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Political Instability and the Effectiveness of Economic Policies: The Case of Thailand from 1993-2013

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Abstract

Between 1993 and 2013, the Thai economy suffered from massive changes in its economy, political situation, and external environment. Given data constraints and the rapidity of the changing situation, it is impossible to create an adequate macroeconomic model for Thailand during this time period. Thus we use a statistical method designed to solve the omitted variables problem with regression analysis. This method produces a separate slope estimate for every observation which makes it possible to see how omitted variables are affecting the estimated relationships over time. We use this method to estimate dGDP/dG, dGDP/dMB, dGDP/dX, dGDP/de, and dGDP/dReserves using quarterly Thai data from 1993 to 2013 where GDP is gross domestic product, G is government consumption, MB is the monetary base, X is exports, e is the baht/US$ exchange rate, and Reserves are foreign reserves. We find that the pro-equality policies of the Thaksin regime were helpful and that export driven growth is no longer a viable option for Thailand. Although we approve of Thaksin's economic policies, we disapprove of other aspects of his regime.

Keywords: Fiscal policy, Monetary policy, Trade policy, Thailand, Omitted variables.

1. Introduction

Thailand's political/economic history from 1993 to 2013 is filled with changes in Thailand's economic policies, political situation, and external environment. This time period involves the opening of an international banking center, a speculative attack, the collapse of an exchange rate that had been successfully fixed for thirteen years, the acceptance of a 17.2 billion dollar loan from the IMF along with the conditions that came with that loan, the political rise of Thaksin Shinawatra, the biggest land-slide election victory in Thai history, another election in which the opposition did not win enough seats to even initiate a censor debate, government condoned killing of drug lords and Muslims, the use of political power to enrich the Shinawatra clan, massive street protests in Bangkok, the calling of a snap election that the opposition boycotted and that resulted in a constitutional crisis, Thailand's king telling Thailand's judges to fix the situation or wear chamber pots over their heads to cover their shame, an annulling of the boycotted election, a coup, new elections, protesters taking over Bangkok's international airport, a new government, different protestors taking over the central business/shopping area of Bangkok, the army dispersing the protesters while several malls burn, the election of Thaksin's sister, Yingluck, as Thailand's first female prime minister, and a failed rice manipulation scheme by the government (Leightner, 2007b). Immediately after this time period there was another coup. It is impossible to create a macroeconomic model that would capture the effects of all of these structural changes, but all of these changes could potentially modify the effectiveness of government policies by directly affecting the economy or by affecting internal and/or external business expectations. Even if such a model could be developed, there would be insufficient data to estimate it because the shortest temporal length for gross domestic product (GDP) data for Thailand is quarterly and there are too few observations between major structural changes. Fortunately, Leightner (2015) has developed a regression procedure that produces unbiased estimates that capture the influence of omitted variables without having to identify, quantify, find proxies for, or model the influence of these important, but omitted variables.

This paper uses Leightner (2015) method to estimate dGDP/dG, dGDP/dMB, dGDP/dX, dGDP/de, and dGDP/dReserves using quarterly Thai data from 1993 to 2013 where GDP is gross domestic product, G is government consumption, MB is the monetary base, X is exports, e is the baht/US$ exchange rate, and Reserves are foreign reserves. Leightner's method produces a separate slope estimate for every observation which makes it possible to see how omitted variables affected the estimated relationships. We find that export driven growth is no longer a viable policy for Thailand and that the economic policies of the Thaksin regime were helpful to the Thai economy. However, it is important to realize that we do not condone the corruption, the extra-judicial killings of drug lords and Muslims, and the undercutting of the institutions required by democracy that are associated with the Thaksin regime. Leightner (2015) shows (using data from the 17 countries using the euro, the USA, the UK, Japan, Russia, Brazil, and China) that the world needs a pro-equality approach in order to solve the current world-wide economic malaise that is due to a surplus of savings and under-consumption. Thaksin's economic policies were pro-equality. It is a shame that those effective policies came bundled with a corrupt, power-hungry, and immoral regime. Section II will provide an intuitive explanation of the statistical technique used in this paper. Section III presents the empirical results, and Section IV concludes.

2. An Intuitive Explanation of the Analytical Technique Used

Omitting important variables from the analysis is one of regression analysis' most serious problems. For example, if just equation (1) is estimated, while not considering the fact that equation (1)'s slope is a function of other variables (equation 2), then a constant slope is found, in contrast to the true slope which varies.

$$Y = \alpha_0 + \beta_1 X \quad (1)$$

$$\beta_1 = \alpha_1 + \alpha_2 q \quad (2)$$

$$Y = \alpha_0 + \alpha_1 X + \alpha_2 Xq \quad (3)$$

We substitute equation 2 into equation 1 to produce equation 3, which provides a convenient way to model the omitted variables problem. We initially assume that all variation from the fitted line (error) is due to omitted variables. Leightner (2015) shows that, in this case, the "error" for the ith observation from estimating equation (1) without considering equation (2) is $\alpha_2 X_i(q_i - E[q])$ where E[q] is the mean value of q.

The standard approach to the omitted variable's problem is to use instrumental variables. However, this standard approach requires instruments that are almost perfectly correlated to the omitted variables while not being independently related to the dependent variable. Finding and justifying such variables is usually impossible. Once instruments are selected, their relationship to the omitted variables and the relationship between the omitted variables and the dependent variable must be correctly modeled. All of these conditions are impossible to meet for a subject as complex as the effectiveness of macroeconomic policies. For recent papers that express concern over omitted variable bias see Abbott and Allen (2011), Angrist and Alan (2001), Black and Lisa (2001), Botosan and Marlene (2002), Cellini (2008), DiPrete and Markus (2004), Harris and Keith (2007), Mustard (2003), Pace and James (2010), Paterson and Kevin (2002), Scheffler *et al.* (2007) , Sessions *et al.* (2006), Streams and Edward (2004), and Swamy *et al.* (2003).

Fortunately, Branson and Knox (2000) explain that the observations at the top of any given data set would be associated with the most favorable values for all omitted variables (in other words, the values of the omitted variables that would lead to the largest values for the dependent variable, ceteris paribus). Building on this intuition, Leightner (2002) developed a new analytical technique named "Reiterative Truncated Projected Least Squares" (RTPLS) that solves the omitted variable problem of regression analysis without using instrumental variables and their unreasonable assumptions. Leightner (2008) and Leightner and Tomoo (2012b) created the second and third generation of the technique respectively: RTPLS2 and RTPLS3. Leightner and Tomoo (2012b) also produce an argument that RTPLS3 is unbiased. Leightner (2015) uses the fourth generation, RTPLS4. His simulations show that the average ratio of Ordinary Least Squares (OLS) error to RTPLS error is 3.8 when the effect of omitted variables on the true slope is 10 times the size of random error. Furthermore, the OLS/RTPLS4 error ratio is more than 28 when the effect of omitted variables on the true slope is 100 times the size of random error. As random error approaches zero and as the sample size increases, the OLS/RTPLS error ratio approaches infinity. Published studies that used RTPLS, RTPLS2, RTPLS3, or RTPLS4 in applications include Leightner and Tomoo (2012a; 2012b; 2009; 2008a; 2008b; 2007) and Leightner (2015; 2013; 2011a; 2011b; 2010a; 2010b; 2008; 2007a; 2005a; 2005b; 2002).

Figure 1 will be used to explain RTPLS. To construct Figure 1, we generated two series of random numbers, X and q, which ranged from 0 to 100. We then calculated a series for the dependent variable, Y, using equation (4):

$$Y = 100 + 10 X + 0.6 q X \quad (4)$$

$\partial Y/\partial X$ for equation (4) equals 10 + 0.6 q. This slope will take numerical values that range from ten (when q equals zero) to seventy (when q equals one hundred). Since seventy is seven times bigger than ten, q makes a seven hundred percent difference to the true slope in this example. In Figure 1, we identified each point with that observation's value for q. Notice that the upper edge of the data corresponds to relatively large qs – 91, 96, 98, 98, 98, 96, 95, and 94. The lower edge of the data corresponds to relatively small qs – 17, 0, 3, 4, and 11. This makes sense since as q increases so does Y, for any given X. For example, when X approximately equals 85, reading the values of q from top to bottom of Figure 1 produces 86, 80, 75, 68, 65, 54, 49, 43, 35, 27, and 21. Thus the relative vertical position of each observation is directly related to the values of q. If, instead of adding 0.6qX in equation 4, we had subtracted 0.6qX, then the smallest qs would be on the top and the largest qs on the bottom of Figure 1. Either way, the vertical position of observations captures the influence of q. Also realize that the omitted variable, q, represents the combined effects of all forces that are not included in the analysis. For example, if there are 500 forces that are omitted where 300 of them are positively related to Y and 200 are negatively related to Y, then the observations on the frontier will correspond to when the 300 variables are at their largest levels and the 200 are at their lowest levels.

Where q is biggest, along the upper edge of Figure 1, the slope is also biggest. Likewise, where q is smallest, along the bottom edge of Figure 1, the slope is also smallest. The relative vertical position of the observations that correspond to any given X is related to the true slope.

