

## **ECONOMIC AND SOCIAL IMPACT OF RISING PRICES: CASE OF SAUDI ARABIA**

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This important study deals with rising prices in Saudi Arabia in recent years. Such increase has economic and social effects on both Saudi producers and consumers. Specifically, this research aims to identify reasons, nature, implications, and determinants of price rising of goods in the Kingdom. Moreover, there is a focus on the structure of commodities (domestic versus imports) and their general growth rates. Additionally, this contribution examines the effect of global economic variables on goods prices in Saudi Arabia (e.g.; World Trade Organization, Imported inflation). The study produces important results which may help policy makers with respect to dealing with inflation.

**Key words:** Inflation; rising of goods prices; monetary policy; liquidity.

### **Introduction**

This study mainly examines (i) the nature, causes, impacts, and implications of goods rising prices; and (ii) the tools and policy recommendations in terms of containing and limiting the effects of inflation in Saudi Arabia. The paper uses data from different sources from 1980 to 2010. Regarding the methodology, it is based on coupled approach: a statistical method and an economic analysis.

### **Background of the Study**

Inflation is the rate of increase in prices over a given period of time. Inflation is typically a broad measure, such as the overall increase in prices or the increase in the cost of living in a country. But it can also be more narrowly calculated—for instance, for certain goods, such as food, or for services, such as school tuition. Whatever the context, inflation represents how much more expensive the relevant set of goods and/or services has become over a certain period, most frequently a year. Consumers' cost of living depends on the prices of the many goods and services they consume and the share of each good or service in the household budget. To measure the average consumer's cost of living, government agencies conduct household surveys to identify a basket of commonly purchased items and then track the cost of purchasing this basket over time. (Housing expenses, including rent and mortgages, constitute the largest

component of the consumer basket in the United States. In other countries, especially poorer ones, food can be biggest part of household budgets.) The cost of this basket at a given time expressed relative to a base year is the *consumer price index* (CPI), and the percentage change in the CPI over a certain period is *consumer price inflation*, the most widely used measure of inflation (Ceyda, 2012).

In this context, Marotta (2013), notes that the use of hedonic quality modeling in adjusting the prices of goods and services has destroyed the concept of the CPI as a measure of out-of-pocket expenses.

- CPI no longer measures the cost of maintaining a constant standard of living.
- CPI no longer measures full inflation for out-of-pocket expenditure.
- With the misused cover of academic theory, politicians forced significant underreporting of official inflation, so as to cut annual cost-of-living adjustments to Social Security, etc.
- Use of the CPI to adjust retirement benefits, private income or to set investment goals impairs the ability of retirees, income earners and investors to stay ahead of inflation.
- Understated inflation used in estimating inflation-adjusted growth has created the illusion of recovery in reported GDP.

Many countries use inflation targeting as a major tool of the monetary policy. Indeed, inflation targeting was initially developed by New Zealand in 1988, and has since been implemented by many developed nations and EMEs in various manners. While IT has taken on many forms, it is rooted in the underlying philosophy that optimal monetary policy can be achieved through explicit long-run inflation goals and a strong commitment to transparency, or full public understanding. Inflation targeting has attracted much attention over the past decade through the hope of providing greater monetary stability to a nation's economy. There has been significant agreement that increased stability through lower inflation would be achieved by anchoring the expectations of the forward looking private sector, which traditional monetary policy does not control (see, among others, Bernanke, 2003; Huh, 1997; *Time Series Analysis of Inflation Targeting* 17 Meyer, 2004; Piger and Thornton, 2004; Kadioglu *et al.*, 2000; Bangko Sentral ng Pilipinas, 2001). Woodford (2004) believes that expectations are so important that, under current conditions, little else matters. Therefore, the central bank's control over expectations is a critical component of the theory behind the IT. The IT framework anchors expectations through transparency, credibility, and accountability.

The right set of anti-inflation policies is function of the causes of inflation. If the economy has overheated, central banks—if they are committed to ensuring price stability—can implement contractionary policies that rein in aggregate demand, usually by raising interest rates. Some central bankers have chosen, with varying degrees of success, to impose monetary discipline by *fixing the exchange rate*—tying its currency to another currency and, therefore, its monetary policy to that of the country to which it is linked. However, when inflation is driven by global rather than domestic developments, such policies may not help. In 2008 and then in 2011, when inflation rose across the globe on the back of high food and fuel prices, many countries allowed the high global prices to pass through to the domestic economy. In some cases the government may directly set prices (as some did in 2008 to prevent high food and fuel prices from passing through). Such *administrative price-setting* measures usually result in the government accruing large subsidy bills to compensate producers for lost income. Central bankers are increasingly relying on their ability to influence *inflation expectations* as an inflation-reduction tool. Policymakers announce their intention to keep economic activity low temporarily to bring down

inflation, hoping to influence expectations and contracts' built-in inflation component. The more credibility central banks have, the greater the influence of their pronouncements on inflation expectations (Ceyda, 2012).

