

ภาคผนวก



ภาคผนวก ก

เงินลงทุนโดยตรงจากต่างประเทศในไทย



ตารางที่ 1 มูลค่าเงินลงทุนโดยตรงจากต่างประเทศคงค้างในประเทศไทย

ไตรมาส-ปี	หน่วย : ล้านดอลลาร์ สหรัฐ	อัตราแลกเปลี่ยน : (USD)	หน่วย: ล้านบาท
Q1-2548	14,735.64	38.612	568,972.65
Q2-2548	15,083.38	40.0962	604,786.18
Q3-2548	15,467.80	41.3353	639,366.01
Q4-2548	15,121.42	41.0354	620,513.57
Q1-2549	18,770.67	39.3343	738,330.99
Q2-2549	19,213.62	38.1188	732,400.18
Q3-2549	19,703.30	37.6896	742,609.60
Q4-2549	19,262.08	36.5718	704,448.96
Q1-2550	22,957.13	35.588	816,998.51
Q2-2550	23,498.88	34.691	815,199.78
Q3-2550	24,097.78	34.0565	820,686.05
Q4-2550	23,558.15	33.9192	799,073.64
Q1-2551	22,807.83	32.4151	739,318.24
Q2-2551	23,346.06	32.3026	754,138.46
Q3-2551	23,941.06	33.883	811,195.01
Q4-2551	23,404.94	34.8513	815,692.67
Q1-2552	25,894.63	35.3419	915,165.37
Q2-2552	26,505.70	34.7229	920,354.68
Q3-2552	27,181.23	33.966	923,237.52
Q4-2552	26,572.55	33.3093	885,112.98
Q1-2553	33,465.64	32.8974	1,100,932.54
Q2-2553	34,255.37	32.3849	1,109,356.79

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 1 (ต่อ)

ไตรมาส-ปี	หน่วย : ล้าน (USD)	อัตราแลกเปลี่ยน : (USD)	หน่วย: ล้านบาท
Q3-2553	35,128.41	31.6343	1,111,262.66
Q4-2553	34,341.77	29.9913	1,029,954.28
Q1-2554	36,716.26	30.5562	1,121,909.46
Q2-2554	37,582.70	30.2723	1,137,714.87
Q3-2554	38,540.54	30.127	1,161,110.92
Q4-2554	37,677.49	31.0221	1,168,834.92
Q1-2555	163,377.54	31.0008	5,064,834.44
Q2-2555	160,972.02	31.2953	5,037,667.66
Q3-2555	175,750.31	31.3632	5,512,092.12
Q4-2555	180,127.94	30.6798	5,526,289.17
Q1-2556	194,863.83	29.8043	5,807,780.05
Q2-2556	188,528.57	29.8998	5,636,966.54
Q3-2556	192,391.00	31.4861	6,057,642.27
Q4-2556	187,343.73	31.7374	5,945,802.90
Q1-2557	196,757.89	32.6627	6,426,643.93
Q2-2557	201,401.04	32.4549	6,536,450.61
Q3-2557	206,533.98	32.0996	6,629,658.14
Q4-2557	201,909.00	32.7194	6,606,341.33
Q1-2558	203,681.91	32.6478	6,649,766.26
Q2-2558	199,156.65	33.2689	6,625,722.67

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 1 (ต่อ)

ไตรมาส-ปี	หน่วย : ล้าน (USD)	อัตราแลกเปลี่ยน : (USD)	หน่วย: ล้านบาท
Q3-2558	184,151.44	35.2545	6,492,166.94
Q4-2558	188,905.58	35.8385	6,770,092.63
Q1-2559	198,407.32	35.6673	7,076,653.40
Q2-2559	202,514.10	35.284	7,145,507.50
Q3-2559	201,454.14	34.8419	7,019,045.00
Q4-2559	199,877.09	35.3988	7,075,409.13
Q1-2560	211,962.12	35.1174	7,443,558.55
Q2-2560	217,914.79	34.3013	7,474,760.59

ที่มา: ธนาคารแห่งประเทศไทย (2560)

**ภาคผนวก ข**

เงินลงทุนในหลักทรัพย์จากต่างประเทศคงค้างในประเทศไทย



ตารางที่ 2 มูลค่าลงทุนในหลักทรัพย์จากต่างประเทศคงค้างในประเทศไทย

ไตรมาส-ปี	หน่วย : ล้าน (USD)	อัตราแลกเปลี่ยน : (USD)	หน่วย: ล้านบาท
Q1-2548	11,629.91	38.612	449,054.08
Q2-2548	10,311.79	40.0962	413,463.41
Q3-2548	9,833.52	41.3353	406,471.64
Q4-2548	8,561.54	41.0354	351,326.27
Q1-2549	13,714.63	39.3343	539,455.39
Q2-2549	12,160.23	38.1188	463,533.21
Q3-2549	11,596.23	37.6896	437,057.37
Q4-2549	10,096.24	36.5718	369,237.71
Q1-2550	18,460.44	35.588	656,970.30
Q2-2550	16,368.15	34.691	567,827.60
Q3-2550	15,609.00	34.0565	531,587.77
Q4-2550	13,589.95	33.9192	460,960.12
Q1-2551	9,832.53	32.4151	318,722.33
Q2-2551	8,718.12	32.3026	281,617.81
Q3-2551	8,313.77	33.883	281,695.42
Q4-2551	7,238.37	34.8513	252,266.57
Q1-2552	15,721.79	35.3419	555,637.83
Q2-2552	13,939.89	34.7229	484,033.51
Q3-2552	13,293.36	33.966	451,522.23
Q4-2552	11,573.84	33.3093	385,516.54
Q1-2553	24,412.87	32.8974	803,119.87
Q2-2553	21,645.93	32.3849	701,001.39
Q3-2553	20,641.99	31.6343	652,994.97
Q4-2553	17,971.92	29.9913	539,001.15
Q1-2554	25,127.41	30.5562	767,798.14

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 2 (ต่อ)

