

Facing the Challenges of Consumerism in Saudi Arabia

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Abstract. As Saudi Arabia seeks sustainable development progress through reducing reliance on petroleum, a service-based economy and a subsidized welfare state, it is also important that the nation adopts and implements policy and strategies to curb consumerism. The Saudi government sets an objective of the Seventh Development Plan (2000-2004) to rationalize consumption. Some public actions have been taken to curb consumerism, but the objective has not been perceived as a high priority and no strong and influential voices in the Kingdom are affirming its importance. The issue urgently needs attention since Saudi Arabia's sudden lurch directly from a traditional to a consumer society has created numerous problematic consequences. In addition, the country economy is dependent on a single, diminishing natural resource vulnerable to fluctuations in world prices and rampant population growth increasing demand for goods and services. This study describes and analyzes the consumption patterns in Saudi Arabia and suggests further policy changes and strategies to curb consumerism.

Introduction

Consumerism has already spread to Arab countries and in particular to the Gulf states (Abdu⁽¹⁾; Zaid and Abu-Elenin⁽²⁾). As consumerism has spread worldwide, concern has grown regarding observed economic, environmental, social, psychological and physical health problems that it has brought in its wake to the developed and developing nations, including the Arabian Gulf countries such as Saudi Arabia.

Saudi Arabia gained entrée to consumerism via its oil wealth. Large-scale oil production increased the national income exponentially, enabling expanded access to imported goods with the rise of individual incomes and the ability to consume.

⁽¹⁾ Abdu, Samir. "Consumerism in the Arab Society." *Al-Wahda*, May 8, No. 92 (1992), 57-65.

⁽²⁾ Zaid, Ahmed and Abu-Elenin, Fathi. "Children's Consumption Behaviour in the Gulf Countries." *Social Affairs*, 12, No. 47 (1995), 5-36.

Numerous studies argue that the spread of a consumer lifestyle and consumerist attitudes in Saudi Arabia is increasingly evident.

Today we are witnessing an increasing concern in Saudi Arabia with the adverse impacts of excessive consumption accompanied by calls for the need to retreat from over consumption to moderation. Wasteful consumption is exacerbating panoply of problems which must be dealt with if the country is to enjoy future well-being.

The impact of consumerism has been particularly important in Saudi Arabia as well as the other Gulf states, which suddenly lurched directly from traditional to consumer society status without going through the widely known five stages of economic growth distinguished by Rostow.⁽³⁾ The country is faced with several challenges: the economy's dependence on petrochemicals, unstable oil revenues, increase in consumption patterns, and rampant population growth leading to still greater demand for services and goods. These factors all threaten the nation's effort to achieve sustainable development through reducing reliance on petroleum, a service-based economy, and a subsidized welfare state. Adoption and implementation of effective policies and strategies to curb consumerism are critically important if Saudi Arabia is to achieve its development goals. The purpose of this study is to describe and analyze the consumption patterns in Saudi Arabia and recommends specific strategies for curbing consumerism and preserving Saudi Arabia's traditional culture of moderation.

The Rise of Consumerism

The growing distribution and influence of western products, the rise of a worldwide popular media and electronic communication systems, and worldwide trends in inequality suggest that consumerism has spread beyond the shores of the United States.⁽⁴⁾ The Arab Gulf countries are among those which have attracted western marketers' array of goods promoting conspicuous consumption. These countries have been pressed to adopt more market-oriented policies which encourage the importation of these goods. The spread of consumerism to Saudi Arabia has been documented by Shukri⁽⁵⁾, Al-Gamdi⁽⁶⁾, Abd-Elal⁽⁷⁾, Al-Shanbary⁽⁸⁾, Al-Khateeb⁽⁹⁾ and Al-Saif⁽¹⁰⁾ among others. Today's Saudi market is an incomparable avenue for international products ranging from home computers to sporting equipments.

⁽³⁾ Rostow, Walt. *The Stages of Economic Growth: A Non-communist Manifesto*. New York: Free Press, 1962.

⁽⁴⁾ Schor, Juliet. "What's Wrong with Consumer Society?" In: Roger Rosenblatt (Ed.), *Consuming Desires*. Washington, D.C.: Island Press, 1999.

⁽⁵⁾ Shukri, Alia. *Family Studies: Current Approaches*. Cairo: Dar-Almarfa, 1981.

⁽⁶⁾ Al-Gamdi, Said. *Youth and Family Values in Saudi Arabia*. Cairo: Dar-Althgafa, 1988.

⁽⁷⁾ Abd-Elal, Weesal. *Socioeconomic Changes and Saudi Family Consumption Patterns in Jeddah, Saudi Arabia*. Master's Thesis (unpublished), King Abdulaziz University, 1995.

⁽⁸⁾ Al-Shanbary, Nasser. *Determinants of Household Consumption Function in Saudi Arabia (1963-1995)*. Master's Thesis (unpublished), King Abdulaziz University, 1998.

⁽⁹⁾ Al-Khateeb, Salwa. "Women, Family and the Discovery of Oil in Saudi Arabia." *Marriage and Family Review*, 27, No. 1/2 (1998), 167-189.

⁽¹⁰⁾ Al-Saif, Saif. *Globalization and Consumerism*. Riyadh: Al-Yamama Publisher, 2002.

Factors Promoting Consumerism

Saudi Arabia is moving toward a consumer society as a result of global and local economic, social and governmental forces. Much of the consumption behavior is driven by emulation. Emulation of the west helps to feed the consumer oriented society. It has evolved to reflect a new global order in which the industrialized countries of the west are considered superior technologically, economically and military. Because of this supremacy, many people around the world attempt to emulate western consumption patterns. In the quest for global status, Saudi Arabia is striving toward modernization. Since modernization has been equated with westernization, there is a tendency to adopt western models of development, particularly in the country's infrastructure projects.

Saudi Arabia is dependent on imports of western goods and services. It relies on industrialized nations of the first world for food, manufactured goods and arms. There is also dependency on western technology and know-how. At the individual level, becoming modern is assumed to be related to the acquisition and consumption of certain status goods and preference for western lifestyle. As a result of travel, mixed marriages, foreign expatriate importation, and western education, the Saudi upper-middle and upper classes have acquired a taste of western fashions, luxuries and superfluous goods. Advertising has also played an important role in spreading consumerism as a result of satellite TV and an open trade market. In addition, the unparalleled boom in supermarkets, hypermarkets, and gleaming, air-conditioned shopping malls is rapidly increasing and stimulating buying urges. Companies are using effective marketing techniques, influencing both affective and cognitive dimensions of individual purchasing behavior.