Imagine that a researcher does not know what q is and that he, thus, omits it from his analysis. In this case, OLS produces the following estimated equation: Y = -59.85 + 45.27X with an R-Squared of 0.6524 and a standard error of the slope of 3.338. Although, this OLS regression may look successful, it is not. Remember that the true equation is Y = 100 + 10 X + 0.6 q X. Since q ranges from 0 to 100, the true slope (true derivative) ranges from 10 to 70 and OLS produced a constant slope of 45.27. OLS did the best it could, given its assumption of a constant slope; OLS produced a slope estimate of approximately 10 + 0.6 E(q) = 10 + 0.6(53) = 42. OLS is always biased when it assumes a constant slope when, in reality, the slope varies.

The most important implication from Figure 1 is that the relative vertical position of different observations contains information about the combined influence of all omitted variables. RTPLS4 uses this relative vertical position to solve the omitted variables problem. Furthermore, using RTPLS4 does not require that the researcher find appropriate proxies for the omitted variables, measure the omitted variables, or model how the omitted variables affect the dependent variable. Indeed, a researcher can use the relative vertical position of observations to capture the combined effects of all omitted variables even when he cannot name the important omitted variables.

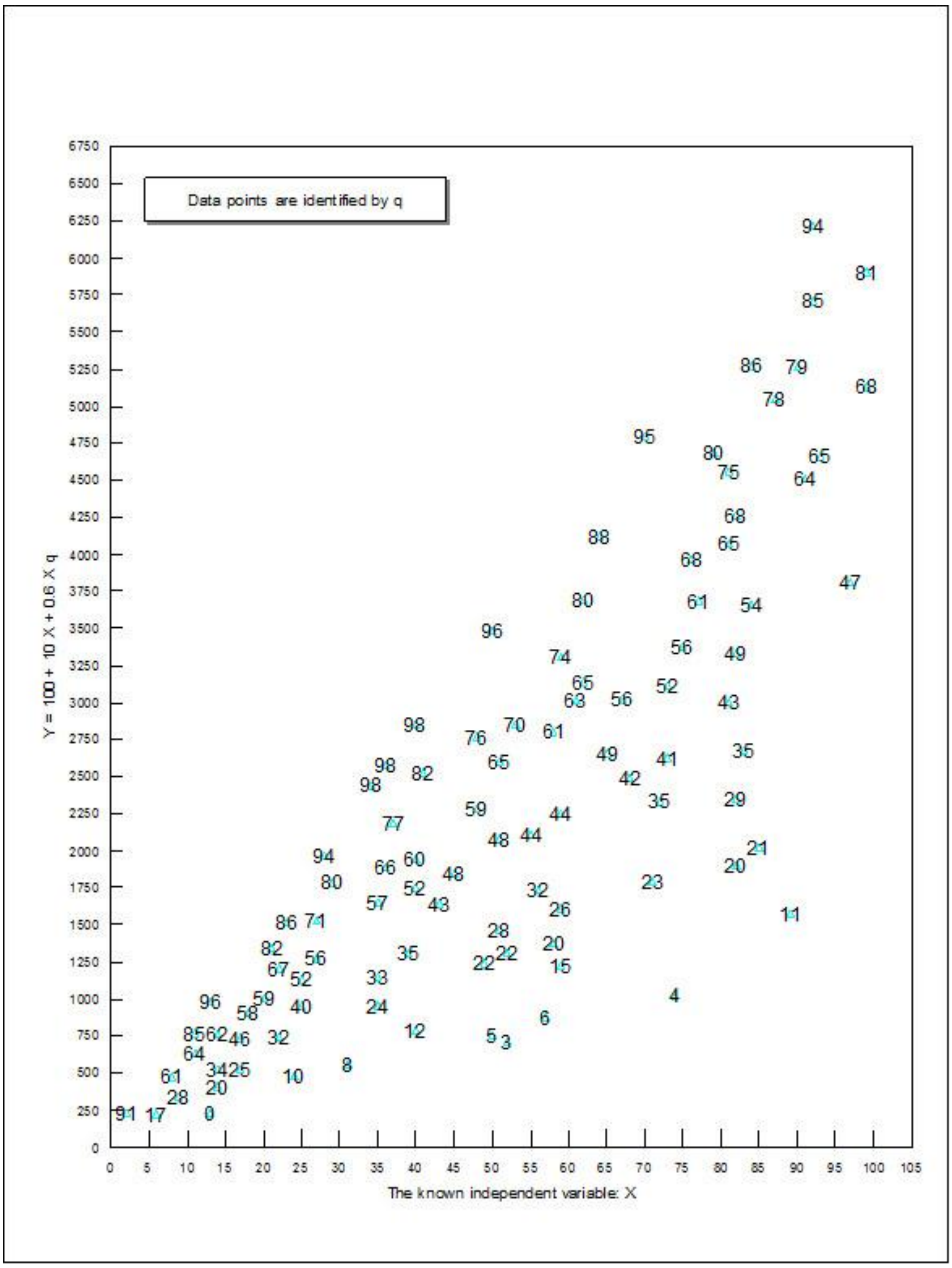

Fig-1. The inuttion behind BD-RTPLS4

RTPLS4 uses Data Envelopment Analysis (DEA) to draw a frontier through the top data points in Figure 1. All the data is then projected vertically upwards to this frontier. Since the observations on the frontier are the observations for which the omitted variables are most favorable (the values for q are at their highest levels along the top edge of Figure 1), this projection makes every observation correspond to the most favorable omitted variables values. In other words, this projection equalizes the influence of omitted variables to their most favorable level.

However, to the right of the top most observation (the 94 in the upper right hand corner in Figure 1), DEA draws a horizontal line extending to infinity. The projection of all observations vertically upward may result in some observations being projected to this horizontal section. For example, the 81 which is closest to the upper right hand corner of Figure 1 would be projected to a horizontal section of the frontier. Because this horizontal section has nothing to do with the true relationship between X and Y, it should not be included when OLS is used to find a slope estimate for the projected data. The OLS slope estimate found for the projected data (after truncating off any horizontal part of the frontier) is a slope estimate for when q is at its most favorable level. We call this slope estimate the "truncated projected least squares" slope estimate (TPLS) for the first iteration. A new column is then added to the data and this TPLS slope estimate is put into that data column for the observations that did not need to be projected upwards – i.e. the observations through which DEA drew the initial frontier.

The observations that did not need to be projected upwards are then cut from the original data file and pasted into a second data file and the procedure repeated using the original data file (sans all previous iterations' frontier observations). We reiterate this process, peeling the data down, layer by layer, from the top of the data to the bottom of the data. The first iteration of this process produces a TPLS slope estimate for when omitted variables cause the dependent variable, Y, to be at its highest numerical level. The second iteration produces a TPLS slope estimate for when omitted variables cause the dependent variable to be at its second highest level, etc. When the regression at the end of an additional iteration would use fewer than ten observations, this process is terminated (the remaining observations will be located at the bottom of the data).

Once the data set has been peeled from the top to the bottom, we return to the original data set and peel it up from the bottom to the top. When peeling up from the bottom, we project the data downward to the lower boundary of the data, we truncate off any lower left horizontal region, we run OLS regressions through the truncated projected data, we cut the frontier observations from the original data set and paste them (along with their TPLS estimates) into the second data set, and we reiterate this process until there are fewer than 10 observations remaining (the remaining observations will be at the top of the original data). By peeling the data both directions – from bottom to top and from top to bottom – all observations will have at least one TPLS estimate associated with it and some (in the middle of the data) will have two.

All the "peeling up" and "peeling down" TPLS estimates (with the corresponding original data) are put into the second data file. We then use this second data file to run a final regression where these TPLS estimates minus Y/X are the dependent variable and 1/X is the sole independent variable. The following derivation provides the rational for this final regression.

$Y = \alpha_0 + \alpha_1 X + \alpha_2 Xq$	(Equation 3 repeated)	(5)
$\partial Y/\partial X = \alpha_1 + \alpha_2 q$	(Derivative of equation 5)	(6)
$Y/X = \alpha_0/X + \alpha_1 + \alpha_2 q$	(Dividing equation 5 by X)	(7)
$\alpha_1 + \alpha_2 q = Y/X - \alpha_0/X$	(Rearranging equation 7)	(8)
$\partial Y/\partial X = Y/X - \alpha_0/X$	(From equations 6 and 8)	(9)
$\partial Y/\partial X - Y/X = - \alpha_0/X$	(rearranging equation 9)	(10)

The α_0 estimated in this final regression and the data for Y/X and X are plugged into equation 9 to produce a separate RTPLS4 slope estimate for each observation. Alternatively, Generalized Least Squares (GLS) could be used to estimate α_0 from equation (1) and the resulting α_0 along with data on Y/X and X could be plugged into equation (9); Inoue *et al.* (2014) name this alternative approach "Variable Slope Generalized Least Squares" (VSGLS). Theoretically VSGLS produces the best linear unbiased estimate (BLUE) for α_0 because equation (1) has heteroscedastic error (Aitken, 1935); however simulations show that VSGLS produces between twice and three times the error of RTPLS4 when sample sizes of 250 observations are used and all error is due to omitted variables. Thus, under these conditions, RTPLS4 is "better than BLUE." However, when random error is added, RTPLS4 and VSGLS perform equally well (Inoue *et al.*, 2014) .

