

Algeria: Selected Issues and Statistical Appendix

This Selected Issues paper and Statistical Appendix for **Algeria** was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on **January 29, 2003**. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of **Algeria** or the Executive Board of the IMF.

The policy of publication of staff reports and other documents by the IMF allows for the deletion of market-sensitive information.

To assist the IMF in evaluating the publication policy, reader comments are invited and may be sent by e-mail to publicationpolicy@imf.org.

Copies of this report are available to the public from

International Monetary Fund • Publication Services
700 19th Street, N.W. • Washington, D.C. 20431
Telephone: (202) 623 7430 • Telefax: (202) 623 7201
E-mail: publications@imf.org • Internet: <http://www.imf.org>

Price: \$15.00 a copy

**International Monetary Fund
Washington, D.C.**

INTERNATIONAL MONETARY FUND

ALGERIA

Selected Issues and Statistical Appendix

Prepared by Michel Lazare, Philippe Callier, Khanjar, Wabel Abdallah, and
Taline Koranchelian (all MED)

Approved by the Middle Eastern Department

January 29, 2003

Contents	Page
I. Overview	4
II. The Sources and Institutional Underpinnings of Sustained Growth in Algeria	5
A. Why is Growth in Algeria so Low?.....	5
B. The Environment for Economic Growth in Algeria	8
C. Institutional and Structural Reforms in Algeria.....	15
D. Conclusion	17
References	18
III. Money Demand and Monetary Policy: Evidence from Algeria.....	20
A. Introduction.....	20
B. Background and Features of Algeria's Monetary Policy	20
C. The Demand for Money and Oil Shocks to the Monetary Equilibrium	22
D. Monetary Policy Instruments in the Wake of Oil Price Shocks.....	28
E. Conclusions and Recommendations	32
References	36
 Tables	
1. Growth Accounting, 1965–2000.....	6
2. Public Enterprise Sector, 1989–2000	8
3. Country Ranking of Selected Indicators of Attractiveness for Foreign Direct Investment.....	11
4. Statistics for ADF (2) Unit Root Tests.....	23

Contents

Page

Figures

1. Evolution of GDP, Physical Capital, Labor, and Human Capital, 1965–2001	6
2. TFP Evolutions 1965–2000 (three-year moving averages)	7
3. Fitted and Actual Real M2, 1974–2001	24
4. Actual and Fitted Changes in Inflation, 1982–2001	26

Appendices

1. Weak Exogeneity Test Statistic	34
2. Model Stability Tests	35

Statistical Appendix Tables

1. Supply and Use of Resources at Current Prices, 1997–2001	37
2. Sectoral Distribution of GDP at Current Prices, 1997–2001	38
3. Sectoral Distribution of Real GDP Growth, 1997–2001	39
4. Production, Exports, and Consumption of Petroleum Products, 1997–2001	40
5. Production, Exports, and Consumption of Gas Products, 1997–2001	41
6. Domestic Prices of Major Energy Products, 1997–2001	42
7. Land Use Patterns, 1997–2001	43
8. Crop Yields, 1997–2001	44
9. Livestock, 1997–2001	45
10. Index of Industrial Production in Public Enterprises, 1997–2001	46
11. Production of Minerals, 1997–2001	47
12. Consumer Price Index, 1997–2001	48
13. Income of Households, 1997–2001	49
14. Labor Force, Employment, and Unemployment, 1997–2001	50
15. Summary of Central Government Operations, 1997–2001	51
16. Composition of Central Government Revenue, 1997–2001	52
17. Central Government Revenue, 1997–2001	53
18. Composition of Central Government Expenditure, 1997–2001	54
19. Central Government Expenditure, 1997–2001	55
20. Sectoral Allocation of Budgetary Capital Expenditure, 1997–2001	56
21. Central Government Domestic debt, 1997–2001	57
22. Housing Supply, 1997–2001	58
23. Monetary Survey, 1997–2001	59
24. Balance Sheet of the Bank of Algeria, 1997–2001	60
25. Distribution of Credit to the Economy by Maturity, 1997–2001	61
26. Distribution of Credit to the Economy by Sector, 197–2001	62
27. Structure of Interest Rates, 1997–2001	63
28. Expansion of Banks' Network, 1997–2001	64

	Page
29. Balance of Payments, 1997–2001	65
30. Breakdown of Imports and Exports, 1997–2001	66
31. Volume of Hydrocarbon Exports, 1997–2001.....	67
32. Exports of Hydrocarbons, 1997–2001.....	68
33. Trade Indices, 1997–99.....	69
34. External Debt, 1997–2000	70
35. Stock of External Debt, Disbursement of Loans and Debt Service by Creditor	72
36. Nominal and Real Effective Exchange Rates, 1990–2001	73
Summary of the Tax System.....	74

I. OVERVIEW

1. The Algerian economy is heavily dependent on the hydrocarbon sector. Notwithstanding the exhaustive characteristic of the wealth arising from hydrocarbon resources, this dependence has two main implications. First, few gainful employment opportunities are created in the sector in which Algeria has its main comparative advantage, because of the very low-labor intensity of hydrocarbon production. Second, as a result of the fluctuations of oil prices, government revenues and the money stock could be volatile.
2. To enhance economic growth and increase employment opportunities until the private sector-led growth picks-up, the Algerian authorities launched in 2000 an economic recovery plan. Notwithstanding the modest positive results, Algeria has still not achieved the growth rates needed to durably reduce unemployment on the required scale. Moreover, the expansionary fiscal policy resulting from the adoption of the economic recovery plan has been a burden on monetary policy.
3. Against this background, and in order to shed light on the possible policy options to reach the authorities' objectives, this paper addresses two issues, namely it examines (a) what Algeria needs to do to achieve higher growth rates; and (b) if an excess bank liquidity resulting from high hydrocarbon revenues is a threat to monetary stability.
4. Chapter II deals with the issue of low growth in Algeria. A growth-accounting exercise indicates that negative total factor productivity growth explains Algeria's low growth rates. The chapter highlights the sources of this low growth, which mainly consist of incomplete structural reforms and the weaknesses of Algeria's institutions. The chapter concludes with policy recommendations, focusing on the institutional reforms required to improve the business environment.
5. Chapter III analyzes Algeria's monetary policy in the context of volatile hydrocarbon revenues. Econometric estimations indicate that Algeria has a stable money demand. However, oil price shocks can create disequilibrium in the money market, particularly in the context of procyclical fiscal policy. The chapter discusses the appropriate monetary instruments and the needed coordination between fiscal and monetary policies to avoid disequilibrium in the money market.

II. THE SOURCES AND INSTITUTIONAL UNDERPINNINGS OF SUSTAINED GROWTH IN ALGERIA¹

Over the past two decades, Algeria has not been able to achieve high growth rates. Similarly, productivity growth has been negative during most of the last three decades. This chapter aims at analyzing the main problems hindering growth in Algeria and providing policy recommendations to reverse these trends, with a special focus on the institutional changes required to improve the business environment.

A. Why Is Growth in Algeria so Low?

6. **Despite very high investment rates, the Algerian economy suffers from growth well below its potential and from high unemployment.** After an initial phase of rapid growth in the 1960s and 1970s (6.4 percent on average for the period 1966–80), Algeria's growth performance was at best modest (2.3 percent from 1981–01 and even negative growth rates in the early 1990s). However, during most of the 40 years since its independence in 1962, Algeria's investment rate has been one of the highest in the world; it averaged 32 percent of GDP annually from 1971–00.² Human capital, proxied by the average number of years of schooling for the population aged over 25, also grew rapidly (Table 1 and Figure 1).³ As the stock of factors of production grew faster than output, total factor productivity (TFP) growth has been negative.

7. To quantify the extent of Algeria's negative TFP growth, this paper has used a Cobb Douglas production function with physical and human capital, and labor as the factors of production.⁴ Rather than producing a single estimate for TFP growth, the paper presents a range based on two scenarios, to assess the robustness of the results. The first scenario (the "low-case scenario") assumes a one-third share for physical capital and two-thirds for labor and human capital combined, with the human capital proxied as described in the previous paragraph. This scenario yields particularly low TFP growth (-2.1 percent per year on average), which is partly the consequence of the very rapid growth of human capital. The second scenario (the "high-case scenario") uses a more conservative estimate for the growth of human capital (4.5 percent of average, or the same as physical capital) and assumes an increase in the share of capital to one half. Even under this optimistic scenario, average TFP growth remains negative (at -0.5 percent per year). The results are presented in Table 1 and illustrated on Figure 2.

¹ Prepared by Philippe Callier (ext. 37143) and Taline Koranchelian (ext. 38592) who are both available to answer questions.

² It compares to an average of 24.4 percent in the MENA region and 21.4 percent for the world.

³ Data are from Barro and Lee (2000).

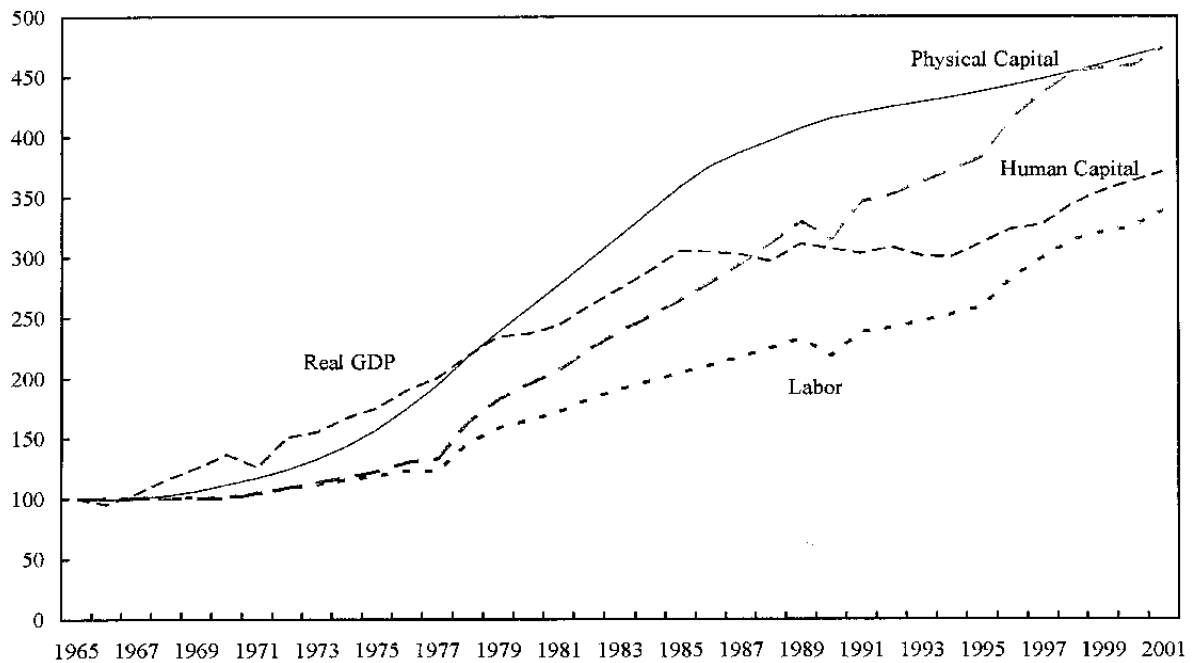
⁴ See Mankiw, Romer and Weil 1992. See also Bosworth, Collins and Chen (1995) for an application of this methodology to a large sample of countries.

Table 1. Algeria. Growth Accounting, 1965–2000
(in percent)

	TFP (low case)	TFP (high case)	GDP	Physical Capital	Labor	Human Capital (low case)	Human Capital (high case)
1965–70	3.9	5.2	6.4	2.2	0.3	5.0	0.0
1970–75	-1.3	-0.2	5.2	7.1	3.3	9.1	4.1
1975–80	-4.6	-3.2	6.2	10.3	6.8	14.8	9.8
1980–85	-2.3	-0.9	5.2	5.3	3.5	9.0	6.3
1985–90	-4.2	-2.6	0.1	3.0	1.4	8.5	3.5
1990–95	-4.3	-2.1	0.3	1.0	3.5	9.0	4.0
1995–2000	-1.8	0.3	3.1	1.3	4.7	8.7	3.7
1965–2000	-2.1	-0.5	3.8	4.5	3.4	9.5	4.5

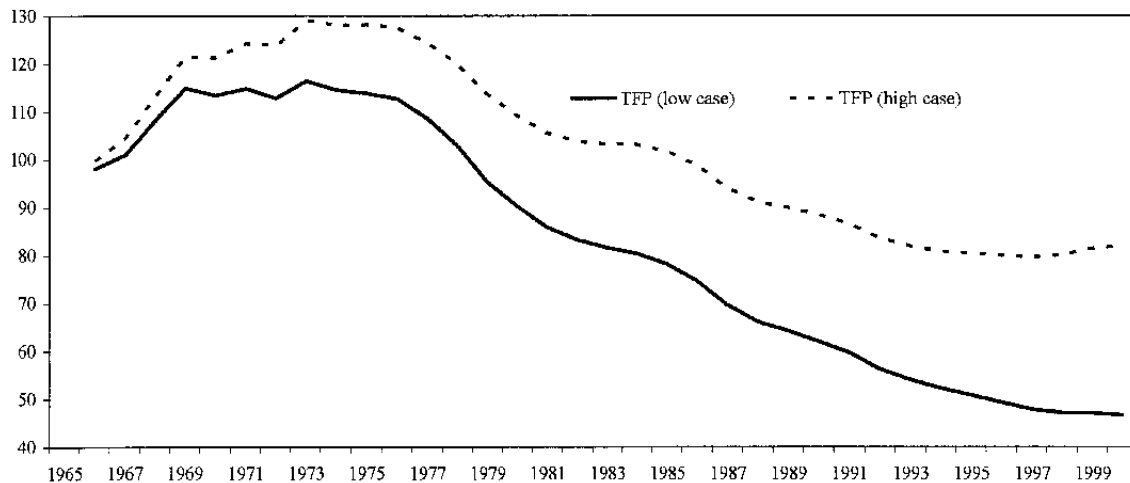
Source: Staff estimates based on Bosworth, Collins and Chen (1995), and Barro and Lee (2000).

Figure 1. Evolution of GDP, Physical Capital, Labor, and Human Capital,
1965–2001



Sources: Algerian authorities and IMF staff estimates.

Figure 2: TFP Evolutions 1965-2000 (3-year moving averages)



Sources: Algerian authorities and IMF

8. **Time series indicate that the negative growth of total factor productivity began in the mid-1970** and continued to the mid-1990s. The sluggish growth output of the Algerian economy can thus be ascribed to the inefficient use of the factors of production, rather than to insufficient investment in human and physical capital. The modest improvement in TFP growth observed after 1995 corresponds to the period when the Algerian authorities embarked on an ambitious and comprehensive reform program, with the support of the IMF. Today, growth remains insufficient to create enough employment opportunities for the fast growing labor force.

9. **The poor growth performance in Algeria is mainly due to delays in completing the transition to a market economy**, which was initiated in the late 1980s after about two decades of central planning. During this process significant results were achieved, but other factors prevailed to cause growth to weaken. Macroeconomic stability was restored, setting the foundations for reforms. The share of the private sector in the nonhydrocarbon “productive sector” increased substantially after 1989 (Table 2). Controls on retail prices and margins were lifted for most goods and services under the Fund-supported programs from 1994–98, and the dinar became fully convertible for current transactions in 1997. However, the overall share of the public sector remains great and markets for credit and land have not been developed. The financial sector is overwhelmingly state-owned and the banks’ portfolios have long been burdened by nonperforming loans to public enterprises.⁵ Ownership of most agricultural land and a large part of industrial real estate is restricted to the public sector. In addition, since 1992, social and political tensions have hampered economic activity.

⁵ To enable banks to meet the prudential ratios, the Treasury repurchases some of these loans from time to time.

Table 2. Public Enterprise Sector, 1989–2000

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Share of public enterprise sector in												
Value added of the productive sector 1/ Excluding hydrocarbons	54.2 40.5	57.1 39.4	58.3 36.2	56.5 38.0	52.3 34.7	53.4 35.2	54.6 33.3	54.3 29.9	54.3 28.8	46.4 26.3	48.2 23.4	57.8 23.9
Wages Excluding hydrocarbons	73.6 72.7	73.4 72.4	67.9 66.6	66.3 64.8	63.7 62.6	66.8 65.4	65.4 64.0	62.5 60.9	57.1 55.0	55.0 52.5	51.7 48.7	51.5 48.3
Net operating surplus Excluding hydrocarbons	30.5 6.9	38.4 7.4	46.6 7.4	45.2 15.1	35.8 6.5	37.9 8.1	41.8 8.3	42.3 5.0	45.9 10.0	33.9 8.1	38.2 7.0	51.5 8.3

Source: Algerian authorities.

1/ Excludes public administrations, banking, insurance, and real estate firms.

B. The Environment for Economic Growth in Algeria

Macroeconomic Policies

10. **Economic management contributes to growth performance.** Economic literature and empirical studies show that macroeconomic policies have an impact on growth.⁶ They emphasize the role of maintaining a stable macroeconomic environment, including price stability. Macroeconomic instability generates uncertainty about the future, discourages long-term investment and thus hinders growth.