In addition to the global factors, local government policies and economic and social factors have contributed to the spread of consumerism in Saudi Arabia. During the boom years, oil revenues allowed the government to offer massive subsidies, and to create thousands of jobs in its own bureaucracy which increase consumer purchasing power. Another factor that has contributed to increased Saudi consumption is relatively the high annual per capita income. The rise of a middle-class population with some surplus income has enabled Saudi Arabia's transformation into a consumer society. The often western-educated professional and technical workers of the middle class are those most likely to espouse the western values of success, achievement and consumption as an indicator of these. Liberal import policies encourage conspicuous consumption by allowing import of a dazzling array of luxury goods that only a few can afford. Saudi women are also becoming influential in family purchasing decisions which make them an attractive target group for advertisers. By far the most influential demographic factor impacting on consumption patterns in Saudi Arabia is the burgeoning youth market. Saudi Arabia's population increased at least by 300% between 1973 and 2000.⁽¹¹⁾

⁽¹¹⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. Westport: Praeger, 2003.

Evidence of Increased Consumption

Evidence of increased consumption in Saudi Arabia has been recognized in the increase of imported goods and increases in the consumption of products.⁽¹²⁾ Consumerist attitudes and behavior in Saudi Arabia are manifested in increased importation of goods and services, consumption of durable and nondurable goods, and consumption of services.

Import of goods and services to Saudi Arabia increased from SR 4.990 billion in 1970 to SR 162.558 billion in 2002.⁽¹³⁾ Imports by major commodity groups have also increased, from SR 3.2 billion in 1970 to SR 113.2 billion in 2000.⁽¹⁴⁾

Total Saudi consumer expenditures on goods and services has increased from SR 154,265.00 million in 1990 to SR 276,553.66 million in 2003 which is a 79.3% growth.⁽¹⁵⁾ Details follow on some major categories of these expenditures.

Household goods and services

Consumer expenditures on household goods and services between 1990 and 2000 almost doubled, from SR 10,991 million to SR 20,604 million.⁽¹⁶⁾

Electronic goods

Personal ownership of electronic goods has continued to increase. Substantial increases have occurred in the ownership of satellite TV systems, CD players, mobile phones, and videotape recorders. Ownership of satellite TV systems increased dramatically between 1990 and 2003, from 0.37 to 60.77 per 100 households. CD player ownership rose from 0.44 per 100 households in 1985 to 32.75 in 2003. Ownership of mobile phones has multiplied 13 times within 14 years. Videotape recorder ownership rose during the 1980-2003 period from 7.96 to 53.20 per 100 households.⁽¹⁷⁾

Cars

The number of passenger cars in use in Saudi Arabia has increased substantially from 764,000 in 1980 to 2,762,900 in 2003. Possession of passenger cars per 100 households increased gradually during the same period, from 89.55 to 99.16.⁽¹⁸⁾ The number of registered vehicles also rose dramatically, from 60,000 in 1970 to 9,484,891 in 2003 (Ministry of Planning⁽¹⁹⁾; Cordesman⁽²⁰⁾).

⁽¹²⁾ Yavas, Ugur and Abdul-Gader, Abdu-Allah. "Impact of TV: Commercials on Saudi Children's Purchase Behavior." *Marketing Intelligence and Planning*, 11, No. 2 (1993), 37-43.

⁽¹³⁾ United Nations Common Database (UNCD) accessed 2004. <http://esa.un.org/unpp/p2k0data.asp>

⁽¹⁴⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*, U.S.A.: Greenwood Publishing Group, Inc., 2003.

⁽¹⁵⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽¹⁶⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽¹⁷⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽¹⁸⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽¹⁹⁾ Ministry of Planning, *Statistical Year Book*. Riyadh: Kingdom of Saudi Arabia, 2003, No. 39.

⁽²⁰⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A.: Greenwood Publishing Group, Inc., 2003.

Telephone services

Telephone lines in use increased threefold between 1990 and 2003, from 1,234,000 to 3,736,430; consumer expenditures on telecommunications more than doubled during the same period, reaching SR 7,058.16 million in 2003; and telephone main lines per 1,000 people almost doubled from 76.89 in 1990 to 143.86 in 2002.⁽²¹⁾ International telecom outgoing traffic rose substantially between 1975 and 2002, from 19.8 to 577.6 minutes per subscriber.⁽²²⁾

Mobile phone ownership increased substantially between 1990 and 2003, from 5.89 to 67.88 per 100 households, a higher rate than in the United States, where it increased from 0.51 to 44.06 per 100 households; and in the United Arab Emirates, where it increased during the same period from 7.41 to 39.38 per 100 households.⁽²³⁾

Television sets

Television sets per 1,000 people in Saudi Arabia increased during the 1975-2002 period by 140.6%, from 110.3 to 265.5.⁽²⁴⁾ Television ownership grew between 1980 and 2003, from 71.7 to 99.2 per 100 households.⁽²⁵⁾

Domestic help

The number of domestic help in Saudi Arabia had increased from 602.8 thousand in 1980 to 848.8 thousand in 1985, declined slightly with the economy to 729.1 in 1990, but rebounded to one million in 2000.⁽²⁶⁾

Air travel and tourism

During the 1990-2003 period, consumer expenditures on air travel increased by 115.9%, from SR 1,741 million to SR 3,759.6 million.⁽²⁷⁾ The Economist Intelligence Unit report estimated local Saudi tourism expenditures at SR 5 billion (\$1.3 billion) in 1999, compared with around SR 25 billion spent every year by three million or so Saudis who holiday abroad.⁽²⁸⁾ In addition, the World Travel and Tourism Council, an international organization of travel industry executives promoting travel and tourism worldwide, reported that the Saudis are expected to spend SR 18.2 billion on personal travel and tourism by the end of 2005, which is equivalent to 5.9% of the total personal spending. The Saudis are expected to spend SR 29.6 billion on personal travel and tourism in 2015, which is equivalent to 6.4% of the total personal spending.⁽²⁹⁾

Leisure and recreation

⁽²¹⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽²²⁾ World Bank database accessed 2004. <http://devdata.worldbank.org>

⁽²³⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽²⁴⁾ World Bank database accessed 2004. <http://devdata.worldbank.org>

⁽²⁵⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽²⁶⁾ Bagader, Baker. *Marriage: Issues and Problems in Gulf States*. United Arab Emirates: Council of Labor and Social Affairs Ministers of GCC States, 2003.

⁽²⁷⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽²⁸⁾ The Economist Intelligence Unit. *Country Profile: Saudi Arabia*. London: The Economist Intelligence Unit Limited, 2004.

