S., 2015. Recent growth experiences of Asian tigers: where does India stand? *International Journal of Social Economics*, 42(2), pp. 143-162.
- 2. Asien, E.R., 2015. Japan, Asian Tigers and Effect Dragon. Journal of Alternative Perspectives in the Social Sciences, 7(2), pp. 334-354.
- 3. Berger, P.L. and Hsiao, H.-H.M. eds., 1988. *In Search of an East Asian Development Model*. New Brunswick and Oxford: Transaction Books.
- 4. Central Intelligence Agency, 2017. *The World Factbook*. Available at: <<u>https://www.cia.gov/library/publications/the-world-factbook/geos/sn.html></u> [Accessed 9 March 2017].
- 5. Chen, E.K.Y., 1979. *Hyper-Growth in Asian Economies*. London: Macmillan Press Ltd.
- 6. Chowdhury, A. and Islam, I., 1997. *The Newly Industrialising Economies of East Asia*. London: Pearson.
- 7. Chua, B.-H., 1997. *Communitarian Ideology and Democracy in Singapore*. London and New York: Routledge.
- 8. Chua, B.-H., 2011. Singapore as Model: Planning Innovations, Knowledge Experts. In: Roy, A., Ong, A., eds., 2011. *Worlding Cities: Asian Experiments and the Art of Being Global*. Chichester: Wiley-Blackwell Publishing. pp. 27-54.

- 9. Davis, J.C. and Gonzalez, J.G., 2003. Scholarly Journal Articles about the Asian Tiger Economies: authors, journals and research fields, 1986-2001. *Asian-Pacific Economic Literature*, 17(2), pp. 51-61.
- 10. Gopinathan, S., 2007. Globalisation, the Singapore developmental state and education policy: A thesis revisited. *Globalisation, Societies and Education*, 5(1), pp. 53-70.
- 11. Haque, M.S., 2004. Governance and bureaucracy in Singapore: Contemporary reforms and implications. *International Political Science Review*, 25(2), pp. 227-240.
- 12. Heng, T.M. and Yam, T.K., eds., 1998. *Competitiveness of the Singapore Economy: A Strategic Perspective*. Singapore: Singapore University Press.
- 13. Huff, W.G., 1995. What is the Singapore model of economic development? *Cambridge Journal of Economics*, 19(6), pp. 735-759.
- 14. Huff, W.G., 1997. *The Economic Growth of Singapore: Trade and Development in the Twentieth Century*. Cambridge: Cambridge University Press.
- 15. Jahan, S., 2015. *Work for Human Development*. New York: United Nations Development Programme. [online] Available at: <http://hdr.undp.org/sites/default/files/2015\_human\_development\_report.pdf> [Accessed 3 March 2017].
- 16. Kanatsu, T., 2015. The Asian Tigers. In: V. Barnett, ed., 2015. *Routledge Handbook of the History of Global Economic Thought*. New York: Routledge. pp. 315-322.
- 17. Khan, H., 2001. *Social policy in Singapore: A Confucian model?* New York: The International Bank for Reconstruction/The World Bank. [online] Available at:

<a href="http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.464.7967&rep=rep1">http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.464.7967&rep=rep1</a> &type=pdf> [Accessed 28 March 2017].

- 18. Klugman, J., 2011. *Sustainability and Equity: a Better Future for All*. New York: United Nations Development Programme. [online] Available at: <a href="http://hdr.undp.org/sites/default/files/reports/271/hdr\_2011\_en\_complete.pdf">http://hdr.undp.org/sites/default/files/reports/271/hdr\_2011\_en\_complete.pdf</a> [Accessed 3 March 2017].
- 19. Krause, B.L., 1988. Thinking about Singapore. In: B. L. Krause, K. Ai Tee, L. Yuan, 1988. *The Singapore Economy Reconsidered*. Singapore: Institute of Southeast Asian Studies. Ch. 1.
- 20. Lall, S., 1996. Learning from Asian Tigers: Studies in Technology and Industrial Policy. New York: Palgrave.
- 21. Leipziger, D. M., ed., 2000. *Lessons from East Asia*. Ann Arbor: The University of Michigan Press.
- 22. Malik, K., 2013. *The Rise of the South: Human Progress in a Diverse World*. New York: United Nations Development Programme. [online] Available at: <http://hdr.undp.org/sites/default/files/reports/14/hdr2013\_en\_complete.pdf.> [Accessed 3 March 2017].
- Malik, K., 2014. Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience. New York: United Nations Development Programme. [online] Available at: <a href="http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf">http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf</a>> [Accessed 3 March 2017].
- 24. Paldam, M., 2003. Economic freedom and the success of the Asian tigers: an essay on controversy. *European Journal of Political Economy*, 19(3), pp. 453-477.

- 25. Perry, M., 1992. The Singapore growth triangle: state, capital and labor at a new frontier in the world economy. *Singapore Journal of Tropical Geography*, 12(2), pp. 138–151.
- 26. Przeworski, A. and Limongi, F., 1993. Political regimes and economic growth. *The Journal of Economic Perspectives*, 7(3), pp. 51-69.
- 27. Richardson, J. and Ong, E., 2012. The Improbable Resilience of Singapore. *Solutions*. 5(3), pp. 63-71.
- 28. Schwab, K., ed., 2013. *The Global Competitiveness Report 2013-2014*. Geneva: World Economic Forum. [online] Available at: <http://www3.weforum.org/docs/WEF\_GlobalCompetitivenessReport\_2013-14.pdf> [Accessed 15 December 2016].
- 29. Schwab, K., ed., 2014. *The Global Competitiveness Report 2014-2015*. Geneva: World Economic Forum. [online] Available at: <http://www3.weforum.org/docs/WEF\_GlobalCompetitivenessReport\_2014-15.pdf> [Accessed 15 December 2016].
- 30. Schwab, K., ed., 2015. *The Global Competitiveness Report 2015-2016*. Geneva: World Economic Forum. [online] Available at: <http://www3.weforum.org/docs/gcr/2015-2016/Global\_Competitiveness\_Report\_2015-2016.pdf > [Accessed 23 December 2016].
- 31. Schwab, K., ed., 2016. *The Global Competitiveness Report 2016-2017*. Geneva: World Economic Forum. [online] Available at: <http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017\_FINAL.pdf> [Accessed 3 March 2017].
- 32. Tan, K.P., 2007. *Renaissance Singapore? Economy, Culture, and Politics.* Singapore: National University of Singapore Press.
- 33. The World Bank, 2016a. *Singapore GDP growth (annual %)*. [online] Available at: < http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2015&locati ons=SG&start=1961> [Accessed 3 March 2017].
- 34. The World Bank, 2016b. Singapore GDP (current US\$). [online] Available at:
- 35. <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=SG> [Accessed 3 March 2017].
- 36. Wade, R., 2004. Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization. New Jersey: Princeton University Press.
- 37. Young, A., 1992. A tale of two cities: Factor accumulation and technical change in Hong Kong and Singapore. *NBER Macroeconomics Annual*, 7, pp. 13-54.