11. **Over the last decade, Algeria has been able to restore macroeconomic stability.** Following the strong record of policy implementation under the Fund-supported programs (1994–98), inflation fell from a peak of about 32 percent in 1992 to about 4 percent in 2001. Since 1999 the balance of payments and the budget have been in surplus,⁷ international official reserves have increased from less than 1 month of imports in 1990 to around 20 months in 2002, and external debt has decreased from about 80 percent of GDP in 1993 to about 21 percent in 2002.

Trade Openness

12. **Trade increases growth.** Aside from the benefits of exploiting comparative advantage, studies stress additional gains from trade liberalization arising through economies of scale, exposure to competition, and the diffusion of knowledge.

⁶ See for example Bassani, Scarpeta and Hemmings (2001). For a critical review of the recent relevant literature, see Rodrick, Subramanian and Trebbi (2002).

⁷ However, a small budget deficit is expected for 2002.

13. **Algeria has achieved significant progress in price and trade liberalization.** Under the Fund-supported programs, trade and payments were liberalized and the dinar became fully convertible in 1997. A second wave of measures starting 2000 includes the abolition of the remaining non-tariff barriers to imports, a comprehensive tariff reform, the signing of an association agreement with the European Union, and negotiations toward accession to the World Trade Organization.

Institutional Environment

14. **However, sound macro policies and liberalization, while necessary for growth, are not enough.** For growth to occur, the private sector has to operate in an environment that rewards innovation and growth rather than rent-seeking activities. For Algeria, deeper institutional reforms are needed to create the environment in which enhanced economic freedom and opportunities rising from liberalization and other structural reforms lead to growth.

15. **The new literature highlights the importance of institutions to promote growth.**⁸ This new strand emphasizes that stability and incentives alone would not be sufficient to generate growth in the absence of adequate institutions.⁹ Recent empirical research also confirms the correlation between good institutions and growth.^{10 11}

16. Sound institutions and laws, together with effective law enforcement improve interactions among economic agents and reduce transaction costs.¹² If institutions are not well developed, and in particular if there is a lack of accountability and transparency, the business environment would not be conducive to growth. The focus on rent-seeking activities aimed at building and exploiting market power which, rather than support efficiency is likely to undermine economic growth prospects.¹³

17. **Indicators on investors' perception of the business environment show that Algeria's performance with regard to institutional/governance variables remain weak.**

⁸ For a critical survey of the literature, see Aron 2000. See also Rodrik, Subramanian and Trebbi 2002, and Camdessus 1999.

⁹ According to North (1994), institutions are defined as "humanly devised constraints that structure human interaction" and comprise formal constraints in the form of rules, laws, and constitutions, and informal constraints in the form of norms of behavior, conventions, and codes of conduct.

¹⁰ See Rodrik 2000; Rodrik, Subramanian, and Trebbi 2002; Aron 2000; Olson, Sarna and Swamy 2000; and Tanzi and Davoodi 2002.

¹¹ The IMF *Operational Guidance Note for Staff Following the 2002 Biennial Surveillance Review* (SM/02/292 of September 13, 2002, paragraph 18) also recognizes the potential impact of institutional factors on growth prospects.

¹² See Olson 1996; Rapaczynski 1996; Abed and Gupta 2002; and World Bank 2003.

¹³ See Olson 1971 and 1982 for an analysis of these two opposite types of collective action.

The political science literature has constructed a variety of cross-country indicators on investors' perception of the business environment to capture economic notions of institutional quality.¹⁴ These indicators distinguish between measures that describe the attributes of institutions and those that evaluate their performance. The analysis of Algeria's ranking in the set of these indicators demonstrates a high degree of perceived weakness in Algeria's business environment. Table 3 provides Algeria's ranking among the countries which have been in the pool of evaluation. Specifically, Algeria was ranked in the bottom 32 percent of the samples for the World Bank indicators on regulatory burden, government effectiveness, rule of the law, corruption,¹⁵ and the International Country Risk Guide (ICRG) country risk,¹⁶ however, it is ranked close to the median for the Heritage Foundation index for economic freedom¹⁷ and for the Economic Intelligence Unit country risk index.¹⁸

18. **According to these indicators, investors often perceive Algeria as a politically unstable country** that harbors corruption. They also see it as a country with inadequate regulations and weak regulatory bodies, lacking enforceable property rights and institutions to manage internal conflicts, such as the rule of law, a strong and independent judicial system, and democratic accountability. The relative ineffectiveness of the privatization strategy, which had raised high expectations, has also negatively affected the credibility of the authorities' economic reform. The cumbersome administrative bureaucracy and lack of confidence in the judiciary system have also been perceived as impediments to investment in Algeria.

19. **In Algeria, the development of the formal sector is also hampered by weak institutions.** Stringent and unsuitable regulations and lengthy administrative procedures have led to the emergence of a large informal sector. For instance the restrictions on acquiring foreign currency and the regulations on the exchange rate market resulted in the emergence of a black market and reduced the efficiency of resource allocation.

¹⁴ The list of indicators is included in Aron 2000.

¹⁵ See Kaufman, Kraay, and Lobatón, 1999.

¹⁶ This index is a composite of indicators on security of contract and property rights. It includes: rule of law, corruption in government, quality of the bureaucracy, repudiation of contracts by government, and expropriation risk of private investment.

¹⁷ This index is a composite of the dimensions of market efficiency. It includes: trade policy; taxation; government intervention; monetary policy; capital flows and foreign investment regulations; wage or price controls; protection of property rights; efficiency of regulations; and extent of parallel market.

¹⁸ This index combines seven different elements: the political situation (political stability and efficacy), the economic policy (monetary, fiscal, exchange rate, trade and regulatory policies), the economic structure (global climate, growth/savings, current account stability, debt structure and financial structure), the liquidity, the currency, the sovereign debt and the banking sector.

Table 3. Country Ranking of Selected Indicators of Attractiveness for Foreign Direct Investment

(Percent share of countries with lower score)

	WB Regulatory Quality 3/	WB Government Effectiveness 3/	WB Rule of Law 3/	WB Corruption 3/	IEF Economic Freedom 4/	ICRG Country Risk 5/	EIU Country Risk 6/	GCR Competitive- ness 7/	WB Business Environment 8/
Jordan	80	67	73	59	60	54	72	41	79
Egypt	50	62	61	53	33	46	50	...	...
Lebanon	62	51	55	31	40	13	15	...	...
West Bank and Gaza	69	64	64	76	...	...	...	...	70
Syria	20	23	37	22	8	55	23	...	...
Mashreq (average)	56	53	58	48	35	42	40	41	...
Tunisia	82	88	77	79	56	59	63	58	...
Morocco	71	54	68	70	56	61	67	31	69
Algeria	16	23	14	32	40	29	54	...	...
Maghreb 1/ (average)	56	55	53	60	51	50	61	44	...
Central Europe 2/ (average)	74	68	73	70	69	72	79	50	71
Malaysia	56	69	64	61	54	74	79	66	91
Korea	62	68	70	69	67	78	90	74	...
Singapore	99	99	98	98	99	98	100	95	...
Sample size	167	159	168	160	156	140	100	80	67
Incl. industrial countries ?	Yes	Yes	Yes	Yes	Yes	Yes	Yes (very few)	Yes	Yes

Sources: Various country reports; for details see footnotes.

1/ Includes Morocco, Tunisia and Algeria.

2/ Includes Czech Republic, Hungary, and Poland.

3/ Aggregate indicators of governance developed in Kaufmann, D. et al., *Governance Matters*, Policy Research Paper No. 2196, World Bank, 1999; and database available at http://www.worldbank.org/wbi/governance/gov_data.htm, and <http://www.worldbank.org/wbi/governance/datasets.htm>.

4/ Index of Economic Freedom published by the Heritage Foundation and The Wall Street Journal, 2002. <http://www.heritage.org/index/>.

5/ Composite risk ratings by International Country Risk Guide, October 2002.

6/ Aggregate scores of business environment in the Economist Intelligence Unit's Country Forecast, September 2002.

7/ Growth Competitiveness index published in Competitiveness Report by World Economic Forum, 2002. <http://www.weforum.org>.

8/ Based on results of survey used for the World Bank's World Development Report 1997 as presented by Brunetti, a. et al., in *Institutional Obstacles for Doing Business*, Policy Research Paper No. 1759, World Bank, 1997; and database available at <http://www.worldbank.org/wbi/governance/wdr97data.htm>

20. **The economic literature classifies market supporting institutions into five types:** Property rights; regulatory institutions; institutions for macroeconomic stabilization; institutions for social insurance; and institutions for conflict management.¹⁹ Understanding where Algeria stands in each of these institutions will help identify the key issues.

Property rights

21. **While property rights are generally well-defined in Algeria, the land rights — agricultural, industrial, commercial, and residential land—are subject to numerous administrative and legal constraints preventing transfers.** For example, a large share of unused land in industrial zones is owned by former state-owned enterprises that have ceased to operate, and there is a need for more efficient procedures to transfer the assets of failing enterprises. These obstacles undermine the efficient use of land and hinder economic growth.

Regulatory institutions

22. Market failures occur when transaction costs prevent the internalizing of externalities, or when incomplete information results in moral hazard and adverse selection. To avoid such failures, vigilant regulatory institutions that regulate trade in goods, services, labor, asset and financial systems should oversee market economies. An important characteristic of well functioning regulatory institutions is a sufficient degree of administrative certainty.²⁰

23. **Algeria's regulatory institutions need to be strengthened to allow for the operation of a free market.** Although regulatory bodies have been established recently in the areas of mining, electricity and telecommunications, and the institutional framework for banking supervision is being strengthened, institutions required for a broader enforcement of competition are not functioning effectively. There is a need to change the focus of regulatory institutions from central planning to promotion of a market economy based on transparency, competition, and creation of a level playing field to ensure open market access. For example, the foreign exchange regulations emphasize the control of exchange transactions, rather than facilitating the functioning of the markets and reducing transaction costs. In the banking sector, political and administrative interventions in the management of state-owned banks are common, while prudential regulations and supervision remain underdeveloped and the banking supervisory body lacks the capacity to evaluate credit risk. Consumer protection mechanisms are often used to shelter local producers from competition.

Institutions for macroeconomic stabilization

24. **Institutions for macroeconomic management in Algeria have been strengthened but continue to suffer from lack of coordination.** Their performance is somewhat hindered

¹⁹ See Rodrik 2000.

²⁰ See Jacobs 1999.

by insufficient coordination between the Bank of Algeria and the treasury. Furthermore, there are no legislative safeguards to guarantee formally the central bank's independence from political authorities. A strong independent central bank requires more robust fiscal institutions.

Institutions for social insurance

25. In many cases, establishing a market economy results in uprooting economic agents from their traditional support systems. Unless social insurance is provided to agents affected by this transition, the social cost of the transition would be unfairly allocated. Social insurance could include such entities as social security, unemployment compensation, public works, public infrastructure, and health insurance. Social insurance is needed to maintain social stability and social cohesion and to legitimize the market economy.

26. **Institutions for social insurance have been undergoing development in Algeria since the start of economic reform.** However, the social safety-net of the scale needed to accompany the privatization and restructuring of the remaining large loss-making public enterprises is not yet in place. The absence of such social safety net is likely to erode political support for reforms because of concerns regarding the social cost of transition on the population.

Institutions of conflict management

27. **Continuing strife characterizes Algeria since 1992.** Discontent with the management of the economy and the political system has been amplified by the weakness of institutions that could provide people with voice and participation, and help resolve internal conflicts in a fair and equitable manner. This dissatisfaction has been reinforced by the perception of widespread corruption and an ineffective judicial system.²¹

28. **Improving the quality of institutions would enhance Algeria's long-term growth prospects.** The World Bank suggests that by improving the quality of institutions to the levels achieved by an average economy in the world, Algeria could add an additional 0.4 percent to its long term growth.²² The per-capita growth bonus that would come with institutions at par with developed country standards would equal 1.5 percentage points. A modest increase in the growth rate, other things being equal, could have significant implications on the growth of the per capita income over a generation.

²¹ This is illustrated in a recent enterprise survey undertaken by the World Bank.

²² See World Bank (forthcoming).

Structural Policies

29. **Well-designed institutions constitute a key underpinning for growth-promoting structural reforms.** While Algeria is well-advanced in price, trade and foreign exchange liberalization, two broad areas require special attention: the size and role of government and the financial system.

The size and role of government

30. **The size and role of government influences growth.** The government contributes to growth by the provision of public goods. It is widely held that at low-to-moderate levels, the productive effects of public expenditure are likely to exceed the social costs of raising funds, and the net contribution of government is positive. However, large government expenditures may reach levels where the negative effects on efficiency, and hence growth, start to dominate.²³

31. **In Algeria, the size of the public sector in the economy is large and expanding.** The size of the government, as measured by total government expenditures over GDP, increased from 25.6 percent in 1990 to 31.3 percent in 2001 (with an estimated 35 percent in 2002). While the government contributes to growth by the provision of public goods, the large share of the public sector in economic activity, together with other institutional and structural constraints, has made it difficult for the private sector to compete. With limited private activity, the public sector is expected to absorb a large share of the increase in the labor force

The financial system

32. **The financial sector in Algeria suffers from major weaknesses.** The banking sector is dominated by six public banks that account for approximately 90–95 percent of all deposits and assets. These public banks have financed (and continue to a lesser extent to finance) loss-making public enterprises. Periodically since 1992, the budget recapitalized these banks and the treasury issued large amounts of treasury debt to clean up the banks' loan portfolio. Public banks' inefficiencies (inadequate management and high level of nonperforming loans) continue to be a drag on private sector development (long delays in examining requests for loans, incapacity to adequately assess borrowers' creditworthiness, and the like). These drawbacks hinder the mobilization of domestic saving and lead to suboptimal allocation of the financial resources available for intermediation. They have undermined prospects for economic growth.

²³ There are, however, exceptions, for example in some European continental countries and, especially, the Scandinavian countries, where government-to-GDP ratio tend to be high. Such economies are generally characterized by high levels of development and good governance.

C. Institutional and Structural Reforms in Algeria

33. The review of Algeria's position relative to the optimal growth promoting environment described earlier suggests that Algeria has made considerable progress in establishing macroeconomic stability and in achieving significant economic liberalization. However, challenges remain in the institutional and structural areas.

Priority Institutional Reforms

34. To complete the transition to a market economy and encourage private activity, it is necessary to ensure that supportive institutions are in place. While progress has been achieved in this regard over the past decades, urgent reforms are needed in the following areas:

35. **Enforcing property rights in the land and real estate market.** To promote private activity, property rights in the area of land and real estate ownership need to be clarified. A proper land cadastre and a titling system are necessary first steps.

36. **Strengthening the role of state institutions in facilitating business entry, investment and growth.** This requires an efficient and fair tax code (with taxes that are as "neutral" as possible and do not discriminate on the basis of the nature of the activity or personality of the economic agents) and a strengthening of the tax administration to create a level-playing field for all economic agents. It also requires a review of the legal business framework, including the bankruptcy mechanisms to facilitate an efficient resource allocation, among other things, through the elimination of enterprises that do not create wealth.

37. **Strengthening institutions for competition and encouraging the development of the formal sector.** This requires: (a) reassessing all administrative rules and procedures with a view to lessening their burden on doing business in Algeria; (b), lowering the relatively excessive taxes and levies on labor (which give labor-intensive activities a strong incentive to evade these costs by operating in the informal sector); and (c) reducing customs tariffs, which encourage smuggling. By cutting the cost of doing business and improving compliance, incentives for operating in the informal sector will be reduced. These reforms will also increase confidence of economic agents in the system, reduce the cost of enforcement, enhance the mutual trust between enterprises and the administration, and contribute to a better overall business environment in Algeria.

38. **Strengthening the judicial system** to speed up the legal proceedings, ensure that decisions are applied equitably, and increase the consistency, predictability and impartiality of judgments. This reform will involve modernizing the legislation governing the judiciary, training manpower to deal with commercial and economic matters, and promoting alternative, less cumbersome, methods to resolve conflicts (arbitrage mechanisms).

39. **Improving transparency, accountability, and governance** including at the local and regional level, through in particular, strengthening the independence and effectiveness of institutions in charge with investigating financial abuses and misappropriations.

40. **Strengthening the statistical system and disseminating systematically available information** to facilitate decision making by private investors by allocating sufficient resources to the agencies in charge of producing the statistics and encouraging their publication. Regular publication of good quality statistical data on the balance of payments, the national accounts, the budget (revenue and expenditures) and the consolidated balance sheet of the banking sector will allow investors and savers to make informed decisions. It is also important to monitor the performance of the State and enhance public accountability and good governance.

Priority Structural Reforms

41. In addition to institutional reforms, structural reforms are urgently needed to improve financial intermediation, and accelerate the reforms and downsizing of the public enterprise sector.