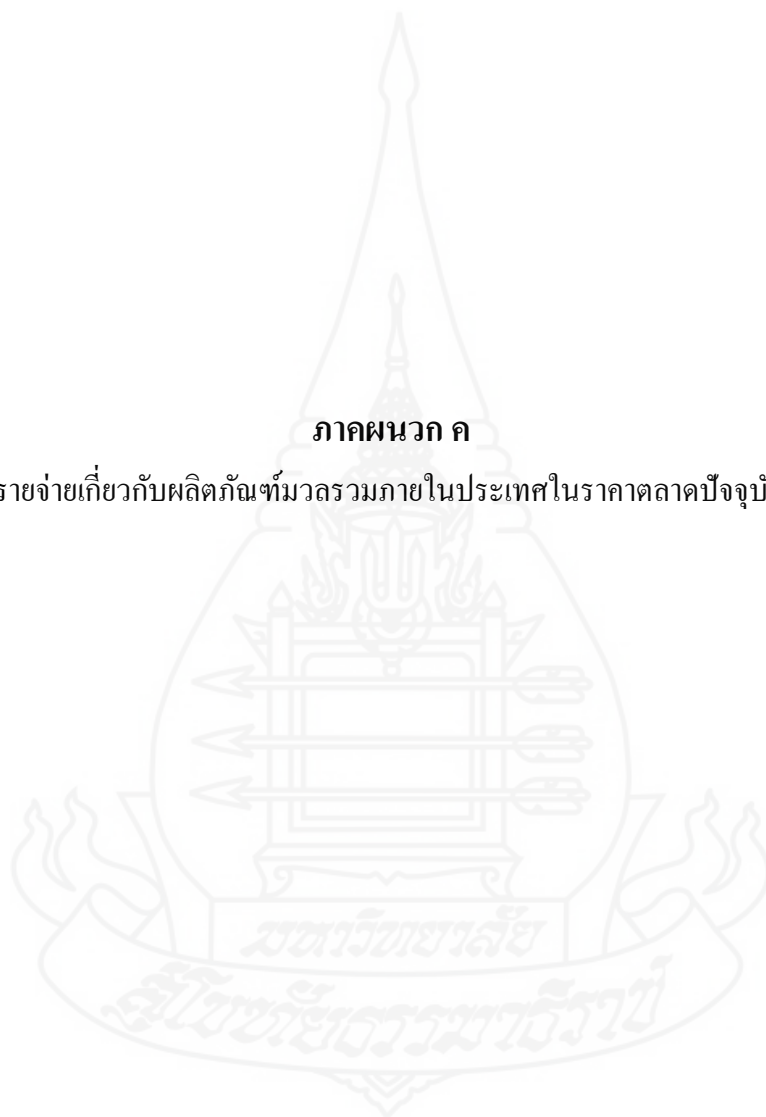
ไตรมาส-ปี	หน่วย : ล้าน (USD)	อัตราแลกเปลี่ยน : (USD)	หน่วย: ล้านบาท
Q2-2554	22,279.49	30.2723	674,451.39
Q3-2554	21,246.16	30.127	640,083.18
Q4-2554	18,497.94	31.0221	573,844.87
Q1-2555	104,894.86	31.0008	3,251,824.58
Q2-2555	103,189.24	31.2953	3,229,338.22
Q3-2555	121,855.53	31.3632	3,821,779.36
Q4-2555	132,237.24	30.6798	4,057,012.08
Q1-2556	155,376.56	29.8043	4,630,889.61
Q2-2556	137,766.31	29.8998	4,119,185.12
Q3-2556	131,376.69	31.4861	4,136,539.60
Q4-2556	114,382.90	31.7374	3,630,215.85
Q1-2557	123,131.96	32.6627	4,021,822.27
Q2-2557	132,982.80	32.4549	4,315,943.48
Q3-2557	143,311.41	32.0996	4,600,238.94
Q4-2557	133,765.48	32.7194	4,376,726.25
Q1-2558	136,330.37	32.6478	4,450,886.65
Q2-2558	128,402.78	33.2689	4,271,819.25
Q3-2558	107,147.05	35.2545	3,777,415.67
Q4-2558	102,859.27	35.8385	3,686,321.95
Q1-2559	117,077.03	35.6673	4,175,821.55
Q2-2559	121,061.75	35.284	4,271,542.79
Q3-2559	133,538.16	34.8419	4,652,723.22
Q4-2559	126,503.50	35.3988	4,478,072.10
Q1-2560	137,647.65	35.1174	4,833,827.58
Q2-2560	141,511.49	34.3013	4,854,028.07

ที่มา: ธนาคารแห่งประเทศไทย (2560)



**ภาคผนวก ค**

รายจ่ายเกี่ยวกับผลิตภัณฑ์มวลรวมภายในประเทศในราคาตลาดปัจจุบัน



หน่วย: ล้านบาท

ตารางที่ 3 มูลค่าผลิตภัณฑ์มวลรวมภายในประเทศ ณ ราคาตลาดปัจจุบัน

Year	Private final consumption expenditure	General	Gross	Change	Exports of	Exports	Exports	Imports of	Imports	Imports	Expenditure	Statistical	Gross
		final government consumption expenditure	fixed capital formation	in inventories	goods and services	of goods	of services	goods and services	of goods	of services	on gross domestic product	discrepancy	domestic product
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Q1-2548	1,014,452	243,126	507,591	96,954	1,144,549	955,325	189,224	1,190,906	964,415	226,491	1,815,766	50,291	1,866,057
Q2-2548	1,052,431	250,785	534,881	92,770	1,240,937	1,056,512	184,425	1,382,698	1,128,384	254,314	1,789,106	39,700	1,828,806
Q3-2548	1,072,905	283,324	541,457	-50,617	1,428,744	1,228,965	199,779	1,362,888	1,097,236	265,652	1,912,925	-10,128	1,902,797
Q4-2548	1,112,090	262,407	526,224	67,101	1,394,234	1,165,872	228,362	1,351,804	1,074,402	277,402	2,010,252	6,497	2,016,749
Q1-2549	1,124,329	274,554	560,829	7,736	1,377,475	1,138,028	239,447	1,314,466	1,028,925	285,541	2,030,457	84,072	2,114,529
Q2-2549	1,150,145	280,657	581,711	4,213	1,379,008	1,159,273	219,735	1,388,172	1,106,430	281,742	2,007,562	38,999	2,046,561
Q3-2549	1,136,608	312,747	558,209	-33,875	1,519,580	1,296,076	223,504	1,417,091	1,120,336	296,755	2,076,178	-1,490	2,074,688
Q4-2549	1,163,169	266,321	554,542	35,788	1,493,108	1,244,864	248,244	1,375,267	1,068,413	306,854	2,137,661	27,216	2,164,877
Q1-2550	1,162,800	306,507	549,760	-10,321	1,468,926	1,196,856	272,070	1,279,367	981,047	298,320	2,198,305	59,880	2,258,185

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 3 (ต่อ)

