Economic Affairs: 59(2): 243-250 June, 2014
DOI Number 10.5958/J.0976-4666.59.2.022

Stability in Economic Growth of G20 Countries

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Paper no: 133 **Received:** 12 November, 2013 **Revised:** 15 April, 2014 **Accepted:** 23 May, 2014

Abstract

An attempt was made to examine the stability in growth rates of G20 countries during the period 1980 2010. The results showed that among 18 countries studied in G20 group, there are 4 fast growing countries, 8 medium growing countries and 6 slow growing countries. Out of 4 fast growing countries, China is the fastest growing country followed by Korea, India and Indonesia. The 8 medium growing countries include China, UK, Brazil, Argentina, USA, Saudi Arabia, Australia and Turkey. Out of 6 slow growing countries, Italy is the slowest growing country during the period of study i.e. 1980 2010. The study showed that besides some exceptions, the fast, medium and slow growing countries remained in their same categories in all the periods, which shows stability in the growth rates of G20 countries. Coefficients of correlation between all the periods were high and significant which indicates that GDP growth rates of G20 countries are stable. Similar results were shown by rank correlation analysis. This proves the stability in economic growth of G20 countries over time.

Keywords: Economic Growth, G20 Countries, Stability, Growth Rate
JEL Classification: O110.

Economic development is necessary for underdeveloped countries because they can solve the problem of general poverty, unemployment, backwardness and low standard of living through it. On the other hand, economic development is equally significant to developed economies as it helps them to maintain their existing growth rate. The main objectives of development are to increase the availability and widen the distribution of basic life sustaining goods such as food, shelter, health and protection, raise the level of living involving higher incomes, the provision of more jobs, better education and greater attention to cultural and humanistic values and to expand the range of economic and social choices available to individuals and nations by freeing them from servitude and dependence (Todaro and Smith, 2003).

It is generally believed that economic growth may trickle down and spreads, thereby benefiting all sections of the society. Therefore, economic growth is the principal objective in policy making and designing investment projects. However, growth may be fluctuating and may not be stable over a longer period. A relatively lower but stable growth is better than highly fluctuating one which may indicate poor foundations of growth.

Promoting economic stability is partly a matter of avoiding economic and financial crisis. Economic stability also means avoiding the large swings in economic activity, high inflation, and excessive volatility in exchange rates and financial markets. Such instability can increase uncertainty and discourage investment, impede economic growth and hurt living standards. A dynamic market economy necessarily involves some degree of instability as well as gradual structural change. The challenge for policymakers is to minimize this instability without reducing the ability of the economic system to raise living standards through the increasing productivity, efficiency, and employment that it generates (Sokil and Panchenko, 2009).

According to Hausmann and Gavin (1996), macroeconomic stability is a development issue. Instability undermines whereas stability helps is promoting healthy economic and social development. Hence, stability in economic growth is an important aspect which needs examination. The present study is a step in this direction. Stability in economic growth has been examined for the period 1980 to 2010 for the G20 countries.

About G20

The Group of Twenty (G20) is the premier forum for international cooperation on the most important issues of the global economic and financial agenda. The G20 was formally established in September 1999 when finance ministers and central bank governors of seven major industrial countries (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States) met in Washington, D.C. in the aftermath of the financial crisis of 1997-1998, which revealed the vulnerability of the international financial system in context of economic globalization and showed that key developing countries were insufficiently involved in discussions and decisions concerning global economic issues (http://www.g20.org/docs/links/faq.html).

The G20 brings together finance ministers and central bank governors from 19 countries plus the European Union. G20 includes Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States of America plus the European Union, which is represented by the President of the European Council and by Head of the European Central Bank. G20 leaders, finance ministers and central bank governors meet regularly to discuss ways to strengthen the global economy, reform international financial institutions and improve the financial regulations (http://www.g20.org/docs/links/faq.html).

The presidency of the G20 rotates annually among its members. The presidency leads a three-member management group of previous, current and future chairs, referred to as the Troika, the purpose of which is to ensure transparency, fairness, and continuity from one presidency to another. The G20 does not have a secretariat of its own. A temporary secretariat is set up by the country that holds the presidency for the term of chairmanship.