Improving financial intermediation

42. **A first priority to accelerate growth is to improve and modernize the banking system, which is by far the most important component of the financial sector in Algeria.** Currently, less than 20 percent of the domestic credit is allocated as credit to the private sector, and the state-owned banks do not have incentives to intermediate resources efficiently. The following initial steps should be taken to allow banks to fulfill efficiently their financial intermediary functions:

- **Removing from public banks the burden of being the financier of last resort for large loss-making public enterprises.** In practice, this will shift the decision from the banks to the government, which will need to make, in a transparent and accountable manner, a direct budgetary transfer to these enterprises. To minimize such transfers, the government would need to encourage a rigorous restructuring –or if necessary closure – of public enterprises accompanied by an orderly winding down of government support for these enterprises.
- **Privatizing the state-owned banks.** This would help prevent political and administrative interference with credit decisions. There is also a need for strengthening the prudential framework (including the enforcement of banks' reporting to the central bank) and banking supervision by the monetary authority (such as the capacity to follow up the evolution of nonperforming loans). In the absence of such steps, resource allocation will remain distorted by political expediency, with resources being channeled to well-connected rather than to the best managed enterprises.

Downsizing the public enterprises

43. To facilitate the efficient use of resources, the government has recognized that it is important to free-up the resources that are currently retained by underperforming public enterprises. However, the process has been slow and has not yet had a major impact. It is essential to accelerate the pace of privatization, in conjunction with the creation of a healthy institutional environment and a reformed financial sector.

D. Conclusion

44. Algeria has good prospects for sustained economic growth. It has abundant natural resources, a well-educated population, and a capacity to accumulate savings that can be invested in productive sectors. Algeria also enjoys a good access to European markets, especially following an Association Agreement with the European Union. However, to realize its growth potential, the Algerian economy must implement reforms to reverse the trend of negative factor productivity and use its vast resources more efficiently.

45. Among the three foundations of a growth-promoting environment—macroeconomic stability, structural reform providing incentives and opportunities for the creation of wealth, and the institutional underpinnings for an efficient market—macroeconomic stability has to a large extent been achieved along with price and trade liberalization. For now, institutional reforms require the most urgent attention for transition to a market economy. Establishing clear property rights, ensuring the legitimacy of institutions and the credibility of policy programs, promoting transparency and accountability, strengthening the ownership and the consensus necessary for effective implementation constitute a very ambitious undertaking. Success requires careful sequencing, and begins with the building of a broad constituency for the reform agenda.

REFERENCES

- Abed, G., and S. Gupta, eds., 2002. *Governance, Corruption, and Economic Performance*, (Washington: International Monetary Fund).
- Aron, J., 2000, "Growth and Institutions: A Review of the Evidence," *The World Bank Research Observer*, Vol. 14, No. 1.
- Barro, R., and J. Lee, 2000, "International Data on Educational Attainment Updates and Implications," *National Bureau of Economic Research Working Paper 7911*, (Cambridge, Mass.: NBER).
- Bassani, A., S. Scarpetta and P. Hemmings, 2001, "Economic Growth: The Role of Policies and Institutions. Panel Data Evidence from OECD Countries," *OECD Economics Department Working Paper 283*, Paris.
- Bosworth, B., S.M. Collins, and Y.C. Chen, 1995, "Accounting for Differences in Economic Growth," *Brookings Discussion Papers in International Economics*, October, Washington, D.C.
- Brunetti, A., G. Kisunko, and B. Weder, 1997, "Institutional Obstacles to Doing Business," *Policy Research Paper No 1759*, (Washington: World Bank).
- Camdessus, M., 1999, *Second Generation Reforms: Reflexion and New Challenges*, opening remarks, IMF Conference on the Second Generation Reforms, Washington, November 8–9.
- International Monetary Fund 2002. "Operational Guidance Note for Staff Following the 2002 Biennial Surveillance Review" SM/02/292, September 13, 2002.
- Jacobs, S. H., 1999. *The Second Generation of Regulatory Reforms*, paper prepared for delivery at IMF Conference on the Second Generation Reforms, Washington, November 8–9.
- Kaufman, D., A. Kraay, and P. Zoido-Lobaton 1999. "Governance Matters" *Policy Research Paper 2196*.
- Mankin, G., D. Romer, and N. Weil 1992. "A Contribution to the Empirics of Economic Growth". *Quarterly Journal of Economics*, May.
- North, D., 1994. "Economic Performance Through Time." *The American Economic Review*, Vol. 84, No. 3.
- Olson, M., 1971, *The Logic of Collective Action; Public Goods and the Theory of Groups*, Cambridge, Mass.: Harvard University Press.

- Olson, M., 1982, *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*, New Haven: Yale University Press.
- Olson M., 1996. "Big Bills Left on the Sidewalk: Why Some Nations are Rich, and Others Poor." *Journal of Economic Perspectives*, Vol. 10, No. 2, Spring.
- Olson M., N. Sarna, and A. Swamy, 2000, "Governance and Growth: A Simple Hypothesis Explaining Cross-Country Differences in Productivity Growth." *Public Choice*, March.
- Rapaczynski A., 1996. "The Roles of the States and the Market in Establishing Property Rights." *Journal of Economic Perspectives*, Vol. 10, No. 2, Spring.
- Rodrik, D., 2000. "Institutions for High-Quality Growth: What They Are and How to Acquire Them." *NBER working paper series*, 7540.
- Rodrik, D., A. Subramanian, and F. Trebbi, 2002. "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development." *NBER working paper series*, 9305.
- Tanzi, V., and R. Davoodi, "Corruption, Growth, and Public Finances", in Abed, G.T. and S. Gupta (editors), 2002, *Governance, Corruption, and Economic Performance*, Washington: International Monetary Fund.
- World Bank, 1997. *World Development Report 1997: The State in a Changing World*. Washington.
- World Bank, 2003. *World Development Report 2003: Institutions for Sustainable Development*, Washington.
- World Bank (unpublished). A Medium-Term Macroeconomic Strategy for Algeria: Sustaining Faster Growth with Economic and Social Stability.

III. MONEY DEMAND AND MONETARY POLICY: EVIDENCE FROM ALGERIA²⁴

This chapter analyzes selected issues in Algeria's monetary policy in the context of volatile hydrocarbon revenues. It first examines the nature and the stability of the demand for money. It also examines the impact of oil price shocks on money supply. Finally, the chapter discusses the appropriate monetary instruments and the needed coordination between fiscal and monetary policies to avoid disequilibrium in the money market.

A. Introduction

46. **A key consideration for monetary policy design in Algeria is to assess whether the money demand function is stable.** This paper examines the stability of the money demand function, and assesses if modeling the money demand could assist the Bank of Algeria in formulating and executing its monetary policy, considering Algeria's high dependence on oil exports.

47. **Monetary policy conduct in Algeria must also take into account the origin of shocks to money supply,** since money supply is highly affected by volatile hydrocarbon revenues. The paper analyzes the channels through which oil price shocks increase/decrease the liquidity in the market, and explores the possible short term instruments that the Algerian authorities can use their monetary policy intermediate objective of targeting the money stock in the context of high dependency on oil and of underdeveloped financial markets.

48. The rest of the paper is organized as follows: The next section describes the current monetary policy regime in Algeria. The third section presents an econometric estimation of the money demand equation, tests its stability, which is the logical foundation for the choice of the current monetary policy intermediate objective. It also analyzes in a simple accounting framework the crucial role of government expenditures in the transmission of oil shocks to the money supply. The fourth section discusses the suitability of current policy instruments to achieve the monetary policy objective. Section five concludes the analysis.

B. Background and Features of Algeria's Monetary Policy

49. **The conduct of monetary policy in Algeria is complex.** Algeria began the process of opening its economy in the early 1990s, by reforming, inter alia, the financial sector and the conduct of monetary policy, with the introduction of indirect instruments of monetary control. However, monetary policy in Algeria is still conducted in a difficult context because it is affected by the economy's strong dependence on hydrocarbon exports (35 percent of GDP, 95 percent of total exports, and 70 percent of total fiscal revenues on average) and the volatility of energy prices on international markets. In practice, foreign currency receipts

²⁴ Prepared by Taline Koranchelian (ext. 38592), who is available to answer questions. Some sections are based on previous work undertaken by the department.

generated by hydrocarbon exports are repatriated and surrendered by Sonatrach²⁵ to the Bank of Algeria, which in turn credits Sonatrach's account held at its commercial bank, the BEA (*Banque Extérieure d'Algérie*), in dinar. Most export receipts (65 percent) are then transferred to the Treasury in the form of staggered tax payments. The remaining 35 percent share of Sonatrach actually contributes to an increase in the money supply, when the government does not spend its share. However, to the extent that fiscal policy is procyclical, and a large part of fluctuating revenues from hydrocarbon exports are injected back in the economy through government expenditures, variations in hydrocarbon revenues tend to translate into fluctuations in the stock of money, in the absence of systematic sterilization. Therefore, the largest part of the potential money creation resulting from an increase in hydrocarbon revenues actually arises from expansionary fiscal policies supported by higher revenues. However, even in a case of acyclical fiscal policy, banking system liquidity is subject to large swings as a function of international oil prices because of their impact on Sonatrach's deposits in commercial banks. For example, the banking system experienced chronic liquidity shortages during the oil price collapse in 1998–99, and has now excess liquidity in the wake of high oil prices. Therefore, a primary concern of the central bank, when implementing monetary policy, has been to control the liquidity of banks through interventions on the interbank market.

50. Algeria's underdeveloped financial system does not dampen external shocks through fluctuation of market-determined interest rates. The banking sector continues to be dominated by six public banks that account for about 95 percent of all deposits and assets, and whose portfolios are heavily biased toward government securities and public enterprise loans. The Algiers Stock Exchange, which opened in July 1999, is still modest in size.²⁶ In July 2001, the Treasury started issuing medium- and long-term bonds, but in limited amounts. The money market includes two segments: (a) an interbank money market, which is also open to nonbank financial institutions; and (b) a short-term Treasury bill market, which is thin.

51. Against this background, and in order to improve the conduct of the Bank of Algeria's monetary policy, two important questions need to be addressed:

- **In an environment of volatile hydrocarbon revenues, is the real demand for money stable in Algeria, and how does a disequilibrium in the money market (e.g., excess money supply) affect inflation?**

²⁵ The hydrocarbon sector is highly concentrated around a limited number of parastatals. Sonatrach is the state-owned petroleum company, and the largest Algerian enterprise in terms of employment. Sonatrach's activities include petroleum exploration, oil and gas production and marketing, and pipeline transportation. The share of the hydrocarbon rent is divided between the government and Sonatrach and its subsidiaries.

²⁶ Three public companies were subsequently listed on the Algiers Stock Exchange, after they were authorized to float 20 percent of their capital. Bonds issued in 1998 by Sonatrach were listed as well.

- **What are the instruments that the Bank of Algeria should use in order to achieve its monetary policy intermediate objective** in the wake of fluctuating oil revenues, and how can the fiscal authorities help maintain macroeconomic stability?

C. The Demand for Money and Oil Shocks to the Monetary Equilibrium

52. **An important prerequisite for operating a policy framework around monetary targets is a stable and predictable demand for money.** In the absence of a stable money demand function, monetary growth targets might be inconsistent with developments in the real economy, the resulting real interest rate may diverge from its equilibrium value. This section estimates a long-run money demand function in Algeria, tests its stability, and assesses whether the recent disinflationary trend against a backdrop of strong growth in monetary aggregates results from a structural break. This section also examines how oil price shocks could affect the money supply and create disequilibrium in the money market.

53. Caution is called for in assessing and interpreting the results of the analysis. **Serious data limitations in monetary statistics, national accounts, and price indices limit the analysis.** There are no published data on GDP at constant prices, and the following empirical analysis is based on staff estimations of GDP at constant prices. The basket adopted in the calculation of the consumer price index (CPI), which is used to measure inflation, has not been updated since 1989. In addition, the length of the period since the gradual liberalization of prices—starting in 1994—is short. Similarly, while the behavior of monetary aggregates excluding Sonatrach’s deposits would better reflect the money demand in the economy—since the hydrocarbon sector may have a different demand for money, data on the distribution of banking deposits between the hydrocarbon and non hydrocarbon sectors do not exist.

Theoretical Framework and Empirical Analysis

54. We postulate a demand for real money balances, which is a function of real GDP, inflation and interest rates. The model can be summarized as follows:

$$m = f(y, \pi, i)$$

where,

$$m = \frac{M^d}{P} = \text{demand for real money (M}_2 \text{ aggregate in real terms)}$$

y = real income (GDP at constant prices)

π = inflation rate (annual change in the average CPI)

i = interest rate (discount rate)

55. Annual data for the period 1974–2001 are used.²⁷ The variables are expressed in logarithmic terms, with the exception of the interest rate and inflation. The inflation rate is measured by the variation of price levels in logarithmic terms.

56. The empirical investigation starts with the analysis of the time-series properties of all variables. The augmented Dickey-Fuller (1981) (ADF) indicates that the nonstationarity hypothesis cannot be rejected at 5 percent confidence in the monetary aggregates, real GDP, the annual inflation rate, and the interest rates. However, for the first difference of the same variables, the hypothesis of nonstationarity is rejected at 5 and 1 percent confidence, suggesting that these variables are integrated of order one I(1) (Table 4).

Table 4: Statistics for ADF(2) Unit Root Tests

Variables	Level		First Difference	
	Lag	t-ADF	Lag	t-ADF
m	6	-1.28	6	-1.96 *
y	6	-1.85 +	6	-3.04 **
π	6	-1.05	6	-4.52 **
i	6	-0.68	6	-6.55 **

Notes: Variables are as defined in the text. For each variable expressed in level (first difference), the Augmented Dickey-Fuller (1979) ADF(2) statistics tests a null hypothesis of a unit root in that variable expressed in level (first difference) against an alternative of a stationary root. The criterion for lag selection is based on the Akaike information criterion, as described by Pantula et. Al. (1994). The critical values are taken from MacKinnon (1991). +, *, and ** denote rejection at 10 percent, 5 percent and 1 percent critical values, respectively.

57. The long-run relationship between m_2 , y , π , and i is therefore estimated in the form of a cointegrating vector. Two dummies are used as exogenous variables to capture the impact of the structural reform efforts that took place in 1988 and 1994. The Engle-Granger (1987) and Johansen's maximum likelihood procedures (1988) are used to determine the number of cointegrating vectors among the variables.²⁸ Both procedures indicate that there is at most one co-integrating vector (at 5 percent confidence). The long-run money market equilibrium takes the following form:

$$m = 6.49 + 1.32 y - 1.59 \pi - 0.03 i \quad (1)$$

$$\begin{matrix} (0.04) & (0.06) & (0.01) \\ [8.79] & [-1.99] & [-3.46] \end{matrix}$$

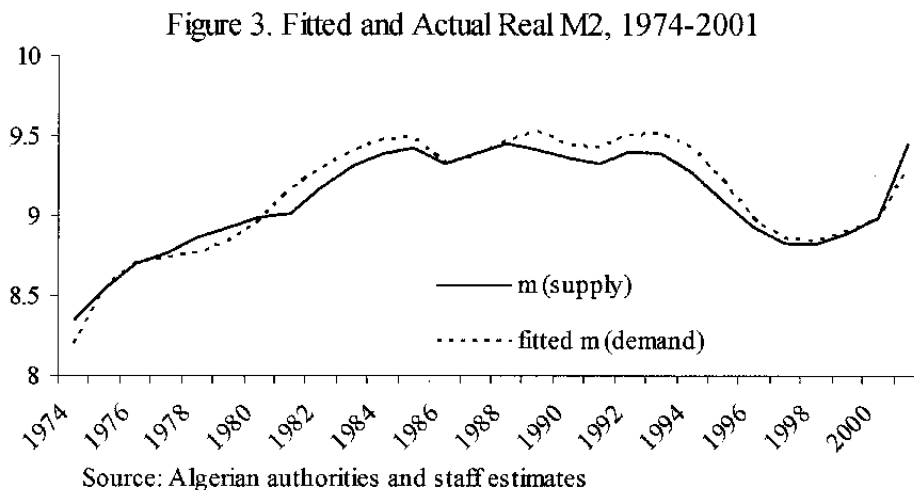
$$R_2 = 0.73 \quad \text{Standard Error} = 0.06$$

²⁷ Data is taken from Algerian authorities, the International Finance Statistics and IMF staff estimates.

²⁸ These procedures will provide better results for higher numbers of observations.

58. All the coefficients of the equation have the expected sign. A coefficient higher than unity on output in the long-run money demand function shows a declining rate of velocity in the long-run. This is consistent with the experience of countries, like Algeria, where money is the principal instrument for the accumulation of financial savings by the public. The equilibrium relationship also shows that the interest rate has a very small impact on the quantity of money the public wants to hold, confirming the behavior of public enterprises that dominate the economy and are not sensitive to interest rates, as well as the absence of alternative financial instruments. The money market equilibrium is, however, very sensitive to the rate of inflation.

59. Equation (1) tracks real M_2 well and deviations are generally of a small magnitude. Figure 3 plots the actual (money stock in real terms) and the fitted values of money. In addition, since 2000, the money supply has exceeded the level predicted by the money demand function, suggesting the existence of excess money supply in the Algerian money market, and thus raising the question of possible inflationary consequences of such disequilibrium.