Figure 1 can be used to better explain the role of the final regression in the RTPLS4 process. If all the upper frontier observations had the exact same omitted variable values (perhaps 97), then the resulting TPLS estimate would be exactly equivalent to the true slope for the frontier observations. However, Figure 1 shows that the observations on the upper frontier were associated with omitted variable values of 91, 96, 98, 98, 98, 96, 95, and 94. The resulting TPLS slope estimate would perfectly fit a q value of approximately 96 (the mean of 91, 96, 98, 98, 98, 96, 95, and 94). When a TPLS estimate for a q of 96 is associated with qs of 91, 96, 98, 98, 98, 96, 95, and 94, some random variation (both positive and negative variation) remains. By stacking the results from all iterations when peeling down and up, and then conducting this final regression, this random variation is eliminated. Realize that Y is co-determined by X and q. Thus the combination of X and Y should contain information about q. This final regression exploits this insight in order to better capture the influence of q.

RTPLS4 generates reduced form estimates that include all the ways that X and Y are correlated. Thus, even when many variables interact via a system of equations, a researcher using RTPLS4 does not have to discover and justify that system of equations. In contrast, traditional regression analysis theoretically must include all relevant variables in the estimation and the resulting slope estimate for $\partial Y/\partial X$ is for the effects of just X – holding all other variables constant. RTPLS4's reduced form estimates are not substitutes for traditional regression analysis' partial derivative estimates. Instead traditional regression analysis and RTPLS4 are compliments that capture different types of relationships. One disadvantage of RTPLS4 is that it cannot determine the mechanism by which the independent variable affects the dependent variable. On the other hand, RTPLS4 has the significant advantage of not having to model and find data for all the forces that can affect Y in order to estimate dY/dX. Both RTPLS4 and standard regression techniques estimate "correlations." Neither one of them prove "causation."

We created confidence intervals for each RTPLS4 estimate by grouping the estimate with the 2 estimates before and after it and then using equation (11), which is based on the Central Limit Theorem.

$$99\% \text{ confidence interval} = \text{mean} \pm (s/\sqrt{n})t_{n-1,\ \alpha/2} \quad (11)$$

In equation (11), "s" is the standard deviation, "n" is the number of observations which is 5, and $t_{n-1,\ \alpha/2}$ is 4.032 as taken off the standard t table. By always considering a given estimate and the 2 estimates before and after it, we created a moving confidence interval (much like a moving average) for a given set of RTPLS estimates. This 99% confidence interval can be interpreted as meaning that there is only a one percent chance that the true average for a given RTPLS estimate with the two RTPLS estimates before it and the two RTPLS estimates after it will lie outside of the given range. Given this interpretation, it is possible for a given RTPLS estimate to lie outside of its confidence interval if the other four estimates around it are all noticeably above or below the given RTPLS estimate.

3. The Data and the Empirical Results

The data is given in Table 1. The data for G, MB, and X are in millions of current baht. The exchange rate data is given in Thai baht per US dollar, and the foreign reserves are given in millions of current US dollars. The empirical results are given in Table 2 where the columns labeled "upper" and "lower" give the upper and lower bounds for a 99% confidence interval for the estimates in the column immediately to the left of these labels. Figures 2 through 6 depict the empirical results.

Table-1. The Data (GDP, G, MB, and X in millions of Baht; e in Baht per US $; reserves in millions of US dollars held at the end of the quarter)

		GDP	G	MB	X	e	reserves
1993	Q1	755554	71336	247009	278949	25.4893	22239.4
	Q2	755573	75095	251122	278051	25.2309	23979.8
	Q3	811118	89321	253105	314353	25.2344	25225.3
	Q4	842977	80230	271418	330152	25.3676	25438.8
1994	Q1	886103	84356	292341	329351	25.4176	26672.6
	Q2	870964	82994	290243	332490	25.2050	28340.5
	Q3	896836	102342	298691	356983	24.9855	29950.2
	Q4	975438	84695	313430	391962	25.0403	30279.0
1995	Q1	1033855	102381	346179	425287	24.9711	30119.5
	Q2	1026365	98676	356481	421084	24.6360	34958.3
	Q3	1032857	115885	358564	438776	24.9432	35866.1
	Q4	1093135	97461	377820	466527	25.1481	37026.7
1996	Q1	1116552	111052	404999	461125	25.2593	38982.5
	Q2	1146094	111159	401172	441700	25.3116	39830.0
	Q3	1154274	125651	402961	442540	25.3478	39537.0
	Q4	1194121	121654	430313	464545	25.5124	38724.5
1997	Q1	1158084	117538	459817	471972	25.8872	38065.6
	Q2	1165717	113471	469964	467382	25.4479	32353.0
	Q3	1182021	130782	445963	589362	32.6166	29612.2
	Q4	1226788	114914	453171	743399	40.2875	26967.7
1998	Q1	1210828	116037	461473	776676	46.6776	27680.0
	Q2	1117120	111876	441534	645169	40.3994	26571.7
	Q3	1112059	150137	443404	671389	41.1398	27290.8
	Q4	1186440	133641	464258	630719	36.9918	29535.9
1999	Q1	1159803	119749	476324	628982	37.0998	29936.1
	Q2	1108838	129285	431217	625559	37.2054	31433.9
	Q3	1152229	144485	429386	692836	38.4051	32360.2
	Q4	1216209	139522	516166	755931	38.8182	34780.6
2000	Q1	1231245	131830	499570	746880	37.7030	32283.9
	Q2	1189978	130009	457647	735051	38.8022	32142.0
	Q3	1212115	156021	468615	874782	41.0781	32249.8
	Q4	1289393	139947	506770	930571	43.5539	32661.3
2001	Q1	1284700	136881	519127	837246	43.3145	32294.7
	Q2	1257209	143445	505812	844237	45.6110	31611.5
	Q3	1270065	164660	506510	857128	45.1024	32635.4
	Q4	1321528	136131	534152	842139	44.3687	33048.4
2002	Q1	1355115	152036	560397	820135	43.6763	33614.5
	Q2	1325184	145700	552827	833325	42.7687	36790.6
	Q3	1343999	166374	563519	898844	42.0522	37652.0
	Q4	1426345	139781	587629	946700	43.3824	38923.7
2003	Q1	1471707	146465	627072	946261	42.9705	37631.7
	Q2	1424519	156390	607517	913278	42.2336	39327.1
	Q3	1457881	179425	611538	979831	41.2460	40264.3
	Q4	1563262	153722	651981	1047196	39.7335	42147.7
2004	Q1	1583692	161420	681915	1059950	39.1582	43036.4
	Q2	1568023	183434	675812	1108574	40.2158	43306.1
	Q3	1606091	199173	691135	1182636	41.2266	44767.5
	Q4	1731670	176568	763277	1236708	40.2704	49831.7
2005	Q1	1716030	193301	776977	1147003	38.5887	48681.1
	Q2	1691863	204321	763749	1244214	40.0950	48357.3
	Q3	1780615	239439	756188	1430853	41.3042	49795.2
	Q4	1904385	206588	794965	1396009	41.0472	52065.9
2006	Q1	1948891	220051	837441	1379062	39.3269	55265.8
	Q2	1900243	230628	795231	1381043	38.1247	58057.4
	Q3	1945831	262614	789179	1522271	37.6822	61592.7
	Q4	2049974	212694	826019	1495178	36.5307	66984.8
2007	Q1	2096403	245357	845252	1470577	33.9916	70863.0
	Q2	2047536	254724	823516	1473854	32.6376	72999.5
	Q3	2107739	295134	831429	1575307	31.4757	80686.7
	Q4	2273519	244055	880730	1739843	31.0903	87455.1

		GDP	G	MB	X	e	reserves
2008	Q1	2283347	259812	922963	1662721	31.0426	109970.3
	Q2	2283267	268331	906861	1739789	32.2996	105676.2
	Q3	2305387	314762	898575	1934054	33.8802	102421.6
	Q4	2208465	277937	967818	1604962	34.8593	111008.0
2009	Q1	2199600	279823	971511	1449590	35.3349	116216.3
	Q2	2196020	288743	975599	1392586	34.7276	120811.0
	Q3	2246467	344407	969872	1616066	33.9632	131755.7
	Q4	2399464	300955	1032435	1721810	33.3039	138417.6
2010	Q1	2560083	316260	1082431	1767053	32.8966	144094.1
	Q2	2471448	315689	1086842	1764641	32.3844	146759.2
	Q3	2490045	359799	1076872	1820548	31.6276	163235.3
	Q4	2583245	318279	1141793	1851057	29.9859	172128.9
2011	Q1	2744960	334477	1244944	2058719	30.5442	181584.0
	Q2	2652994	337697	1206049	2013730	30.2842	184894.3
	Q3	2688075	397216	1217604	2220098	30.1460	180112.7
	Q4	2454105	328140	1311562	1817403	31.0048	175123.8
2012	Q1	2798211	355744	1317609	2038340	30.9973	179247.8
	Q2	2811487	368186	1337258	2098657	31.2885	174689.1
	Q3	2801625	442386	1334503	2224797	31.3531	183627.2
	Q4	2964026	378014	1409036	2167418	30.6748	181608.0
2013	Q1	2999658	371474	1435458	2148647	29.7952	177802.9
	Q2	2955431	404666	1408188	2061985	29.8939	170841.1
	Q3r	2924215	481986	1397179	2286810	31.4804	172286.3
	Q4	3018145	384517	1492954	2255011	31.7307	167232.5