The objectives of the G20 refer to:

1. Policy coordination between its members in order to achieve global economic stability, sustainable growth.
2. Promoting financial regulations that reduce risks and prevent future financial crises.
3. Modernizing international financial architecture.

The primary function of the G20 is to provide strategic guidance, vision, and a sense of direction for the global economy. The G20 is an informal mechanism, not a "decider." Nor is it an authority with legal powers to generate final decisions or instructions for action. Rather, it is a strategic guidance mechanism acting as a steering committee for the global economy to provide vision for the general direction for the world and policy frameworks and recommendations for national officials, especially officials of the G20 nations, and for international organizations that have their own decision making bodies and procedures. As a consequence, the G20 provides vital strategic leadership for the global economy, which is crucial to its functioning as a complex system of national and supranational economic interactions. At the same time, the G20 is limited by its informality, its lack of authority, its periodicity, and its essential nature as a steering or coordinating committee rather than as a formal institution per se (Bradford and Lim, 2010).

G20 members account for 85 percent of the world economy, 80 percent of global trade, and two-thirds of the world's population. The G20 represents all geographic regions of the world, but remains small enough to be an effective decision-making body (http://www.dfat.gov.au/trade/g20).

The G20's major achievements include strengthening the role of emerging economies, such as BRICS, reforming international financial institutions, improving discipline and tightening oversight over national financial institutions and regulators, improving the quality of financial regulations in economies whose regulatory problems led to the crisis, and creating financial and organizational safety nets to prevent severe economic slumps in the future (http://www.g20.org/docs/links/faq.html).

Review of Literature

Looking at past experience as reported by different studies may be a valuable source of information as regards the expected future developments, which refer to the prospects of achieving a more stable economic growth.

Hausmann and Gavin (1996) reported that macroeconomic stability is a development issue. Instability undermines and stability promotes healthy economic and social development. Achieving stability involves a long term and painstaking process of designing and constructing institutions that take account of the fact that shocks are inevitable and which are strong enough to withstand shocks, and that 'absorb', rather than amplify the destabilizing consequences of shocks. McConnell *et al.* (1999) examined the decomposition of increased stability of GDP growth in U.S. economy and found that U.S. economy has grown at a remarkably steady pace. It also showed that every major component of GDP has exhibited smoother growth. However, two components i.e. inventory investment and consumers spending were responsible for the bulk of decline in overall volatility. They also examined the composition of more stable economy across the stages of business cycle and found that the growth of GDP and its components has been smoother in both recessions and expansions. Almunia (2005) opined that an

 Print ISSN: 0424-2513 Online ISSN: 0976-4666

efficient system of economic coordination is essential for achieving policy goals in relation to macroeconomic stability and structural reforms to reach higher growth rates. Masuda (2008) examined the rapid growth and macroeconomic stability across countries and reported that while developed countries were generally on a stable growth path, HPAEs (High Performing Asian Economies) generally experienced relatively instable growth. It was opined that high performance was supported by policies involving higher risks.

Database and Methodology

As per the nature of study, secondary data was required. The data was collected from publications of Planning Commission, Government of India. The data was available for 18 G20 countries for the period 1980 to 2010. The countries were also divided into fast, medium and slow growing countries using the Cumulative Frequency Cube Root Method.

The overall period of study was divided into 3 sub periods i.e. 1980-1990, 1990-2000 and 2000-2010, so that the stability of economic growth can be examined over a period of time.

For data analysis, various statistical techniques were used which include tabular analysis, correlation analysis and rank correlation analysis. The results were interpreted accordingly.

Fast, Medium and Slow Growing G20 Countries

Table 1 shows fast, medium and slow growing G20 countries which were divided on the basis of GDP growth rates during the period 1980-2010. The countries were divided into fast growing, medium growing and fast growing countries by using Cumulative Frequency Cube Root method. Accordingly, the countries with growth rates higher than 4.5 % were categorized as fast growing countries, below 2.5 % were categorized as slow growing countries and countries having growth rates between 2.5 and 4.5 were categorized as medium growing countries. The table shows GDP growth rates of different time periods i.e. 1980-2010, 1980-90, 1990-2000 and 2000-2010 for fast, medium and slow growing G20 countries.