60. Tests of weak stationarity indicate that y , m , and i are weakly exogenous to this co-integrating relationship, and that the inflation rate, π , adjusts to the disequilibrium in the money market.²⁹

61. The estimation of a short-term single error-correction equation is used to analyze the dynamics of inflation. By using ordinary least squares, equation (2) estimates the first difference of inflation, using the first difference of real money stock, output, interest rate, the two dummy variables to take into account the two attempts of economic liberalization, and the first lag of the error term ε as explanatory variables. After removing the statistically

²⁹ See Appendix I.

insignificant variables from this general equation, we obtain the following equation for the period 1982–2001 (figures in parentheses represent standard errors; figures in brackets represent t-statistics):

$$\begin{aligned} \Delta\pi_t = & -0.02 + 0.37\Delta m_{(t-1)} + 0.02\Delta i_{(t-1)} + 0.01\Delta i_{(t-2)} \\ & (0.01) \quad (0.00) \quad (0.00) \\ & [2.87] \quad [3.23] \quad [2.86] \\ & + 0.04\text{dummy1} + 0.03\text{dummy2} + 0.03\varepsilon \\ & (0.01) \quad (0.03) \quad (0.05) \\ & [2.02] \quad [1.95] \quad [2.32] \end{aligned} \quad (2)$$

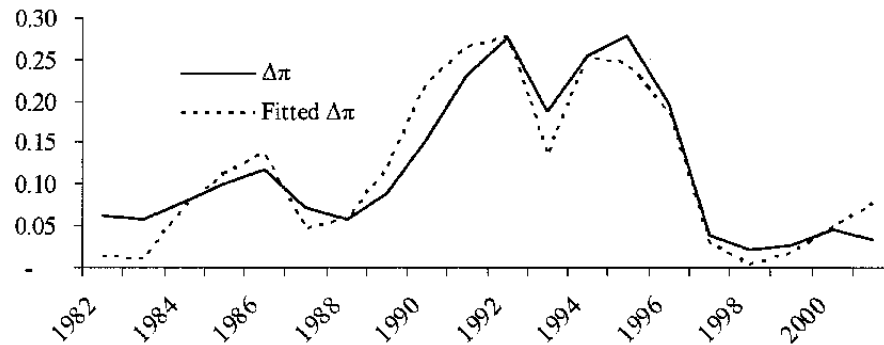
$$R_2 = 0.76 \quad DW = 2.15 \quad \text{Standard Error} = 0.04$$

62. The model fits the data quite well. The residuals are very small (Figure 4). Excess money and lagged real money has a positive impact on inflation, suggesting that increased monetary aggregates have inflationary consequences. The two dummies have also positive, albeit small, impact on inflation, suggesting that the economic liberalization efforts of 1988 and 1994 led to a slight increase in inflation in the short run. Finally, the lagged and twice lagged variations of interest rates enter the equation with positive coefficients, suggesting that an increase in interest rates have very small impact on inflation. This result suggests that in Algeria an increase in the interest rate has little effect on demand and that its main impact is to increase costs of production.

63. The model predicts an acceleration of the inflation rate in the context of excess liquidity. The fitted value of the change in inflation suggests that in 2001, in the context of excess money supply, inflation should have increased above its actual level. A series of stability and break-point tests were carried out to measure the strength of the model and to gauge whether there was any structural change in inflation dynamics during the latter part of the sample (1994-2001), in the context of an excess money supply.³⁰ The two types of Chow breakpoint and Chow forecast tests did not reject the hypothesis of model constancy over the sample period. The non-acceleration of inflation in 2001 and in particular its decline in 2002 against a background of strong monetary growth is the result of factors that have not been included in the equation, such as tariff reduction in 2001 and 2002. In the future, there seems to be little prospects for much further growth in real money without upward pressure on inflation.

³⁰ See Appendix II.

Figure 4. Actual and Fitted Changes in inflation, 1982-2001



Source: Algerian authorities and staff

64. **While the stability of the money demand matters if monetary policy targets a monetary aggregate, it is not sufficient for successful targeting**, since the central bank does not fully control that aggregate. It only controls the reserve money. The ability of the central bank to control M2 depends, therefore, on the predictability of the money multiplier. Therefore, further research (not covered in this paper) on the relation between reserve money and the M2 aggregate is required to complete the assessment of the transmission mechanisms of monetary policy in Algeria.

Oil Price Shocks and Monetary Equilibrium

65. **The impact of hydrocarbon revenues on monetary aggregates can be a source of disturbance in the money market.** Analyzing the channels through which an increase in international prices for hydrocarbon affect the money market equilibrium will help design better policies. In this section, a simplified accounting framework is used to show that an increase in international oil prices creates money market disequilibrium, and that the degree of *ex-ante* excess money supply depends on the distribution of hydrocarbon revenues between the government and the oil companies, and on the government expenditure policy.

66. The short-term impact of a positive price shock in the hydrocarbon sector in a fixed exchange rate regime could be expressed through the following equation.

$$\Delta M^s = \Delta NFA + \Delta NCG + \Delta CE,$$

where:

- M^s = money supply
- NFA = net foreign assets
- NCG = net credit to the government
- CE = credit to the economy

67. Suppose that the money market is at equilibrium and that we have a sudden increase in the international price of hydrocarbons that only affects, in the short run, the value of

exports by an amount ΔR ; in particular, we assume that the external demand for hydrocarbons and domestic production (as well as the domestic demand for imports) are unchanged at this stage. Other things being equal, foreign exchange reserves will also increase by ΔR .

Therefore, as a first approximation:

$$\Delta NFA \approx \Delta R.$$

68. Before taking into account the second round effects resulting from changes in the liquidity of the banking system, banks' credit supply is unchanged by this accumulation of net foreign assets, and:

$$\Delta CE = 0.$$

Assuming that a share α of additional hydrocarbon export proceeds accrues to the government,³¹ and that it is saved, we arrive at:

$$\Delta NCG = -\alpha \Delta R.$$

Therefore, money supply increases *ex-ante* by:

$$\Delta M^s = (1 - \alpha)\Delta R.$$

69. The demand for money is, however, not directly affected by the shock *ex-ante*. Real GDP, unlike nominal GDP, is not directly impacted by a hydrocarbon price change, at least in the short term.³² The same goes for the nominal interest rate and, to a lesser extent, for the consumer price level.³³

70. An oil price shock will, therefore, create an *ex-ante* disequilibrium on the money market—assuming no response from monetary authorities—which can be reestablished through one (or a combination)³⁴ of the following:

³¹ It is a relatively common feature in commodity exporting countries (and in particular in developing oil producing countries) that a large share of the commodity rent accrues to the government.

³² Real GDP in this framework is not adjusted for terms of trade changes.

³³ The price level may be affected directly by the shock if hydrocarbons are also domestically consumed and if their domestic price is not administered. However, we make the assumption that the possible price increase is insufficient to offset the increase in nominal money supply.

³⁴ Here is a possible scenario: interest rates could drop as a result of excess money supply. This would stimulate demand. Additional demand—also potentially coming from the income effect of the shock—for traded goods

(continued)

- A decrease in the nominal interest rate;
- An increase in the price level; and
- An increase in real GDP.

71. The model shows that the degree of *ex-ante* excess money supply depends crucially on the distribution of hydrocarbon revenues. For instance, if all revenues accrue to the government, and if the latter decides to save any unexpected revenues in its central bank account, we have (assuming no variation in credit to the economy):

$$\Delta NCG = -\Delta NFA = -\Delta R .$$

Consequently:

$$\Delta M^s = \Delta R - \Delta R + 0 = 0 .$$

72. In such a context, the money market would thus remain at equilibrium. However, since in Algeria, 65 percent of hydrocarbon revenues accrue to the government, the monetary policy has to deal with the remaining 35 percent, which represents Sonatrach's share, as well as the liquidity injected in the market resulting from the government use of hydrocarbon revenues.

D. Monetary Policy Instruments in the Wake of Oil Price Shocks

73. Before discussing the various policy responses to a temporary positive shock on hydrocarbon prices that might be envisaged, as well as their appropriateness to the Algerian economy, it is useful to review what happened over the last three years (2000–02) in Algeria, when net foreign assets increased substantially in the wake of an increase in hydrocarbon prices.

Recent Economic Developments

74. **Monetary expansion was relatively contained in 2000:** while the increase in net foreign assets amounted to 34 percent of the initial money stock, broad money only increased by 13 percent in 2000. This control was, however not due to monetary operations, but rather to a partial sterilization of net foreign asset accumulation through fiscal policy. In fact, in April 2000, the authorities established an oil stabilization fund to save any hydrocarbon revenues in excess of those budgeted (below). Even though the fiscal policy stance was relaxed compared to 1999 (the nonhydrocarbon deficit increased by 6 percent of nonhydrocarbon GDP) and part of the non-budgeted revenues were not saved, this expansion

would increase imports and deteriorate the current account position (and thus reduce the external source of money creation). Excess demand for nontraded goods would increase their price, and thus the price level.

was still small relative to the increase in net foreign assets.³⁵ This is shown by the substantial increase in overall budget balance from almost nil in 1999 to around 10 percent of GDP in 2000.

75. Monetary policy did not have adequate instruments to absorb excess liquidity in 2001, in the context of expansionary fiscal policy. Despite continuously increasing hydrocarbon revenues, total fiscal surplus shrunk substantially in 2001.³⁶ Reflecting this development, coupled with substantial debt servicing payments made by the Treasury to public banks, money growth increased rapidly from 13 percent in 2000 to more than 22 percent in 2001. This rise occurred despite the lower increase in net foreign assets in 2001 and 2002 compared to 2000 (26 percent in 2001 against 34 percent of the initial money stock in 2000). It led to higher prices, and the average inflation rate increased from nil in 2000 to 4.2 percent in 2001. The following observations are consistent with the diagnosis of excess liquidity: (a) for most of 2001, banks resorted only to the rediscount window for central bank refinancing, and the use of this facility ended in November 2001, with a significant drop in banks' refinancing needs; (b) banks have maintained reserve balances at the central bank well in excess of required amounts; and (c) interest rates have substantially declined on the interbank money market, and fell below the rediscount rate in the autumn of 2001. As of end-2001, the Bank of Algeria did not have the appropriate instruments to withdraw liquidity from banks. The only active instrument was the rate of reserve requirements, which was raised from 3 percent to 4.25 percent during the last quarter.

76. The monetary authorities introduced a new instrument to absorb excess bank liquidity in 2002. In the wake of continuous accumulation of foreign assets, and given the further relaxation of the fiscal stance, the monetary authorities decided to introduce in April 2002 a deposit facility (or negative liquidity auctions) at the central bank to absorb banks' excess liquidity.³⁷ However, in the initial transactions under this new facility, the Bank of Algeria has accepted only part of the liquidity offered by commercial banks, meaning that there is still some excess liquidity in the market. If this excess liquidity persists, it might lead to further expansion of the money supply through new credits, and put upward pressure on prices.

³⁵ The Treasury accumulated DA 320 billion (about 8 percent of GDP) on its central bank account during 2000. By doing this, it has effectively sterilized a large part (more than 50 percent) of the net foreign assets accumulation.

³⁶ This occurred, with, in particular, a significant increase in capital expenditures and a 15 percent one in civil servants' salaries in January 2001.

³⁷ The Bank of Algeria issues a call for deposits, remunerated at a preannounced interest rate (currently 2.75 percent) and maturity.

Instruments to Sterilize Excess Money Supply

77. This section analyzes only the measures that could be taken in the short term to address money market disequilibrium in Algeria, namely sterilization. Sterilization is, however, a costly process, and should not be adopted on a permanent basis. The paper does not address long term structural deficiencies hindering financial deepening, nor does it address other fundamental questions of macroeconomic policy, such as the appropriate level of government expenditure over the long run or the optimum rate of saving

78. **The monetary impact of hydrocarbon export revenues cannot be analyzed separately from fiscal policy decisions.** In addition to the negative liquidity facility, other monetary instruments and fiscal measures could be used by the Algerian authorities if they were to face this situation in the future.³⁸

Sterilization through monetary operations

79. **In order to be able to appropriately address similar situations of excess liquidity in the future, the Bank of Algeria might wish to sterilize additional hydrocarbon-related export earnings through open market operations** such as issuing treasury or central bank bills over the medium term.³⁹ By selling securities (such as treasury bills or central bank bills) on the money market, the monetary authorities might be able to mop up excess liquidity so as to prevent the nominal interest rate from falling.⁴⁰ In addition, open market operations would help develop the financial markets in Algeria.

80. **Since the sterilization capacity in Algeria is currently limited by the underdevelopment of money and financial markets, the monetary authorities should, in the short term, continue resorting to negative liquidity auctions.** However, they need to improve its implementation by fully absorbing the excess liquidity, instead of accepting only part of the liquidity offered by banks, which is currently the practice.

³⁸ The problem facing monetary authorities is quite similar to the one posed by massive capital inflows. Therefore, the same considerations often apply. For a survey of the main issues raised by capital inflows, see Calvo, Leiderman, and Reinhart 1993. For a study of the available tools for monetary policy, see Lee 1996.

³⁹ Sterilization through monetary operations can entail a significant financial cost, if the domestic securities sold to the public (or the deposits auctioned to banks) command a higher interest rate than the one earned on the corresponding foreign exchange reserves.

⁴⁰ Whether the central bank should issue its own paper for monetary management purposes depends on its ability to absorb the fiscal cost by issuing its own paper as on the impact of such measure on dividend payments to the treasury.

Sterilization through fiscal policy

81. **Sterilization through fiscal policy is another option to rein in excess liquidity in Algeria.** Since most of the hydrocarbon revenue accrues to the government, sterilization through fiscal policy is both easy and warranted to avoid the macroeconomic instability resulting from a procyclical fiscal policy that would transmit the swings of the world oil market.

82. **Following the 1994–98 programs, when automatic adjusters on overall fiscal targets helped sterilize excess revenues, a stabilization fund was established in 2000.** The Algerian authorities, aware of the costs of high uncertainty, decided in 2000 to adopt a longer term perspective which, in principle, should have led them to sterilize the impact of oil price shocks through fiscal policy.⁴¹ The oil stabilization fund was established, and the supplementary budget law for the 2000, and 2001 and 2002 budgets was based on conservative oil price assumptions.⁴² The purpose was to set expenditures in a multi-year perspective and to avoid, in particular, having to adjust them regularly—and sometimes drastically—because of oil price fluctuations.

83. **In the period ahead, it is important that Algeria avoid a procyclical fiscal stance, and that the Treasury coordinate with the Bank of Algeria on liquidity management.** During periods of abundant hydrocarbon revenues, the government should be prudent in relaxing the fiscal stance, and when monetary sterilization cannot mop-up the total excess liquidity, fiscal sterilization should complement the Bank of Algeria's efforts. Therefore, Algeria's high dependency on oil requires that monetary policy be coordinated with other policies (fiscal in particular) aimed at managing the excess liquidity of the economy.

Sterilization through foreign exchange interventions

84. Sales of foreign exchange are a possible instrument to sterilization. However, in the context of an economy where there is no complete capital account convertibility, such interventions imply significant exchange rate volatility.

Sterilization of Sonatrach's share of the hydrocarbon revenue

85. **Even if Sonatrach actually "sterilizes" its deposits by holding them in commercial banks rather than adjusting its expenditures and financing plans in reaction to changes in its own liquidity, its large share of hydrocarbon revenues still affects the total liquidity of the banking system.** As discussed previously, the share of the

⁴¹ Operational details concerning the functioning of the stabilization fund and, in particular, rules governing the use of the accumulated resources have yet to be fully specified.

⁴² It was indeed clear, at the time, that the supplementary budget law was passed by the parliament, that oil prices would be significantly higher than US\$19 per barrel on average in 2000–02.

hydrocarbon revenue accruing to Sonatrach is not negligible. Therefore, large fluctuations in hydrocarbon prices can have significant consequences on its financial situation and, *in fine*, on the domestic banking sector's liquidity, since Sonatrach holds its deposits in dinar in the banking system.

86. The case could therefore be made for trying to sterilize in the short term at least part of Sonatrach's windfall gains consecutive to an increase in oil prices. This could be done either through the issuance of Treasury bills to back these deposits, or by allowing Sonatrach to hold foreign exchange deposits in the domestic banking system. This is why this measure might be resisted by the authorities, especially when the traded goods sector is already being "cannibalized" by the hydrocarbon sector.⁴³ Therefore, an exchange rate adjustment should probably not be the first line of defense, but rather one which is envisaged after sterilization has already been tried.

E. Conclusions and Recommendations

87. **This study finds that money demand is stable and predictable in Algeria.** The empirical results have an important bearing on the feasibility of framing monetary policy around targets for monetary aggregates. While the empirical analysis shows that targeting the M_2 aggregate is an appropriate intermediate objective for Algeria's monetary policy, the Bank of Algeria does not have a full control of M_2 . Further work is, therefore, needed to deepen the analysis of the channels of monetary policy transmission to clarify the choice of targets for Bank of Algeria's intermediate objective.

88. **The empirical study also shows that excess money supply has implications on the behavior of prices.** Therefore it is likely that much further growth in real money in the future would lead to upward pressure on inflation.

89. **It is, however, important to be prudent when using the outcome of the empirical model for future policy design.** Given the weaknesses of the data, and because the period of coverage of the empirical study covers episodes preceding economic liberalization, it is recommended to use the empirical findings for future policy design with caution.

90. **In designing monetary and fiscal policies, the Algerian authorities need to take into account the impact of oil price shocks.** While higher oil revenues create disequilibrium on the money market, this disturbance is amplified when fiscal stance is expansionary, and the government monetizes its share of hydrocarbon revenues through higher expenditures.