⁽²⁹⁾ Al-Sharq Al-Awsat Newspaper. July 10, 2005.

Consumer expenditures on leisure and recreation rose from SR 11,652.0 million in 1990 to SR 20,633.5 million in 2003, which is a 77.08% growth.⁽³⁰⁾

Catering

Consumer expenditures on catering increased from SR 4,450 million in 1990 to SR 8,161.38 million in 2003, an increase of 83.4%.⁽³¹⁾

Bank claims

Bank claims on the private sector show an increase in debt in Saudi Arabia. During the 1990-2003 period, private sector debt to banks rose by 221.9%, from SR 70,985.7 million to SR 228,486 million.⁽³²⁾

Water

According to Cordesman, water use is extraordinarily high for a nation at Saudi Arabia's overall level of economic development. Many experts have concluded that Saudi usage averages about 90 gallons per person per day, about twice the international average.⁽³³⁾

Electricity

Domestic energy use in Saudi Arabia has been wasteful. Electricity consumption increased by 315% during the 1982-2000 periods, rising to 110,611 million kilowatt hours. Total consumption multiplied at an annual rate of 4.2% during 1994-1998, while peak load grew by an annual average of 2.7%.⁽³⁴⁾ Per capita consumption also increased substantially, from 321.3273 kilowatt hours in 1970 to 5,116.843 in 2001.⁽³⁵⁾ Consumer expenditures on electricity rose from SR 3,370 million in 1990 to SR 6,704.75 million in 2003, which is a 98.95% increase.⁽³⁶⁾ Consumers' preferences for large homes and establishment of independent nuclear-family residences have contributed to domestic energy costs.

Problematic Aspects of Consumerism

According to numerous western researchers (cf. Schor⁽³⁷⁾; Schor⁽³⁸⁾; Durning⁽³⁹⁾;

⁽³⁰⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽³¹⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽³²⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽³³⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A: Greenwood Publishing Group, Inc., 2003.

⁽³⁴⁾ Ministry of Planning. *Seventh Development Plan*. Riyadh: Kingdom of Saudi Arabia, 2000-2004.

⁽³⁵⁾ World Bank database accessed 2004. <http://devdata.worldbank.org>

⁽³⁶⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽³⁷⁾ Schor, Juliet. *The Overworked American: The Unexpected Decline of Leisure*. New York: Basic Books, 1991.

⁽³⁸⁾ Schor, Juliet. "What's Wrong with Consumer Society?" In: Roger Rosenblatt (Ed.), *Consuming Desires* Washington, D.C.: Island Press, 1999.

⁽³⁹⁾ Durning, Alan. *How Much Is Enough*. New York: W.W. Norton and Company, 1992.

Lane⁽⁴⁰⁾; Redclift⁽⁴¹⁾; and Frank⁽⁴²⁾), economic, environmental, social, psychological and physical health problems have resulted from excessive consumption in developed countries. However, few systematic studies have been done on developing countries such as Saudi Arabia in which oil wealth enabled the rise of consumerism.

Economic problems

Economic concerns with consumerism in Saudi Arabia stem from what Ibrahim⁽⁴³⁾ and Barakat⁽⁴⁴⁾ refer to as the economic dependency in the Arab world on the industrialized nations of the first world for food, manufactured goods, arms, technology, and managerial know-how. In addition, the oil-dependent Saudi economy is vulnerable to world market fluctuations in oil prices. As consumerism rises in Saudi Arabia, Al-Rahmani has warned against increased consumer debt in the Gulf countries due to the lure of credit cards, an economic problem which can cause stress at the household level.⁽⁴⁵⁾

Social and psychological problems

Consumerism can also have a broader negative social and psychological impact. Al-Abadi⁽⁴⁶⁾ and Barakat⁽⁴⁷⁾ have been critical of the spread of conspicuous consumption in the Gulf states. Ibrahim⁽⁴⁸⁾ and Barakat⁽⁴⁹⁾ have pointed to increased income differentials among various strata in the Arab world, a widening gap between social classes, and feelings of deprivation among those who cannot afford the conspicuous consumption on which social status increasingly depends. Al-Rabee reported that people in the Gulf countries are experiencing what he called "cultural alienation" as imported goods displace indigenous products and people sense that they have lost control over the means of production.⁽⁵⁰⁾ Al-Qudsi added that as the Arab consumer was seduced to buy

⁽⁴⁰⁾ Lane, Robert. "The Road Not Taken: Friendship, Consumerism and Happiness." *Critical Review*, 8, No. 4 (1994), 521-554.

⁽⁴¹⁾ Redclift, Michael. *Wasted: Counting the Costs of Global Consumption*. London: Earthscan Publication Limited, 1996.

⁽⁴²⁾ Frank, Robert H. *Luxury Fever: Why Money Fails to Satisfy in an Era of Excess*. New York: The Free Press, 1999.

⁽⁴³⁾ Ibrahim, Saad E. *The New Arab Social Order: A Study of the Social Impact of Oil Wealth*. Boulder: West View Press, Inc, 1982.

⁽⁴⁴⁾ Barakat, Halim. *The Arab World in the Twentieth Century*. Beirut, Lebanon: Center for Contemporary Arab Studies, 2000.

⁽⁴⁵⁾ Al-Rahmani, Eqbal. "Consumption in Affluent Societies: Different Approach." *Social Studies Journal*, 27, No. 1 (spring 1999), 27-48.

⁽⁴⁶⁾ Al-Abadi, Abdu-Allah. "Developmental Issues in Gulf Countries", *Arab Future*, 140, No. 10 (1990), 103-117.

⁽⁴⁷⁾ Barakat, Halim. *The Arab World in the Twentieth Century*. Beirut, Lebanon: Center for Contemporary Arab Studies, 2000.

⁽⁴⁸⁾ Ibrahim, Saad E. *The New Arab Social Order: A Study of the Social Impact of Oil Wealth*. United States: West view Press, Inc, 1982.

⁽⁴⁹⁾ Barakat, Halim. *The Arab World in the Twentieth Century*. Beirut, Lebanon: Center for Contemporary Arab Studies, 2000.

⁽⁵⁰⁾ Al-Rabee, Ahmad. "Problems of Naft Culture." *Derajat*, 1, No. 2 (1990), 165-175.

western products, he lost his self-confidence.⁽⁵¹⁾ Al-Abadi⁽⁵²⁾ and Abdu⁽⁵³⁾ have indicated that in the Gulf countries, material aspects of culture are exceeding immaterial changes.