Sources: G, X, and GDP: National Economic and Social Development Board; Reserves and MB: The Bank of Thailand; e: http://fx.com

Table-2. The Empirical Results: *d*GDP/

		dG			*dMB*			*dX*			*de**			*dres*		
1993	Q1	4.82	upper	lower	1.76	upper	Lower	0.80	upper	lower	23.26	upper	lower	0.61	Upper	Lower
	Q2	4.58			1.73			0.80			23.50			0.56		
	Q3	4.47	5.79	4.16	1.93	2.02	1.69	0.89	1.09	0.72	23.94	24.53	23.11	2.74	6.06	-0.75
	Q4	5.38	6.00	4.23	1.92	2.02	1.74	0.94	1.12	0.77	24.06	24.66	23.45	3.97	6.47	0.41
1994	Q1	5.62	5.98	4.32	1.93	1.95	1.89	1.08	1.11	0.87	24.35	24.91	23.75	5.40	6.09	2.64
	Q2	5.53	6.70	4.47	1.89	2.07	1.83	1.02	1.15	0.92	24.44	25.49	23.77	4.55	7.66	3.06
	Q3	4.74	6.87	4.58	1.92	2.12	1.84	1.02	1.20	0.97	24.86	26.12	23.90	5.17	9.96	3.04
	Q4	6.66	7.04	4.66	2.08	2.12	1.85	1.13	1.23	0.98	25.43	26.61	24.17	7.71	10.50	3.59
1995	Q1	6.08	7.04	4.59	2.06	2.11	1.90	1.18	1.23	1.03	25.97	26.61	24.80	9.69	10.40	5.12
	Q2	6.23	7.26	5.26	1.98	2.10	1.95	1.17	1.21	1.12	26.26	26.53	25.44	8.13	10.07	7.18
	Q3	5.36	7.14	5.26	1.98	2.07	1.94	1.14	1.27	1.12	25.99	26.44	25.89	8.11	10.31	7.70
	Q4	6.99	7.28	5.33	2.04	2.07	1.94	1.20	1.39	1.08	26.26	26.57	25.97	9.48	10.58	7.61
1996	Q1	6.35	7.26	5.22	1.96	2.10	1.95	1.27	1.47	1.10	26.33	26.68	25.97	9.61	11.00	8.11
	Q2	6.61	7.09	5.82	2.05	2.10	1.96	1.39	1.50	1.18	26.51	26.73	26.19	10.14	11.68	8.85
	Q3	5.91	6.74	5.91	2.07	2.15	1.82	1.41	1.47	1.26	26.54	26.83	26.00	10.43	11.82	9.29
	Q4	6.43	6.86	5.91	2.03	2.17	1.74	1.43	1.45	1.32	26.68	26.86	26.04	11.67	13.16	9.35
1997	Q1	6.35	6.78	5.71	1.82	2.12	1.73	1.33	1.53	1.12	26.01	29.40	21.22	10.93	15.09	9.30
	Q2	6.65	7.19	5.77	1.80	2.08	1.75	1.36	1.56	0.90	26.52	30.37	16.46	13.09	18.25	9.16
	Q3	5.89	7.33	5.81	1.93	2.03	1.76	1.10	1.47	0.76	20.79	29.52	12.49	14.86	19.36	10.16
	Q4	7.09	7.33	5.79	2.00	2.03	1.75	0.93	1.36	0.71	17.06	26.70	11.50	17.97	18.65	12.15
1998	Q1	6.89	7.73	4.61	1.93	2.04	1.74	0.87	1.09	0.78	14.65	20.71	13.33	16.94	18.54	12.44
	Q2	6.31	7.72	4.58	1.80	2.02	1.73	0.91	1.04	0.81	16.47	18.71	14.36	14.12	18.55	12.50
	Q3	4.66	7.32	4.64	1.78	1.94	1.72	0.86	1.06	0.81	16.14	19.23	14.28	13.56	16.90	12.54
	Q4	5.80	6.78	4.59	1.86	1.87	1.74	1.04	1.06	0.83	18.36	19.03	15.75	15.05	15.67	11.66
1999	Q1	6.25	6.43	4.46	1.76	1.94	1.72	1.00	1.06	0.83	18.16	19.01	16.19	13.95	15.45	11.31
	Q2	5.39	6.36	4.98	1.82	1.95	1.69	0.92	1.05	0.85	17.83	18.47	17.33	11.67	15.47	11.32
	Q3	5.13	6.55	4.95	1.93	1.94	1.69	0.90	1.00	0.87	17.50	18.40	17.36	12.68	15.54	11.29
	Q4	5.77	6.41	4.99	1.73	1.97	1.72	0.91	0.94	0.88	17.65	18.25	17.25	13.63	15.54	11.29
2000	Q1	6.22	6.45	4.84	1.82	1.99	1.73	0.94	0.98	0.78	18.25	18.43	16.60	15.15	15.51	12.47
	Q2	5.99	6.62	5.13	1.90	1.97	1.73	0.90	0.97	0.76	17.52	18.62	15.83	13.94	16.81	12.82
	Q3	5.13	6.81	5.18	1.90	1.94	1.82	0.78	0.97	0.76	16.66	18.44	15.41	14.58	17.53	13.36
	Q4	6.27	6.72	5.14	1.91	1.93	1.84	0.81	0.93	0.76	16.06	17.69	14.94	16.76	17.82	13.53
2001	Q1	6.38	6.72	4.84	1.85	1.92	1.83	0.90	0.92	0.77	16.13	16.84	14.95	16.80	17.59	14.66
	Q2	5.89	7.00	5.18	1.85	1.91	1.83	0.86	0.95	0.80	15.20	16.41	15.08	16.30	17.58	15.85
	Q3	5.21	6.98	5.17	1.87	1.88	1.84	0.86	1.01	0.81	15.43	16.56	15.04	16.18	18.41	15.61
	Q4	6.68	6.94	5.17	1.87	1.89	1.81	0.94	1.02	0.82	15.91	16.79	14.96	17.53	18.46	15.18
2002	Q1	6.21	6.93	5.06	1.84	1.89	1.80	1.00	1.02	0.85	16.32	17.13	15.30	18.24	18.48	15.04
	Q2	6.27	7.39	5.41	1.81	1.89	1.80	0.95	1.01	0.89	16.53	17.11	15.86	15.85	18.75	15.33
	Q3	5.60	7.67	5.36	1.81	1.88	1.79	0.90	1.02	0.89	16.90	17.24	16.22	15.99	19.84	14.98
	Q4	7.26	7.70	5.44	1.88	1.88	1.79	0.94	1.01	0.90	16.76	17.35	16.46	17.58	19.55	14.92
2003	Q1	7.24	7.72	5.24	1.83	1.89	1.79	0.99	1.01	0.90	17.13	17.79	16.52	19.39	19.58	15.66
	Q2	6.48	7.97	5.75	1.81	1.92	1.80	0.98	1.01	0.93	17.21	18.98	16.17	17.35	19.98	16.65
	Q3	5.83	7.97	5.75	1.86	1.91	1.80	0.95	1.01	0.95	17.78	19.76	16.43	17.78	20.42	17.00
	Q4	7.49	7.78	5.56	1.90	1.91	1.80	0.98	1.01	0.93	18.99	19.88	16.97	19.48	20.29	17.01
2004	Q1	7.26	7.79	5.36	1.85	1.90	1.82	0.99	1.01	0.90	19.37	19.65	17.72	19.56	20.21	17.86
	Q2	6.30	8.04	5.77	1.84	1.90	1.82	0.93	1.02	0.90	18.78	19.74	18.35	19.07	19.93	18.98
	Q3	6.00	7.76	5.75	1.86	1.88	1.80	0.91	1.05	0.89	18.51	20.47	18.16	19.30	20.18	18.94
	Q4	7.48	7.49	5.62	1.85	1.88	1.78	0.97	1.03	0.88	19.57	20.49	18.17	19.86	20.20	18.95
2005	Q1	6.75	7.56	5.32	1.79	1.93	1.75	1.03	1.04	0.84	20.34	20.50	18.38	20.01	20.87	19.00
	Q2	6.27	7.84	5.54	1.79	2.01	1.73	0.93	1.05	0.86	19.46	20.44	19.05	19.64	22.31	18.76
	Q3	5.72	7.56	5.62	1.93	2.04	1.74	0.87	1.08	0.86	19.32	21.25	18.87	20.86	22.79	19.08
	Q4	7.23	7.49	5.57	1.99	2.06	1.80	0.98	1.06	0.86	20.04	21.92	18.68	22.32	22.79	19.05