91. **The Bank of Algeria should develop the appropriate instruments to control the market liquidity** through increasingly relying on modern market-based monetary management. In this regard, acquiring an in-depth knowledge of the channels through which monetary policy is transmitted would increase the effectiveness of monetary policy in

⁴³ Or if the traded goods sector is not competitive and surviving due to high external protection.

achieving its targets. In addition, to facilitate monetary management, it is important to promote the development of the money and financial markets by including a policy of regular treasury security issues.

92. **However, coordination between monetary and fiscal policies remains the main key for success.** Given the magnitude of potential liquidity swings linked to hydrocarbon revenue fluctuations, the monetary authorities cannot manage alone the excess liquidity in an effective manner. Coordination between monetary and fiscal policies is a prerequisite for liquidity control. The Bank of Algeria needs to coordinate with the Treasury to increase the issuance of Treasury bills, which could be progressively used for open market operations. Second, it is important to establish at the Ministry of Finance a system for forecasting treasury operations. Forecasts should be reported to the central bank, and used to regulate the liquidity of the system. Finally, prudence in fiscal policy is a necessity during periods of large-scale hydrocarbon revenues, in order to promote monetary stability.

Weak Exogeneity Test Statistics

Block Exogeneity Wald Test

Exclude	Chi-sq	Df	Prob.
y	0.706708	2	0.7023
$\Delta\pi$	2.764895	2	0.2510
Δi	0.719278	2	0.6979
All	3.804616	6	0.7031

Dependent variable: $\Delta\pi$

Exclude	Chi-sq	df	Prob.
Δy	2.070854	2	0.3551
$\Delta\pi$	1.503192	2	0.4716
Δi	0.801505	2	0.6698
All	5.709149	6	0.4565

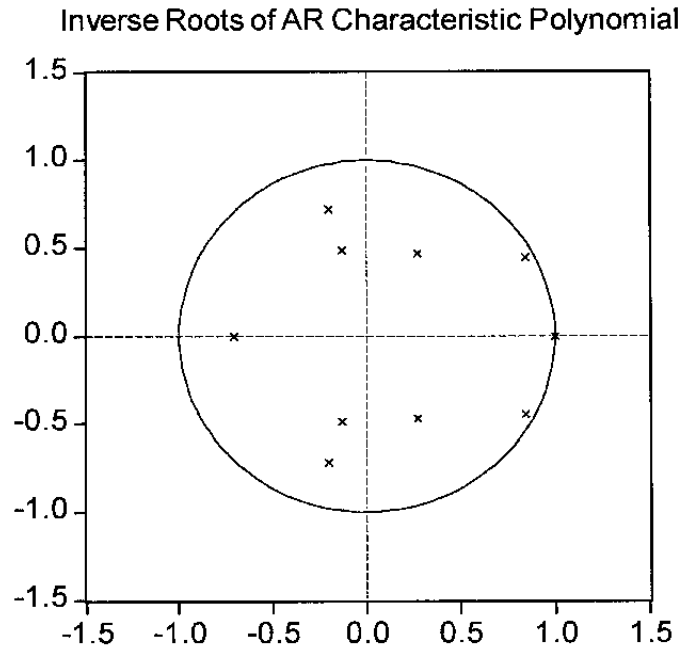
Dependent variable: $\Delta\pi$

Exclude	Chi-sq	df	Prob.
Δy	9.034097	2	0.0109
$\Delta\pi$	1.062582	2	0.5878
Δi	5.266259	2	0.0719
All	16.72540	6	0.0103

Δi

Exclude	Chi-sq	df	Prob.
Δy	2.422058	2	0.2979
$\Delta\pi$	0.474593	2	0.7888
Δi	2.105205	2	0.3490
All	3.804677	6	0.7031

Model Stability Tests



Chow Breakpoint Test: 1994

Log Likelihood ratio	16.43	Probability	0.02
----------------------	-------	-------------	------

Chow Forecast test: Forecast from 1994 to 2001

Log Likelihood ratio	19.85	Probability	0.01
----------------------	-------	-------------	------

REFERENCES

- Calvo, Guillermo, Leonardo Leiderman and Carmen Reinhart, 1993, "The Capital Inflows Problem: Concepts and Issues," IMF Paper on Policy Analysis and Assessment ; No.93/10 (Washington: International Monetary Fund).
- Dickey, David A., and Fuller, Wayne A., 1981, "Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root," *Econometrica*, Vol. 49.
- Engle, Robert F., and C.W.J. Granger, 1987, "Co-Integration and Error-Correction: Representation, Estimation and Testing," *Econometrica*, Vol. 55, March.
- International Monetary Fund, 2000a, "Algeria: Recent Economic Developments," *IMF Staff Country Reports* No. 00/105, August.
- International Monetary Fund, 2000b, "Algeria: Staff Report for the 2000 Article IV Consultation," *IMF Staff Country Reports* No. 00/93, August.
- Johansen, Soren, 1988, "Statistical Analysis of Cointegration Vector," *Journal of Economic Dynamics and Control*, Vol. 12 (No 2).
- Lee, Jang-Yung, 1996, "Implications of a Surge in Capital Inflows: Available Tools and Consequences for the Conduct of Monetary Policy," IMF Working Paper 96/53 (Washington: International Monetary Fund).
- MacKinnon, James G., 1991, "Critical Values for Cointegration Tests," in *Long Run Economic Relationships: Readings in Cointegration*, ed. by Robert F. Engle and C.W.J. Granger (New York: Oxford University Press).
- Pantula, Sastry G., Graciela Conzales-Farias, and Wayne A. Fuller, 1994, "A Comparison of Unit Root Test Criteria," *Journal of Business and Economic Statistics*, April.

Table 1. Algeria: Supply and Use of Resources at Current Prices, 1997–2001

	1997	1998	1999	2000	2001
	(In billions of dinars)				
Gross domestic product	2,780	2,810	3,215	4,079	4,222
Resource gap	243	-4	179	921	666
Exports of goods and nonfactor services	837	652	919	1,749	1,570
Imports of goods and nonfactor services	595	656	739	828	904
Gross domestic spending	2,538	2,814	3,036	3,158	3,556
Consumption	1,890	2,059	2,211	2,273	2,473
Government	460	504	544	560	631
Nongovernment	1,430	1,555	1,667	1,713	1,842
Gross investment	647	755	825	885	1,084
Gross fixed capital formation	638	729	790	869	931
Change in inventories	9	26	35	15	152
Gross domestic savings	890	751	1,004	1,805	1,750
Net factor income from abroad	-124	-115	-147	-174	-161
Net current transfers	104	94	98	77	64
National savings	870	730	955	1,709	1,653
Gross national product	2,656	2,695	3,068	3,905	4,061
	(In percent of GDP)				
Gross domestic product	100.0	100.0	100.0	100.0	100.0
Resource gap	8.7	-0.1	5.6	22.6	15.8
Exports of goods and nonfactor services	30.1	23.2	28.6	42.9	37.2
Imports of goods and nonfactor services	21.4	23.3	23.0	20.3	21.4
Gross domestic spending	91.3	100.1	94.4	77.4	84.2
Consumption	68.0	73.3	68.8	55.7	58.6
Government	16.5	17.9	16.9	13.7	14.9
Nongovernment	51.4	55.3	51.9	42.0	43.6
Gross investment	23.3	26.9	25.7	21.7	25.7
Gross fixed capital formation	23.0	25.9	24.6	21.3	22.1
Change in inventories	0.3	0.9	1.1	0.4	3.6
Gross domestic savings	32.0	26.7	31.2	44.3	41.4
Net factor income from abroad	-4.5	-4.1	-4.6	-4.3	-3.8
Net current transfers	3.7	3.3	3.0	1.9	1.5
National savings	31.3	26.0	29.7	41.9	39.1
Gross national product	95.5	95.9	95.4	95.7	96.2

Source: Algerian authorities.

Table 2. Algeria: Sectoral Distribution of GDP at Current Prices, 1997–2001

	1997	1998	1999	2000	2001
(In billions of dinars)					
Hydrocarbons	839	638	891	1,624	1,498
Other sectors	1,724	1,945	2,098	2,204	2,450
Agriculture	243	304	338	326	387
Industry	223	257	270	284	302
Construction and public works	277	301	308	334	358
Nongovernment services	634	697	769	836	920
Government services	348	386	413	425	482
Imports taxes and duties	217	227	226	250	274
Gross domestic product	2,780	2,810	3,215	4,079	4,222
(In percent of GDP)					
Hydrocarbons	30.2	22.7	27.7	39.8	35.5
Other sectors	62.0	69.2	65.3	54.0	58.0
<i>Of which:</i>					
Agriculture	8.7	10.8	10.5	8.0	9.2
Industry	8.0	9.1	8.4	7.0	7.2
Government services	12.5	13.7	12.8	10.4	11.4
(Annual percentage change)					
Hydrocarbons	14.4	-23.9	39.6	82.3	-7.8
Other sectors	6.5	12.8	7.9	5.1	11.1
<i>Of which:</i>					
Agriculture	-12.6	25.5	11.1	-3.7	18.9
Industry	0.4	15.1	5.3	4.9	6.6
Government services	11.0	11.0	7.0	2.8	13.6
Gross domestic product	8.4	1.1	14.4	26.9	3.5

Source: Algerian authorities.

Table 3. Algeria: Sectoral Distribution of Real GDP Growth, 1997–2001

(In percent)

	1997	1998	1999	2000	2001
Hydrocarbons	6.0	4.0	6.2	4.9	-1.6
Other sectors					
Agriculture	-13.5	11.4	2.7	-5.0	13.2
Mining	-13.4	5.5	-3.0	15.9	-2.8
Energy (nonhydroelectric) and water	3.9	8.7	7.0	2.4	5.0
Public industry	-7.6	9.2	-0.8	-1.9	-1.3
Food processing	-2.4	14.2	-1.1	-8.9	-12.5
Steel, mechanical and electrical construction	-20.9	11.8	8.5	2.2	10.4
Chemical industry	6.5	16.3	-2.2	6.2	-3.1
Textiles	-8.8	0.6	-17.4	-14.4	-14.7
Leather products	-19.1	-3.4	-28.9	-6.0	-0.5
Building materials	-5.1	5.3	-3.1	6.4	0.3
Wood and paper	-2.5	-8.5	-16.5	-8.2	-13.1
Other	-17.9	-1.9	-6.9	38.2	2.0
Private industry	5.0	5.0	8.0	5.3	3.0
Construction and public works	2.5	2.4	1.4	5.1	2.8
Nongovernment services	2.4	5.4	3.1	3.1	3.8
Government services	3.0	2.5	2.5	2.0	2.0
Import taxes and duties	0.5	5.4	1.1	0.9	4.8
Gross domestic product	1.1	5.1	3.2	2.4	2.1
Gross domestic absorption	-0.2	6.2	2.2	0.6	4.9
Consumption	-0.1	2.8	2.9	2.1	2.5
Government	2.7	2.8	2.5	1.5	1.6
Nongovernment	-1.0	2.9	2.9	2.2	2.7
Gross investment	0.8	3.3	2.7	2.4	2.2
Exports of goods and nonfactor services	6.3	4.7	6.0	5.9	-2.2
Imports of goods and nonfactor services	2.4	7.0	1.8	-0.9	3.9
Memorandum item:					
Real per capita GDP	-0.6	3.5	1.7	0.8	

Source: Algerian authorities.

Table 4. Algeria: Production, Exports, and Consumption of
Petroleum Products, 1997–2001

(In millions of tons)

	1997	1998	1999	2000	2001
Crude petroleum and substitutes					
Production	60.8	62.3	63.6	66.8	66.0
Crude petroleum and substitutes	37.7	38.4	39.9	41.5	40.6
Condensate 1/	16.7	16.6	16.4	17.1	16.5
Liquefied petroleum gas (LPG)	6.5	7.4	7.4	8.2	8.8
Imports	0.3	0.2	0.3	0.3	0.3
Refinery input	21.1	20.2	21.9	21.3	22.2
Direct exports	38.4	40.7	41.4	44.7	44.1
Crude	17.4	19.3	19.3	21.4	20.4
Condensate	16.0	15.5	15.3	15.9	15.6
Liquefied petroleum gas (LPG)	5.1	5.9	6.8	7.4	8.1
LPG consumption	1.4	1.5	1.5	1.6	1.7
Discrepancy 2/	0.2	0.1	-0.9	-0.5	-1.7
Refined products					
Production	20.1	19.2	20.2	19.6	21.0
Exports	14.4	12.8	13.5	13.6	14.2
Domestic consumption	5.8	6.0	6.1	6.6	6.8
Discrepancy 2/	-0.1	0.4	0.6	-0.5	0.0
Memorandum item:					
Total exports	52.8	53.5	54.9	58.3	58.3

Source: Algerian authorities.

1/ By-product of gas production.

2/ Reflects change in inventories and errors of measurement.

Table 5. Algeria: Production, Exports, and Consumption of Gas Products, 1997–2001

	1997	1998	1999	2000	2001
(In billions of cubic meters)					
Gross production	149.4	151.7	155.8	170.2	169.6
Input into oil production	67.0	63.9	58.2	69.1	78.2
Net production 1/	82.4	87.8	97.6	101.1	91.4
Volume transported 2/	68.1	72.2	81.4	83.2	78.2
Domestic consumption	10.1	11.4	10.8	11.8	12.1
Sales to liquefaction plants	33.8	33.1	35.1	34.6	33.4
LNG production	24.3	24.7	25.8	26.4	25.8
<i>Of which:</i>					
LNG exports	24.2	24.7	25.7	26.3	25.8
Exports by pipeline	24.2	27.9	34.0	34.9	31.1
Discrepancy 3/	-0.1	-0.2	1.5	1.9	1.6
(Annual percentage change)					
Gross production	4.9	1.5	2.7	9.2	-0.4
Input into oil production	-5.6	-4.6	-8.9	18.7	13.2
Net production 1/	15.5	6.5	11.2	3.6	-9.6
Volume transported 2/	16.0	6.0	12.7	2.2	-6.0
Domestic consumption	1.3	12.5	-5.3	9.3	2.5
Sales to liquefaction plants	22.8	-2.0	6.0	-1.4	-3.5
LNG production	22.6	1.7	4.5	2.3	-2.3
<i>Of which:</i>					
LNG exports	22.4	1.9	4.0	2.3	-1.9
Exports by pipeline	14.3	15.1	21.9	2.6	-10.9
(In billions of cubic meters; unless specified otherwise)					
Memorandum item:					
Total exports	48.4	52.6	59.7	61.1	56.9
<i>Of which:</i>					
LNG exports (in percent)	50.1	47.0	43.0	43.0	45.3
Piped exports (in percent)	50.1	53.0	57.0	57.1	54.7

Source: Algerian authorities.

1/ Net of gas reinjected into producing oil wells.

2/ Equal to net production minus gas flared, gas used for lifting and for fuel gas, and other losses in the fields.

3/ Reflects errors in measurement.

Table 6. Algeria: Domestic Prices of Major Energy Products, 1997–2001

(In dinars per liter, unless otherwise indicated)

	1997	1998	1999	2000	2001
Butane (13 kg/bottle)	135.0	157.0	157.0	157.0	157.0
Propane (35 kg/bottle)	278.0	278.0	278.0	278.0	278.0
LPG fuel (kg)	4.3	4.3	4.3	4.3	4.3
LPG carb.	7.0	7.2	7.2	7.2	7.2
Super gasoline	20.5	20.5	20.5	21.3	21.5
Regular gasoline	18.0	18.4	18.4	19.2	19.2
Gas oil	11.3	11.5	11.5	11.8	11.8
Fuel oil	9.6	9.9	9.9	9.9	9.9

Source: Algerian authorities.

Table 7. Algeria: Land Use Patterns, 1997–2001

(In thousands of hectares)

	1997	1998	1999	2000	2001
Cereals	1,153	3,575	1,887	1,057	2,402
Durum wheat	591	1,707	889	545	1,112
Bread wheat	234	870	483	282	724
Barley	265	939	468	216	516
Other	63	59	47	15	50
Pulses	80	78	72	63	60
Fodder crops	486	488	461	458	244
Industrial crops 1/	38	43	48	40	29
Vegetables 2/	267	267	275	262	267
Grapes	52	52	51	51	52
Fruit trees	452	432	462	470	466
Natural prairies	42	42	35	35	35
Others	5,669	3,240	4,935	5,791	4,634
Total cultivated land	8,202	8,216	8,227	8,227	8,188
Fallow	3,416	3,202	3,641	3,521	...

Source: Algerian authorities.

1/ Industrial tomatoes and tobacco.

2/ Potatoes, tomatoes, garlic and onions, and watermelons.

Table 8. Algeria: Crop Yields, 1997–2001

(In kilograms per hectare)

	1997	1998	1999	2000	2001
Cereals					
Hard wheat	771	878	1,010	890	1,114
Soft wheat	879	896	1,180	970	1,105
Barley	721	745	1,090	760	1,114
Potatoes	14,104	16,025	15,350	16,610	14,782
Pulses					
Fava beans	240	582	620	380	646
Chickpeas	524	614	470	340	638

Source: Algerian authorities.