Physical health problems

With regard to the harmful effects of consumerism on physical health in the Arabian Gulf countries, Al-Rahmani has warned of the dangers to children and youth posed by western-style fast food consumption high in fat, cholesterol, salt and sugar.⁽⁵⁴⁾ Several studies have pointed to an alarmingly high incidence of obesity in Saudi females, who on average are reported to be more obese than their European counterparts.⁽⁵⁵⁾ Al-Nuaim *et al.* have found a high prevalence of overweight and obesity among Saudi subjects, particularly females; 45% of men and 52% of women they studied were overweight.⁽⁵⁶⁾ Another study, by Al-Nuaim *et al.*, found a high prevalence of childhood obesity among Saudi male children attending public schools.⁽⁵⁷⁾ According to a Global Market Information report, whereas 25% of the Saudi population was classified as obese in 1990, this percentage had risen to almost 27% by 2000. Many Saudis also have a high cholesterol level and high blood pressure, both of which can be attributed partly to rising imports of rich western food.⁽⁵⁸⁾

Environmental problems

A number of environmental issues associated with consumerism have arisen in the Gulf countries as a result of increasing oil production. Al-Rahmani⁽⁵⁹⁾ and Al-Saif⁽⁶⁰⁾ have referred to the huge quantities of toxic waste generated by oil refining. Al-Saif has pointed to such areas of environmental concern as: the depletion of non-renewable resources, with the country's oil reserves projected to last only about 80 more years; ground water supplies being depleted and contaminated; the destruction of the ozone layer in the stratosphere and acidification of soils and surface water and air pollution as passenger car traffic as well as oil and oil-by products production increase.⁽⁶¹⁾ The Economist Intelligence Unit report summarized serious environmental issues in Saudi

⁽⁵¹⁾ Al-Qudsi, Mohamed. "Values in the Contemporary Consumer Arab Society." *Al-Wahda*, 8, No. 92 (May 1992), 66-74.

⁽⁵²⁾ Al-Abadi, Abdu-Allah. "Developmental Issues in Gulf Countries." *Arab Future*, 140, No. 10 (1990), 103-117.

⁽⁵³⁾ Abdu, Samir. "Consumerism in the Arab Society." *Al-Wahda*, May 8, No. 92 (1992), 57-65.

⁽⁵⁴⁾ Al-Rahmani, Eqbal. "Consumption in Affluent Societies: Different Approach." *Social Studies Journal*, 27, No. 1 (spring 1999), 44.

⁽⁵⁵⁾ Al-Rehaimi, Amira and per Bjorntorp. "Obesity and Fat Distribution in Women from Saudi Arabia." *International Journal of Obesity*, 16 (1992), 1017-1019.

⁽⁵⁶⁾ Al-Rubeaan, K.; Al-Mazrou, Y.; Al-Attas, O.; Al-Aaghari, N. and Khoja, T. "High Prevalence of Overweight and Obesity in Saudi Arabia." *International Journal of Obesity*, 20 (1996a), 547-552.

⁽⁵⁷⁾ Bangboye, F.A. and Al-Herbish, A. "The Pattern of Growth and Obesity in Saudi Arabian Male School Children." *International Journal of Obesity*, 20, No. 11 (November 1996b), 1000-1005.

⁽⁵⁸⁾ Global Market Information database accessed 2004. www.euromonitor.com/gmid

⁽⁵⁹⁾ Al-Rahmani, Eqbal. "Consumption in Affluent Societies: Different Approach." *Social Studies Journal*, 27, No. 1 (spring 1999), 44.

⁽⁶⁰⁾ Al-Saif, Saif. *Globalization and Consumerism*. Saudi Arabia: Al-Yamama Publisher, 2002.

⁽⁶¹⁾ Al-Saif, Saif. *Globalization and Consumerism*. Saudi Arabia: Al-Yamama Publisher, 2002.

Arabia that include: air pollution caused by heavy reliance on cars and the oil and petrochemicals industries; overuse of the country's limited water resources, which are obtained principally through tapping underground aquifers and desalinating sea water; and shortage of municipal facilities for and contamination of the land from improper disposal of hazardous industrial and military waste, with the desert often used as a dumping ground.⁽⁶²⁾ Al-Rahmani has also pointed out that increased consumerism results in increasing volumes of disposable waste.⁽⁶³⁾

Focus on water shortage problem

Given excessive per capita water consumption in Saudi Arabia and declining natural supply, a water shortage is looming which provides a clear-cut case study of a major problem created by the country's transformation into a consumer society. Not only in Saudi Arabia but throughout the arid Arab world, water shortages are expected to be further exacerbated by rapid population growth.

Abdu predicted that water shortages could be expected in the Arab countries after the year 2000 and would reach 70 billion cubic meters by 2030.⁽⁶⁴⁾ Al-Elikm worried that water shortages in the Arab countries might cause conflict over water resources, and he complained of a lack of strategies to reduce water consumption in the region. He predicted that if the 3% population growth rate persisted in the region, water shortages would double.⁽⁶⁵⁾ In Saudi Arabia, the government faces a water situation in which consumer expectations will be difficult to meet. Al-Sudani and Al-Mehamid warn of a drinking water shortage in Saudi Arabia.⁽⁶⁶⁾ In addition, the expected water shortage will adversely impact on Saudi economic and social development.⁽⁶⁷⁾

Annual rainfall in Saudi Arabia is less than 100 mm in most areas. The country has only about 2.33 million cubic km of internal renewable water resources which provide only minimal amounts of water even to the current Saudi population. They total about 156 cubic meters per person – less than one-seventh the total for a citizen of the United States.⁽⁶⁸⁾

At the same time, 75% of the water in the central and eastern Saudi regions still comes from non-renewable underground lakes. These reserves will be exhausted within

⁽⁶²⁾ The Economist Intelligence Unit. *Country Profile: Saudi Arabia*. United Kingdom: The Economist Intelligence Unit Limited, 2004.

⁽⁶³⁾ Al-Rahmani, Eqbal. "Consumption in Affluent Societies: Different Approach." *Social Studies Journal*, 27, No. 1 (spring 1999), 34.

⁽⁶⁴⁾ Abdu, Samir. "Consumerism in the Arab Society." *Al-Wahda*, May 8, No. 92 (1992), 60.

⁽⁶⁵⁾ Al-Elikm, Hassan. "Water Crisis in the Arab World and Expected War." *Social Science Journal*, 23, No. 3 (1995), 7-25.

⁽⁶⁶⁾ Al-Sudani, Abd-Al-Aziz and Al-Mehamid, Ahmad. "Water Pricing Policy in Saudi Arabia." *Public Administration*, 40, No. 3 (2000), 489-533.