หน่วย:ล้านบาท

Year	Private final consumption expenditure	General final government consumption expenditure	Gross fixed capital formation	Change in inventories	Exports of goods and services	Exports of goods	Exports of services	Imports of goods and services	Imports of goods	Imports of services	Expenditure on gross domestic product	Statistical discrepancy	Gross domestic product
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Q2-2550	1,191,701	309,270	588,351	1,772	1,471,838	1,238,402	233,436	1,370,823	1,076,415	294,408	2,192,109	-4,715	2,187,394
Q3-2550	1,181,703	349,366	578,835	-6,460	1,573,194	1,332,056	241,138	1,393,824	1,089,279	304,545	2,282,814	-46,799	2,236,015
Q4-2550	1,233,245	298,816	593,538	18,618	1,737,097	1,444,895	292,202	1,492,616	1,148,671	343,945	2,388,698	6,015	2,394,713
Q1-2551	1,276,435	321,758	630,380	50,776	1,660,525	1,348,501	312,024	1,548,983	1,206,211	342,772	2,390,891	57,614	2,448,505
Q2-2551	1,327,076	325,410	654,563	-11,220	1,738,118	1,485,037	253,081	1,649,371	1,301,753	347,618	2,384,576	60,532	2,445,108
Q3-2551	1,308,388	397,515	655,210	45,873	1,931,491	1,669,292	262,199	1,893,211	1,508,642	384,569	2,445,266	19,071	2,464,337
Q4-2551	1,294,843	347,483	627,110	87,230	1,602,207	1,328,256	273,951	1,608,215	1,238,939	369,276	2,350,658	-1,676	2,348,982
Q1-2552	1,256,936	367,871	501,169	-159,180	1,453,333	1,176,633	276,700	1,099,130	811,309	287,821	2,320,999	36,993	2,357,992
Q2-2552	1,273,919	378,338	548,719	-40,622	1,393,855	1,176,629	217,226	1,244,503	937,701	306,802	2,309,706	32,240	2,341,946

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 3 (ต่อ)

หน่วย: ล้านบาท

Year	Private final consumption on expenditure re	General final government consumption expenditure	Gross fixed capital formation	Change in inventories	Exports of goods and services	Exports of goods	Exports of services	Imports of goods and services	Imports of goods	Imports of services	Expenditure on gross domestic product	Statistical discrepancy	Gross domestic product
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Q3-2552	1,275,464	416,697	584,583	-98,927	1,618,765	1,380,319	238,446	1,403,896	1,082,823	321,073	2,392,686	1,759	2,394,445
Q4-2552	1,318,919	378,738	597,548	59,913	1,724,105	1,424,063	300,042	1,538,841	1,204,756	334,085	2,540,382	19,251	2,559,633
Q1-2553	1,361,086	417,443	608,767	146,483	1,750,569	1,426,284	324,285	1,589,146	1,247,587	341,559	2,695,202	53,797	2,748,999
Q2-2553	1,419,716	424,122	659,151	-40,850	1,754,963	1,546,424	208,539	1,629,551	1,269,948	359,603	2,587,551	63,065	2,650,616
Q3-2553	1,409,933	453,220	661,283	-351	1,809,070	1,556,992	252,078	1,680,380	1,318,226	362,154	2,652,775	2,353	2,655,128
Q4-2553	1,439,067	417,123	663,967	42,136	1,830,952	1,530,483	300,469	1,648,196	1,287,174	361,022	2,745,049	2,610	2,747,659
Q1-2554	1,479,074	436,456	739,096	79,314	2,017,879	1,665,851	352,028	1,849,700	1,467,093	382,607	2,902,119	56,653	2,958,772
Q2-2554	1,521,300	452,416	758,834	-52,366	1,973,105	1,687,800	285,305	1,913,679	1,514,996	398,683	2,739,610	69,722	2,809,332
Q3-2554	1,512,201	501,432	723,473	-35,188	2,159,676	1,841,015	318,661	2,083,109	1,675,964	407,145	2,778,485	71,790	2,850,275

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 3 (ต่อ)

หน่วย: ล้านบาท

Year	Private final consumption on expenditure (1)	General final government consumption expenditure (2)	Gross fixed capital formation (3)	Change in inventories (4)	Exports of goods and services (5)	Exports of goods (6)	Exports of services (7)	Imports of goods and services (8)	Imports of goods (9)	Imports of services (10)	Expenditure on gross domestic product (11)	Statistical discrepancy (12)	Gross domestic product (13)
Q4-2554	1,465,518	433,918	699,891	116,231	1,792,067	1,480,402	311,665	1,903,142	1,502,166	400,976	2,604,483	77,623	2,682,106
Q1r-2555	1,544,209	464,023	803,089	133,911	2,059,213	1,665,068	394,145	2,041,745	1,642,488	399,257	2,962,700	82,992	3,045,692
Q2r-2555	1,627,872	502,610	846,300	45,681	2,107,626	1,774,222	333,404	2,174,166	1,751,189	422,977	2,955,923	36,197	2,992,120
Q3r-2555	1,654,090	558,342	825,314	-130,663	2,220,494	1,846,142	374,352	2,110,733	1,709,495	401,238	3,016,844	33,815	3,050,659
Q4r-2555	1,708,994	487,889	860,389	78,415	2,170,941	1,731,090	439,851	2,127,750	1,704,503	423,247	3,178,878	81,677	3,260,555
Q1r-2556	1,676,045	484,258	860,400	181,505	2,136,831	1,668,456	468,375	2,130,280	1,716,151	414,129	3,208,759	66,608	3,275,367
Q2r-2556	1,714,351	531,435	858,962	56,963	2,058,813	1,662,296	396,517	2,108,827	1,688,349	420,478	3,111,697	25,795	3,137,492
Q3r-2556	1,695,634	597,044	786,280	-112,031	2,276,155	1,823,832	452,323	2,070,970	1,654,305	416,665	3,172,112	8,714	3,180,826
Q4r-2556	1,669,821	510,892	774,244	141,367	2,258,614	1,773,384	485,230	2,086,653	1,652,228	434,425	3,268,285	39,528	3,307,813

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 3 (ต่อ)

หน่วย:ล้านบาท

Year	Private final consumption on expenditure re (1)	General final government consumption expenditure (2)	Gross fixed capital formation (3)	Change in inventories (4)	Exports of goods and services (5)	Exports of goods (6)	Exports of services (7)	Imports of goods and services (8)	Imports of goods (9)	Imports of services (10)	Expenditure on gross domestic product (11)	Statistical discrepancy (12)	Gross domestic product (13)
<b>Q1p-2557</b>	1,663,574	514,851	798,338	48,644	2,277,026	1,808,545	468,481	2,036,408	1,604,273	432,135	3,266,025	42,855	3,308,880
<b>Q2p-2557</b>	1,776,176	555,614	853,399	-96,868	2,177,053	1,809,054	367,999	2,049,858	1,617,777	432,081	3,215,516	4,738	3,220,254
<b>Q3p-2557</b>	1,766,437	615,036	821,077	-70,118	2,244,574	1,826,570	418,004	2,107,269	1,674,090	433,179	3,269,737	-44,866	3,224,871
<b>Q4p-2557</b>	1,716,433	549,927	786,674	20,124	2,400,060	1,855,764	544,296	2,036,590	1,605,153	431,437	3,436,628	-58,399	3,378,229
<b>Q1p1-2558</b>	1,684,203	530,412	847,186	36,839	2,274,024	1,729,690	544,334	1,904,440	1,485,593	418,847	3,468,224	-66,607	3,401,617
<b>Q2p1-2558</b>	1,778,695	572,944	851,441	-96,156	2,222,267	1,752,145	470,122	1,931,691	1,489,858	441,833	3,397,500	-93,156	3,304,344
<b>Q3p1-2558</b>	1,771,020	641,169	796,432	-80,929	2,404,587	1,911,365	493,222	2,004,817	1,571,396	433,421	3,527,462	-195,822	3,331,640
<b>Q4p1-2558</b>	1,740,433	589,624	880,416	31,620	2,439,816	1,872,369	567,447	1,970,758	1,527,100	443,658	3,711,151	-211,267	3,499,884