		dG			***dMB***			***dX***			**de***			***dres***		
2006	Q1	6.99	7.53	5.36	1.94	2.06	1.90	1.03	1.06	0.86	21.14	22.63	19.01	21.84	22.82	18.99
	Q2	6.45	8.00	5.68	1.98	2.11	1.92	0.99	1.05	0.93	21.56	23.56	19.68	19.95	22.80	18.47
	Q3	5.84	7.88	5.66	2.06	2.15	1.92	0.93	1.09	0.92	22.05	25.41	19.95	19.54	21.72	18.26
	Q4	7.70	7.77	5.55	2.09	2.14	1.99	1.02	1.09	0.92	23.32	26.87	20.46	19.53	20.48	17.92
2007	Q1	6.87	7.81	5.22	2.10	2.15	2.05	1.06	1.09	0.93	25.33	28.32	21.37	19.11	20.46	16.74
	Q2	6.42	8.21	5.54	2.10	2.22	2.04	1.03	1.06	0.98	26.08	29.58	22.82	17.88	19.96	16.43
	Q3	5.75	7.94	5.60	2.15	2.22	2.06	1.00	1.08	0.98	27.43	29.93	24.72	16.93	20.15	14.03
	Q4	7.63	7.97	5.62	2.22	2.22	2.08	1.00	1.05	0.98	28.84	29.71	25.94	17.51	19.03	13.34
2008	Q1	7.20	8.01	5.42	2.13	2.23	2.11	1.05	1.08	0.92	28.94	29.50	26.37	14.02	18.09	13.23
	Q2	6.97	7.87	5.84	2.16	2.31	1.96	1.01	1.09	0.92	27.82	29.98	25.05	14.58	17.55	12.28
	Q3	6.02	7.38	5.84	2.21	2.28	1.87	0.92	1.17	0.90	26.65	29.43	24.05	15.26	15.66	12.18
	Q4	6.46	6.99	5.82	1.95	2.26	1.81	1.04	1.24	0.88	25.34	27.94	24.11	13.21	15.73	11.33
2009	Q1	6.39	6.81	5.34	1.93	2.19	1.81	1.15	1.25	0.90	24.95	26.85	24.57	12.54	15.28	10.51
	Q2	6.18	7.01	5.37	1.92	2.02	1.90	1.20	1.21	1.00	25.37	27.67	24.16	12.04	13.32	11.15
	Q3	5.33	7.18	5.34	1.98	2.08	1.89	1.06	1.22	1.04	26.24	29.35	23.94	11.42	12.90	11.33
	Q4	6.60	7.22	5.35	2.01	2.08	1.91	1.08	1.20	1.03	27.67	30.03	24.84	11.97	12.67	11.26
2010	Q1	6.79	7.21	5.20	2.07	2.07	1.95	1.15	1.15	1.04	28.99	30.51	26.10	12.62	12.84	10.56
	Q2	6.52	7.19	5.82	1.98	2.07	1.95	1.10	1.15	1.06	28.91	32.01	26.90	11.78	12.91	10.20
	Q3	5.78	7.35	5.81	2.01	2.07	1.92	1.08	1.15	1.05	29.71	33.11	27.70	10.71	12.70	10.03
	Q4	6.82	7.30	5.80	1.98	2.02	1.92	1.11	1.12	1.05	31.96	33.61	28.44	10.70	11.79	10.03
2011	Q1	6.98	7.34	5.43	1.95	2.02	1.91	1.08	1.14	0.97	32.44	33.61	29.88	11.03	11.12	10.31
	Q2	6.64	7.29	5.67	1.93	2.12	1.65	1.05	1.13	0.97	32.11	33.42	30.21	10.34	11.32	9.74
	Q3	5.73	7.24	5.67	1.94	2.09	1.64	0.97	1.14	0.97	32.49	33.53	30.24	10.80	11.73	9.63
	Q4	6.22	7.01	5.72	1.63	2.06	1.64	1.06	1.14	0.97	30.08	33.40	30.23	9.78	12.20	9.50
2012	Q1	6.71	6.99	5.24	1.88	2.03	1.64	1.11	1.14	0.96	32.31	33.36	30.21	11.47	12.30	9.74
	Q2	6.52	7.21	5.43	1.86	2.00	1.64	1.09	1.15	1.01	32.09	34.13	29.94	11.85	12.82	9.79
	Q3	5.40	7.47	5.47	1.86	1.88	1.85	1.02	1.18	1.02	31.96	35.11	30.91	11.22	12.85	10.94
	Q4	6.75	7.36	5.41	1.88	1.88	1.86	1.12	1.21	1.01	33.73	35.69	31.23	12.23	13.31	11.07
2013	Q1	6.97	7.39	4.85	1.87	1.88	1.86	1.15	1.21	1.00	34.96	35.61	31.52	12.70	13.46	11.25
	Q2	6.29	7.54	5.26	1.87	1.90	1.81	1.18	1.20	1.04	34.55	35.38	32.14	12.96	13.65	12.02
	Q3r	5.21			1.86			1.05			32.61			12.67		
	Q4	6.78			1.81			1.10			32.95			13.61		

*for the *d*GDP/*d*e results, GDP was measured in units of 5 billion baht. This was done so that Figure 5 would be easier to understand.

As shown in Table 2, *d*GDP/*d*MB was 2.03 in the fourth quarter of 1996, immediately prior to George Soros' speculative attack against the Thai baht in the first half of 1997. This value means that for every one million increase in the monetary base for Thailand, GDP increased by 2.03 million. This multiplier had fallen to 1.78 by the third quarter of 1998 for a 12.3 percent decline. The bottom line in Figure 2 shows that the monetary base remained unusually constant between the third quarters of 1997 and 1999. This was due to the IMF conditions imposed on Thailand when Thailand accepted an IMF bailout in August 1997. By 2000, the monetary base began to steadily increase. The upper lines in Figure 2 show that the *d*GDP/*d*MB multiplier was unusually stable during most of the Thaksin administration (2001-2006), rose noticeably in the last year of Thaksin's administration (between the third quarters of 2005 and 2006), continued to rise after the coup that displaced Thaksin and during the pro-Thaksin Samak/Somchai regime. Between the second quarter of 2005 and the third quarter of 2008, *d*GDP/*d*MB rose by 23.5 percent. Under the Democrats (first quarter of 2009 – second quarter of 2011), *d*GDP/*d*MB fell and became more unstable. The economic policies of the Thaksin regime were more pro-equality than that of the Democrats. A shift away from pro-equality policies will decrease the marginal propensity to consume (MPC) which should decrease all government multipliers. Soon after Thaksin's sister, Yingluck, was elected in July 2011, *d*GDP/*d*MB fell for one quarter, but then stabilized.

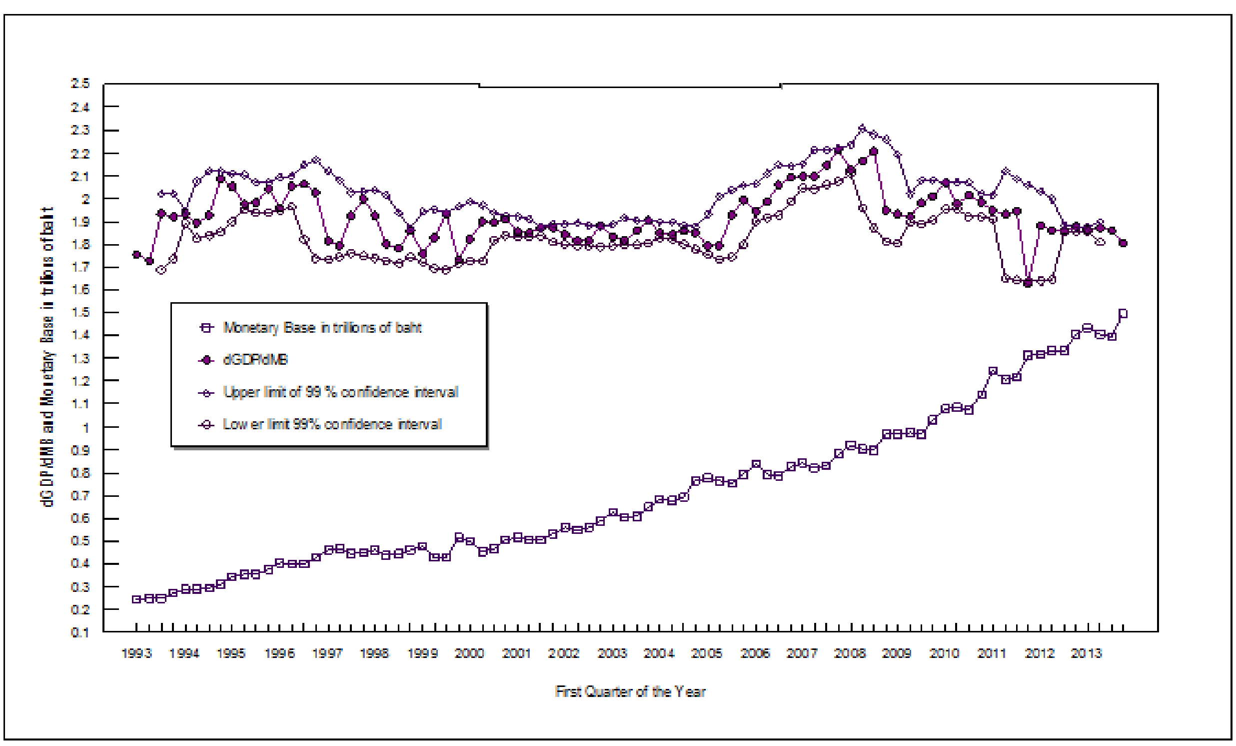

Figure-2. dGDP/dMB

Leightner (2015) found that, for the USA and Japan (between1980 and 2012), increases in the money supply were associated with declines in the money multiplier and that decreases in the money supply were associated with increases in the money multiplier. However, the Thai results do not produce a similar pattern. Indeed a comparison of the upper and bottom lines in Figure 2 implies that the variations found in *d*GDP/*d*MB were not due to noticeable changes in the growth of the monetary base; instead these variations must be due to other factors like monetary policy interacting with other government policies or due to expectations.