Ramady (2009), states that high rates of inflation can lead to direct and indirect consequences through three main channels:

-Fiscal: Unanticipated inflation can have positive effect on a government's debt burden as the stock of the local currency debt is eroded in real terms.

-Political: High rates of inflation often raise social tensions as the purchasing power of citizens is damaged.

-Economic: High rates of inflation can jeopardize growth by deterring productive investment, encouraging wages hikes, and disrupting economic activity through strikes and political unrest.

The government of Saudi Arabia was not really worried about inflation until 2006 when rising inflation reaching nearly an annual rate of 10% from an average rate of 1% in previous decade (SAMA, 2008). Inflation has affected the wellbeing of Saudi families due to the erosion of their purchasing power.

There are many factors of inflation in Saudi Arabia. The internal factors are money supply, stock market, and the Saudi riyal interest rate. The external factors are the behavior of the currency exchange rates, the U.S. dollar interest rate, and oil prices (Ramady, 2009).

The research objectives of this study aims to explore causes, nature, and impacts of goods rising prices in Saudi Arabia. It also seeks to recommend inflation containment policies and options. The research questions can be summarized as follows: What is the relationship between Saudi level of prices and imported inflation? What are the structural economic factors of inflation in Saudi Arabia? Is the demand of goods in the Saudi market a major source of inflation?

Moreover, the study states three hypotheses: (i) a relationship exists between general level of prices in Saudi Arabia and imported inflation. The two variables go in the same direction; (ii) The Saudi inflation is due to structural changes in the domestic economy such as the increase of the money supply; and (iii) the Saudi inflation is generated by the increase of the demand of goods due to natural demographic growth.

There is no convergence regarding sources of inflation considering the heterogeneity of economic structures of different countries. Saudi Arabia's decision adhesion to the WTO in 2006 implied the commitment to reduce tariffs and barriers on imports which should have theoretically reduce prices and benefit local consumers. By contrast, the period 2007-2008 recorded an increase of prices globally and a decline of the value of the U.S. dollar. These two factors have affected Saudi Arabia which depends heavily on imports of commodity goods especially foods.

Lommatzsch and Tober (2006) have examined the causes of varying inflation rates in the European Union and have tried to explain the inflation drivers between different European countries and different industries. They have tested the Balassa-Samuelson effect to see whether productivity increase in services relative to industries would push prices upward. Their findings show that differences in productivity growth, and thus the difference in the size of the relative price adjustment between countries, do not have unambiguous consequences for the overall inflation rate.

Oatlay (1997) developed a statistical analysis to test the validity of the assumption that central bank independence causes low inflation. He showed that the empirical tests supporting this theory were unsatisfactory, since they did not include control variables and some important political variables. He used a political-economic model of inflation and the results support the

underlying theory through the inclusion of such variables. Iversen (1999) presented a game-theoretic model of wage bargaining and monetary policy making to test the hypothesis that the two are complementary in inflation theory. He advocated that the causes of inflation depend on either wage bargaining or the independence of central banks and offered empirical evidence that there might be merit to both arguments.

In general, high rates of inflation can have both direct and indirect well-known consequences. These tend to operate through three main channels (Ramady, 2009):

- *Unanticipated fiscal-Inflation* can have a beneficial effect on a government's debt burden as the stock of local currency debt is eroded in real terms. This played a role in the past when some countries tried to inflate their debt away. However, the government can find it difficult to maintain fiscal discipline during inflationary periods as citizens demand compensatory increases in salaries, subsidies, and welfare payments to offset their decaying purchasing power.
- *Political-High rates of inflation* often raise social tensions as the purchasing power of citizens is damaged. Governments, public and private employers are sometimes reluctant to raise wages, subsidies, and welfare payments fast enough in order to offset this, partly because of a justified fear that such increases will intensify inflationary pressures and lead to further demands. The social impact of inflation can be hurtful in terms of an increase of the rate of unemployment.
- *Economic -High rates of inflation* can endanger growth by deterring productive investment, perverting market incentives, encouraging wage hikes. and disrupting activity through strikes or more serious political unrest.

The biggest shifting point in the Saudi Arabian economy was generated by the discovery of oil in the last century. Extracting and selling crude oil has been the main source of income for Saudi Arabia since the discovery of oil. Additionally, an important portion of the industrial, contracting and service industries serve the oil industry. The Saudi government invested and encouraged the private sector to invest in downstream products such as petrochemicals to leverage its strategic resource and to allow more diversification in its economy. This strategy allowed the Saudi Arabian Basic Industries (SABIC) to be founded in 1977 as a petrochemical giant which was the seed of a major industry in the Saudi economy (SABIC 2007). Oil is extracted and sold by Saudi Aramco, the largest oil company in the world. This huge organization was owned by American oil companies, but later transferred completely under Saudi government ownership (Ramady, 2009).

