Are the Fragile Five Resilient According to the Net Savings as a Proxy for Economic Resilience

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Abstract

Economic resilience, refers to the extent to which an economy can withstand or bounce back from the negative effects of external shocks. In the measurement of economic resilience the composite index proposed by Briguglio et al is very famous. Moreover it was proposed by Baritto that net savings can be used as a proxy for economic resilience. Based upon this hypothesis, by using savings as a proxy for resilience for the countries named as fragile five we aimed to evaluate if the fragile five are really resilient or not according to this measure and analyse the policy implications especially for Turkey with respect to the results obtained..

Keywords: Economic Resilience, Savings, Fragile Five, Vulnerability.

1. Introduction

The term of fragile five was first decleared by a research analyst at Morgan Stanley to represent emerging market economies that have become too dependent on unreliable foreign investment to finance their growth ambitions. These five countries are Brazil, India, Indonesia, South Africa and Turkey. This concept of macroeconomic vulnerability and resilience are closely related to this issue. Vulnerability was initially championed by Briguglio in the context of Small Island Developing States (SIDS) but was later developed into a conceptual framework applicable to all countries. In the measurement of resilience, beside the composite index proposed by Brigugli, Baritto proposed that net savings is a sufficient proxy for resilience and advantageous because of its ease to calculate. The main point of this study is to use savings as a proxy for resilience for the countries named as "fragile five". It was tried to evaluate if the fragile five are really resilient or not according to this measure and analyse the policy implications especially for Turkey with respect to the results obtained.

2. The Consept of Vulnerabılıty

The meaning of the word "vulnerability" originates from its Latin root *vulnerare*, meaning "to wound". This etymology associates the word with exposure to damage or harm and with precariousness (Briguglio, 2014). In very general terms, vulnerability can be defined as the likelihood of a system being negatively affected by some sort of perturbation or sudden 'shock' going beyond the normal range of variability (Gallopín, 2006). This brings us close to Guillaumont's (2009: 197) dynamic definition of vulnerability as 'the risk that economic growth of a country is markedly and extensively reduced by shocks'.

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Consequently, vulnerability, can be seen to have three distinguishable components or building blocks: the nature of the *shocks* in question, the *exposure* of a country to these shocks and the country's ability to react appropriately, or its *resilience* (Guillaumont, 2001, 2009).

The term "economic vulnerability" when applied to a country is generally used to refer to that country's susceptibility to being harmed by external economic forces as a result of exposure to such forces (Briguglio, 2014). Generally, in economics, the concept of vulnerability is approached from both the macroeconomic and microeconomic perspectives. The microeconomic perspective focuses on the impact of shocks on the well-being of individual households, whereas the macroeconomic perspective focuses on the impact of these shocks on economic growth (Seth, & Ragab; 2012). Central to the microeconomic perspective is a concern that the shock may result in a household's income falling below a given threshold such as the poverty line (Alwang et al., 2001). The reason for this is that poorer households have fewer assets, more limited risk-coping mechanisms and less access to capital markets to cope with economic fluctuations. Concepts of 'vulnerable households' and 'transient and chronic poverty' all arise from the study of a household's vulnerability to poverty (Hulme et al., 2001; Baulch & McCulloch, 2002; Dercon & Shapiro, 2007). In other words, the microeconomic perspective on vulnerability seeks to identify households that are 'at risk of poverty' in the event of a financial and economic crisis and identifies policies that increase the households' ability to 'manage risk' (Alwang et al., 2001).

This concept of macroeconomic vulnerability was initially championed by Briguglio in the context of Small Island Developing States (SIDS) but was later developed into a conceptual framework applicable to all countries (Briguglio, 1995; Briguglio, 1997; Briguglio & Galea, 2003; Briguglio et al., 2009).