The results showed that there were 4 fast growing countries, 8 medium growing countries and 6 slow growing countries. Out of 4 fast growing countries, China was the fastest growing country followed by Korea, India and Indonesia. It was seen that these countries observed higher growth rates in all the periods, which shows stability in the growth rates of fast growing countries. However, it was seen that Korea in 2000-10 and Indonesia in 1990-2000, experienced slightly lower growth rates, but their growth rates in other periods were high enough, so they fell in the category of fast growing states on the basis of growth rate of overall period.

The table also showed that there were 8 medium growing countries during 1980-2010, which include China, UK, Brazil, Argentina, USA, Saudi Arabia, Australia and Turkey. It was also seen that in 1980 90, Brazil, Argentina and Saudi Arabia observed slow growth rates, but their growth rate in other periods were higher, so they fell in medium growth rate on the basis of growth rate of overall period i.e.1980-2010. Similarly, in 2000-2010, Canada, UK and USA observed slow growth rates, but due to their higher growth rates in other periods, they fell in category of medium growing countries on the basis of growth rate in overall period. Further, in 1980-1990, Turkey and in 2000-10, Argentina and Saudi Arabia observed higher growth rates, but their growth rates in other periods were slow, so they fell in medium growing countries in overall period. Beside these exceptions, the medium countries remained in the same category thereby showing stability in growth rates.

It was also seen that there were 6 slow growing countries, out of which Italy was the slowest growing country followed by Germany, France, Japan, South Africa and Mexico. All these slow growing countries observed slow growth rate in all the periods except Japan (1980-90), Mexico (1990-2000) and South Africa (2000-10). Thus, the slow growing countries remained in slow growing category throughout the period of study.

Thus, majority of the G20 countries remained in their respective categories in all the periods, i.e. the fast growing countries remained in category of fast growing countries; the medium growing countries remained in category of medium growing countries and the slow growing countries remained in the category of slow growing countries. This shows stability in the growth rates of G20 countries. Thus, the GDP growth rates of G20 countries have been stable over the period of study i.e. 1980-2010.

Table 1: GDP Growth Rate of G20 Countries

Fast Growing G20 Countries

S.No.	Country	1980-2010	1980-90	1990-2000	2000-10
1.	China	10.10	9.35	10.46	10.50
2.	Korea	6.85	9.74	6.63	4.17
3.	India	6.19	5.58	5.58	7.39
4.	Indonesia	4.96	5.48	4.16	5.24

Medium Growing G20 Countries

S.No.	Country	1980-2010	1980-90	1990-2000	2000-10
1.	Canada	2.55	2.84	2.91	1.91
2.	United Kingdom	2.56	3.11	2.78	1.79
3.	Brazil	2.60	1.64	2.51	3.64
4.	Argentina	2.61	-1.07	4.33	4.56
5.	United States	2.74	3.27	3.41	1.55
6.	Saudi Arabia	2.75	0.15	3.12	4.98
7.	Australia	3.28	3.33	3.43	3.09
8.	Turkey	4.33	5.22	3.77	4.00

Slow Growing G20 Countries

S.No.	Country	1980-2010	1980-90	1990-2000	2000-10
1.	Italy	1.47	2.41	1.60	0.39
2.	Germany	1.74	2.32	1.91	0.99
3.	France	1.83	2.39	1.98	1.12
4.	Japan	2.19	4.64	1.14	0.80
5.	South Africa	2.31	1.54	1.84	3.55
6.	Mexico	2.40	1.93	3.61	1.66

Source: Compiled from data taken from Planning Commission, Government of India. (http://planningcommission.gov.in)

Print ISSN: 0424-2513 Online ISSN: 0976-4666

Correlation Analysis

To examine the stability, coefficients of correlation were also worked out between the GDP growth rates of G20 countries during different sub periods of the study i.e. 1980-2010, 1980-90, 1990-2000 and 2000-10. Table 2 shows correlation coefficients between GDP growth rates of G20 countries for different time periods.