There are many factors affecting inflation in Saudi Arabia. Some of these factors are internal to the economy or are controlled by the SAMA such as: (i) the increase of money supply, (ii) the occurrence of a stock market bubble; and (iii) the decrease of Saudi interest rates<sup>1</sup>. Other factors of Saudi inflation are external (Ramady, 2009):

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<sup>1</sup> The SAMA has little control on interest rates adjustment due to the fixed exchange rate against the dollar. When the Fed makes a decision regarding interest rates for the U.S. dollar, it affects the Saudi interest rates. This impacts inflation in two ways: (1) by reducing the purchasing power of riyals when the dollar weakens, and (2) by forcing a potentially unwanted Saudi monetary policy for interest adjustment.

- Currency exchange rates: Saudi Arabia depends deeply on imported goods. Any depreciation of the Saudi exchange rate against currencies of major trade partners will rise the cost of importations<sup>2</sup>.
- High oil prices: Oil is the major input of the majority of Saudi industries. An increase of crude oil prices causes a rise of refined oil products prices and also petrochemicals costs.
- The U.S. Dollar Interest Rates: A decision of the Fed to reduce U.S. interest rates pushes Saudi authorities to reduce the interest rate domestically. This due the fixity of the Saudi riyal against the U.S. dollar.

### **Importance of Present Study and Its Justifications**

The present study is based on the following justifications:

1. The problem of rising prices of commodities is a general phenomenon and all economic systems suffer from this problem in different proportions.
2. The present research is planned at a time when the prices of commodities have registered consecutive increases at the level of the Kingdom of Saudi Arabia, therefore, it became necessary to study the problem at the level of economic sectors in the Kingdom when the economists find it difficult to indentify real reasons behind this phenomenon<sup>1</sup>.
3. This research is one of the rare scientific researches which strive to analysis the phenomenon of rising prices of commodities in the Kingdom.

### **Methodology & Data Sources**

The study relies on a scientific descriptive and analytical method using linear and non-linear regression models as well as on a number of standards and other economic indicators. The “International Monitory Fund (IMF) depends on such as price indexes and other indicators. In regard to data sources, the study depends on published data and statistics of different local and international sources such as publications, periodical reports issued by Saudi Arab Monitory Agency (SAMA), and Annual Statistical Book which is published by “Department of General Statistics” – Saudi Ministry of Economic & Planning during the period 1980-2012 GC.

### **Current Situation of Local Price Levels**

The study relies on index of consumer prices which reflects the variable in the level of prices of commodities and the services purchased by families. This indicator is one of the most used indicators when dealing with the effect of prices variables on the consumer. In the meantime, it is considered to be a tool to measure the improvement of commodities and services (produced and manufactured).

The study focuses on sixteen Saudi: Riyadh, Makkah, Madinah, Jeddah, Taif, Hafoof, Dammam, Tabook, Abha, Buraidah, Hael, Arar, Sakaka, Baha, Jazan and Najran. Table 1 outlines many important observations about the index of consumer prices during the period 1999-2012. They can be stressed as follows:

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<sup>2</sup> Except the U.S. dollar due to the fixity of the exchange rate.

1. An increase in the index of consumer prices from 100% in 1999 (base year) to 139,4% in 2012. This constitutes an augmentation of 39,5% from base year.
2. An increase in the index of food & beverages from 100% in 1999 to 159,7% in 2012, which indicates an increase of 59,7% from base year.
3. A decrease in the index of garments & cloths” from 100% to 87,8% with a drop rate of 12,2%.
4. An increase in the index of renovation, rent, fuel and water from 100% in 1999 to 182,9% in 2012. This reflects an increase of 82,9% from base year.
5. An augmentation of the index of home furniture from 100% in base year to 118,9% in 2012.
6. An increase in the index of health care from 100% in the base year to 114,6% in 2012.
7. A decline in the index of transportation and communication from 100% in 1999 to 93,6% in 2012.
8. A slight increase in the index of education and promotion which reached about 7,5% as it increased from 100% in 1999 to 107,5% in 2012.
9. With respect to commodities and other services, their indicator increases from 100% in 1999 to 167,5% in 2012.

In total, there is increase of the index of cost of living in terms of rents, fuel, water and renovation. The increase in rents is exacerbated by foreign workers demand’s hike. The increase in the commodities, foods, beverages, and other services is due to the population growth. Additionally, an increase is observed in home furniture and health care while the decline has been registered in transportation & communication, garments, clothing, and shoes. Generally, the increase has been noticed in the index from 100% in 1999 to about 139,4% in 2012 which reflects positively the increases in the inflation rates and increase in the general level of prices during recent years.