Table 9. Algeria: Livestock, 1997–2001

(In thousands of heads)

	1997	1998	1999	2000	2001
Bovine	1,255	1,317	1,650	1,364	1,613
Ovine	16,387	17,949	18,200	17,616	17,298
Caprine	3,121	3,257	3,400	3,027	3,129
Cameline	151	150	220	234	245

Source: Algerian authorities.

Table 10. Algeria: Index of Industrial Production in Public Enterprises, 1997–2001

	Weights (In percent)	1997	1998	1999	2000	2001
(1989 = 100)						
Water and energy	6.9	143.7	156.3	167.3	171.3	179.8
Hydrocarbons	17.8	118.2	119.2	121.5	129.3	128.5
Mining and quarrying	2.7	67.2	70.8	68.7	79.6	79.4
Mechanical and electrical	26.3	46.8	53.1	56.5	56.7	62.2
Construction materials	8.8	89.0	93.4	91.2	97.1	97.3
Chemicals	7.0	79.9	93.2	91.6	97.2	94.3
Food processing	14.5	83.1	95.4	93.9	85.5	74.9
Textiles	9.2	48.6	48.1	39.0	31.7	28.6
Leather and hides	2.2	23.7	22.4	16.5	16.2	15.5
Woods and paper	4.6	47.3	45.3	38.8	35.8	31.0
General index	100.0	78.2	83.8	84.1	85.2	84.8
General index (excluding hydrocarbons)		69.0	75.7	75.5	74.9	74.6
General index of manufactured commodities		63.1	69.0	68.1	66.8	65.9
(Annual percentage change)						
Water and energy		3.9	8.8	7.0	2.4	5.0
Hydrocarbons		4.4	0.8	1.9	6.4	-0.6
Mining and quarrying		-13.5	5.4	-3.0	15.9	-0.3
Mechanical and electrical		-21.1	13.5	6.4	0.4	9.7
Construction materials		-5.1	4.9	-2.4	6.5	0.2
Chemicals		6.5	16.6	-1.7	6.1	-3.0
Food processing		-2.4	14.8	-1.6	-8.9	-12.4
Textiles		43.8	-1.0	-18.9	-18.7	-9.8
Leather and hides		49.1	-5.5	-26.3	-1.8	-4.3
Woods and paper		35.1	-4.2	-14.3	-7.7	-13.4
General index		-0.1	7.2	0.4	1.3	-0.5
General index (excluding hydrocarbons)		-6.5	9.8	-0.3	-0.8	-0.4
General index of manufactured commodities		-2.2	9.4	-1.3	-1.9	-1.3

Source: Algerian authorities.

Table 11. Algeria: Production of Minerals, 1997–2001 1/

	1997	1998	1999	2000	2001
(In thousands of tons; unless otherwise indicated)					
Iron ore	1,614	1,783	1,337	1,609	1,271
Phosphates	1,063	1,155	1,097	796	901
Zinc and lead	8	10	10	11	11
Mercury 2/	14	7	7	6	9
(Annual percentage change)					
Iron ore	-28.1	10.5	-25.0	20.3	-21.0
Phosphates	1.1	8.7	-5.0	-27.4	13.2
Zinc and lead	17.4	20.4	0.0	10.8	-0.9
Mercury 2/	27.9	-54.2	7.7	-11.4	50.0

Source: Algerian authorities.

1/ Excluding hydrocarbons.

2/ In thousands of containers, each weighing 34 kilograms.

Table 12. Algeria: Consumer Price Index, 1997-2001 1/

	Weights (In percent)	1997	1998	1999	2000	2001
		(1989 = 100)				
Foodstuffs, beverages, and tobacco	44.1	539.7	570.6	577.2	572.8	604.3
Clothing and shoes	11.6	369.5	388.5	418.3	424.0	439.3
Housing costs	5.6	541.6	580.6	597.6	607.8	622.4
Furniture	6.8	343.7	354.7	362.8	365.9	373.2
Health and medical care	3.4	527.7	556.7	581.8	603.0	644.0
Transportation and communications	11.5	452.5	459.5	473.2	483.9	499.9
Education and entertainment	6.5	500.5	496.8	482.8	461.7	464.5
Other services	10.5	551.0	590.9	631.8	648.2	668.3
General index	100.0	494.9	519.4	533.1	534.9	557.4
		(Annual percentage change)				
Foodstuffs, beverages, and tobacco		5.7	5.7	1.2	-0.8	5.5
Clothing and shoes		6.3	5.1	7.7	1.4	3.6
Housing costs		19.3	7.2	2.9	1.7	2.4
Furniture		4.1	3.2	2.3	0.9	2.0
Health and medical care		10.0	5.5	4.5	3.6	6.8
Transportation and communications		4.8	1.5	3.0	2.3	3.3
Education and entertainment		-3.8	-0.7	-2.8	-4.4	0.6
Other services		5.5	7.2	6.9	2.6	3.1
General index		5.7	5.0	2.6	0.3	4.2

Source: Algerian authorities.

1/ Includes 256 items and covers households in the area of Algiers.

Table 13. Algeria: Income of Households, 1997–2001

(In billions of dinars)

	1997	1998	1999	2000	2001
Wages and salaries 1/	720.7	781.2	826.5	866.1	957.0
Agriculture	33.3	37.4	39.3	39.2	42.4
Central government	334.5	365.8	394.0	410.4	464.3
Other sectors	352.9	378.0	393.2	416.5	450.3
Self-employed	635.9	723.3	792.9	825.4	938.2
Transfers	293.8	344.2	402.7	431.3	501.4
Gross income	1,650.4	1,848.7	2,022.1	2,122.8	2,396.6
Disposable income	1,479.3	1,663.6	1,838.2	1,901.9	2,141.5

Source: Algerian authorities.

1/ Includes social security contributions paid by employees.

Table 14. Algeria: Labor Force, Employment, and Unemployment, 1997–2001 1/

(In thousands, unless otherwise indicated)

	1997	1998	1999	2000	2001
Labor force	8,072	8,326	8,583	8,850	9,074
Agriculture	1,144	1,180	1,185	1,185	1,328
Other sectors	6,928	7,146	7,398	7,665	7,746
Employment	4,719	4,858	4,898	4,977	5,198
Agriculture	1,144	1,180	1,185	1,185	1,328
Other sectors	3,575	3,678	3,713	3,792	3,870
Industry	487	493	493	497	502
Construction and public works	723	740	743	781	803
Government	1,378	1,415	1,420	1,440	1,456
Other	987	1,030	1,057	1,074	1,109
Work at home 2/	1,096	1,135	1,175	1,263	1,398
Unemployed	2,257	2,333	2,510	2,610	2,478
(in percent of labor force)	28.0	28.0	29.2	29.5	27.3

Source: Algerian authorities.

1/ Data are not strictly comparable over time, as surveys are conducted in different months and use different classifications.

2/ Including military draft and irregular employment.

Table 15. Algeria: Summary of Central Government Operations, 1997–2001

(In billions of dinars)

	1997	1998	1999	2000	2001
Total budget revenue and grants	926.6	774.6	950.5	1,578.1	1,478.5
Hydrocarbon revenue 1/	592.5	425.9	588.3	1,213.2	1,016.4
Nonhydrocarbon revenue 2/	334.1	348.7	358.4	364.9	462.0
Tax revenue	313.9	329.8	314.8	349.5	398.2
Taxes on income and profits	81.8	88.1	72.2	82.0	98.5
Taxes on goods and services	148.0	154.9	149.7	165.0	179.2
Customs duties	73.5	75.5	80.2	86.3	103.7
Registration and stamps	10.6	11.3	12.7	16.2	16.8
Nontax revenues	20.2	18.9	43.6	15.4	63.8
Fees	15.8	14.7	16.5	15.4	16.6
Bank of Algeria dividends	4.4	4.2	27.1	0.0	46.6
Dividends from Holdings	0.0	0.0	0.0	0.0	0.6
Grants	0.0	0.0	3.9	0.0	0.1
Total budget expenditure	845.1	875.7	961.7	1,178.1	1,321.0
Current expenditure	643.4	663.9	774.7	856.2	963.6
Personnel expenditure	245.2	268.6	286.1	289.6	324.0
Mudjahidins' pensions	25.0	37.9	59.9	57.7	54.4
Material and supplies	43.5	47.5	53.6	54.6	46.3
Current transfers 3/	220.4	199.1	248.7	292.0	391.4
Interest payments	109.4	110.8	126.4	162.3	147.5
Capital expenditure	201.6	211.9	187.0	321.9	357.4
Budget balance	81.5	-101.2	-11.2	400.0	157.5
Special accounts balance	1.1	-6.9	-5.6	-0.7	-20.0
Net lending by the treasury	-1.5	0.1	-0.3	0.5	-6.5
Allocation to the Rehabilitation Fund	18.0	0.0	0.0	0.0	0.0
Primary balance 4/	175.5	2.7	109.9	561.1	291.5
Overall balance 4/	66.1	-108.1	-16.5	398.8	144.0
Financing	-66.1	108.1	16.5	-398.8	-144.0
Bank 5/	-106.7	95.9	64.4	-407.4	-145.8
Nonbank	-23.1	15.6	24.7	105.7	112.3
Foreign 6/	63.7	-3.4	-72.6	-97.1	-110.5

Source: Algerian authorities.

1/ Including dividends on current profits paid by Sonatrach.

2/ Excluding privatization receipts, which are reclassified under nonbank financing.

3/ Covers expenditures for food subsidies, agricultural price support, and cash transfers for the poor.

4/ Including special accounts, net lending and operations of the Rehabilitation Fund.

5/ Including debt rescheduling proceeds blocked on account at the Bank of Algeria.

6/ Includes external debt rescheduling proceeds.

Table 16. Algeria: Composition of Central Government Revenue, 1997–2001

	1997	1998	1999	2000	2001
	(In billions of dinars)				
Total budget revenue and grants	926.6	774.6	950.5	1,578.1	1,478.5
Hydrocarbon revenue	592.5	425.9	588.2	1,213.2	1,016.4
<i>Of which:</i>					
Sonatrach Dividends	27.7	47.3	28.1	40.0	60.0
Nonhydrocarbon revenue	334.1	348.7	358.4	364.9	462.0
Tax revenue	313.9	329.8	314.8	349.5	398.2
Taxes on income and profits	81.8	88.1	72.2	82.0	98.5
Wage income taxes	40.8	42.5	32.6	34.9	45.5
Other	41.0	45.6	39.6	47.1	53.0
Taxes on goods and services	148.1	154.9	149.7	165.0	179.2
VAT and excises on imports	43.7	51.5	53.3	54.5	60.8
VAT and excises on domestic activities	73.2	70.7	63.8	72.1	80.1
TVA-TC-TSA domestic transactions	51.7	49.1	41.9	47.8	55.0
Tobacco excises (TIC)	21.5	21.6	21.8	24.3	25.2
VAT on petroleum products/levy	8.5	9.8	10.4	11.2	10.5
Excises on petroleum products	21.2	21.6	20.8	25.7	27.3
Other indirect taxes	1.4	1.4	1.4	1.5	0.5
Customs duties	73.5	75.5	80.2	86.3	103.7
Registration and stamps	10.6	11.3	12.7	16.2	16.8
Nontax revenue	20.2	18.9	43.6	15.4	63.8
Fees 1/	15.8	14.7	16.5	15.4	16.6
Bank of Algeria dividends	4.4	4.2	27.1	0.0	46.6
Dividends from holdings	0.0	0.0	0.0	0.0	0.6
Grants	0.0	0.0	0.0	0.0	0.1
	(In percent of total budget revenue and grants)				
Total budget revenue and grants	100.0	100.0	100.0	100.0	100.0
Hydrocarbon revenue	63.9	55.0	61.9	76.9	66.5
Nonhydrocarbon revenue	36.1	45.0	37.7	23.1	32.5
Tax revenue	33.9	42.6	33.1	22.1	26.5
Taxes on income and profits	8.8	11.4	7.6	5.2	6.5
Taxes on goods and services	16.0	20.0	15.7	10.5	11.9
Customs duties	7.9	9.7	8.4	5.5	6.9
Registration and stamps	1.1	1.5	1.3	1.0	1.1
Nontax revenue	2.2	2.4	4.6	1.0	6.0
Grants	0.0	0.0	0.0	0.0	1.0

Source: Algerian authorities.

1/ For 2001, privatization receipts of DA 27.1 billion were reclassified in financing.

Table 17. Algeria: Central Government Revenue, 1997–2001

(In percent of GDP)

	1997	1998	1999	2000	2001
Total budget revenue	33.3	27.6	29.6	38.7	35.0
Hydrocarbon revenue	21.3	15.2	18.3	29.7	24.1
<i>Of which:</i>					
Sonatrach dividends	1.0	1.7	0.9	1.0	1.4
Nonhydrocarbon revenue	12.0	12.4	11.1	8.9	10.9
Tax revenue	11.3	11.7	9.8	8.6	9.4
Taxes on income and profits	2.9	3.1	2.2	2.0	2.3
Wage income taxes	1.5	1.5	1.0	0.9	1.1
Other	1.5	1.6	1.2	1.2	1.3
Taxes on goods and services	5.3	5.5	4.7	4.0	4.2
VAT and excises on imports	1.6	1.8	1.7	1.3	1.4
VAT and excise on domestic transactions	2.6	2.5	2.0	1.8	1.9
TVA-TC-TSA domestic transactions	1.9	1.7	1.3	1.2	1.3
Tobacco excises (TIC)	0.8	0.8	0.7	0.6	0.6
VAT on petroleum products/levy	0.3	0.3	0.3	0.3	0.2
Excises on petroleum products	0.8	0.8	0.6	0.6	0.6
Other indirect taxes	0.1	0.0	0.0	0.0	0.0
Customs duties	2.6	2.7	2.5	2.1	2.5
Registration and stamps	0.4	0.4	0.4	0.4	0.4
Nontax revenue	0.7	0.7	1.4	0.4	1.5
Fees	0.6	0.5	0.5	0.4	1.0
Bank of Algeria dividends	0.2	0.1	0.8	0.0	1.1
Dividends from Holdings	0.0	0.0	0.0	0.0	0.0

Source: Algerian authorities.

Table 18. Algeria: Composition of Central Government Expenditure, 1997–2001

	1997	1998	1999	2000	2001
	(In billions of dinars)				
Total budget expenditure	845.2	875.8	961.7	1,178.1	1,321.0
Current expenditure	643.6	663.9	774.7	856.2	963.6
Personnel expenditure	245.2	268.6	286.1	289.6	324.0
Wages and salaries	235.0	258.2	278.1	281.1	315.4
Other	10.2	10.4	8.0	8.5	8.6
Mudjahidins' pensions	25.0	37.9	59.9	57.7	54.4
Material and supplies	43.5	47.5	53.6	54.6	46.3
Public services	74.0	75.2	81.9	92.0	114.6
Hospitals	29.9	28.8	31.2	33.0	41.4
Other	44.1	46.4	50.6	59.0	73.2
Current transfers	146.5	123.9	166.8	200.0	276.8
Family allowances	44.2	42.5	36.2	29.0	25.9
Public works and social assistance	12.0	13.6	14.2	16.1	1.2
Food subsidies	0.7	0.2	0.4	0.5	0.2
Agricultural price support	5.3	5.3	4.6	5.8	23.5
Housing	28.8	19.0	14.5	8.6	26.4
Youth Employment Support Fund	2.7	5.3	6.1	6.2	7.4
Other transfers	52.8	38.0	90.8	133.8	192.1
Interest on debt	109.4	110.8	126.4	162.3	147.5
Capital expenditure	201.6	211.9	187.0	321.9	357.4
Special accounts balance	1.1	-6.9	-5.6	-0.7	-20.0
Net lending by the treasury	-1.5	0.1	-0.3	0.5	-6.5
Allocation to the Rehabilitation Fund 1/	18.0	0.0	0.0	0.0	0.0
Total expenditure 2/	860.6	882.8	967.0	1,179.3	1,334.5
	(In percent of total expenditure)				
Total expenditure	100.0	99.2	99.4	100.0	100.0
Total budget expenditure	98.2	99.2	99.5	99.9	99.0
Current expenditure	74.8	75.2	80.1	72.6	72.2
Personnel expenditure	28.5	30.4	29.6	24.6	24.3
Wages and salaries	27.3	29.2	28.8	23.8	23.6
Mudjahidins' pensions	2.9	4.3	6.2	4.9	4.1
Material and supplies	5.0	5.4	5.5	4.6	3.5
Public services	8.6	8.5	8.5	7.8	8.6
Current transfers	17.0	14.0	17.2	17.0	20.7
Food subsidies	0.1	0.0	0.0	0.0	0.0
Other transfers	6.1	4.3	9.4	11.3	14.4
Interest payments	12.7	12.6	13.1	13.8	11.1
Capital expenditure	23.4	24.0	19.3	27.3	26.8
Special accounts balance	0.1	-0.8	-0.6	-0.1	-1.5
Net lending by the treasury	-0.2	0.0	0.0	0.0	-0.5
Allocation to the Rehabilitation Fund	2.1	0.0	0.0	0.0	0.0

Source: Algerian authorities.

1/ Excluding the compensation for commercial banks' foreign exchange losses on principal payments of external debt contracted on behalf of the treasury.