⁽⁶⁷⁾ Awd, Adel. "Population Growth and Sustainable Development." *Arab Affairs*, No.108 (2001), 175-196.

⁽⁶⁸⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A.: Greenwood Publishing Group, Inc., 2003, 299.

80 years at the present rates of water usage, if not substantially sooner.⁽⁶⁹⁾ This depletion of natural water will eventually confront Saudi Arabia with far more serious problems than it faces today.⁽⁷⁰⁾ Saudi Arabia's rapid increase in population is causing its natural water resources to drop sharply. The World Resources Institute and the World Bank estimate that Saudi per capita natural water resources dropped from 537 cubic meters in 1960 to 156 cubic meters in 1990 and project that they will drop to 49 cubic meters by 2025.⁽⁷¹⁾

Saudi Arabia is extensively dependent on a system of desalinization plants for its drinking water. The Kingdom increased the output of these plants from 4.4 million U.S. gallons per day in 1970 to 491.6 million gallons per day in 2000 – an average growth rate of 17%.⁽⁷²⁾ A Saudi briefing issued in April 2002 – based on Ministry of Agriculture and Water figures – indicated that Saudi water consumption would raise from 7 million cubic meters per day in 2002 to 11.3 million in 2022. This estimate was based on estimated population growth from 23.4 million in 2002 to 38 to 48 million in 2022, with a nominal estimate of 43.0 million. The cost was estimated to total 180 billion riyals from 2002 to 2022, including funds for the construction of new desalination plants and rehabilitating old ones, costs for operations, and maintenances fees. The Saline Water Conversion Corporation (SWCC) estimates the total cost of meeting the Kingdom's growing demand for desalinated water alone at \$54 billion by 2020.⁽⁷³⁾

The Seventh Development Plan also projected a continuing massive increase in Saudi Arabia's water needs. The total demand for water is projected to increase from 21.1 billion cubic meters in 2000 to 22.5 in 2004 and 27.8 in 2020.⁽⁷⁴⁾

Government response to the water problem

The Saudi government has taken several actions in response to the water problem. These include: a) Steady construction of a number of dams. b) Constant construction of new plants and pipelines; output increased by over 29 billion cubic meters between 1998 and 1999, and three major projects were under construction in 2000. Saudi new-term plans called for a total of 30 plants to produce 2.9 million cubic meters of water a day and 3,400 megawatts of electricity.⁽⁷⁵⁾ c) The Seventh Development Plan places particular emphasis on the water sector. It sets the following objectives, among others: continue to supply water in sufficient quantities and qualities, preserve water resources, and reduce water consumption. The plan calls for constructing 2,500 km of new water

⁽⁶⁹⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A.: Greenwood Publishing Group, Inc., 2003, 301.

⁽⁷⁰⁾ Saudi Arabian Monetary Agency (SAMA), *Thirty-sixth Annual Report*. Riyadh: SAMA, 2000.

⁽⁷¹⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A.: Greenwood Publishing Group, Inc., 2003, 300.

⁽⁷²⁾ Saudi Arabian Monetary Agency (SAMA). *Thirty-seventh Annual Report*. Riyadh: SAMA, 2001, 229-233.

⁽⁷³⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A.: Greenwood Publishing Group, Inc., 2003, 302.

⁽⁷⁴⁾ Ministry of Planning. *Seventh Development Plan*. Riyadh: Kingdom of Saudi Arabia, 2000-2004, 95-99.

⁽⁷⁵⁾ Saudi Arabian Monetary Agency (SAMA). *Thirty-seventh Annual Report*. Riyadh: SAMA, 2001, 229-233.

networks and 62 dams, completing construction of 22 dams, and renovating 25 dams, establishing 12 new desalination plants with a total design capacity of 2.1 million meters of water and 2,502 megawatts of electricity, constructing 2,800 km of wastewater networks, implementing 170,000 domestic wastewater connections, and building water treatment plants with a capacity of 450,000 cubic meters a day.⁽⁷⁶⁾ d) The government cut water subsidies in 1998 and has raised water prices in recent years.

Focus on electricity consumption problem

Saudi Arabia must also face the consequences of excessive electricity consumption compounded by rapid population growth. As with water, growth in demand has been encouraged by years of subsidies resulting in inefficient and wasteful use of power.

Population and economic growth will increase future demand at least as sharply. The Seventh Development Plan estimated that total demand for electric power would grow at an average rate of 5.2% through 2004 and 4.5% per year through 2020. It projected that the Kingdom would have to meet the needs of over 7 million new households by 2020.⁽⁷⁷⁾ Meeting the rising demand will be very expensive. The Saudi Ministry of Industry and Electricity has stated that an investment of \$117 billion is required over the next 24 years, an average of \$ 4.9 billion a year.⁽⁷⁸⁾

Government response to the electricity problem

The Saudi government has taken several steps to meet increasing power demands, with the results that: a) electricity production increased from 4,382 kwh in 1975 to 137,388 kwh in 2001,⁽⁷⁹⁾ b) generating capacity increased from 344 megawatts in 1970 to 23,230 in 2001, and c) peak load increased from 300 megawatts in 1970 to 23,582 megawatts in 2001.⁽⁸⁰⁾

The government has also imposed a special tariff on heavy electricity users since 1995, expanded power plants financed by an international commercial loan, and planned greater private sector involvement for a 1,750 megawatt power station project which is expected to increase the western region's capacity initially by 25% and eventually by 50 percent.⁽⁸¹⁾

Evaluating Over-all Government Response to Excessive Consumption

During the 1996-2001 period of massive fluctuations in oil prices and revenues, the Saudi government cut back on subsidies to consumers. During the oil crash of 1997, for

⁽⁷⁶⁾ Ministry of Planning. *Seventh Development Plan*. Riyadh: Kingdom of Saudi Arabia, 2000-2004.

⁽⁷⁷⁾ Ministry of Planning. *Seventh Development Plan*. Riyadh: Kingdom of Saudi Arabia, 2000-2004.

⁽⁷⁸⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A.: Greenwood Publishing Group, Inc., 2003, 295.

⁽⁷⁹⁾ World Bank database accessed 2004. World Bank database accessed 2004. <http://devdata.worldbank.org>

⁽⁸⁰⁾ Ministry of Planning. *Statistical Year Book*. Riyadh: Kingdom of Saudi Arabia, 2002, 288, Vols. 31, 32, 38.