**Table 1:** Index of consumer prices (Costs of Living) for all residents of 16 cities (100 = 1999).

Year	Index	Foods & Beverages	Garments, Cloths and Shoes	Renovation, Rents, Fuel and Water	Home Furniture	Health Care	Transportation & Communication	Education & Promotion	Commodities & Other Services
1999	100	100	100	100	100	100	100	100	100
2000	98.9	98	95	100	98.8	101.2	100.1	99.7	99.6
2001	97.8	98.6	92.9	100.1	97.3	100.7	96.3	99.5	98.8
2002	98	98.1	92.3	100	96.8	100.8	96.4	99.3	100.8
2003	98.6	100.6	91.8	100	96.2	101	94.8	98.7	103.2
2004	98.9	103.4	89.6	100.3	94.5	101.4	94.2	98.1	103.9
2005	99.6	106.5	88.3	100	94.9	101.4	91.8	98.4	106.4
2006	101.8	112.2	87.7	101	95.2	102.7	88.9	98.7	114.6
2007	106	120.1	85.6	109.2	96.4	107	88.1	98.9	120.7
2008	116.5	137	85.9	128.3	103.8	112.4	88.3	101.1	133.6

2009	122.4	139.6	86.3	146.4	112.6	113.2	89.2	102.3	139.3
2010	128.9	148.4	85.7	160.3	115.7	113.7	90.2	103.2	149.6
2011	135.4	156.1	86	172.7	116.4	114.6	92.1	104.8	163
2012	139.4	159.7	87.8	182.9	118.9	114.6	93.6	107.5	167.5

Source: Central Department of Statistics and Information- Saudi

Ministry of Economy and Planning

Table 2: Saudi Inflation between 1980 and 2011

Year	Inflation, average consumer prices
1980	4.402
1981	2.811
1982	0.946
1983	0.208
1984	-1.559
1985	-3.071
1986	-3.173
1987	-1.589
1988	0.908
1989	1
1990	2.079
1991	4.559
1992	-0.371
1993	0.838
1994	0.646
1995	5.046
1996	0.873
1997	-0.433
1998	-0.174
1999	-1.307
2000	-1.1
2001	-1.138
2002	0.23
2003	0.587
2004	0.355
2005	0.632
2006	2.31
2007	4.107
2008	9.871
2009	5.057
2010	5.354
2011	5.0

Source: International Monetary Funds

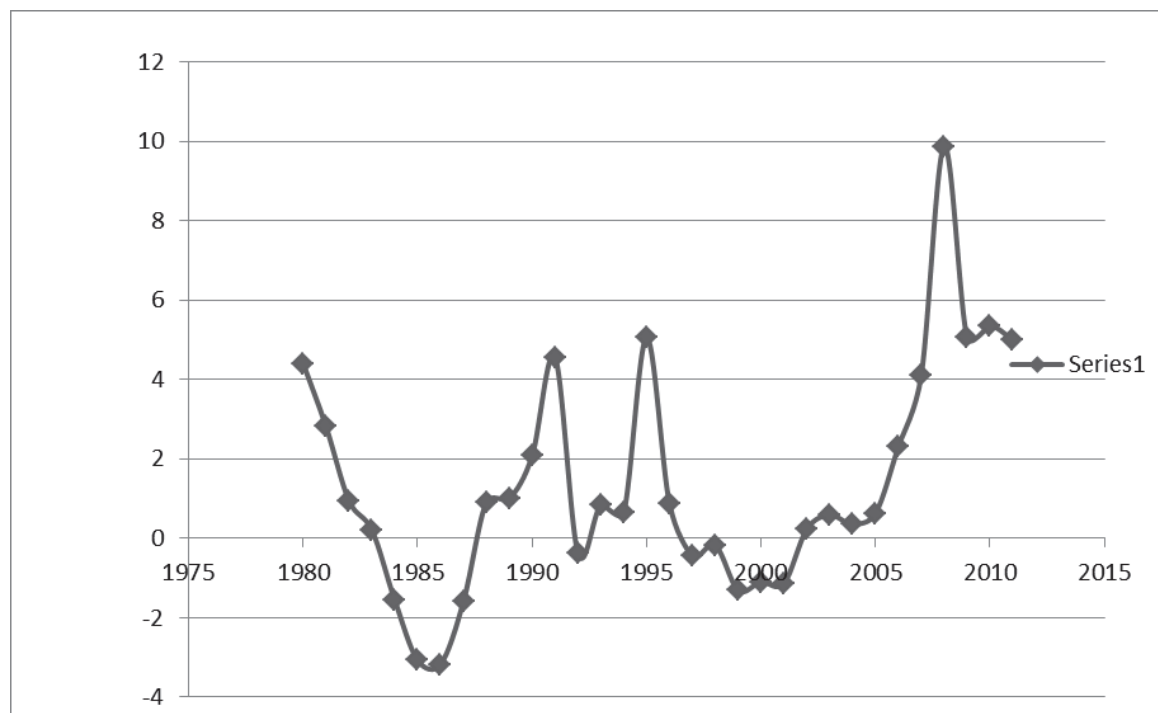


Figure 1: Evolution of Inflation in Saudi Arabia (1980-2011).

### Imported Inflation and Its effect on the levels of local prices

The imported inflation is defined as an inflation which is found in any country provided that it is resulted from rising prices in foreign markets where the concerned country is depending on its imports. The imported inflation constitutes a danger in a country that has a big degree of economic exposure. The imported inflation is measured using several indicators such as the economic exposure index and the index of ratio of imports to GDP:

#### a. Economic Exposure Index:

The economic exposure index is considered as one of the most important indicators which provide a clear picture about the economic condition of a country. This index is estimated by total foreign trade to GDP as percentage. This index is affected by average or conditions of trade exchange which reflects the relation between exports of the country against its imports from outside.