Table shows that correlation coefficients of GDP growth rate of the periods 1980-90, 1990-2000 and 2000-10 with that of overall period of study i.e. 1980-2010, were 0.833, 0.952 and 0.871 respectively, which were significant at one percent level of significance. Thus, the correlation coefficients of all the sub periods (1980-90, 1990-2000 and 2000-10) with that of overall period of study (1980-2010) were high and significant which shows stability in growth rates of all the sub periods of the study.

The table also shows that the correlation coefficient of GDP growth rates of the period 1980 90 with that of 1990-2000 and 2000-10 were 0.694 and 0.480 respectively, which were significant. This shows the stability of growth rates of G20 countries. Further, it was also seen that the correlation coefficient of GDP growth rates of the period 1990-2000 with 2000-10 was 0.857, which was significant and thereby shows stability in growth rate.

Thus, from correlation analysis, it is clear that the coefficients of correlation of all the periods were high and significant which shows that GDP growth rates of G20 countries are stable. This proves the stability in economic growth of G20 countries over time.

Rank Correlation Analysis

Attempt was made to examine the stability of GDP growth rates through Rank Correlation Analysis. Table 3 shows rank correlation coefficients of GDP growth rates of G20 countries in different sub periods.

The rank correlation coefficients of the periods 1980-90, 1990-2000 and 2000-10 with that of overall period of study i.e. 1980-2010, were 0.604, 0.886 and 0.860 respectively, which were significant at one percent level of significance. All these correlation coefficients were high and significant which shows stability in growth rates. Also, the rank correlation coefficients of periods 1980-90 with that of 2000-10, was 0.482, which was significant at one percent level of significance, which again shows stability in growth rate. But the rank correlation coefficient of 1980-90 with that of 2000-2010 was 0.265 which was insignificant which may show some instability. It was further seen that the rank correlation coefficient of period 1990-2000 with that of 2000-10 was 0.792, which was significant at one percent level of significance, thereby showing stability in this period.

Thus, the results of rank correlation analysis showed that there is stability in GDP growth rates of G20 countries.

Table 2: Correlation: Gross Domestic Product (GDP) at Constant Price (%) (1980 2010, 1980 90, 1990 2000 and 2000-10)

	GDP Growth Rate 1980-2010	GDP Growth Rate 1980-90	GDP Growth Rate 1990-2000	GDP Growth Rate 2000-10
GDP Growth Rate 1980-2010	1	0.833**	0.952**	0.871**
GDP Growth Rate 1980-90		1	0.694**	0.480*
GDP Growth Rate 1990-2000			1	0.857**
GDP Growth Rate 2000-10				1

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Source: Calculated by author, data taken from data taken from Planning Commission, Government of India. (http://planningcommission.gov.in)

Table 3: Rank Correlation: Gross Domestic Product (GDP) at Constant Price (%)(1980 2010, 1980 90, 1990 2000 and 2000-10)

	GDP Growth Rate 1980-2010	GDP Growth Rate 1980-90	GDP Growth Rate 1990-2000	GDP Growth Rate 2000-10
GDP Growth Rate 1980-2010	1	0.604**	0.886**	0.860**
GDP Growth Rate 1980-90		1	0.482*	0.265
GDP Growth Rate 1990-2000			1	0.792**
GDP Growth Rate 2000-10				1

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Source: Calculated by author, data taken from data taken from Planning Commission, Government of India. (http://planningcommission.gov.in)

Conclusion

The study shows that among 18 countries studied in G20 group, there are 4 fast growing countries, 8 medium growing countries and 6 slow growing countries. Out of 4 fast growing countries, China is the fastest growing country followed by Korea, India and Indonesia. There were 8 medium growing countries during 1980-2010, which include China, UK, Brazil, Argentina, USA, Saudi Arabia, Australia and Turkey. There were 6 slow growing countries, out of which Italy is the slowest growing country followed by Germany, France, Japan, South Africa and Mexico. The study showed that besides some exceptions, the fast, medium and slow growing countries remained in their same categories in all the periods, which shows stability in the growth rates of G20 countries.

Coefficients of correlation between all the periods were high and significant which indicates that GDP growth rates of G20 countries are stable. Similar results were shown by rank correlation analysis. This proves the stability in economic growth of G20 countries over time.

 Print ISSN: 0424-2513 Online ISSN: 0976-4666

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