3. Economic Vulnerability and Resilience

Economic resilience, refers to the extent to which an economy can withstand or bounce back from the negative effects of external shocks. As such it can be considered as the obverse of economic vulnerability. The word originates from its Latin roots *resilire* referring to the ability to rise again (Briguglio, 2014). Briguglio et al. (2009) distinguished between economic resilience—which is developed and managed as a result of deliberate policy—and economic vulnerability, which is due to inherent features of the economy. The authors argued further that the term economic resilience can be used in two senses, respectively relating to the ability of an economy to (a) absorb the effect of external economic shocks and (b) counter act the harmful effects of such shocks. The ability of an economy to absorb external shocks is associated with the flexibility of an economy, enabling it to recover after being adversely affected by a shock. The ability of an economy to counteract shocks will be enhanced when the economy has room for manoeuvre, as is the case, for example, in a situation of a strong fiscal position, when policy-makers can utilise discretionary expenditure or tax cuts to counteract the effects of negative shocks (Briguglio, 2014).

4. Measurement of Resilience

Briguglio stated detailed literature review on economic vulnerability and resilience with a focus on small states. It also proposes a revised vulnerability/resilience framework, building on the work of Briguglio et al. (2009), who defined vulnerability in terms of inherent features which render countries exposed to external shocks, and resilience in terms of policy-induced measures that enable countries to minimise or withstand the harmful effect of such shocks. The juxtaposition of vulnerability and resilience, as measured by the vulnerability and resilience indices, would indicate the overall risk of an economy being harmed by external shocks (Briguglio, 2014). Briguglio(2014), confirms the original findings of Briguglio et al. (2009) that (a) countries with high resilience and low vulnerability scores are mostly large developed countries with relatively good economic governance (b) countries with low resilience and vulnerability scores are mostly large developing countries with relatively weak economic governance (c) countries with high vulnerability and resilience scores are mostly small states with relatively good economic governance and (d) countries with relatively high vulnerability and relatively low resilience scores include many small states with relatively weak economic governance. The study also classifies 183 countries, for which data was available, according to the four categories just described (Briguglio, 2014). Briguglio et al. (2009) hypothesised that the economic resilience-building policies can be captured by the following variables: 1. Macroeconomic stability,2. Market efficiency, 3. Good political governance, 4. Social development, 5. Environmental governance.

4.1. The composite index proposed by Briguglio et al.(2009)

Using the indicators described in the previous section, with the exception of the environmental management index, Briguglio et al. (2009) constructed a resilience index for 86 countries. They used the Max-Min formula to rescale the variables and used a simple average to aggregate the scores.

The authors found that countries with an advanced economy, notably the United States, Canada, Japan, Australia, New Zealand and a number of countries in Western Europe registered high resilience scores. These countries have well-developed institutional economic, social and political structures and are countries where market forces predominate in resource allocation. There was a high degree of correlation between GDP per capita and countries' resilience scores (Briguglio, 2014).

4.2. Net savings as a proxy for economic resilience

Another economic resilience index proposed by Baritto (2008) is based on net savings per capita in the countries examined. The author defined economic resilience as the ability of a country to recover from shocks, but the author's focus was on the aftermath of a disaster. According to the author, net savings represent the available funds for a country to be invested in order to undertake the recovery of its capital stock. This approach implies that a country with low per capita net savings is less able to recover from a severe shock on its own than a country with high per capita net savings (Briguglio, 2014). The author admitted that this is an indirect approach that is to be considered only as a tentative estimate, but it has a number of advantages including that it can easily be constructed using data that is available for a wide range of countries and that is updated regularly (Briguglio, 2014). Baritto found that there was a very close relationship between the resilience index constructed by Briguglio et al. (2009) and the per capita net savings as a proxy of resilience. The author contended that although very different aspects are covered by those indicators, this relationship could be in part explained by the fact that both indices are strongly correlated with per capita income levels. Baritto makes the calculation of net savings as follows:

GNI: Gross National Income
PPC: Public+ Private Consumption
GNS: Gross National Savings
DpK: Depreciation of capital
NS: Net Savings
GNI: PPC +GNS
GNS: DPK + NS

To facilitate comparisons, the author recommends expressing the Net Savings in per capita terms(*NSpc*). According to this approach, it would be inferred that a country showing low per capita Net Savings values is likely to require external support in case of the occurrence of a major disaster event than countries with a higher saving capacity, so its ability to recover from a severe shock on its own, bringing the country back to its pre-disaster levels could be questionable (Baritto, 2009).