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 3 (ต่อ)

หน่วย:ล้านบาท

Year	Private final consumption on expenditure (1)	General final government consumption expenditure (2)	Gross fixed capital formation (3)	Change in inventories (4)	Exports of goods and services (5)	Exports of goods (6)	Exports of services (7)	Imports of goods and services (8)	Imports of goods (9)	Imports of services (10)	Expenditure on gross domestic product (11)	Statistical discrepancy (12)	Gross domestic product (13)
Q1-2559	1,725,350	604,092	904,438	-205,292	2,524,915	1,879,550	645,365	1,827,454	1,458,381	369,073	3,726,049	-166,965	3,559,084
Q2-2559	1,875,926	605,865	833,754	-158,143	2,362,830	1,830,540	532,29	1,904,969	1,537,247	367,720	3,665,263	-141,287	3,523,976
Q3-2529	1,841,131	627,059	809,711	-78,601	2,494,611	1,912,865	581,746	1,965,085	1,600,369	364,716	3,728,226	-157,980	3,570,846
Q4-2559	1,837,857	618,763	892,905	111,313	2,516,515	1,932,368	584,147	2,084,869	1,697,580	387,289	3,892,484	-179,833	3,712,657
Q1-2560	1,807,323	618,012	934,877	-67,550	2,659,088	1,973,238	685,850	2,043,647	1,664,158	379,489	3,908,103	-110,784	3,797,319
Q2-2560	1,935,471	635,799	903,638	-69,457	2,508,669	1,923,387	585,282	2,091,093	1,704,035	387,058	3,823,027	-111,728	3,711,299

ที่มา: ธนาคารแห่งประเทศไทย (2560)

r = revised

p = preliminary based on annual figure

p= preliminary based on annual figure

p1 = without annual figure

**ภาคผนวก ง**  
**อัตราแลกเปลี่ยนเงินตราต่างประเทศ**





ตารางที่ 4 อัตราแลกเปลี่ยนเงินตราต่างประเทศเฉลี่ยของธนาคารพาณิชย์ในกรุงเทพมหานคร  
(2548-2560)

ไตรมาส-ปี	อัตราแลกเปลี่ยน : ดอลลาร์สหรัฐ (USD)
Q1-2548	38.612
Q2-2548	40.0962
Q3-2548	41.3353
Q4-2548	41.0354
Q1-2549	39.3343
Q2-2549	38.1188
Q3-2549	37.6896
Q4-2549	36.5718
Q1-2550	35.588
Q2-2550	34.691
Q3-2550	34.0565
Q4-2550	33.9192
Q1-2551	32.4151
Q2-2551	32.3026
Q3-2551	33.883
Q4-2551	34.8513
Q1-2552	35.3419
Q2-2552	34.7229
Q3-2552	33.966
Q4-2552	33.3093
Q1-2553	32.8974
Q2-2553	32.3849
Q3-2553	31.6343
Q4-2553	29.9913

ที่มา: ธนาคารแห่งประเทศไทย (2560)

ตารางที่ 4 (ต่อ)

ไตรมาส-ปี	อัตราแลกเปลี่ยน : ดอลลาร์สหรัฐ (USD)
Q1-2554	30.5562
Q2-2554	30.2723
Q3-2554	30.127
Q4-2554	31.0221
Q1-2555	31.0008
Q2-2555	31.2953
Q3-2555	31.3632
Q4-2555	30.6798
Q1-2556	29.8043
Q2-2556	29.8998
Q3-2556	31.4861
Q4-2556	31.7374
Q1-2557	32.6627
Q2-2557	32.4549
Q3-2557	32.0996
Q4-2557	32.7194
Q1-2558	32.6478
Q2-2558	33.2689
Q3-2558	35.2545
Q4-2558	35.8385
Q1-2559	35.6673
Q2-2559	35.284
Q3-2559	34.8419
Q4-2559	35.3988
Q1-2560	35.1174
Q2-2560	34.3013

ที่มา: ธนาคารแห่งประเทศไทย (2560)

**ภาคผนวก จ**

ผลการทดสอบ Unit Root



Null Hypothesis: GDP has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.741375	0.0020
Test critical values: 1% level	-4.156734	
5% level	-3.504330	
10% level	-3.181826	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(GDP)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:48  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	-0.657100	0.138589	-4.741375	0.0000
C	1247048.	255921.0	4.872785	0.0000
@TREND(2005Q1)	24922.09	5350.216	4.658146	0.0000
R-squared	0.328362	Mean dependent var		37738.55
Adjusted R-squared	0.299161	S.D. dependent var		106415.1
S.E. of regression	89086.62	Akaike info criterion		25.69188
Sum squared resid	3.65E+11	Schwarz criterion		25.80770
Log likelihood	-626.4510	F-statistic		11.24466
Durbin-Watson stat	1.846527	Prob(F-statistic)		0.000106

Null Hypothesis: FDI has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.036717	0.5671
Test critical values: 1% level	-4.156734	
5% level	-3.504330	
10% level	-3.181826	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(FDI)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:49  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI(-1)	-0.140537	0.069002	-2.036717	0.0475
C	-120298.2	180488.1	-0.666516	0.5084
@TREND(2005Q1)	28506.22	13399.34	2.127434	0.0388
R-squared	0.090670	Mean dependent var		140934.4
Adjusted R-squared	0.051134	S.D. dependent var		567274.2
S.E. of regression	552580.3	Akaike info criterion		29.34186
Sum squared resid	1.40E+13	Schwarz criterion		29.45768
Log likelihood	-715.8755	F-statistic		2.293359
Durbin-Watson stat	2.051825	Prob(F-statistic)		0.112355

Null Hypothesis: FPI has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.112435	0.5262
Test critical values: 1% level	-4.156734	
5% level	-3.504330	
10% level	-3.181826	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(FPI)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:49  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FPI(-1)	-0.155056	0.073401	-2.112435	0.0401
C	-101246.6	139845.8	-0.723987	0.4727
@TREND(2005Q1)	20404.64	9460.501	2.156825	0.0363
R-squared	0.095322	Mean dependent var		89897.43
Adjusted R-squared	0.055988	S.D. dependent var		451441.8
S.E. of regression	438622.1	Akaike info criterion		28.87993
Sum squared resid	8.85E+12	Schwarz criterion		28.99576
Log likelihood	-704.5584	F-statistic		2.423413
Durbin-Watson stat	2.065799	Prob(F-statistic)		0.099853