⁽⁸¹⁾ *Middle East Economic Survey*. 42, No.10 (March 8, 1999), B2.

example, the government reduced state subsidies for gasoline, diesel fuel, water, electricity and air travel. However, such goods and service cuts remained under priced compared to real market value, and suspended subsidies were reintroduced when oil revenues once again rose. For example, the government reintroduced the barley subsidies in mid-2000 that it had suspended in 1998, at a cost of around 4 billion riyals (\$1.1 billion) a year⁽⁸²⁾, thereby increasing consumption. Although the Seventh Development Plan (2000-2004) emphasized reducing water consumption, government aid encouraged the excessive use of water by providing consumers with free deep wells and low-cost diesel fuel for pumps. The subsidies for electricity, fuel and petroleum products alone cost the government an estimated \$2.7 billion in 1997 at world market prices. Diesel fuel, for example, sold for 8.59 cents per gallon in Saudi Arabia although it costs 12 cents per gallon to produce.⁽⁸³⁾

Despite government efforts in response to the water demand, problems remain. Dams have a limited value in a country with no major rivers and sparse rainfall. Some key pipelines are already beginning to age. Sewer construction has lagged behind in some areas. A great deal of Saudi Arabia's water still goes to subsidize agriculture because Saudi government policy is to pursue self-sufficiency in food.⁽⁸⁴⁾ The Seventh Development Plan does not address such key issues as water allocation and cost. Even though water subsidies to agriculture were reduced in mid-1990, costs remained below free market prices, encouraging inefficient use of water, and the government reinstates these subsidies in 2000 after a rise in oil revenues. The Saline Water Conversion Corporation (SWCC) recognizes that the majority of water facilities will reach an age at which the capacity begins to drop by 2050.⁽⁸⁵⁾ The enormous costs of meeting current and future Saudi water needs burden the government budget.

Although occasional public lectures, columns in the newspapers, and statements in telephone, water, and electricity bills seek to motivate the Saudi public to reduce consumption, no concerted effort is underway in educational institutions or community development centers to tackle the problem. Despite sporadic government efforts, reducing consumerism is not yet perceived as a high priority, and no strong, influential voices in the Kingdom are affirming the importance of this issue.

The critical need to tackle the excessive consumption problem is apparent from a reprise of only several aspects of Saudi Arabia's situation. The economy remains overwhelmingly dependent on oil, a resource expected to dry up in at the most 80 years. Economic diversification efforts have been made, and the country is less dependent on the petroleum sector than it was at the beginning of the oil boom. However, according to

⁽⁸²⁾ Bourland, Bradley. *The Saudi Economy: 2000 Performance, 2001 Forecast*. Riyadh: Saudi American Bank, 2001, 7.

⁽⁸³⁾ *Middle East Economic Digest*. April 21, 1995, 32-33.

⁽⁸⁴⁾ Saudi Arabian Monetary Agency (SAMA), *Thirty-sixth Annual Report*. Riyadh: SAMA, 2000, 224-229.

⁽⁸⁵⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A.: Greenwood Publishing Group, Inc., 2003.

Cordesman, diversification efforts have had limited productive impact, have not generated the necessary jobs or knowledge-based economy, and have taken place largely in the service and construction sectors. Oil revenues are not only finite but fluctuate with world market prices. Thus, eras are inevitable in which Saudi consumers' expectations will be difficult to meet. The Saudi Arabia's population increased at least by 300% between 1973 and 2000. The native Saudi population increased at an estimated average rate of 3.5% during 1995-2000.⁽⁸⁶⁾ Like other Gulf countries, Saudi Arabia is facing the major problem of finding ways to absorb its disproportionately young population into the labor force. Saudi youth today find the employment search a frustrating experience and are disgruntled by the prospect of downward social mobility if the country cannot sustain its consumer society.⁽⁸⁷⁾ In addition, ever-increasing youth cohorts are set to follow them if population growth continues at the present rate. Yet, no concerted national effort is being made to promote limiting family size.

Prospects and Compensations for Changing Consumption Behavior

The challenges facing Saudi Arabia will take years to overcome through a combination of continued government spending discipline, revenue adjustment, a shift from oil sector-driven to job-creating growth, and changes in consumption behavior. Available evidence indicates that consumer spending in Saudi Arabia as elsewhere will fall in times of economic uncertainty.⁽⁸⁸⁾ Although Glock and Nicosia⁽⁸⁹⁾ observed that consumer expenditures tend to remain stable even when income declines, this observation referred to a competitive situation in which people seek to emulate the consumer lifestyle of their wealthier acquaintances, not to a situation in which the incomes of most persons in a society decline as has happened from time to time in Saudi Arabia. In this latter situation, the decreased number of wealthy should decrease the pressure to emulate them. Since almost all are in the same boat, it is likely that a certain degree of decline in conspicuous consumption will occur naturally.

This is not to say that the adjustment will be easy, as any increasingly indebted consumer who has been forced to rein in their spending can attest. Perhaps Saudis will find comfort, however, in the greater congruity between their reduced lifestyle and that advocated by the great moral and religious traditions of the world, including Islam. The philosophy of sufficiency is deeply rooted in the human past. All the sages denounced materialism, and every world religion is widespread with warnings against the evils of excess. The attainment of happiness through limitless material acquisition is denied by every major religion and philosophy known to humankind. Examples of Islamic

⁽⁸⁶⁾ Cordesman, Anthony. *Saudi Arabia Enters the Twenty First Century*. U.S.A.: Greenwood Publishing Group, Inc., 2003.

⁽⁸⁷⁾ Robinson, Bob. *The Saudi Labor Market: The Experience and Understanding of Saudi Development and Training Company*. Dammam: Saudi Development and Training Company Limited, 1996.

⁽⁸⁸⁾ Tuncalp, Secil. "The Automobile Market in Saudi Arabia: Implications for Export Marketing Planning." *Marketing Intelligence and Planning*, 11, No. 1 (1993), 28-38.

⁽⁸⁹⁾ Glock, Charles and Nicosia, Francesco. "Uses of Sociology in Studying Consumption Behavior." *Journal of Marketing*, 28, July (1964), 51-54.

teachings in the Koran emphasizing the importance of moderation in consumption appear in Surat Al-Furkan⁽⁹⁰⁾, which refers to those who, when they spend, are not extravagant and not niggardly but hold to a just (balance) between those extremes; and in Surat Al-Anam⁽⁹¹⁾, which counsels, "waste not by excess; for God loveth not the wasters."