Figure 3 and Tables 1 and 2 show that both government consumption and the government consumption multiplier, *d*GDP/*d*G, exhibited an annual pattern where government consumption increased in the third quarter and *d*GDP/*d*G fell in the third quarter. This implies that cuts in government consumption (in the fourth quarter) have a stronger negative effect on GDP that increases in government consumption (in the third quarter) have a positive effect. Leightner (2015) found a similar pattern for Austria, Brazil, Cyprus, Estonia, Greece, Luxembourg, Portugal, and Slovakia in recent years. For example, in Thailand when government consumption increased by 74.2 billion baht in the third quarter of 2012 (442.4 – 368.2), *d*GDP/*d*G was 5.40, implying that GDP rose by 400.68 billion baht (74.2 x 5.40). However, when government consumption was cut in the fourth quarter of 2012 by 64.4 billion baht (378.0 – 442.4), *d*GDP/*d*G was 6.75 implying a decline in GDP of 434.7 billion baht (6.75 x 64.4). Since 6.75 is twenty five percent bigger than 5.40, the fourth quarter decline in government consumption caused GDP to fall by 25 percent more than an equal increase in government consumption would cause GDP to rise. Government consumption would be a much more effective tool if government consumption was smoothed throughout out the year instead of spiking in the third quarter and then being cut in the fourth quarter to reduce the deficit.

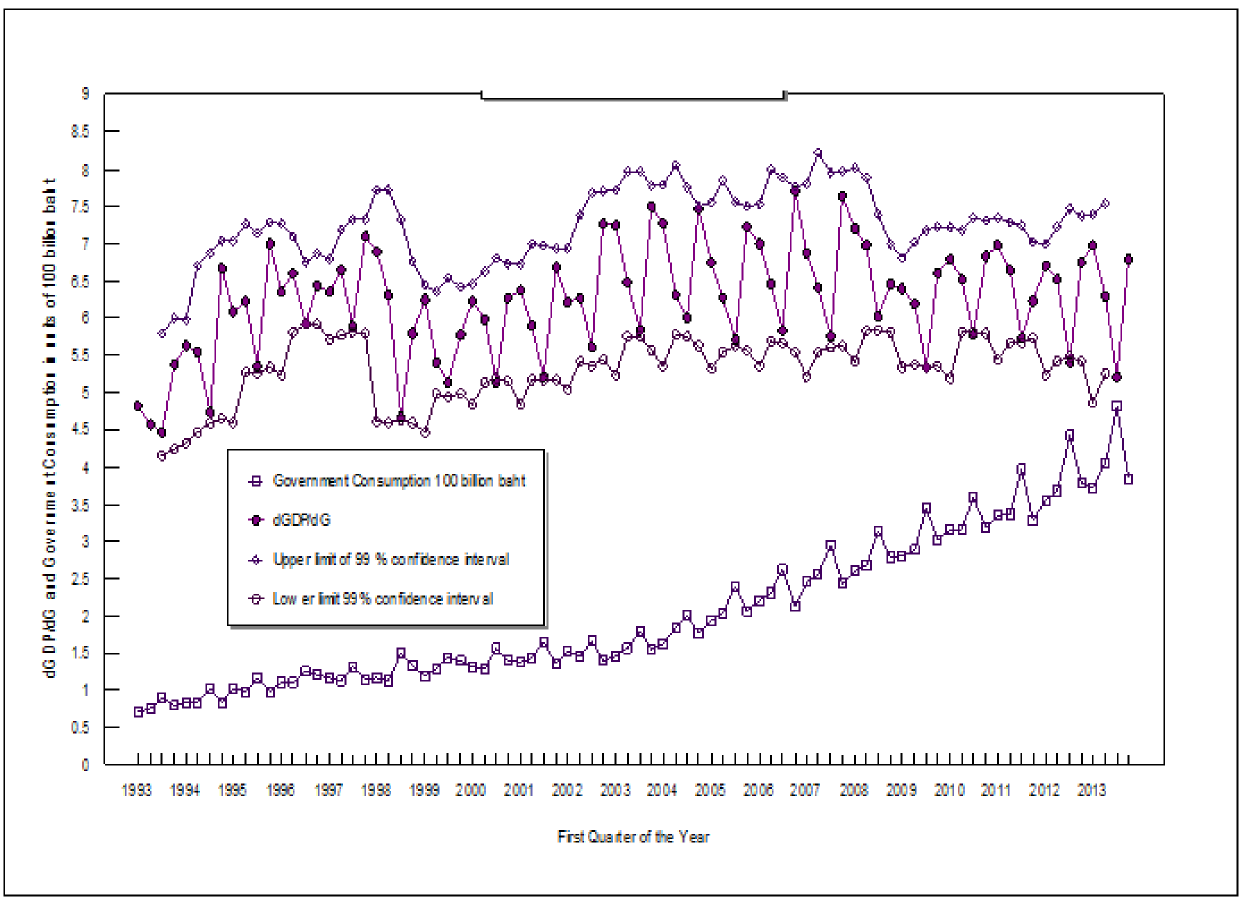

Figure-3. dGDP/dG

If we eliminate this annual pattern by taking the annual average value for *d*GDP/*d*G, we find that annual *d*GDP/*d*G steadily grew from 4.81 in 1993 to 6.49 in 1997 for a 35 percent increase. However, after the baht collapsed on July 2, 1997 and Thailand took out the IMF loan in August 1997, annual *d*GDP/*d*G fell to 5.91 in 1998 and continued to decline to 5.63 in 1999 for a 13.3 percent decline. During the first half year of the Thaksin regime (quarters 1 and 2 of 2001) there was a pending constitutional court case against Thaksin for corruption, and this pending court case constrained what the Thaksin administration could do. The annual *d*GDP/*d*G for 2001 was 6.04. Between 2002 and 2008 (the remaining Thaksin years, the year of the coup, and the pro-Thaksin Samak/Somchai regime), annual *d*GDP/*d*G ranged between 6.33 and 6.77. However, annual *d*GDP/*d*G fell to 6.13 in 2009, the first year under the next Democrat regime. The Democrats in 2010 started to implement more pro-equality programs than they previously had and annual *d*GDP/*d*G rebounded to 6.48. Again Keynesian theory would predict a higher multiplier under pro-equality regimes (ceteris paribus) because increasing equality increases the marginal propensity to consume. Under Yingluck, Thaksin's sister, annual *d*GDP/*d*G slightly declined from 6.39 to 6.31.

Table 2 and Figure 4 show the *d*GDP/*d*X results. Notice that *d*GDP/*d*X for Thailand is always much lower than *d*GDP/*d*G. Furthermore, *d*GDP/*d*X for Thailand was often less than one meaning that a one million baht increase in exports increased GDP by less than one million baht. From the perspective of a simple Keynesian model, the Thai results are surprising. Since GDP = C + I + G + X – M (where C = private consumption, I = Investment, G = Government Consumption, X = exports, and M = imports), one would expect *d*GDP/*d*X to equal *d*GDP/*d*G (because both G and X are added into GDP in the same way).

There are several reasons why *d*GDP/*d*X would be less than *d*GDP/*d*G in a more complex Keynesian model. Government consumption is often done for the benefit of the country in contrast to exports which are done for the benefit of private citizens and companies. Thus government consumption is more likely to be pro-equality while exporting is often correlated with increased inequality. Greater equality causes the marginal propensity to consume to raise causing government policy multipliers to increase. Many Asian countries, especially prior to 2008, embraced an export driven growth strategy which explicitly entailed greater inequality. For example China (prior to 2008) embraced an export driven growth model that employed a suppressed exchange rate, which Leightner (2015) shows hurts consumers and helps producers, and the suppression of wages which further hurts consumers. Please understand that we are NOT anti-trade. There are real gains from trade. However, many countries have tried to increase those gains by employing market distortions, like suppressed wage rates and exchange rates, and these distortions are no longer able to drive sustainable growth in today's world. The remainder of section III will explore the issues dealing with trade in more depth.