Null Hypothesis: GDP has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.741051	0.8264
Test critical values: 1% level	-3.571310	
5% level	-2.922449	
10% level	-2.599224	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(GDP)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:50  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	-0.020732	0.027977	-0.741051	0.4623
C	95551.22	79495.61	1.201969	0.2354
R-squared	0.011549	Mean dependent var		37738.55
Adjusted R-squared	-0.009482	S.D. dependent var		106415.1
S.E. of regression	106918.4	Akaike info criterion		26.03748
Sum squared resid	5.37E+11	Schwarz criterion		26.11470
Log likelihood	-635.9183	F-statistic		0.549156
Durbin-Watson stat	2.338866	Prob(F-statistic)		0.462349



Null Hypothesis: FDI has a unit root

Exogenous: Constant

Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.237701	0.9263
Test critical values: 1% level	-3.571310	
5% level	-2.922449	
10% level	-2.599224	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FDI)

Method: Least Squares

Date: 03/29/18 Time: 04:50

Sample (adjusted): 2005Q2 2017Q2

Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI(-1)	-0.007084	0.029803	-0.237701	0.8131
C	163690.2	125951.5	1.299629	0.2001
R-squared	0.001201	Mean dependent var		140934.4
Adjusted R-squared	-0.020050	S.D. dependent var		567274.2
S.E. of regression	572933.0	Akaike info criterion		29.39489
Sum squared resid	1.54E+13	Schwarz criterion		29.47210
Log likelihood	-718.1747	F-statistic		0.056502
Durbin-Watson stat	2.135042	Prob(F-statistic)		0.813146



Null Hypothesis: FPI has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.425297	0.8964
Test critical values: 1% level	-3.571310	
5% level	-2.922449	
10% level	-2.599224	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(FPI)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:50  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FPI(-1)	-0.015178	0.035688	-0.425297	0.6726
C	121120.4	98087.05	1.234826	0.2230
R-squared	0.003834	Mean dependent var		89897.43
Adjusted R-squared	-0.017361	S.D. dependent var		451441.8
S.E. of regression	455343.8	Akaike info criterion		28.93545
Sum squared resid	9.74E+12	Schwarz criterion		29.01267
Log likelihood	-706.9186	F-statistic		0.180878
Durbin-Watson stat	2.158841	Prob(F-statistic)		0.672561

Null Hypothesis: D(GDP) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.174906	0.0000
Test critical values: 1% level	-4.161144	
5% level	-3.506374	
10% level	-3.183002	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(GDP,2)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:51  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-1.203312	0.147196	-8.174906	0.0000
C	53652.72	32745.99	1.638451	0.1083
@TREND(2005Q1)	-242.0282	1115.342	-0.216999	0.8292
R-squared	0.598376	Mean dependent var	-933.7917	
Adjusted R-squared	0.580526	S.D. dependent var	165208.8	
S.E. of regression	107000.5	Akaike info criterion	26.05952	
Sum squared resid	5.15E+11	Schwarz criterion	26.17647	
Log likelihood	-622.4284	F-statistic	33.52253	
Durbin-Watson stat	2.116345	Prob(F-statistic)	0.000000	

Null Hypothesis: D(FDI) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.292819	0.0000
Test critical values: 1% level	-4.161144	
5% level	-3.506374	
10% level	-3.183002	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(FDI,2)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:51  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI(-1))	-1.084754	0.148743	-7.292819	0.0000
C	52990.85	175820.6	0.301392	0.7645
@TREND(2005Q1)	4010.672	6088.350	0.658745	0.5134
R-squared	0.541724	Mean dependent var	-96.07271	
Adjusted R-squared	0.521356	S.D. dependent var	840127.9	
S.E. of regression	581234.8	Akaike info criterion	29.44416	
Sum squared resid	1.52E+13	Schwarz criterion	29.56111	
Log likelihood	-703.6598	F-statistic	26.59706	
Durbin-Watson stat	1.984710	Prob(F-statistic)	0.000000	

Null Hypothesis: D(FPI) has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.420121	0.0000
Test critical values: 1% level	-4.161144	
5% level	-3.506374	
10% level	-3.183002	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(FPI,2)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:52  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FPI(-1))	-1.101355	0.148428	-7.420121	0.0000
C	27722.49	139701.6	0.198441	0.8436
@TREND(2005Q1)	2903.843	4835.615	0.600512	0.5512
R-squared	0.550314	Mean dependent var		1162.316
Adjusted R-squared	0.530328	S.D. dependent var		674133.7
S.E. of regression	462001.5	Akaike info criterion		28.98499
Sum squared resid	9.61E+12	Schwarz criterion		29.10194
Log likelihood	-692.6397	F-statistic		27.53491
Durbin-Watson stat	1.968869	Prob(F-statistic)		0.000000

Null Hypothesis: D(GDP) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.271349	0.0000
Test critical values: 1% level	-3.574446	
5% level	-2.923780	
10% level	-2.599925	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(GDP,2)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:52  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-1.204279	0.145596	-8.271349	0.0000
C	47519.91	16367.60	2.903292	0.0057
R-squared	0.597956	Mean dependent var	-933.7917	
Adjusted R-squared	0.589215	S.D. dependent var	165208.8	
S.E. of regression	105886.4	Akaike info criterion	26.01889	
Sum squared resid	5.16E+11	Schwarz criterion	26.09686	
Log likelihood	-622.4535	F-statistic	68.41522	
Durbin-Watson stat	2.113070	Prob(F-statistic)	0.000000	



Null Hypothesis: D(FDI) has a unit root

Exogenous: Constant

Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.308728	0.0000
Test critical values: 1% level	-3.574446	
5% level	-2.923780	
10% level	-2.599925	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FDI,2)

Method: Least Squares

Date: 03/29/18 Time: 04:53

Sample (adjusted): 2005Q3 2017Q2

Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI(-1))	-1.074642	0.147035	-7.308728	0.0000
C	153814.8	85994.53	1.788658	0.0803
R-squared	0.537305	Mean dependent var	-96.07271	
Adjusted R-squared	0.527246	S.D. dependent var	840127.9	
S.E. of regression	577647.6	Akaike info criterion	29.41209	
Sum squared resid	1.53E+13	Schwarz criterion	29.49006	
Log likelihood	-703.8901	F-statistic	53.41750	
Durbin-Watson stat	1.987420	Prob(F-statistic)	0.000000	

Null Hypothesis: D(FPI) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Fixed)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.448515	0.0000
Test critical values: 1% level	-3.574446	
5% level	-2.923780	
10% level	-2.599925	