5. Macroeconomic Resilience in Fragile Five

Fragile five is a term coined in August of 2013 by a research analyst at Morgan Stanley to represent emerging market economies that have become too dependent on unreliable foreign investment to finance their growth ambitions.[2] Morgan Stanley analyst James Lord has declared Brazil, India, Indonesia, South Africa and Turkey as the "Fragile Five" in an 2013 research note. Like other emerging markets, these countries have benefited from Fed's easy-money policies in the past decade. The term Fragile Five is now the key phrase that is being commonly used in the media. High inflation, weakening growth, large external deficits, high dependence on foreign investment, general concern over the US Federal Reserve's tapering process, and slowing down of China make these emerging markets and therefore vulnerable (Olgu..et al,2015; 168). Below, there are some calculations about the "saving per capita" of the countries named as fragile five. We preferred using gross saving data rather than net savings because of the difficulty to calculate net savings.

[2] http://internationalinvest.about.com/od/Important-Concepts-To-Know/fl/What-Are-the-Fragile-Five.htm

5.1. Brazıl

Brazil is a Latin American and Caribbaen country which is categorized as "upper middle income" country. It has 2.346 trillion $ Gross Domestic Product for 2014 and has a population of 206,1 million. It can be seen from Table 1 that savings increase year by year from 2006 to 2014. Moreover, saving per capita increases from 989 $ to 1804 $. As a share of GDP per capita, saving per capita is 0,17 in 2006 and 0,16 in 2014. It doesn't represent any substantial change in a 8 yeared period.

5.2. Indıa

India takes part in South Asia with 1.295 billion of population and has a 2.049 trillion $ Gross Domestic Product and categorized as a lower middle income country. Table 2 shows that although saving per capita and GDP per capita is quite low, saving per capita as a share of GDP per capita is upper than 0,30.

5.3. Indonesıa

Indonesia is a member of countries of East Asia & Pasific. The GDP for 2014 of Indonesia is 888.5 billion $ and has a population of 254.5 million. According to Table 3, Indonesia has also higher saving ratios which differs between 0,26 and 0,33.

5.4. South Afrıca

South Africa belongs to Sub-Saharan Africa geographically and is a upper middle incomed country with a GDP of 350,1 billion $ and a 54 million population in 2014 numbers. Table 4 shows that although GDP per capita is higher than most of other contries mentioned, saving ratio as a share of GDP is lowe than the average.

5.5. Turkey

Turkey is one of the largest upper middle incomed countries. With a Gross Domestic Product (GDP) of $ 799,54 billion, Turkey is the 17th largest economy in the world. In less than a decade, per capita income in the country has nearly tripled and now exceeds $10, 500. Turkey is a member of the OECD and the G20, and an increasingly important donor to bilateral Official Development Assistance. [3] It can be seen from Table 5 that GDP per capita increases from 7.727 $ to 10.515 $. When we look at the saving ratio of Turkey, it has a quite stabilized trend between 0,13 and 0,17.