2/ Including net lending and allocations to the Rehabilitation Fund.

Table 19. Algeria: Central Government Expenditure, 1997–2001

(In percent of GDP)

	1997	1998	1999	2000	2001
Total expenditure 1/	31.0	31.2	29.9	28.9	31.3
Current expenditure	23.1	23.6	24.1	21.0	22.8
Personnel	8.8	9.6	8.9	7.1	7.7
Wages and salaries	8.5	9.2	8.6	6.9	7.5
Other	0.4	0.4	0.2	0.2	0.2
Mudjahidins' pensions	0.9	1.3	1.9	1.4	1.3
Material and supplies	1.6	1.7	1.7	1.3	1.1
Public services	2.7	2.7	2.5	2.3	2.7
Hospitals	1.1	1.0	1.0	0.8	1.0
Others (government entities)	1.6	1.7	1.6	1.4	1.7
Current transfers	5.3	4.4	5.2	4.9	6.6
Family allowances	1.6	1.5	1.1	0.7	0.6
Public works and social assistance	0.4	0.5	0.4	0.4	0.0
Food subsidies	0.0	0.0	0.0	0.0	0.0
Agricultural price support	0.2	0.2	0.1	0.1	0.6
Housing	1.0	0.7	0.5	0.2	0.6
Youth Employment Support Fund	0.1	0.2	0.2	0.2	0.2
Other transfers	1.9	1.4	2.8	3.3	4.5
Interests on debt	3.9	3.9	3.9	4.0	3.5
Capital expenditure	7.3	7.5	5.8	7.9	8.5
Special accounts balance	0.0	-0.2	-0.2	0.0	-0.5
Net lending by the treasury	-0.1	0.0	0.0	0.0	-0.2
Allocation to the Rehabilitation & Recapitalization Fund 2/	0.6	0.0	0.0	0.0	0.0

Source: Algerian authorities.

1/ Including net lending and operations of the Rehabilitation Fund.

2/ Excluding the compensation for commercial bank's foreign exchange losses on principal payments of external debt contracted on behalf of the treasury.

Table 20. Algeria: Sectoral Allocation of Budgetary Capital Expenditure, 1997–2001 1/

	1997	1998	1999	2000	2001
	(In millions of dinars)				
Agriculture and fishery	5,878	7,469	6,562	8,595	20,339
Irrigation and waterworks	23,120	29,804	31,649	34,462	38,127
Industry and energy	6,810	8,620	8,553	7,278	6,448
Tourism	13	11	13	9	126
Economic infrastructure	27,037	23,262	30,068	34,501	53,903
Housing	9,848	52,693	60,709	69,511	78,248
Education and professional training	28,811	33,527	35,177	38,819	53,762
Social infrastructure	7,298	8,857	9,187	12,298	17,499
Administrative infrastructure	14,164	23,295	22,905	29,341	31,125
Urban development	20,388	20,789	23,056	30,948	36,067
Not allocated	50,327	21,373	21,683	24,470	35,437
Total	237,194	229,700	249,562	290,232	371,081
	(Annual percentage change)				
Agriculture and fishery	-18.6	27.1	-12.1	31.0	136.6
Irrigation and waterworks	35.3	28.9	6.2	8.9	10.6
Industry and energy	17.5	26.6	-0.8	-14.9	-11.4
Tourism	62.5	-15.4	18.2	-30.8	1,300.0
Economic infrastructure	21.9	-14.0	29.3	14.7	56.2
Housing	11.4	435.1	15.2	14.5	12.6
Education and professional training	18.2	16.4	4.9	10.4	38.5
Social infrastructure	-10.7	21.4	3.7	33.9	42.3
Administrative infrastructure	15.2	64.5	-1.7	28.1	6.1
Urban development	-1.8	2.0	10.9	34.2	16.5
Not allocated	11.4	-57.5	1.5	12.9	44.8
Total	12.7	-3.2	8.6	16.3	27.9
	(In percent of total)				
Agriculture and fishery	2.5	3.3	2.6	3.0	5.5
Irrigation and waterworks	9.7	13.0	12.7	11.9	10.3
Industry and energy	2.9	3.8	3.4	2.5	1.7
Tourism	0.0	0.0	0.0	0.0	0.0
Economic infrastructure	11.4	10.1	12.0	11.9	14.5
Housing	4.2	22.9	24.3	24.0	21.1
Education and professional training	12.1	14.6	14.1	13.4	14.5
Social infrastructure	3.1	3.9	3.7	4.2	4.7
Administrative infrastructure	6.0	10.1	9.2	10.1	8.4
Urban development	8.6	9.1	9.2	10.7	9.7
Not allocated	21.2	9.3	8.7	8.4	9.5
Total	100.0	100.0	100.0	100.0	100.0

Source: Algerian authorities.

1/ Data are on a commitment basis.

Table 21. Algeria: Central Government Domestic Debt, 1997–2001

(In billions of dinars; end of period)

	1997	1998	1999	2000	2001
Total domestic debt 1/	578.3	616.2	727.4	1,022.9	1,001.5
Treasury, equipment and C/C bills	61.4	80.0	113.6	80.5	83.4
Central bank overdrafts	164.4	164.4	152.4	146.4	139.1
Refinancing bonds	352.4	371.8	398.2	735.1	720.3
Public enterprises, EPIC, agroindustries	234.8	227.7	236.5	224.6	214.8
Supplementary restructuring debt	0.0	0.0	0.0	346.2	311.6
OPGI (real estate companies)	82.2	106.3	124.6	161.0	161.0
Farmers' debt	0.0	0.0	0.0	0.0	15.0
Banks	32.4	35.8	35.8	0.0	15.2
Solidarity bonds	3.0	2.0	1.3	0.0	0.0
Obligations of CNAC	0.0	0.0	0.0	3.3	2.7
Bonds (CNR)	0.0	0.0	46.3	43.2	40.1
Bonds (CNAS)	0.0	0.0	16.9	17.7	18.6
Memorandum items:					
Domestic debt as percent of GDP	20.8	21.9	22.6	25.1	23.7
GDP (In billions of dinars)	2,780.2	2,810.1	3,215.1	4,078.7	4,222.1

Source: Algerian authorities.

1/ Excluding the blocked account at the Bank of Algeria and other deposits.

Table 22. Algeria: Housing Supply, 1997–2001

	1997	1998	1999	2000	2001
(In thousands of dwellings delivered)					
Formal	111.6	121.4	124.2	130.1	102.0
Social	95.6	112.1	116.8	120.5	96.0
Rental	46.5	51.6	42.0	60.5	45.8
Owner occupied	49.1	60.5	74.8	60.0	50.2
Other formal	16.0	9.3	7.4	9.6	6.0
Public	14.3	8.3	6.6	7.4	4.8
Private	1.6	1.0	0.8	2.2	1.1
Autoconstruction	30.0	30.0	30.0	32.0	30.0
Total	141.6	151.4	154.2	162.1	132.0
(In percent of total)					
Formal	78.8	80.2	80.5	80.3	77.3
Social	67.5	74.0	75.7	74.4	72.7
Rental	32.8	34.1	27.2	37.3	34.7
Owner occupied	34.7	40.0	48.5	37.0	38.0
Other formal	11.3	6.1	4.8	5.9	4.5
Public	10.1	5.5	4.3	4.6	3.7
Private	1.1	0.7	0.5	1.3	0.9
Autoconstruction	21.2	19.8	19.5	19.7	22.7
Total	100.0	100.0	100.0	100.0	100.0

Source: Algerian authorities.

Table 23. Algeria: Monetary Survey, 1997–2001 1/

	1998	1999	2000	2001
	(In billions of dinars)			
Foreign assets (net)	280.7	169.6	775.9	1,310.8
Central bank	278.7	172.6	774.3	1,313.6
Commercial banks	2.0	-3.0	1.6	-2.8
Net domestic assets	1,311.7	1,619.6	1,246.5	1,162.7
Domestic credit	1,629.4	1,998.6	1,671.1	1,648.1
Credit to government (net)	723.2	847.9	677.4	569.7
Central bank 2/	99.3	159.0	-156.4	-276.3
Commercial banks 3/	535.5	592.1	737.7	739.6
CCP and treasury deposits	88.4	96.8	96.1	106.4
Credit to the nongovernment 3/	906.2	1,150.7	993.7	1,078.4
Government lending funds	-15.2	-14.5	-22.3	-12.7
Medium- and long-term foreign liabilities	-39.0	-39.5	-27.6	-24.5
Other items (net)	-263.5	-325.0	-374.7	-448.2
Money plus quasi-money	1,592.5	1,789.4	2,022.5	2,473.5
Money	826.4	905.2	1,048.1	1,238.5
Currency outside banks	390.4	440.0	484.5	577.2
Demand deposits	347.6	368.4	467.5	554.9
Deposits with the treasury and the postal checking system	88.4	96.8	96.1	106.4
Quasi-money	766.1	884.2	974.4	1,235.0
	(Annual percentage change)			
Money and quasi-money	...	12.4	13.0	22.3
Money	...	9.5	15.8	18.2
Quasi-money	...	15.4	10.2	26.7
Net domestic assets	...	23.5	-23.0	-6.7
Domestic credit	...	22.7	-16.4	-1.4
Credit to government 3/	...	17.2	-20.1	-15.9
Credit to nongovernment 3/	...	27.0	-13.6	8.5
	(In percent)			
Memorandum items:				
Total liquidity/GDP	56.7	55.7	49.6	58.6
Money/GDP	29.4	28.2	25.7	29.3
Currency outside banks/GDP	13.9	13.7	11.9	13.7
Domestic credit/GDP	58.0	62.2	41.0	39.0
Money/M2	51.9	50.6	51.8	50.1
Currency outside banks/M2	24.5	24.6	24.0	23.3
Money multiplier	3.9	4.0	3.7	3.2
Nominal GDP (in billions of dinars)	2,810.1	3,215.1	4,078.7	4,222.1

Source: Bank of Algeria.

1/ Including savings banks.

2/ Includes, as a net item, deposits of the BAD and ministries with the central bank.

3/ This includes the impact of banks' restructuring packages. The conversion of banks' claims on public enterprises in banks' claims on the government results, other things being equal, in a decrease in credit to the economy and an equal increase in credit to the government.

Table 24. Algeria: Balance Sheet of the Bank of Algeria, 1997–2001

	1997	1998	1999	2000	2001
(In billions of dinars)					
Net foreign assets	342.9	278.7	172.6	774.3	1,313.6
Net domestic assets	13.7	124.8	276.9	-224.1	-535.8
Credit to government	155.7	99.3	159.0	-156.4	-276.3
Credit to banks	219.1	226.3	310.8	170.5	0.0
Other credit		0.3	0.6	0.7	0.7
Other items net	-361.1	-201.1	-193.5	-238.9	-260.2
Reserve money	356.6	403.5	449.5	550.2	777.8
Currency in circulation	341.7	396.4	444.9	491.5	584.5
Bankers deposits	14.9	7.1	4.6	58.7	193.3
(Annual change; in billions of dinars)					
Net foreign assets	220.5	-64.2	-106.1	601.7	539.3
Net domestic assets	-169.8	111.1	152.1	-501.0	-311.7
Credit to government	-16.7	-56.4	59.7	-315.4	-119.9
Credit to banks	-40.0	7.2	84.5	-140.3	-170.5
Other credit					
Other items net	-113.0	160.0	7.6	-45.4	-21.3
Reserve money	50.7	46.9	46.0	100.7	227.6
Currency in circulation	48.2	54.7	48.5	46.6	93.0
Bankers deposits	2.5	-7.8	-2.5	54.1	134.6
(Annual percentage change)					
Net foreign assets	180.1	-18.7	-38.1	348.6	69.7
Net domestic assets	-92.5	810.9	121.9	-180.9	139.1
Credit to government	-9.7	-36.2	60.1	-198.4	76.7
Credit to banks	-15.5	3.3	37.3	-45.1	-100.0
Reserve money	16.6	13.2	11.4	22.4	41.4
Currency in circulation	16.4	16.0	12.2	10.5	18.9
Bankers deposits	20.2	-52.3	-35.2	1,176.1	229.3

Source: Bank of Algeria.

Table 25. Algeria: Distribution of Credit to the Economy by Maturity, 1997–2001 1/

	1997	1998	1999	2000	<u>Est.</u> 2001
(In billions of dinars; end of period)					
Short term	449.8	407.6	555.6	467.0	513.3
Medium term	285.9	317.0	371.0	300.1	315.9
Long term	5.6	6.5	8.5	9.1	10.1
Total	741.3	731.1	935.1	776.2	839.3
(Annual percentage change)					
Short term	-25.1	-9.4	36.3	-15.9	9.9
Medium term	68.5	10.9	17.0	-19.1	5.3
Long term	7.7	16.1	30.8	7.1	11.0
Total	-4.6	-1.4	27.9	-17.0	8.1
(In percent of total credit)					
Short term	60.7	63.7	59.4	60.2	61.2
Medium term	38.6	35.5	39.7	38.7	37.6
Long term	0.7	0.8	0.9	1.2	1.2
Total	100.0	100.0	100.0	100.0	100.0

Source: Bank of Algeria.

1/ Credit to the economy has been affected by banks restructuring packages. The conversion of banks' claims on public enterprises in banks' claims on the government results, other things being equal, in a decrease in credit to the economy.

Table 26. Algeria: Distribution of Credit to the Economy by Sector, 1997–2001 1/

	1997	1998	1999	2000	2001
(In billions of dinars; end of period)					
Public sector	632.6	601.9	760.5	530.1	549.3
Private sector	108.6	129.1	174.5	245.9	289.8
Local administration	0.1	0.1	0.1	0.2	0.2
Total	741.3	731.1	935.1	776.2	839.3
(Annual percentage change)					
Public sector	-0.8	-4.9	26.3	-30.3	3.6
Private sector	-21.2	18.9	35.2	40.9	17.9
Local administration	-91.7	0.0	0.0	100.0	0.0
Total	-4.6	-1.4	27.9	-17.0	8.1
(In percent of total credits)					
Public sector	85.3	82.3	81.3	68.3	65.4
Private sector	14.6	17.7	18.7	31.7	34.5
Local administration	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

Source: Bank of Algeria.

1/ Credit to the economy has been affected by banks restructuring packages. The conversion of banks' claims on public enterprises in banks' claims on the government results, other things being equal, in a decrease in credit to the economy.

Table 27. Algeria: Structure of Interest Rates, 1997-2001

(In percent per annum)

	As of Dec. 1997	As of Dec. 1998	As of Dec. 1999	As of Dec. 2000	As of Dec. 2001
Central bank rediscount	11.0	9.5	8.5	6.0	6.0
Central bank overdraft	24.0	19.0	19.0	19.0	19.0
Money market					
Repurchase agreements 1/	13.33	13.00	12.00	10.75	...
Auctions	14.50	11.82	11.10	8.29	...
Commercial banks' deposit rate 2/	8.5-12.0	8.5-12.0	8.5-10.0	7.0-8.5	5.50-6.75
Commercial banks' lending rate	9.0-13.0	8.5-12.5	8.5-11.3	8.5-11.2	8.0-11.0
Foreign currency deposits					
Denominated in U.S. dollars 3/	5.74	5.35	5.20	...	...
CNEP (savings and housing)	...	...	...	...	...
Deposit rate	...	...	...	...	...
Savings	16.0	12.0	7.5-9.0	6.5-7.0	5.0-6.0
Housing	12.0	10.0	7.0-9.0	6.0-6.5	5.50
Lending rate (housing)					
Individuals	10.0-17.5	8.5-10.0	8.5-10.25	10.5-10.25	8.00-9.75
Developers	10.00-17.50	8.5-10.0	8.5-10.25	10.5-10.25	8.0
Treasury bonds					
Negotiable					
13 weeks	12.93	10.00	9.80	5.90	5.30
26 weeks	13.93	10.04	9.90	6.20	5.69
52 weeks	...	9.96	10.00	7.50	6.20
2 years	...	8.00	8.00	6.00	...
Nonnegotiable	...	...	...	8.0	...
6 months	9.50	...	...	...	...
12 months	10.0	...	...	...	...
24 months	11.25	...	...	...	...
36 months	13.0	...	...	...	...
Equipment bonds					
1 year	...	...	...	...	...
2 years	...	...	...	...	...
3-20 years	11.0-15.0	...	...	...	...
Negotiable	18.0	...	...	...	...
Memorandum item:					
Consumer price index (12-months increase)	5.7	5.0	2.6	0.3	

Source: Algerian authorities.

1/ Central bank overnight rate.

2/ No interest is paid on sight deposits; interest on term deposits is subject to a 15 percent securities revenue tax, whereas government bond yields are tax exempt.

3/ Free for banks to determine on the basis of Libor plus 150 basis points.