\*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(FPI,2)  
 Method: Least Squares  
 Date: 03/29/18 Time: 04:53  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FPI(-1))	-1.092852	0.146721	-7.448515	0.0000
C	100993.7	67561.88	1.494833	0.1418
R-squared	0.546710	Mean dependent var		1162.316
Adjusted R-squared	0.536856	S.D. dependent var		674133.7
S.E. of regression	458779.4	Akaike info criterion		28.95130
Sum squared resid	9.68E+12	Schwarz criterion		29.02927
Log likelihood	-692.8312	F-statistic		55.48037
Durbin-Watson stat	1.972692	Prob(F-statistic)		0.000000

Null Hypothesis: GDP has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-4.710339	0.0021
Test critical values: 1% level	-4.156734	
5% level	-3.504330	
10% level	-3.181826	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	7.45E+09
HAC corrected variance (Bartlett kernel)	7.20E+09

Phillips-Perron Test Equation  
 Dependent Variable: D(GDP)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:40  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	-0.657100	0.138589	-4.741375	0.0000
C	1247048.	255921.0	4.872785	0.0000
@TREND(2005Q1)	24922.09	5350.216	4.658146	0.0000
R-squared	0.328362	Mean dependent var		37738.55
Adjusted R-squared	0.299161	S.D. dependent var		106415.1
S.E. of regression	89086.62	Akaike info criterion		25.69188
Sum squared resid	3.65E+11	Schwarz criterion		25.80770
Log likelihood	-626.4510	F-statistic		11.24466
Durbin-Watson stat	1.846527	Prob(F-statistic)		0.000106



Null Hypothesis: FDI has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.061581	0.5537
Test critical values: 1% level	-4.156734	
5% level	-3.504330	
10% level	-3.181826	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2.87E+11
HAC corrected variance (Bartlett kernel)	2.98E+11

Phillips-Perron Test Equation  
 Dependent Variable: D(FDI)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:41  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI(-1)	-0.140537	0.069002	-2.036717	0.0475
C	-120298.2	180488.1	-0.666516	0.5084
@TREND(2005Q1)	28506.22	13399.34	2.127434	0.0388
R-squared	0.090670	Mean dependent var		140934.4
Adjusted R-squared	0.051134	S.D. dependent var		567274.2
S.E. of regression	552580.3	Akaike info criterion		29.34186
Sum squared resid	1.40E+13	Schwarz criterion		29.45768
Log likelihood	-715.8755	F-statistic		2.293359
Durbin-Watson stat	2.051825	Prob(F-statistic)		0.112355

Null Hypothesis: FPI has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.168916	0.4956
Test critical values: 1% level	-4.156734	
5% level	-3.504330	
10% level	-3.181826	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1.81E+11
HAC corrected variance (Bartlett kernel)	1.96E+11

Phillips-Perron Test Equation  
 Dependent Variable: D(FPI)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:41  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FPI(-1)	-0.155056	0.073401	-2.112435	0.0401
C	-101246.6	139845.8	-0.723987	0.4727
@TREND(2005Q1)	20404.64	9460.501	2.156825	0.0363
R-squared	0.095322	Mean dependent var		89897.43
Adjusted R-squared	0.055988	S.D. dependent var		451441.8
S.E. of regression	438622.1	Akaike info criterion		28.87993
Sum squared resid	8.85E+12	Schwarz criterion		28.99576
Log likelihood	-704.5584	F-statistic		2.423413
Durbin-Watson stat	2.065799	Prob(F-statistic)		0.099853

Null Hypothesis: GDP has a unit root  
 Exogenous: Constant  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.596157	0.8619
Test critical values: 1% level	-3.571310	
5% level	-2.922449	
10% level	-2.599224	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1.10E+10
HAC corrected variance (Bartlett kernel)	6.16E+09

Phillips-Perron Test Equation  
 Dependent Variable: D(GDP)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:51  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	-0.020732	0.027977	-0.741051	0.4623
C	95551.22	79495.61	1.201969	0.2354
R-squared	0.011549	Mean dependent var		37738.55
Adjusted R-squared	-0.009482	S.D. dependent var		106415.1
S.E. of regression	106918.4	Akaike info criterion		26.03748
Sum squared resid	5.37E+11	Schwarz criterion		26.11470
Log likelihood	-635.9183	F-statistic		0.549156
Durbin-Watson stat	2.338866	Prob(F-statistic)		0.462349

Null Hypothesis: FDI has a unit root  
 Exogenous: Constant  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.220992	0.9286
Test critical values: 1% level	-3.571310	
5% level	-2.922449	
10% level	-2.599224	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3.15E+11
HAC corrected variance (Bartlett kernel)	3.06E+11

Phillips-Perron Test Equation  
 Dependent Variable: D(FDI)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:51  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI(-1)	-0.007084	0.029803	-0.237701	0.8131
C	163690.2	125951.5	1.299629	0.2001
R-squared	0.001201	Mean dependent var		140934.4
Adjusted R-squared	-0.020050	S.D. dependent var		567274.2
S.E. of regression	572933.0	Akaike info criterion		29.39489
Sum squared resid	1.54E+13	Schwarz criterion		29.47210
Log likelihood	-718.1747	F-statistic		0.056502
Durbin-Watson stat	2.135042	Prob(F-statistic)		0.813146

Null Hypothesis: FPI has a unit root  
 Exogenous: Constant  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.428718	0.8958
Test critical values: 1% level	-3.571310	
5% level	-2.922449	
10% level	-2.599224	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1.99E+11
HAC corrected variance (Bartlett kernel)	2.00E+11

Phillips-Perron Test Equation  
 Dependent Variable: D(FPI)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:52  
 Sample (adjusted): 2005Q2 2017Q2  
 Included observations: 49 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FPI(-1)	-0.015178	0.035688	-0.425297	0.6726
C	121120.4	98087.05	1.234826	0.2230
R-squared	0.003834	Mean dependent var		89897.43
Adjusted R-squared	-0.017361	S.D. dependent var		451441.8
S.E. of regression	455343.8	Akaike info criterion		28.93545
Sum squared resid	9.74E+12	Schwarz criterion		29.01267
Log likelihood	-706.9186	F-statistic		0.180878
Durbin-Watson stat	2.158841	Prob(F-statistic)		0.672561



Null Hypothesis: D(GDP) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-8.653586	0.0000
Test critical values: 1% level	-4.161144	
5% level	-3.506374	
10% level	-3.183002	

\*Mackinnon (1996) one-sided p-values.