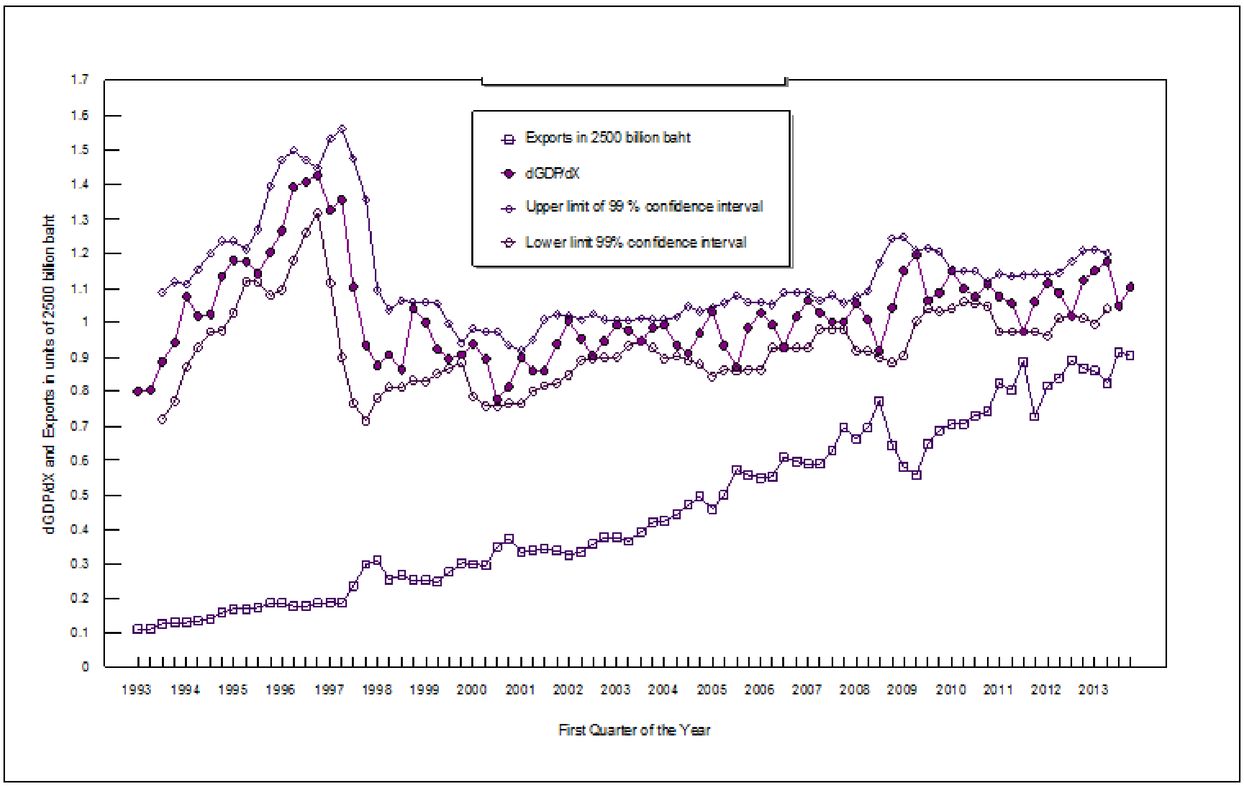

Figure-4. dGDP/dX

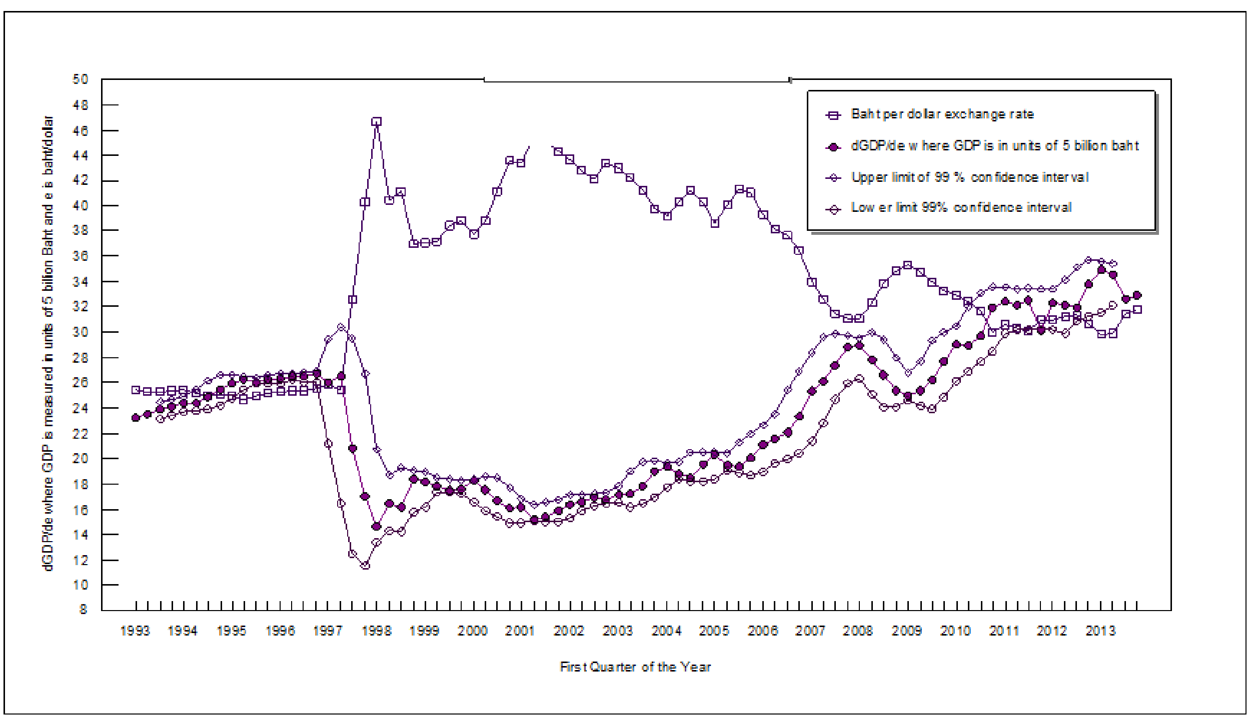

Figure-5. dGDP/de

Figure 5 shows the *d*GDP/*d*e results where "e" is the baht/US dollar exchange rate and GDP is in units of five billion baht. The *d*GDP/*d*e value of 23.26 in the first quarter of 1993 means that for every one baht increase in the baht per US dollar exchange rate, Thailand's GDP increased by 116.3 billion baht (5 billion x 23.26). Notice that an increase in "e" is a depreciation of the baht and a decrease in "e" is an appreciation of the baht. Thailand's *d*GDP/*d*e steadily increased from 116.3 billion baht in the first quarter of 1993 to 132.6 billion baht in the second quarter of 1997. The top line in Figure 5 shows that when the Thai baht was floated on July 2, 1997, the exchange rate (baht/dollar) immediately rose to 32.62 baht/dollar and kept rising until it hit 46.68 baht/dollar in the first quarter of 1998 (if we were to examine daily values of the baht, instead of quarterly values, the baht hit a high of 55.5 baht/dollar). This depreciation of the baht (dollars/baht falling or baht/dollar rising) is correlated with *d*GDP/*d*e falling from 132.6 billion baht in the second quarter of 1997 to 73.25 billion baht in the first quarter of 1998 for a 44.8 percent decline. This means that the immediate boost to GDP in 1997-1998 from the depreciation of the baht was 44.8 percent less than what the Thais expected based on data immediately prior to the fall.

Figure 5 also shows that *d*GDP/*d*e steadily rose during the Thaksin years (2001-2006) and accelerated its increase in the year of the coup (2007) and during the pro-Thaksin Samak/Somchai regime. However, when the Democrats took over in 2008, *d*GDP/*d*e initially fell but rebounded in 2009. During the Yingluck years (2011-2013), *d*GDP/*d*e was the highest it had been since 1993, but was also slightly more volatile. Notice that when the baht/dollar exchange rate increases, *d*GDP/*d*e falls, and that when the baht/dollar exchange rate decreases, *d*GDP/*d*e rises. This means that the positive effects from the baht/dollar exchange rate rising are weaker than the negative effects of the baht/dollar exchange rate falling. For example when the exchange rate went from 31.04 baht/dollar in the first quarter of 2008 to 35.33 baht/dollar in the first quarter of 2009, *d*GDP/*d*e went from 144.7 billion baht to 124.75 billion baht for a 20 percent decline. In contrast, when the exchange rate went from 35.33 baht/dollar in the first quarter of 2009 to 29.99 baht/dollar in the fourth quarter of 2010, *d*GDP/*d*e rose from 124.75 to 159.8 billion baht for a 28 percent increase. Therefore appreciations of the baht (baht/dollar falling) hurt the Thai economy more than equal depreciations of the baht help. This asymmetric affect could be because negative news has a stronger effect on expectations than positive news has.