More recently, Marius de Geus has called for more moderate consumption and self-restraint and for a simpler, less materialistic and luxurious lifestyle in the modern world. He defines restrained luxury as maintaining "comfortable prosperity in combination with restraint from luxury." Restrained luxuries can be selected on the basis of their potential for saving work and energy and must be characterized by optimal efficiency, e.g. highly efficient dishwashing machines which actually use less water and energy than the old-fashioned brush and wash basin.⁽⁹²⁾

As Durning has put it, simple living means spending more time attending to our lives...is devoting less time to earning more money and more time to the daily doings of life. There is a need to take time out to talk with our children, to sit and watch the sun goes down, to cook from scratch, to make our beds, and to visit a friend.⁽⁹³⁾

In the west, people are actively seeking to find more free time for personal development, family and community activities. People who want to cultivate the deeper, non-material sources of fulfillment that are the main psychological determinants of happiness turn to non-material sources of fulfillment such as family and social relationships, meaningful work, and leisure.⁽⁹⁴⁾ The predominance of things that people name as their most rewarding pastimes is substantially sustainable. Religious practices, conversation, family and community gatherings, theater, music, dance, literature, sports, poetry, artistic and creative pursuits, education, and appreciation of nature all fit readily into a culture of permanence, a way of life that can endure through countless generations.⁽⁹⁵⁾

To regulate their consumption of material goods, Saudis would find themselves compensated by their rediscovery of richer nonmaterial lives.

Recommendations

As Saudi Arabia seeks sustainable development, it is important that the nation adopts and implements policy and strategies to curb consumerism. A comprehensive plan should be developed to include the following components:

⁽⁹⁰⁾ Surat Al-Furkan verse 67.

⁽⁹¹⁾ Surat Al-Anam verse 141.

⁽⁹²⁾ de Geus, Marius. *The End of Over-consumption: Toward a Life Style of Moderation and Self-restraint*. Utrecht, the Netherlands: International Books, 2003.

⁽⁹³⁾ Durning, Alan. *How Much Is Enough*. New York: W.W. Norton and Company, 1992.

⁽⁹⁴⁾ Durning, Alan. *How Much Is Enough*. New York: W.W. Norton and Company, 1992.

⁽⁹⁵⁾ Wachtel, Paul. *The Poverty of Affluence*. Philadelphia: New Society Publishers, 1989.

Encourage moderation in consumption for sustainable development

Achieving sustainable development in Saudi Arabia must begin with individual Saudi behavior. Respected persons should model lifestyles based on professional and community achievements rather than material acquisition. "Moderating" consumption means reducing existing waste, producing less waste, and avoiding overindulgence. We need to assume responsibility for our actions if we are to transform a consumer society into a sustainable one. The fundamental value of a sustainable society is each generation should meet its needs without endangering the prospects for future generations to meet theirs. To achieve such a society will require structural and policy change on the part of the Saudi government and a shift in certain attitudes and behavior of the people.

Introduce the element of sustainability into all consumption patterns

Reducing consumption to achieve sustainability involves a wide spectrum of individual and societal decisions to spend more prudently. Among these decisions should be:

- 1) As a priority, to curtail the use of non-renewable resources such as fossil fuels and minerals so as to extend their availability to as many future generations as possible and to use as much as possible renewable resources such as solar, wind and human energy.
- 2) To initiate public service campaigns emphasizing to consumers the deleterious effects of excessive consumerism. Concerted campaigns by appropriate government ministries focusing on various aspects of wasteful consumption can change behavior. The Ministry of Transportation, for example, might point out that large, gas-guzzling cars increase air pollution, decrease national fuel reserves, and impose a burden on the family budget. The Ministry of Transportation might also consider providing suitable and convenient public transportation and advocate for riding buses and using carpools. The Ministry of Agriculture and Water could initiate a water conservation campaign. The Ministry of Housing could promote the advantages of smaller, more energy-efficient homes. The Environment Protection Administration could conduct a recycling campaign to reduce food and beverage packaging waste. The Ministry of Industry and Electricity could advocate turning off lights and electronic devices when not in use. Awlia ⁽⁹⁶⁾ indicates that one of the main reasons for inefficient electricity consumption is that people are not aware of the real cost of generating it; a public awareness campaign could increase their compliance with more prudent use guidelines.
- 3) To educate children in the home and at school to watch TV advertising with a critical eye. To create viewer-supported public television channels offering high-quality programming for children and adults with no commercials.

⁽⁹⁶⁾ Awlia, Sahar. *Evaluation of the Role of Women in Residential Electric Power Conservation in Jeddah*. Master's Thesis (unpublished), King Abdulaziz University, 2003.

Setting priorities and strategies

It is evident that the Saudi Arabian economy and society must undergo extensive structural adjustments in the coming decades to plan and act responsibly for the future well-being of the country and its people. Given the extensiveness of this undertaking, it will be necessary to set priorities and map out strategies.

Priority goals

We should develop a vision of the future of Saudi society in relation to our environment and our resources. Goals should be identified such as:

- 1) To embrace the challenge of transition to low consumption as a matter of national policy.
- 2) To make sustainability a central element in mainstream political discourse. In other words, sustainability should be incorporated into policy choices.
- 3) To make the notion of resource limits, and the need for sustainability of livelihood systems, prevalent in the society's values, embodied in its constitution, and inherent in its education system.
- 4) To spread knowledge about the importance of controlling consumption to create public awareness.
- 5) To provide environmental, social, and economic knowledge about the costs and harm to future generations if current consumption patterns persist.
- 6) To adopt strategies to change consumption patterns targeting the upper and middle classes, at least in terms of electricity, water and energy. These classes are not only the most wasteful consumers, but also the role models for the lower ranks of society.
- 7) To bridge the gap between knowledge and action. Many of us know that we should consume less but lack the will to do so. Motivational techniques such as appeals to national patriotism and hope for future family well-being should be test-marketed and applied, turning the arsenal of effective advertising techniques pioneered by commercial advertisers to a more noble purpose.

Educational strategies

- 1) Involve educational institutions. School and university systems should offer programs and activities inculcating values that promote saving and regulate consumption. Values to be emphasized should include thrift, public mindness, farsightedness, and self-denial instead of greed and self-interest. Students should be sensitized to the self-interest of marketers in promoting the latest novelty products and be made aware of the planned obsolescence of many expensive purchases. Students should also be taught to ask themselves before they buy something whether it is something they really need. The basic educational curriculum should include a home and auto repair program to help students acquire skills to make basic repairs instead of replacing malfunctioning equipment. Students should be educated about the environmental consequences of a throwaway society and should be encouraged to get involved in community recycling and other responsible development activities by granting them course credit for such involvement.

Students should be taught positive attitudes toward helping with household responsibilities to reduce the need to import domestic help.