Residual variance (no correction)	1.07E+10
HAC corrected variance (Bartlett kernel)	6.98E+09

Phillips-Perron Test Equation  
 Dependent Variable: D(GDP,2)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:53  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-1.203312	0.147196	-8.174906	0.0000
C	53652.72	32745.99	1.638451	0.1083
@TREND(2005Q1)	-242.0282	1115.342	-0.216999	0.8292
R-squared	0.598376	Mean dependent var	-933.7917	
Adjusted R-squared	0.580526	S.D. dependent var	165208.8	
S.E. of regression	107000.5	Akaike info criterion	26.05952	
Sum squared resid	5.15E+11	Schwarz criterion	26.17647	
Log likelihood	-622.4284	F-statistic	33.52253	
Durbin-Watson stat	2.116345	Prob(F-statistic)	0.000000	

Null Hypothesis: D(FDI) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.285190	0.0000
Test critical values: 1% level	-4.161144	
5% level	-3.506374	
10% level	-3.183002	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3.17E+11
HAC corrected variance (Bartlett kernel)	3.34E+11

Phillips-Perron Test Equation  
 Dependent Variable: D(FDI,2)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:53  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI(-1))	-1.084754	0.148743	-7.292819	0.0000
C	52990.85	175820.6	0.301392	0.7645
@TREND(2005Q1)	4010.672	6088.350	0.658745	0.5134
R-squared	0.541724	Mean dependent var	-96.07271	
Adjusted R-squared	0.521356	S.D. dependent var	840127.9	
S.E. of regression	581234.8	Akaike info criterion	29.44416	
Sum squared resid	1.52E+13	Schwarz criterion	29.56111	
Log likelihood	-703.6598	F-statistic	26.59706	
Durbin-Watson stat	1.984710	Prob(F-statistic)	0.000000	

Null Hypothesis: D(FPI) has a unit root  
 Exogenous: Constant, Linear Trend  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.403032	0.0000
Test critical values: 1% level	-4.161144	
5% level	-3.506374	
10% level	-3.183002	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2.00E+11
HAC corrected variance (Bartlett kernel)	2.22E+11

Phillips-Perron Test Equation  
 Dependent Variable: D(FPI,2)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:54  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FPI(-1))	-1.101355	0.148428	-7.420121	0.0000
C	27722.49	139701.6	0.198441	0.8436
@TREND(2005Q1)	2903.843	4835.615	0.600512	0.5512
R-squared	0.550314	Mean dependent var	1162.316	
Adjusted R-squared	0.530328	S.D. dependent var	674133.7	
S.E. of regression	462001.5	Akaike info criterion	28.98499	
Sum squared resid	9.61E+12	Schwarz criterion	29.10194	
Log likelihood	-692.6397	F-statistic	27.53491	
Durbin-Watson stat	1.968869	Prob(F-statistic)	0.000000	



Null Hypothesis: D(GDP) has a unit root  
 Exogenous: Constant  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-8.773201	0.0000
Test critical values: 1% level	-3.574446	
5% level	-2.923780	
10% level	-2.599925	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	1.07E+10
HAC corrected variance (Bartlett kernel)	6.99E+09

Phillips-Perron Test Equation  
 Dependent Variable: D(GDP,2)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:55  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-1.204279	0.145596	-8.271349	0.0000
C	47519.91	16367.60	2.903292	0.0057
R-squared	0.597956	Mean dependent var	-933.7917	
Adjusted R-squared	0.589215	S.D. dependent var	165208.8	
S.E. of regression	105886.4	Akaike info criterion	26.01889	
Sum squared resid	5.16E+11	Schwarz criterion	26.09686	
Log likelihood	-622.4535	F-statistic	68.41522	
Durbin-Watson stat	2.113070	Prob(F-statistic)	0.000000	

Null Hypothesis: D(FDI) has a unit root  
 Exogenous: Constant  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.300144	0.0000
Test critical values: 1% level	-3.574446	
5% level	-2.923780	
10% level	-2.599925	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	3.20E+11
HAC corrected variance (Bartlett kernel)	3.39E+11

Phillips-Perron Test Equation  
 Dependent Variable: D(FDI,2)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:55  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FDI(-1))	-1.074642	0.147035	-7.308728	0.0000
C	153814.8	85994.53	1.788658	0.0803
R-squared	0.537305	Mean dependent var	-96.07271	
Adjusted R-squared	0.527246	S.D. dependent var	840127.9	
S.E. of regression	577647.6	Akaike info criterion	29.41209	
Sum squared resid	1.53E+13	Schwarz criterion	29.49006	
Log likelihood	-703.8901	F-statistic	53.41750	
Durbin-Watson stat	1.987420	Prob(F-statistic)	0.000000	

Null Hypothesis: D(FPI) has a unit root  
 Exogenous: Constant  
 Bandwidth: 2 (Fixed using Bartlett kernel)

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.429659	0.0000
Test critical values: 1% level	-3.574446	
5% level	-2.923780	
10% level	-2.599925	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	2.02E+11
HAC corrected variance (Bartlett kernel)	2.24E+11

Phillips-Perron Test Equation  
 Dependent Variable: D(FPI,2)  
 Method: Least Squares  
 Date: 03/28/18 Time: 06:56  
 Sample (adjusted): 2005Q3 2017Q2  
 Included observations: 48 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FPI(-1))	-1.092852	0.146721	-7.448515	0.0000
C	100993.7	67561.88	1.494833	0.1418
R-squared	0.546710	Mean dependent var		1162.316
Adjusted R-squared	0.536856	S.D. dependent var		674133.7
S.E. of regression	458779.4	Akaike info criterion		28.95130
Sum squared resid	9.68E+12	Schwarz criterion		29.02927
Log likelihood	-692.8312	F-statistic		55.48037
Durbin-Watson stat	1.972692	Prob(F-statistic)		0.000000

VAR Lag Order Selection Criteria  
 Endogenous variables: FDI FPI GDP SA  
 Exogenous variables: C  
 Date: 12/22/17 Time: 00:54  
 Sample: 2005Q1 2017Q2  
 Included observations: 40

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1739.379	NA	1.37e+34	87.11897	87.24564	87.16477
1	-1636.231	185.6679	1.24e+32	82.41153	82.91819*	82.59472
2	-1624.823	18.82330*	1.11e+32*	82.29113	83.17779	82.61172
3	-1620.337	6.728888	1.42e+32	82.51683	83.78349	82.97482
4	-1609.507	14.61936	1.35e+32	82.42537	84.07203	83.02075
5	-1595.430	16.89292	1.12e+32	82.17150	84.19816	82.90428
6	-1590.120	5.575262	1.50e+32	82.35601	84.76267	83.22618
7	-1580.703	8.475198	1.73e+32	82.33517	85.12182	83.34273
8	-1574.852	4.388707	2.57e+32	82.49259	85.65924	83.63755
9	-1556.618	10.94010	2.31e+32	82.03091	85.57756	83.31327
10	-1523.775	14.77964	1.21e+32	80.83873*	84.76538	82.25848*