6. Comparıson of Data Of Fragıle Fıve

In the table 6, there are gross saving averages on a clasification basis of income groups and regions of countries. As shown below in Table 6, gross saving average ratio overall the world at 2000 and 2014 is 24 and 23 respectively. The countries categorized as lower middle income have the average of 24 and 29, while the upper middle income countries have 26 and 32. Table 7 shows the saving ratios of countries named as "fragile five" from 2006 to 2014. Among these countries, India and Indonesia as lower income countries have the saving ratio very high according to world average ratio and the other countries. Brazil, South Africa and Turkey belong to upper middle income countries have lower saving ratios compared to others and are it can be inferred fron this table hat these countries are less resilient than others. The least resilient country is Turkey among the fragile five according to the average scores. According to the average of the savings as a ratio of GDP, the highest saving ratio belongs to India, İndonesia, respectively. Brazil and South Africa comes after them respectively. Turkey has an average saving of 14% of GDP which is the least score of five countries. The average score of the five countries' is 22% which is very close to the World average ratio of savings. According to savings per capita of five countries, Turkey ranks first and Brazil second in terms of resilience. In 2006, average gross savings per capita is $772 and it increases until 2008. After a decrease in 2009, it increases until 2011 and then it decreases year by year until 2014 and scores $1.182. The average saving amount of all the countries is $977 per capita. Also, Turkey and Brazil scores higher than the average.

7. Polıcy Implıcatıons to Increase Savings in Turkey

There are the data of savings in Turkey from 1998 to 2014 with the details of public and private savings. According to the Table 9 showing the distribution of total gross savings in Turkey, private savings constitute the major part of total savings and public savings are very less even sometimes before zero.

[3] (http://www.worldbank.org/en/country/turkey/overview)

A substantial decrease in savings in last years especially in private savings can be seen. Therefore a policy aiming an increase in savings in Turkey should focus on potential sources of increase of private savings. There are four main determinants of private saving behaviour in Turkey according to the multivariate cross-country model estimates which are; real interest rate, gross private disposable income, young-age dependency ratio and inflation rate. The analysis of these determinants uses the estimates of Loayza, Schmidt-Hebbel and Servén (2000). The model mentioned is one of the most comprehensive and detailed studies made before(Report of Specialization Commission, 26). A stabilizied and facilitator economic environment is very crucial to increase saving rates. Private saving rates rise with the level and growth rate of real per capita income. The influence of income is larger in developing than in developed countries. In developing countries a doubling of income per capita is estimated, other things equal, to raise the long-run private saving rate by some 10 percentage points of disposable income. Likewise, a 1 percentage-point rise in the growth rate raises the private saving rate by a similar amount. The overall implication is that policies that spur development are an indirect but effective way to raise private saving rates (Loayza et al, 2000). Moreover, unequal distribution of income is important for policymaking because lowest income bracket have negative saving rate and household of high income bracket have high saving rate. Thus, fiscal policy aiming to eliminate unequality of distribution of income will result in an increase in saving rates.

While the higher disposable income have a positive impact on savings, employment policies especially high income creating policies should be the center of economic policies. And also participation of women in labor is highly correlated with the increase in saving. And employment projects at the same time, should promote productivity growth(Report of Specialization Commission, 16). Education is also related to saving behaviour. A nation-wide increase in education level will increase the employability and therefore will increase the saving rate.
In terms of public saving, reducing the unproductive expenditures will increase the national savings. A well designed supreme aduit system and transparency in public finance will make a great contribution to productivity as well. In the supply side, the intermediatory role of markets is crucial. There are three policy alternative to improve the intermediatory role of markets which are; (Report of Specialization Commission, 16).

i. the beter use of existing products,
ii. product innovation,
iii. design of specialised saving systems.

These policies can be implemented to encourage households to save more in Turkey.

8. Conclusions

In this study, it was aimed to evaluate the five developing countries which are named as “fragile five” in terms of resilience and as a proxy for resilience, the criteria of savings which was introduced by Baritto were used. When compared according to the average of the savings as a ratio of GDP, the highest saving ratio belongs to India and İndonesia, respectively. Brazil and South Africa comes after them respectively. Turkey has an average saving of 14% of GDP which is the least score of five countries. The average score of the five countries’ average is 22% which is very close to the world ratio of savings. But, in terms of savings per capita of five countries, Turkey ranks first and Brazil second in terms of resilience. This is an adverse result compared with beforely mentioned one. In general terms, developing countries should develop policies increasing savings. Especially in Turkey, private savings are in a substantial decrease in last years. In order to increase savings, increasing growth, eliminating unequality of income, developing education and reducing the unproductive public expenditures are important policy alternatives that should be implemented in Turkey to increase saving to develop macroeconomic resilience.