- 2) Develop health education programs advocating diet and exercise choices for growth, health and longevity. Make these programs available in health centers, other health facilities, and schools beginning at the primary level. Give particular attention to the health hazards associated with obesity.
- 3) Establish adult education programs at the local level to teach responsible consumption and family financial management.
- 4) Use media to promote awareness of the necessity to rationalize consumption. Efforts should also be made to curtail advertising to children, particularly ads for unhealthy snack foods, and to regulate product claims. Offer favorable advertising rates to purveyors of Saudi-made products.
- 5) Establish community development centers to help disseminate public information on ways to reduce excessive consumption. Poster campaigns, leaflets, classes, and other activities should be offered throughout Saudi Arabia at the local level and should be supported by public service announcements in the national media. Public information programs should include:
 - a) Increasing householders awareness of practices that reduce energy consumption, such as using highly efficient, energy-saving air conditioners and home appliances, reducing home appliance use during peak use hours (with energy supplier offering financial incentives for use during off-peak hours), encouraging the use of natural lighting and air when possible, monitoring servants' and drivers' use of energy, and using trees and plants to provide shade. Spread public awareness of such ways to conserve household water as reducing the amount of water used to wash dishes, cars and yards; running the washing machines only with full loads; taking shorter showers; using water-conserving toilets; and repairing water leaks promptly.
 - b) Spreading knowledge of methods to conserve gas as reducing the number of household cars and drivers; buying smaller, more economical cars; reducing driving by "bunching" errands by geographical location and preparing shopping lists so that return trips will less likely be necessary; ride-sharing or use of public transport to work and school; and regular car maintenance.
 - c) Considering ways to control waste as buying products with a longer life-cycle, replacing throwaway with more durable goods; substituting local foods for grain-fed meat and packaged fare, thereby also supporting the local economy; promoting reuse and recycling of food, beverage and household cleaner containers and packaging materials; reducing use of non-biodegradable plastic paper cups, plates and table covers and aluminum; and exploring creative use of attractive natural materials such as straw, fabric, or clay to package gifts.
 - d) Raising awareness of the public and environmental costs of littering. The national government should support this effort by establishing and enforcing sanctions against litterers, particularly those among the multitudes who make the annual pilgrimage to Mecca and Madina.
 - e) Promoting the desirability of smaller, more energy-efficient houses. A sizable

portion of Saudi family income goes to pay for household water, electricity and gas, all materials in declining supply. Architects and builders should receive official recognition for designing and building for maximum energy efficiency in the Saudi climate, using building materials that accommodate the weather and attending to proper wall, ceiling and window installation; putting smaller houses closer to each other; making use of natural ventilation; and using landscaping materials appropriate for the Saudi climate (Al-Megren,⁽⁹⁷⁾ Awlia⁽⁹⁸⁾).

Other government programs

In addition to supporting the educational strategies outlined above, the Saudi government's efforts to cope with and curb excessive consumption should include such actions as the following:

- 1) Adopting advanced disposal techniques.
- 2) Monitoring public building. Al-Mofeez has suggested building designs for mosques which require less use of air-conditioning. He recommends returning to the traditional use of courtyards for prayer and using ceiling fans during prayer times when the heat is not at its peak, which he estimates would reduce mosque energy consumption by 31%.⁽⁹⁹⁾
- 3) Using solar energy, one natural resource in abundant supply in Saudi Arabia, for water desalinization instead of more expensive methods. Solar energy in the Arab world reaches 250 watts per square meter and can rise to 300 watts per square meter.⁽¹⁰⁰⁾
- 4) Improving irrigation systems used in agriculture to reduce water waste and depletion of water resources.
- 5) Promoting Saudi production of goods. Producers must strive for high product quality and durability if they hope to persuade increasingly educated and sophisticated Saudi consumers to abandon foreign-made goods.⁽¹⁰¹⁾
- 6) Eliminating most subsidies for water, electricity, and gas and converting to market prices.

Conclusion

The challenge for the Saudi Arabian government is to lead the country's conversion from a consumer society to a sustainable one. To achieve sustainable development, we

⁽⁹⁷⁾ Al-Megren, Khalid. "Introduction to the Conservation of Electric Energy Consumption in Building in the City of Riyadh." *King Saud University, Journal of Architecture and Planning*, 6 (1994), 29-48.

⁽⁹⁸⁾ Awlia, Sahar. *Evaluation of the Role of Women in Residential Electric Power Conservation in Jeddah*. Master's Thesis (unpublished), King Abdulaziz University, 2003.

⁽⁹⁹⁾ Al-Mofeez, Ibraheem. "The Role of Courtyard in Mosques in Conserving Electrical Energy." *King Saud University, Journal of Architecture and Planning*, 14 (2002), 1-17.

⁽¹⁰⁰⁾ Meshal, Amin. "Arab and Water Crisis". *Al-Arabi Journal*, No. 445 (December 1995), 30-35.

⁽¹⁰¹⁾ Omasha, Amal. *The Effect of the Trade Mark of the Consumer Goods on the Behavior of the Saudi Women: A Comparative Study between the National and the Foreign Trade Marks in Jeddah, Saudi Arabia*. Master's Thesis (unpublished), King Abdulaziz University, 2003.

need to recover our control over consumption rather than establish new institutions to manage its consequences. We can expect no immediate moral awakening to change consumption behavior. Public policy makers should focus on modifying those areas of consumer behavior on which government can most effectively exert influence, designing education programs and social incentives and sanctions to support replacing current excessive consumption patterns with a culture of moderation. Such a culture will simultaneously honor both traditional Saudi values and future Saudi aspirations.

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ملخص البحث. اهتمت المملكة العربية السعودية بالتقليل من سياسة الاقتصاد المدعوم والاعتماد على البترول كمصدر رئيسي للدخل لتحقيق التنمية المستدامة، وبالرغم من اتخاذ العديد من الإجراءات لترشيد الاستهلاك باعتباره أحد أهداف خطة التنمية السابعة (٢٠٠٠-٢٠٠٤م)، إلا أن هذه المشكلة لم تعط لها الأهمية الكافية. تتضح أهمية تفعيل ترشيد الاستهلاك إذا أخذنا في الاعتبار انتقال المملكة العربية السعودية بشكل سريع من مجتمع تقليدي إلى مجتمع مستهلك وما ترتب على ذلك من مشكلات، هذا بالإضافة إلى أن اقتصاد المملكة يعتمد بشكل رئيسي على مصدر طبيعي واحد يتعرض لتقلبات الأسعار العالمية، وكذلك الزيادة المستمرة في السكان وما يتبعها من زيادة في الطلب على السلع والخدمات. تهدف هذه الدراسة إلى وصف وتحليل ظاهرة الاستهلاك في المملكة العربية السعودية واقتراح أساليب لتفعيل ترشيد الاستهلاك.