The percentage of foreign trade to GDP by current prices in Saudi Economy has been fluctuated during the period 1998-2008 and moved from 41.72% in 1998 to 111.42% in 2008. The same index has increased from 84.75% in 1980 to 110.11% in 2011. This shows not only that Saudi Arabia has a high degree of economic exposure, but also its domestic inflation clearly affected by costs of imports.



Table (3): Index of Economic Exposure during the Period 1980-2011(Value in Million Riyal)

Years	Total Volume of Trade	Cash GDP	Index of Economic Exposure (%)
1980	463235	546604	84.748
1981	524779	622175	96.007
1982	410425	524197	65.966
1983	293861	445210	56.059
1984	250957	420389	56.368
1985	185100	376318	44.031
1986	145458	322020	38.653
1987	162193	320931	50.367
1988	172895	330519	53.873
1989	185572	357065	56.146
1990	256621	437334	71.87
1991	287570	491853	65.755
1992	312931	510459	63.623
1993	264386	494907	51.794
1994	246782	503055	49.864
1995	292590	533504	58.163
1996	331408	590748	62.119
1997	335086	617902	56.722
1998	257785	546648	41.719
1999	295064	603589	53.977
2000	403793	706657	66.899
2001	371829	686296	52.618
2002	392829	707067	57.239
2003	506055	804648	71.571
2004	650150	938771	80.799
2005	90129	1182514	95.884
2006	1052741	1335581	89.026
2007	1212491	1442572	90.784
2008	1607235	1786143	111.415
2009	1079399	1412596	60.432
2010	1342521	1690470	95.039
2011	1861327	2163094	110.107
Annual Average	532974.9063	764119.875	67.489

Source: Central Department of Statistics and Information – Ministry of Economy & Planning – Saudi Arabia

b. Index of Ratio of Imports to GDP:

This index is an extension to the previous one as it explains the ratio of total imports to GDP. The table (4) shows that the ratio of imports to GDP reached minimum 16.24% in the year 2000 and maximum 30.42% in the year 1983 with an annual rate of around 21.34% for the same period. The above requires making more efforts in order to increase the growth rate in GDP through best exploitation of economic resources available in the Kingdom.

Furthermore, some policies should be designed in order to rationalize the imports from other countries and at the same time strive to increase the competitive power of Saudi exports and maintain its present situation. In addition, there should be diversification in the export structure which guarantees to achieve improvement in the index of economic and trade exposure as well as achieve balance in the conditions of international exchange. This will reflect positively the declines in the rates of prices at local level.

Table No. (4): Index of Ratio of Imports to GDP during the Period 1980-2011

Year	Total Imports	Cash GDP	Ratio of Imports to Cash GDP (%)
1980	100350	546604	18.359
1981	119298	622175	19.174
1982	139335	524197	26.581
1983	135417	445210	30.416
1984	11837	420389	28.245
1985	85564	376318	22.737
1986	70780	322020	21.98
1987	75313	320931	23.467
1988	81607	330519	24.691
1989	72978	357065	22.203
1990	90282	437334	20.644
1991	108934	491853	22.148
1992	124606	510459	24.411
1993	105616	494907	21.341
1994	87192	503055	17.332
1995	105187	533504	19.716
1996	103980	590748	17.601
1997	107643	617902	17.421
1998	112397	546648	20.561
1999	104980	603589	17.393
2000	113240	706657	16.025

2001	116931	686296	17.038
2002	121088	707067	17.125
2003	156391	804648	19.436
2004	177659	938771	18.925
2005	222985	1182514	18.857
2006	261402	1335581	19.572
2007	338088	1442572	23.436
2008	431753	1786143	24.172
2009	358290	1412596	25.364
2010	400736	1690470	23.706
2011	493707	2163094	22.824
Annual Average	164023.9	764119.9	21.34061

Source: Central Department of Statistics and Information – Ministry of Economy & Planning

The imported commodities' pricing contains local cost factors such as transportation services and packaging. Also, the ingredients of most of the local commodities contain imported materials (raw materials and intermediates) and as a result, it is most likely that the imported commodities have great impacts on inflation rates in the Kingdom.

### Money Supply and Its relation with the Levels of Local Prices

The money supply consists of currency outside banks, demand deposits, time deposits, saving deposits and other cash equivalent deposits. The study of development of Saudi money supply during the year 1980-2011 shows that it increases from 94,380 million SAR in 1980 to 1,223,563 million SAR in 2011. The increase in money supply has coincided with the increase in general level of prices. Such situation has amplified prices rising in the Kingdom.

Table No. (5): Money Supply during the Period 1980-2011 GC (Million Riyal).