Table 1:Saving Indicators in Brazil, 2006-2014

BRAZIL									
($)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gross Saving	188.686.755.509	244.849.183.701	290.185.803.433	235.703.221.913	424.803.554.716	508.961.031.703	428.530.224.952	406.287.275.110	371.746.575.065
Population	190.698.241	192.784.521	194.769.696	196.701.298	198.614.208	200.517.584	202.401.584	204.259.377	206.077.898
Saving Per Capita	989	1.270	1.490	1.198	2.139	2.538	2.117	1.989	1.804
GDP Per Capita	5.809	7.241	8.701	8.463	11.124	13.042	11.923	11.711	11.384
SpC as a ratio of GDP p C	0,17	0,18	0,17	0,14	0,19	0,19	0,18	0,17	0,16

Source: Calculated from Worlbank national accounts data[4]

Table 2:Saving Indicators in India, 2006-2014

INDIA									
($)	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gross Saving	331.854.714.557	453.452.535.466	414.434.442.682	462.917.119.643	583.607.342.800	625.932.186.545	592.437.823.650	587.817.475.638	640.320.883.964
Population	1.162.088.305	1.179.685.631	1.197.070.109	1.214.182.182	1.230.984.504	1.247.446.011	1.263.589.639	1.279.498.874	1.295.291.543
Saving Per Capita	286	384	346	381	474	502	469	459	494
GDP Per Capita	817	1.050	1.023	1.125	1.388	1.472	1.450	1.455	1.582
SpC as a ratio of GDP p C	0,35	0,37	0,34	0,34	0,34	0,34	0,32	0,32	0,31

Table 3:Saving Indicators in Indonesia, 2006-2014

INDONESIA									
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gross Saving	101.663.741.002	112.509.273.602	134.541.472.124	168.023.197.087	246.530.547.626	294.301.492.557	295.760.460.481	279.923.702.607	278.598.084.350
Population	229.263.980	232.296.830	235.360.765	238.465.165	241.613.126	244.808.254	248.037.853	251.268.276	254.454.778
Saving Per Capita	443	484	572	705	1.020	1.202	1.192	1.114	1.095
GDP Per Capita	1.590	1.861	2.168	2.263	3.125	3.648	3.701	3.624	3.492
SpC as a ratio of GDP p C	0,28	0,26	0,26	0,31	0,33	0,33	0,32	0,31	0,31

Source: Calculated from Worlbank national accounts data[5]

[4] http://data.worldbank.org/indicator/NY.GNS.ICTR.ZS
[5] http://data.worldbank.org/indicator/NY.GNS.ICTR.ZS

Table 4:Saving Indicators in South Africa, 2006-2014

SOUTH AFRICA									
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gross Saving	42.649.388.175	46.742.389.672	50.050.477.583	53.221.505.942	67.619.617.577	70.743.299.688	60.172.989.329	52.558.587.923	52.208.326.658
Population	47.991.699	48.656.506	49.344.228	50.055.701	50.791.808	51.553.479	52.341.695	53.157.490	54.001.953
Saving Per Capita	889	961	1.014	1.063	1.331	1.372	1.150	989	967
GDP Per Capita	5.660	6.154	5.812	5.912	7.390	8.081	7.592	6.890	6.483
SpC as a ratio of GDP p C	0,16	0,16	0,17	0,18	0,18	0,17	0,15	0,14	0,15

Source: Calculated from Worlbank national accounts data[6]

Table 5:Saving Indicators in Turkey, 2006-2014

TURKEY									
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Gross Saving	86.254.189.849	98.059.385.294	120.652.660.546	79.221.515.097	96.583.341.030	109.357.117.015	112.496.891.147	108.477.258.378	117.685.997.304
Population	68.704.721	69.515.492	70.344.357	71.261.307	72.310.416	73.199.372	74.099.255	75.010.202	75.932.348
Saving Per Capita	1.255	1.411	1.715	1.112	1.336	1.494	1.518	1.446	1.550
GDP Per Capita	7.727	9.310	10.382	8.624	10.112	10.584	10.646	10.975	10.515
SpC as a ratio of GDP p C	0,16	0,15	0,17	0,13	0,13	0,14	0,14	0,13	0,15