\* indicates lag order selected by the criterion

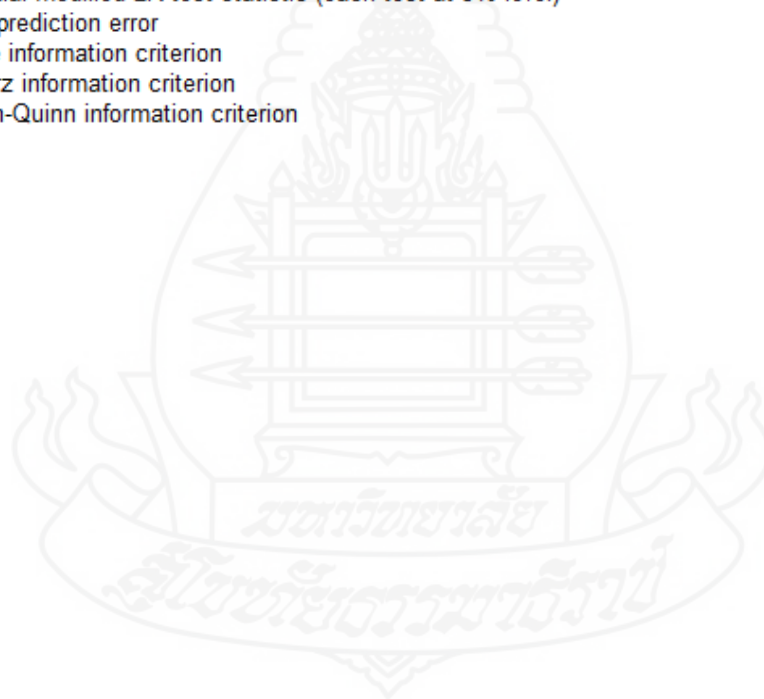
LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion



## Vector Autoregression Estimates

Date: 12/16/17 Time: 01:06

Sample (adjusted): 2005Q3 2017Q2

Included observations: 48 after adjustments

Standard errors in ( ) &amp; t-statistics in [ ]

	FDI	FPI	GDPSA
FDI(-1)	1.440578 (0.33466) [ 4.30458]	0.374365 (0.27643) [ 1.35428]	0.018370 (0.05087) [ 0.36116]
FDI(-2)	-0.490987 (0.34007) [-1.44378]	-0.115299 (0.28090) [-0.41047]	0.013593 (0.05169) [ 0.26299]
FPI(-1)	-0.501448 (0.42286) [-1.18585]	0.515631 (0.34928) [ 1.47626]	0.022451 (0.06427) [ 0.34933]
FPI(-2)	0.435090 (0.42492) [ 1.02392]	0.018030 (0.35099) [ 0.05137]	-0.054374 (0.06458) [-0.84190]
GDPSA(-1)	-3.250258 (1.11039) [-2.92713]	-1.959539 (0.91718) [-2.13648]	0.615254 (0.16877) [ 3.64554]
GDPSA(-2)	3.738868 (1.06438) [ 3.51273]	2.202170 (0.87917) [ 2.50482]	0.317620 (0.16178) [ 1.96334]
C	-808407.8 (821753.) [-0.98376]	-386776.0 (678766.) [-0.56982]	199975.1 (124899.) [ 1.60110]

R-squared	0.970115	0.953798	0.980804
Adj. R-squared	0.965741	0.947037	0.977995
Sum sq. resids	1.11E+13	7.59E+12	2.57E+11
S.E. equation	520761.1	430147.8	79150.82
F-statistic	221.8189	141.0694	349.1460
Log likelihood	-696.1522	-686.9764	-605.7233
Akaike AIC	29.29801	28.91568	25.53014
Schwarz SC	29.57089	29.18857	25.80302
Mean dependent	3410329.	2185342.	2846552.
S.D. dependent	2813539.	1869100.	533573.8

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Determinant resid covariance (dof adj.)	4.40E+31
Determinant resid covariance	2.74E+31
Log likelihood	-1941.670
Akaike information criterion	81.77791
Schwarz criterion	82.59657

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**ภาคผนวก น**

ผลการทดสอบ Cointegration Test





Date: 12/19/17 Time: 19:11  
Sample (adjusted): 2007Q4 2017Q2  
Included observations: 39 after adjustments  
Trend assumption: Linear deterministic trend  
Series: FDI FPI GDPSA  
Lags interval (in first differences): 1 to 10

#### Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.844312	122.8283	29.79707	0.0000
At most 1 *	0.637558	50.29213	15.49471	0.0000
At most 2 *	0.240163	10.71140	3.841466	0.0011

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

#### Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.844312	72.53616	21.13162	0.0000
At most 1 *	0.637558	39.58072	14.26460	0.0000
At most 2 *	0.240163	10.71140	3.841466	0.0011

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

#### Unrestricted Cointegrating Coefficients (normalized by b\*S11\*b=I):

FDI	FPI	GDPSA
-2.48E-05	3.18E-05	1.52E-05
-1.64E-06	6.29E-06	-1.10E-05
-4.11E-06	3.27E-06	1.76E-06

#### Unrestricted Adjustment Coefficients (alpha):

D(FDI)	-81826.25	-203664.6	-131743.7
D(FPI)	-130577.3	-158745.4	-76500.72
D(GDPSA)	-31590.99	9013.311	-18276.05

1 Cointegrating Equation(s): Log likelihood -1490.830

#### Normalized cointegrating coefficients (standard error in parentheses)

FDI	FPI	GDPSA
1.000000	-1.283643	-0.614446
	(0.03038)	(0.07875)

#### Adjustment coefficients (standard error in parentheses)

D(FDI)	2.028923
	(3.48858)
D(FPI)	3.237729
	(2.42653)
D(GDPSA)	0.783314
	(0.38666)



2 Cointegrating Equation(s):      Log likelihood      -1471.039

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Normalized cointegrating coefficients (standard error in parentheses)

FDI	FPI	GDPSA
1.000000	0.000000	-4.305944 (0.50960)
0.000000	1.000000	-2.875797 (0.39478)

Adjustment coefficients (standard error in parentheses)

D(FDI)	2.363218 (2.92649)	-3.886251 (3.82095)
D(FPI)	3.498293 (1.92114)	-5.155212 (2.50832)
D(GDPSA)	0.768520 (0.37815)	-0.948768 (0.49373)

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## ภาคผนวก ข

ผลการทดสอบ Granger Causality Test



## Pairwise Granger Causality Tests

Date: 12/19/17 Time: 19:06

Sample: 2005Q1 2017Q2

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
DFPI does not Granger Cause DFDI	47	0.65753	0.52338
DFDI does not Granger Cause DFPI		0.36456	0.69668
DGDPSA does not Granger Cause DFDI	47	6.22341	0.00429
DFDI does not Granger Cause DGDPSA		0.80435	0.45415
DGDPSA does not Granger Cause DFPI	47	3.47165	0.04024
DFPI does not Granger Cause DGDPSA		1.07781	0.34957