End Period	Currency outside Banks	Demand Deposits	Money Supply	Time & Saving Deposits	Money Supply	Other Cash Equivalent Deposits	Money Supply
	1-	2-	3-	4-	5-	6-	7-
1980	26144	37265	63409	19994	83403	10977	94380
1981	30421	46167	76588	26367	102955	16490	119445
1982	35281	51762	87043	29050	116093	18305	134398
1983	34655	51667	86321	33575	119897	24051	143948
1984	34750	48361	83111	36589	119700	29196	148896
1985	36868	46171	83039	39682	122721	27519	150240
1986	38604	47247	85850	41089	126939	36797	163736

1987	39396	49926	89323	39697	129020	35340	164360
1988	35945	57719	93664	40479	134143	44275	178418
1989	33877	57875	91752	44662	136414	43767	180181
1990	44776	57488	102265	39281	141545	46893	188438
1991	44620	75850	120470	44623	165093	50749	215843
1992	43772	81692	125464	46333	171796	51209	223005
1993	42623	78880	121503	47892	169395	59256	228651
1994	44965	80679	125644	51417	177062	59377	236439
1995	43087	81384	124471	61223	185694	56276	241970
1996	43038	89890	132928	71081	204009	54503	258511
1997	45823	95361	141184	77166	218349	54353	272702
1998	45019	95253	140272	83436	223708	59881	283589
1999	55060	101605	156665	85341	242006	63935	305941
2000	51019	114481	165500	90832	256332	62903	319235
2001	49203	130192	179396	91685	271080	69115	340196
2002	52329	150010	202339	108028	310367	80059	390427
2003	55445	167577	223022	113382	336404	81061	417465
2004	60133	211170	271303	136673	407976	88122	496098
2005	64288	219251	283539	165266	448805	104869	553675
2006	69324	243418	312742	226027	538769	121815	660583
2007	72192	311365	383557	283059	666616	123140	789755
2008	83006	342488	425494	367624	793118	136007	929125
2009	88395	433162	521558	323377	844935	184009	1028944
2010	95520	530072	625592	298283	923874	156495	1080370
2011	119929	641056	760985	305441	1066427	157136	1223563
Annual Average	51859.58	150828	202687	108395	311083	68996.3	380079

Source: Central Department of Statistics and Information – Ministry of Economy & Planning

### **Government Expenditure and Its relation with the Levels of Local Prices**

The rise of government expenditure and its components constitutes one of the major factors that contribute positively to the increase of inflation. Saudi governmental expenditures move from 81,914 million SAR in 1980 to 375,968 million SAR in 2010. Hence, an annual average of 5,537,357 million riyal during the same period (Table 6)

Table No. (6): Government Consumption Expenditure with the Values of Byers in Current Prices (in Million of SAR)

Year	Services	Defense	Education	Health	Social Insurances and Welfare Services	Housing and Community Development	Other Community Services	Economic Services	Other Purposes	Total
1980	10708	43000	11833	2465	219	2012	1538	3553	6586	81914
1981	12490	57858	12822	3385	220	2415	2158	4925	32254	128527
1982	15863	48492	16565	4749	276	2671	1718	4214	32356	126904
1983	17538	51839	16862	5717	290	3199	2278	18707	5195	121625
1984	19025	50330	18475	6059	349	4296	2494	10343	4276	115647
1985	21041	47236	20075	6872	359	4706	2739	11235	5788	120051
1986	20313	41392	19453	6671	340	4519	2612	10576	5758	111633
1987	20718	41739	19643	6926	349	4491	2725	9777	6672	113040
1988	19527	36474	18998	6190	319	4361	2356	9417	4598	102240
1989	24769	42325	23582	7241	320	5276	2351	9460	4634	119958
1990	54546	45590	14906	1108	473	166	3276	7539	220	127824
1991	42282	59195	33826	10317	677	1691	4228	10148	6765	169128
1992	29730	56359	28055	10219	414	5549	3180	12019	7167	152692
1993	24984	51296	27693	7587	400	4687	2899	8097	3333	130976
1994	24389	45503	26476	7788	402	4612	2777	7450	3156	122552
1995	25765	46018	27233	8233	533	4721	3018	7440	2962	125923
1996	28651	52708	29096	9554	633	5505	3606	9939	5091	144783
1997	31703	59618	32270	10830	823	6077	4104	10744	5627	161795
1998	31830	55747	30723	10637	825	5790	4054	10193	5392	155192
1999	30546	42285	45362	16921	583	7210	4439	5203	1545	154095
2000	33010	51357	49649	21566	864	9691	5536	8571	3560	183804
2001	34705	51696	49904	22349	860	10319	5663	9317	3881	188694
2002	37352	48652	48351	21849	856	8813	5830	9132	3682	184517
2003	36150	51773	57847	23306	962	10528	6379	6869	4336	198148
2005	42320	58669	60856	24857	1150	10527	6087	6641	10691	221798
2005	55871	63949	69429	30503	1149	12215	7461	5461	16613	262650
2006	62909	75206	83273	37283	1252	14530	8084	7659	20888	311082
2007	68902	80157	81279	39086	1465	15685	9406	7319	18788	322087
2008	63840	97754	87684	36829	1301	18712	7224	7747	24006	345098
2009	67542	85632	100563	44866	1391	14539	7255	8977	26249	357012
2010	70946	96010	104890	44750	1387	18335	7495	6783	25372	375968
Annual Average	34838	55995	40893	16023	692	7350	4354	8563	9917	178624