Source: Calculated from Worlbank national accounts data[7]

Table 6: Gross Savings Worlwide

GROSS SAVINGS (%)	2000	2014
World	24	23
Low income	..	16
Middle income	26	31
Lower middle income	24	29
Upper middle income	26	32
Low & middle income	26	31
East Asia & Pacific	35	45
Europe & Central Asia	18	16
Latin America & Caribbean	17	18
Middle East & North Africa	28	..
South Asia	25	31
Sub-Saharan Africa	19	16
High income	24	21
Euro area	23	23

Source: Worlbank national accounts data[8]

[6] http://data.worldbank.org/indicator/NY.GNS.ICTR.ZS
[7] http://data.worldbank.org/indicator/NY.GNS.ICTR.ZS
[8] http://data.worldbank.org/indicator/NY.GNS.ICTR.ZS

Table 7: Savings of Fragile Five Countries

	2006	2007	2008	2009	2010	2011	2012	2013	2014	AV
BRAZIL	0,17	0,18	0,17	0,14	0,19	0,19	0,18	0,17	0,16	0,17
INDIA	0,35	0,37	0,34	0,34	0,34	0,34	0,32	0,32	0,31	0,34
INDONESIA	0,28	0,26	0,26	0,31	0,33	0,33	0,32	0,31	0,31	0,30
SOUTH AFRICA	0,16	0,16	0,17	0,18	0,18	0,17	0,15	0,14	0,15	0,16
TURKEY	0,16	0,15	0,17	0,13	0,13	0,14	0,14	0,13	0,15	0,14
AV	0,22	0,22	0,22	0,22	0,23	0,24	0,22	0,21	0,22	0,22

Source: Calculated from Worlbank national accounts data[9]

Table 8: Gross Savings Per Capita Of Fragile Five Countries

($)	2006	2007	2008	2009	2010	2011	2012	2013	2014	AV
BRAZIL	989	1.270	1.490	1.198	2.139	2.538	2.117	1.989	1.804	1.397
INDIA	286	384	346	381	474	502	469	459	494	390
INDONESIA	443	484	572	705	1.020	1.202	1.192	1.114	1.095	769
SOUTH AFRICA	889	961	1.014	1.063	1.331	1.372	1.150	989	967	928
TURKEY	1.255	1.411	1.715	1.112	1.336	1.494	1.518	1.446	1.550	1.403
AV.	772	902	1.027	892	1.260	1.422	1.289	1.199	1.182	977

Source: Calculated from Worlbank national accounts data[10]

Table 9:The Shares Of Total Domestıc Savıngs In Gdp In Turkey(1998-2014)

	PUBLIC SAVING	PRIVATE SAVING	TOTAL DOMESTIC SAVINGS
1998	-1,4	25,7	24,3
1999	-5,0	25,1	20,1
2000	-3,4	21,8	18,4
2001	-7,1	25,5	18,4
2002	-4,8	23,4	18,6
2003	-4,1	19,6	15,5
2004	-1,0	16,9	16,0
2005	2,8	13,2	16,0
2006	4,2	12,4	16,6
2007	2,4	13,1	15,5
2008	1,7	15,1	16,8
2009	-0,8	14,1	13,2
2010	1,5	12,0	13,5
2011	3,7	10,7	14,4
2012	2,9	11,6	14,5
2013	3,4	9,9	13,4
2014	3,2	11,7	14,9

Source: Turkish Ministry of Development Data

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[9] http://data.worldbank.org/indicator/NY.GNS.ICTR.ZS

[10] http://data.worldbank.org/indicator/NY.GNS.ICTR.ZS

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