Many countries that embrace export driven growth models suppress their exchange rates below market clearing levels by printing more of their currencies and then exchanging their currencies for US dollars, US treasury bills, or other foreign currencies. When a country accumulates US dollars (for example) in order to drive down their exchange rate, they must forever hold those dollars, because if they ever use those dollars, then the value of the dollar would fall causing the value of their own currencies to rise, ceteris paribus. Other countries wanting to accumulate US dollars, which they never use, has been a wonderful deal for the US – the US gets imports in exchange for printed dollar bills that never get used. It is like the world giving the US loan after loan and never asking to be repaid. [However, Leightner (2015) discusses how China (who now holds almost 4 trillion dollars of foreign reserves as of April 2014) now has significant leverage against the USA because China can threaten to dump those reserves, of which more than ½ are US dollars.] This "accumulating US dollars to suppress the exchange rate and increase exports" deal "might" be worth it for the accumulating countries if *d*GDP/*d*(foreign reserves) exceeds the cost of the foreign reserves. We emphasize the word "might" because a complete analysis would need to analyze the opportunity costs involved. However, it is safe to say that if the resulting increase in GDP does not exceed the cost of the reserves, then accumulating the foreign reserves were not worth it as a growth strategy (however, it might be worth it as a strategy to reduce the risk of speculative attacks).

Table 2 and Figure 6 depict the *d*GDP/*d*(reserves) results for Thailand where GDP is measured in millions of baht and foreign reserves are measured in millions of US dollars at the end of the quarter. Since *d*GDP/*d*(reserves), as shown in Figure 6, never exceeds the baht/dollar exchange rate, as shown in Figure 5, Thailand's accumulation of foreign reserves were not worth it as a growth strategy. In other words, for every dollar of reserves that Thailand accumulated, Thailand's GDP increased by much less than a dollar. Thailand gave the US a dollar worth of imports for printed paper (that it is illogical for Thailand to ever cash in under an export driven growth model) but Thailand got less than a dollar's increase in GDP.

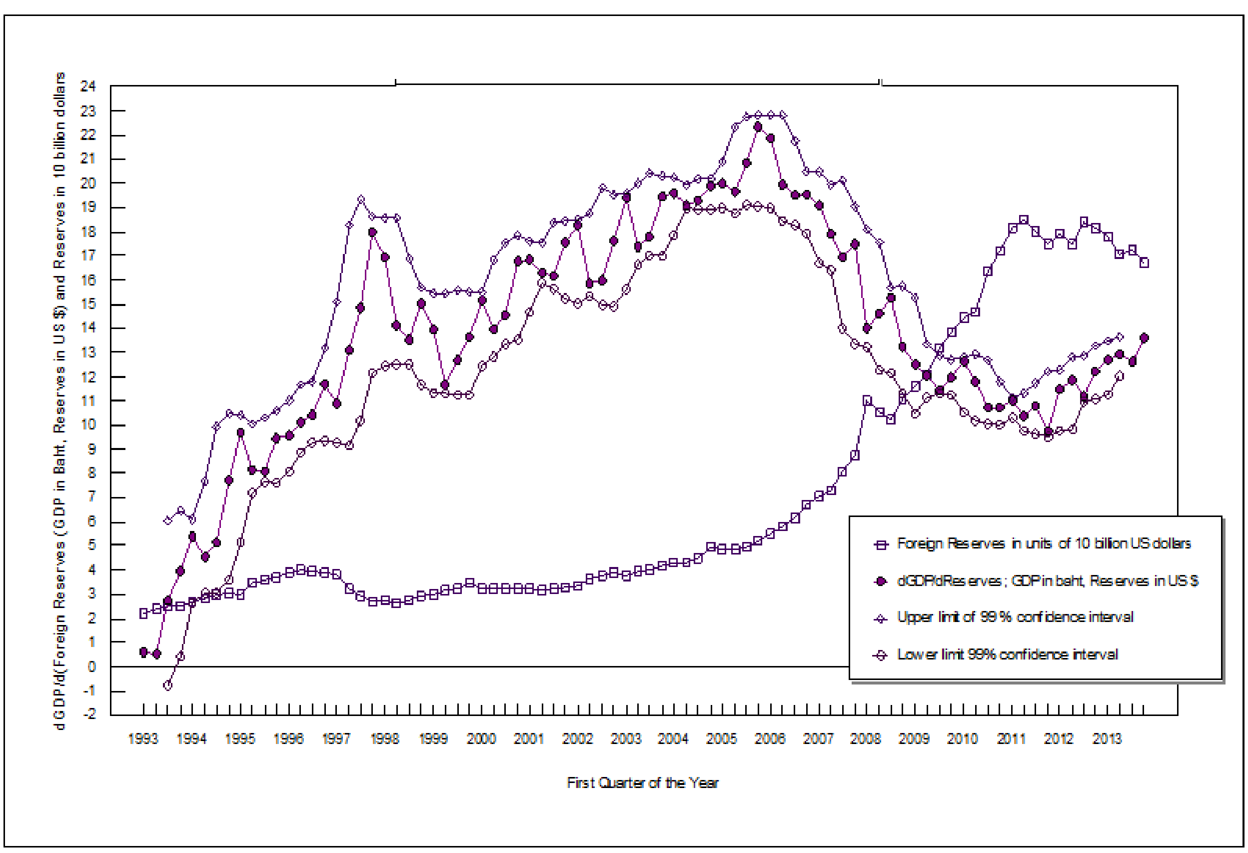

Figure-6. dGDP/d (Foreign Reserves)

Figure 6 shows Thailand's official holdings of foreign reserves (in units of 10 billion dollars); however, these official holdings of foreign reserves do not depict the true drop in foreign reserves that occurred in 1997. At the beginning of 1997 Thailand had 38.7 billion dollars of foreign reserves. When George Soros launched a speculative attack against the Thai baht in the first half of 1997, the Thai government defended its fixed exchange rate by buying up surplus baht on the market. However, the Thai government did not want the world to know how much of its foreign reserves it was using (because that knowledge would have caused more foreigners to sell their baht) thus, the Thai government hid its defense of the Thai baht by using forward contracts, the effects of which do not immediately show up in the official foreign reserves accounts. Actually, in the first half of 1997, Thailand spent approximately 35 billion dollars of foreign reserves (if the forward contracts are included) defending the baht (recall that in January 1997, Thailand only had 38.7 billion dollars of foreign reserves).

Figure 6 shows that during the Thaksin regime (2001-2006) Thailand's holdings of foreign reserves steadily increased at a relatively slow rate resulting in Thailand's foreign reserves of 32.3 billion dollars in the first quarter of 2001 increasing to only 58.1 billion dollars by the second quarter of 2006 for an 80 percent increase in six years. In contrast, in the six years between the coup that displaced Thaksin (3rd quarter of 2006) and when his sister, Yingluck became prime minister (3rd quarter of 2011), Thai holdings of foreign reserves increased from 58.1 billion dollars to 184.9 billion dollars for a 218 percent increase. Furthermore, during the Thaksin six years, *d*GDP/*d*(reserves) rose from 16.8 to 19.95 for an 18.8 percent increase. In contrast, during the six years after the Thaksin regime, *d*GDP/*d*(reserves) fell from 19.95 to 10.34 for a 48.2 percent decline. Figure 6 also shows that when Yingluck, Thaksin's sister, took over the Thai government she stopped accumulating foreign reserves and *d*GDP/*d*(reserves) began to rebound. As Leightner (2015) shows, accumulating foreign reserves to suppress an exchange rate in order to increase exports also increases the degree of inequality which reduces all government multipliers. Thus, Thaksin and Yingluck not accumulating massive amounts of foreign reserves during their regimes was consistent with their pro-equality agendas. According to the Keynesian model, government multipliers are higher when the marginal propensity to consume (MPC) is higher and the MPC increases under government policies that increase equality.

4. Conclusion

For a country to grow, there must be production increasing investment. Investment requires two things – savings to fund the investment and the reasonable belief that what investment produces will sell (Leightner, 2015). Many of our growth models emphasize the role of savings to fund investment while ignoring the role of consumption in providing a reason to invest. Leightner (2015) shows the world is currently suffering from a surplus of saving, which is currently either (1) sitting idle, (2) seeking a return from deception or rent, or (3) funding speculative bubbles and these three things are happening because there is insufficient consumption to justify investing that saving in the expansion of production. Thailand suffered from a speculative bubble between 1993 and 1996, this bubble gave George Soros the evidence he needed to successfully conduct a speculative attack against the Thai baht. The collapse of the Thai baht was devastating to the Thai economy. The political rise of Thaksin Shinawatra was a direct consequence of the collapse of the Thai baht and of the conditionality imposed by the subsequent IMF bailout loan. The Thaksin regime used a pro-equality strategy which is what is needed in a world suffering from a surplus of savings. The empirical results of this paper show that Thaksin's pro-equality economic policies were appropriate and good for the country. Unfortunately, Thaksin was corrupt, power hungry, condoned the killing of drug dealers and Muslims, and undercut the institutions needed for democracy. The results of this paper are consistent with what Leightner (2015) found for the seventeen countries using the euro, the USA, the UK, Japan, Brazil, and Russia. Leightner (2015) shows that pro-equality policies are the solution to the current world-wide economic malaise and that export driven growth will no longer work in our current world.

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