Source: Central Department of Statistics and Information – Ministry of Economy &amp; Planning

### **The Relation between Money Supply and Government Expenditure and Its effect on Local Prices:**

The study of nature of relation between money supply in its wider meaning and total government expenditure during the period 1980-2011 GC through evaluation of simple regression relationship between them as mentioned in the following equation:

$$C H = 4349.190 + 2.171 S H$$

$$(0.044) \quad (4.228)$$

**C H** represents: Dependent Variable which represents size of government expenditure (million riyal)

**S H** represents: Independent Variable which represents money supply (million riyal).

$$F = 17.874 \quad R^2 = 37\%$$

The above equation shows that there is positive relationship between both variables as the increase in money supply, which represents independent variable, is necessary and it entails the increase in dependent variable which represents the size of government expenditure as the increase in money supply with an average of 1% results in the increase in government expenditure with an average of 2.17% during the same period. The statistical significance for this statistical estimation at the potential level 1% has proved as the value (F) has reached around 17.87.

The above shows that the increase in money supply in its wider meaning must result in increase in the size of government expenditure which causes increase in inflation rates as a result of increase in effective demand of individuals on one hand and increased purchasing power of these individuals on the other.

### **Economic Analysis of important Determinants of Rising Prices at the Level of Kingdom of Saudi Arabia**

Inflation rates and levels of prices in the Kingdom are affected by many local factors, foremost of which are: money supply, interest rates, aggregate demand for commodities & services, exchange rate and other factors. Also, some international variables affect the inflation rates and prices such as: imported inflation rate, global inflation rate, degree of Saudi economic exposure to the outside world, the joining of Saudi Arabia to the WTO, exchange rate, money supply and Global Export Price Index.

This multiple regression attempts to explain factors that impact the rise of prices in Saudi Arabia. The results show that the increase rate in the prices in the Kingdom, as dependent variable (CPI) is effected by of Saudi Arabia joining to the WTO and the global export price index:

$$C H = 59.970 + 11.103 S 1 H + 0.295 S 2 H$$

$$(9.532) \quad (2.699) \quad (2.815)$$

F=42.098      R<sup>2</sup>=0.74

C H : Dependent Variable (Increase Rate of Prices)

**S1H** Represents: Saudi Arabia's joining the WTO

**S2H** Represents: Global Export Price Index

The results of statistical estimation showed that the factors affecting the levels of local prices represents in Kingdom's joining the WTO and Global Export Price Index which expresses the imported inflation rate. In addition, the indication of both of these factors is positive and compatible with the economic theory: An increase in any of the explanatory variables should lead to an increase of the inflation rate.

The statistical significance of each of variables found that the calculated value of (F) has reached 42.098 which is acceptable statistically at the potential level 1%. The value R<sup>2</sup> is equal to 74%. This means that 74 per cent of changes of Saudi prices are attributed to the joining of the Kingdom to the Global Export Price Index.

In sum, there are many factors of prices rising in Saudi Arabia. They can be summarized as following:

1. The increase in housing supply is not proportional to the demand of Saudi citizens.
2. The increase of the demand of consumer goods as a result of rapid population growth.
3. The rise of the general level of prices in the countries with which the Kingdom has trade relations such as the U.S.A, China, Japan and Germany.
4. Decline in the dollar exchange rate against other main currencies which caused increase in local prices due to rising costs of importations.
5. The increase by the Saudi Government of the levels of wages and salaries of citizens to allow them to cope with the burden of the cost of living. The Saudi private sector has also increased salaries and wages in order to attract skilled workers.
6. Huge rise in shares prices since 2005 and the frantic hike of investments in the Saudi financial market.
7. The commercial banks have augmented operations of personal loans supported with high liquidity generated by the growth of the Saudi banking sector.
8. The impact of external factors such as increase prices of foods, production equipments, and raw materials.
9. The effective role of imported inflation which has always came through consumer goods and the Saudi exchange rate fixity against the U.S. Dollar..

### **Economic & Social Effects of Prices Rising in the Kingdom of Saudi Arabia**

The important economic effects caused by rising prices are represented in following:

1. Lack of cash and its inability to act as a reserve of value.
2. Growing debt of individuals and the existence of so-called negative saving.
3. Imbalance in the balance of payments (BOP): The rising prices have negative effect on BOP because it contributes to the increase of prices of goods produced locally. This decreases the Saudi competitiveness in foreign markets.
4. Decrease in size of investments and its negative impact on the level of GDP.

5. State of confusion and uncertainty during the execution of economic development projects..
6. Lack of necessary amount of money which limits the purchasing power.
7. The decrease in the real income of these individuals and households.
8. Unequal distribution of national income among different social classes.
9. Negative effect on the size of savings and deposits.
10. Negative effect on the process of economic development.
11. Increase in the ratio of loans from the banks to compensate the difference of decrease in the standards of living.
12. Existence of low quality alternative consumer materials which may harm the health of individuals.
13. Increasing rate of foreign migration which have negative effect on the National Income.
14. Redistribution of economic resources, imbalance of economic roles and converting the lender to the borrower particularly when the interest rates are stable.
15. The high inflation causes high level of uncertainty regarding the prediction of prices in the future which requires individuals to spend more time and resources in order to protect themselves and their earnings due to fear of changes in the future.
16. Rising prices conflicts with the purposes of financial stability as it has negative effect on the capacity of financial system to distribute and allocate the resources in an effective and efficient way.

### **Social Effects of Phenomenon of Rising Prices**

Consecutive rises in the levels of local prices affect the living standards of individuals and generate the following elements:

1. Intensification of contrasts between classes.
2. Prevalence of bribery and administrative corruption.
3. Increase of suffering of households and inability to meet the requirements of a decent life.
4. Some citizens find themselves forced to increase working hours or search for additional works to make extra income in order to safeguard the minimum of subsistence.
5. The increase of mental stress, depression and frustration which affects the productivity and causes refrain from participation in the development process.
6. Increasing rate of spinsterhood as a result of refraining from marriage due to inability of people to manage marriage's expenses.
7. The rise of the rate of divorce due to financial instability which causes family problems. This occurs when the head of the household is unable to meet the necessary needs of his family.

### **Recommendation of the Study**

Considering results of this study, we suggest the following recommendations:

1. Develop the Saudi capacity of producing animals and plant since the Kingdom import a big portion of this category from the foreign market.
2. Consider determinants of Saudi prices rising identified in this study and make efforts to adopt economic policies that aim to reduce their effects on local inflation rates.
3. Reconsider the policy of SAMA related to money supply.



4. Monitor the activity of private sector with respect to the import process in order to limit imported inflation.
5. Increase the government support directed to individuals through the allocation of social insurance and the living allowance. The goal is to prevent the economic and social negative effects of inflation.
6. Reconsider the replacement of the exchange fixed regime toward the U.S. Dollar by a system of basket of money.
7. Utilize Saudi media to pursue citizens to rationalize their consumption. This may lead to the demand reduction and the optimization of the spending.
8. Make efforts to rely on the policy of inflation targeting because it is an effective tool of monetary policy and exchange rate policy.
9. Limit monopolies and encourage free and fair competition among individuals and firms.
10. Activate the role of consumer protection associations in the Kingdom.

## Conclusion

There are great controversies about the impacts of inflation to the employment. Professor Philips worked before 1965 and invented the Philips curve, showing that inflation and unemployment are inversely related inflation being zero about when unemployment in 5.5%. Nevertheless, other researchers advocate that more inflation causes more unemployment, or that the inflation affects unemployment only in the short-run whereas in the long run the aggregate supply of labour is perfectly inelastic.

The Saudi government has several options to control inflation. It can achieve this goal through the fiscal policy that manages the aggregate demand by using government spending. Indeed, to lower inflation the government should reduce expenditure, create new types of taxes or raise existing ones. One should note though that such policy is usually unwanted and unpopular. Alternatively, it is useful to use monetary policy as instrument to fight against inflation. Such policy is implemented by controlling interest rates and medium-term financial strategy.

That said, let's keep in mind that an effective way to reduce the cost push inflation is to use direct intervention or prices and incomes' policy. This is when government takes measures to restrict the increase in wages (incomes) and prices. However, the issue of direct intervention is the confrontation with trade unions and employers, because the prices are much more easily controlled in public sector, it tends to discriminate in favour of private sector. It also distorts market forces, because expanding sectors can't find any new workers, because of the low price, whereas declining sectors hold on to theirs. Direct intervention policy is more effective in short-term, but it stores up trouble for the future, because prices tend to rise fast as soon as the policy is abandoned.

According to the International Monetary Fund, the Saudi economic growth in Saudi Arabia is expected to be only 4.4 percent in 2013 compared to 6.8 percent in 2012. This situation is due not only to unexpected fall of oil prices, but also cuts in the government spending. Saudi inflation has rose during mid-2012 due to higher food prices and cost increases for restaurants, hotels and transportation. Nevertheless, inflation rate remains contained at 4.0 percent. Saudi fiscal policy remains very strong considering large budgets surpluses. It is time then for the Saudi government to develop new fiscal tools in order to deal with oil prices uncertainty.

In sum, slowing down inflation rates is not an easy endeavor, and taking unmeasured decisions may hurt the economy in the long run more. The Saudi government has the option to cut and rationalize expenditures to control money supply, but this would be at the cost in economic and social development. Alternatively, SAMA can reduce the money supply to tackle inflation by raising reserves requirements of commercial banks.

That said, one should note also that the Saudi stock market can absorb a huge amount of cash when people are bearish about it. However, the number of listed companies is still small relative to the size of the Saudi economy, and further cash entering the market can create another asset bubble that may have a disastrous social impact.

### Thank You Note

We would like to thank the Deanship of Scientific Research at Salman Bin Abdulaziz University for supporting financially and logistically this research.

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