Table 28. Algeria: Expansion of Banks' Network, 1997–2001

	1997	1998	1999	2000	2001
	(Number of branches)				
Bank of Algeria	49	49	49	49	49
Banque de l'Agriculture et du Développement Rural (BADR)	305	307	305	310	315
Banque de Développement Local (BDL)	168	164	170	152	170
Banque Extérieure d'Algérie (BEA)	74	74	74	76	76
Banque Nationale d'Algérie (BNA)	183	187	181	182	189
Crédit Populaire d'Algérie (CPA)	133	134	135	119	135
Caisse Nationale d'Épargne et de Prévoyance (CNEP)	174	180	185	185	185
Bank El Baraka	5	5	5	5	8
Union Bank	1	1	1	1	1
El-Khalifa Bank	0	5	5	24	24
Mouna Bank	0	1	1	1	1
Société de Refinancement Hypothécaire (SRH)	0	1	1	1	1
Banque Commerciale et Industrielle d'Algérie (BCIA)	0	1	1	12	12
Citibank	0	1	1	1	1
Compagnie Algérienne de Banque (CAB)	0	0	1	4	4
Arab Banking Corporation (ABC Algeria)	0	0	0	1	1
Société Générale	0	0	0	1	2
Natexis El Amana Bank	0	0	0	1	1
Algerian International Bank	0	0	0	1	1
Al Rayan Algerian Bank	0	0	0	1	1
Arab Bank	0	0	0	1	1
Total	1,092	1,110	1,115	1,128	1,178

Source: Bank of Algeria

Table 29. Algeria: Balance of Payments, 1997-2001

(In billions of U.S. dollars; unless otherwise indicated)

	1997	1998	1999	2000	2001
Current account	3.45	-0.91	0.02	9.14	7.06
Trade balance	5.69	1.51	3.36	12.30	9.61
Exports, f.o.b.	13.82	10.14	12.32	21.65	19.09
Hydrocarbons	13.18	9.77	11.91	21.06	18.53
Other exports	0.64	0.37	0.41	0.59	0.56
Imports, f.o.b.	-8.13	-8.63	-8.96	-9.35	-9.48
Services account (net)	-3.30	-3.48	-4.13	-3.95	-3.22
Nonfactor services (net)	-1.08	-1.48	-1.84	-1.45	-1.53
Credit	1.07	0.74	0.72	0.91	0.91
Debit	-2.15	-2.22	-2.56	-2.36	-2.44
Factor services (net)	-2.22	-2.00	-2.29	-2.50	-1.69
Credit	0.26	0.37	0.22	0.38	0.85
Debit	-2.48	-2.37	-2.51	-2.88	-2.54
Interest payments	-2.11	-1.95	-1.85	-1.72	-1.52
Other	-0.37	-0.42	-0.66	-1.16	-1.02
Transfers (net)	1.06	1.06	0.79	0.79	0.67
Capital account	-2.29	-0.83	-2.40	-1.57	-0.87
Medium- and long-term capital	-2.25	-0.83	-1.51	-1.54	-0.81
Direct investment, net	0.26	0.50	0.46	0.42	1.18
Official capital, net	-2.51	-1.33	-1.97	-1.96	-1.99
Drawings	1.69	1.83	1.08	0.80	0.91
Total amortization	-4.20	-3.16	-3.04	-2.76	-2.90
Short-term capital and errors and omissions	-0.04	0.00	-0.89	-0.03	-0.06
Overall balance	1.16	-1.74	-2.38	7.57	6.19
Financing	-1.16	1.74	2.38	-7.57	-6.19
Change in gross official reserves (increases -)	-3.96	1.20	2.40	-7.51	-6.05
Fund repurchases	-0.35	-0.45	-0.36	-0.10	-0.14
Increase in other liabilities of Bank of Algeria(+)	0.00	0.00	-0.05	0.00	0.00
Exceptional financing	3.15	0.99	0.39	0.04	0.00
Rescheduling	2.22	0.52	0.00	0.00	0.00
Multilateral balance of payments support	0.34	0.13	0.08	0.04	0.00
Fund purchases	0.59	0.34	0.31	0.00	0.00
Memorandum items:					
Gross official reserves (in billions of US\$) 1/	8.05	6.85	4.40	11.90	17.96
In months of total imports	9.39	7.57	4.58	12.19	18.08
As percent of debt service	120.80	123.10	84.60	248.90	24.85
Algerian crude oil price (US\$/barrel)	19.49	12.94	17.91	28.50	24.85
Gross external debt (in billions of US\$) 2/	31.20	30.47	28.32	25.26	22.57
Debt service (in billions of US\$)	6.66	5.56	5.25	4.58	4.56
Debt service/exports (in percent)	29.83	46.32	40.26	20.30	22.80
External debt to exports ratio (in percent)	209.54	280.06	217.14	111.97	112.86
Debt/GDP (in percent)	65.18	64.34	59.44	46.65	41.28
Current account (in percent of GDP)	7.21	-1.92	0.04	16.89	12.92
GDP (in billions of US\$)	47.87	47.35	47.64	54.15	54.68
Exchange rate (DA/US\$, average)	57.71	58.74	66.57	75.26	77.22

Source: Bank of Algeria

1/ According to the information provided by the Bank of Algeria all official reserves are liquid.

2/ According to the Bank of Algeria, its actual data include short-term debt, use of Fund resources, and debt to Russia.

Table 30. Algeria: Breakdown of Imports and Exports, 1997–2001

	1997	1998	1999	2000	2001
(In millions of U.S. dollars)					
Imports					
Food	2,381	2,325	2,438	2,356	2,346
Energy	124	116	119	106	97
Raw materials	467	496	492	495	445
Semi finished	1,464	1,581	1,556	1,690	1,747
Agricultural equipment	20	39	76	84	154
Industrial equipment	2,652	2,864	2,949	2,773	3,293
Consumer goods	1,024	1,211	1,329	1,841	1,400
Total	8,132	8,632	8,960	9,345	9,482
Exports					
Food	47	33	22	30	30
Energy	13,181	9,774	11,910	21,061	18,531
Raw materials	51	46	44	42	39
Semi finished	486	255	272	477	413
Agricultural equipment	1	4	24	12	22
Industrial equipment	29	14	36	47	42
Consumer goods	29	18	18	15	14
Total	13,824	10,143	12,318	21,684	19,091
<i>Of which:</i>					
Nonhydrocarbon	643	370	416	623	560
(In percent)					
As share of total imports					
Food as share of imports	29.3	26.9	27.2	25.2	24.7
Industrial goods	32.6	33.2	32.9	29.7	34.7
Consumer goods	12.6	14.0	14.8	19.7	14.8
As share of total exports					
Nonhydrocarbons	4.7	3.6	3.4	2.9	2.9

Source: Algerian authorities.

Table 31. Algeria: Volume of Hydrocarbon Exports, 1997–2001

	1997	1998	1999	2000	2001
	(In billions of BTUs)				
Petroleum and petroleum products					
Crude petroleum	746	819	768	850	826
Condensate	772	767	677	704	698
Refined petroleum products	616	549	593	594	622
Liquefied petroleum gas (LPG)	343	392	310	339	394
Total	2,476	2,526	2,347	2,487	2,539
Natural gas and liquefied natural gas					
Liquefied natural gas (LNG)	935	955	1,032	1,054	1,017
Natural gas	903	1,027	1,205	1,286	1,174
Total	1,838	1,982	2,237	2,340	2,191
Total hydrocarbon trade	4,314	4,508	4,584	4,827	4,730
	(In percent of total hydrocarbon volumes)				
Petroleum and petroleum products					
Crude petroleum	17.3	18.2	16.8	17.6	17.5
Condensate	17.9	17.0	14.8	14.6	14.7
Refined petroleum products	14.3	12.2	12.9	12.3	13.1
Liquefied petroleum gas (LPG)	7.9	8.7	6.8	7.0	8.3
Total	57.4	56.0	51.2	51.5	53.7
Natural gas and liquefied natural gas					
Liquefied natural gas (LNG)	21.7	21.2	22.5	21.8	21.5
Natural gas	20.9	22.8	26.3	26.6	24.8
Total	42.6	44.0	48.8	48.5	46.3

Source: Algerian authorities.

Table 32. Algeria: Exports of Hydrocarbons, 1997–2001

	1997	1998	1999	2000	2001
Crude petroleum					
Value (in millions of US\$)	2,661.7	1,942.9	2,724.3	4,815.1	3,994.4
<i>Of which:</i> Profit repatriation	312.8	358.2	550.4	852.1	728.4
Volume (in millions of barrels)	136.6	150.2	151.5	169.1	164.4
Volume (in millions of metric tons)	17.4	19.0	19.2	21.4	20.8
Unit price (in US\$ per barrel)	19.5	12.9	17.8	28.5	24.3
Condensate					
Value (in millions of US\$)	2,800.9	1,952.9	2,432.3	3,999.6	3,170.2
<i>Of which:</i> Profit repatriation	35.0	43.4	57.8	178.0	153.8
Volume (in millions of barrels)	140.1	140.5	134.8	140.2	138.9
Volume (in millions of metric tons)	16.0	15.9	15.3	15.9	15.6
Unit price (in US\$ per barrel)	20.0	13.9	18.1	28.5	22.8
Refined petroleum products					
Value (in millions of US\$)	2,274.6	1,486.7	1,996.0	3,282.4	2,736.6
Volume (in millions of barrels)	111.5	99.3	106.8	107.0	112.0
Volume (in millions of metric tons)	14.4	12.7	13.5	13.6	14.2
Unit price (in US\$ per barrel)	20.4	15.0	18.7	30.7	24.4
Liquefied petroleum gas (LPG)					
Value (in millions of US\$)	988.2	766.6	1,152.0	2,118.6	1,848.5
<i>Of which:</i> Profit repatriation	19.6	22.4	51.9	139.2	141.0
Volume (in millions of barrels)	59.4	68.1	79.7	81.8	95.1
Volume (in millions of metric tons)	5.0	5.7	6.8	6.8	8.1
Unit price (in US\$ per barrel)	16.6	11.3	14.5	25.9	19.4
Liquefied natural gas (LNG)					
Value (in millions of US\$)	2,460.3	1,924.8	1,832.1	3,290.9	3,250.9
Volume (in millions of m3 of LNG)	39.9	24.5	43.8	44.7	43.2
Volume (in billions of BTUs)	946.8	955.1	1,021.6	1,047.8	1,017.0
Unit price (in US\$ per m3 of LNG)	61.1	48.0	41.8	73.6	75.2
Unit price (in US\$ per million BTUs)	2.6	2.0	1.8	3.1	...
Natural gas (NG)					
Value (in millions of US\$)	1,995.5	1,700.1	1,768.2	3,554.7	3,531.3
Volume (in billions of m3)	24.1	27.5	32.1	34.3	31.1
Volume (in billions of BTUs)	909.3	1,026.6	1,204.2	1,294.1	1,174.0
Unit price (in US\$ per m3)	82.5	63.8	55.0	103.6	113.5
Unit price (in US\$ per million BTUs)	2.2	1.7	1.5	2.7	3.0
Total hydrocarbon receipts (in US\$ mn)					
<i>Of which:</i> Share of Sonatrach's partners	13,181.3	9,774.0	11,904.9	21,061.3	18,531.9
	370.3	420.0	660.0	1,169.3	1,023.2
(In percent of total exports)					
Crude petroleum	20.2	19.9	22.9	22.9	21.6
Condensate	21.2	20.0	20.4	19.0	17.1
Refined petroleum products	17.3	15.2	16.8	15.6	17.1
Liquefied petroleum gas (LPG)	7.5	7.8	9.7	10.1	14.8
Gas	33.8	37.1	30.3	32.5	36.6
Liquefied natural gas (LNG)	18.7	19.7	15.4	15.6	17.5
Natural gas (NG)	15.1	17.4	14.9	16.9	19.1

Source: Algerian authorities.

Table 33. Algeria: Trade Indices, 1997-99

	1997	1998	1999
	(1980 = 100)		
Total export volume index	195.2	201.1	213.1
Nonhydrocarbon export volume index	188.5	151.7	124.9
Total import volume index	84.7	90.2	92.0
Food import volume index	133.2	136.4	140.5
Terms of trade index	51.9	38.9	49.0
	(Annual percentage change)		
Total export volume index	9.8	3.0	6.0
Nonhydrocarbon export volume index	21.1	-19.5	-17.7
Total import volume index	-2.8	6.5	2.0
Food import volume index	1.2	2.4	3.0
Terms of trade index	3.4	-25.0	25.8

Source: Algerian authorities.

Table 34. Algeria: External Debt, 1997–2000 1/

(In millions of U.S. dollars; unless otherwise indicated)

	1997	1998	1999	2000
Total external debt 1/	30,895	30,676	28,004	25,002
Long-term debt	28,715	28,480	25,903	23,062
Official creditors	18,249	19,425	18,473	17,181
Multilateral (excluding IMF)	3,854	4,390	4,244	4,124
<i>Of which:</i>				
World Bank	1,795	1,676	1,540	1,425
Bilateral	14,395	15,036	14,230	13,056
Concessional	2,789	2,909	2,773	2,385
Private creditors	10,465	9,054	7,430	5,881
Commercial banks	4,261	3,948	3,612	2,948
Supplier 2/	420	344	...	...
Other private	5,780	4,758	3,818	2,934
IMF	2,018	2,011	1,906	1,718
Short-term debt	162	186	195	222
Disbursements	2,110	1,510	1,449	965
Official creditors	1,207	767	743	524
Multilateral (excluding IMF)	792	594	432	337
<i>Of which:</i>				
World Bank	250	56	62	58
Bilateral	415	173	311	187
Private creditors	438	400	401	441
IMF purchases	465	344	306	0
Principal repayment	2,369	3,139	3,386	2,812
Official creditors	1,044	976	1,122	1,051
Multilateral (excluding IMF)	698	412	425	351
<i>Of which:</i>				
World Bank	234	208	199	
Bilateral	346	565	697	700
Private creditors	975	1,728	1,905	1,668
IMF repurchases	350	435	359	93
Interest payments	2,049	1,993	1,811	1,654
Official creditors	1,125	1,196	1,190	1,130
Multilateral (excluding IMF)	252	279	319	297
<i>Of which:</i>				
World Bank	120	124	126	128
Bilateral	873	917	871	833
Private creditors	818	683	533	422
IMF charges	93	99	78	92
Short-term debt	13	15	10	10
Total debt service	4,418	5,131	5,196	4,467
Official creditors	2,170	2,172	2,311	2,182
Multilateral (excluding IMF)	951	691	744	648
Bilateral	1,219	1,481	1,568	1,533
Private creditors	1,793	2,411	2,438	2,090
IMF repurchases and charges	443	534	437	185
Short-term debt	13	15	10	10

Table 34. Algeria: External Debt, 1997–2000 1/ (concluded)

(In millions of U.S. dollars; unless otherwise indicated)

	1997	1998	1999	2000
Debt restructurings				
Total amount rescheduled	2,295	559	2	0
Principal rescheduled	2,114	543	0	0
Official creditors	219	81	0	0
Private creditors	1,895	462	0	0
Interest rescheduled	89	0	0	0
Official creditors	20	0	0	0
Private creditors	69	0	0	0
Average terms on new commitments (all creditors)				
Interest (in percent)	5.5	5.3	5.1	5.6
Maturity (in years)	11.1	11.2	22.8	8.3
Grace period (in years)	3.2	3.1	2	2
Grant element (in percent)	17.0	19.5	21.4	10.4
Average terms on new commitments (official creditors)				
Interest (in percent)	5.5	6	4.5	3.9
Maturity (in years)	11.1	14.9	47.2	13.8
Grace period (in years)	3.6	3.6	3.1	3.7
Grant element (in percent)	17.2	19.6	34.1	33.1

Source: World Bank, Debtor Reporting System (DRS).

1/ The World Bank's DRS data which are used in this table may not correspond exactly to the external debt data published by the Algerian authorities

2/ Suppliers' credits comprise export credit guaranteed by an export credit agency as well as other supplier's credit arranged directly with suppliers.

Table 35. Algeria: Stock of External Debt, 1/ Disbursement of Loans,
and Debt Service by Creditor

	Stock of debt in Millions of U.S. dollars (End-2001)	Stock of debt in Percent of Total (End-2001)	Disbursement in Millions of U.S. dollars (2001)	Debt Service in Millions of U.S. dollars (2001)
Bilateral	14,574	66.25	601	2,890
France	2,708	12.3	147	624
Germany	1,033	4.7	94	184
Italy	2,325	10.6	8	549
Japan	1,637	7.4	29	349
Spain	1,576	7.2	43	224
United States	2,212	10.1	211	358
Other OECD	2,213	10.1	51	389
Others 2/	871	4.0	19	213
Multilateral	5,253	23.9	122	1,057
IMF	1,525	6.9	0	254
World Bank	1,330	6.1	24	312
Other institutions	2,398	10.9	98	491
Private	2,171	9.9	0	517
Total	21,999	100.0	723	4,465

Source: Algerian authorities.

1/ Excluding short-term debt of US\$173 million.

2/ According to the Bank of Algeria, its actual data include use of Fund resources and debt to Russia.

Table 36. Algeria: Nominal and Real Effective Exchange Rates, 1990–2001

(1990 = 100)

	Q1	Q2	Q3	Q4
Nominal effective exchange rate				
1990	114.9	110.3	95.3	79.5
1991	54.4	52.4	52.3	40.2
1992	40.3	40.5	39.6	40.9
1993	41.8	41.6	41.9	42.3
1994	42.4	28.0	24.9	22.9
1995	21.9	19.9	18.2	18.0
1996	17.6	17.5	17.1	17.2
1997	18.0	18.4	18.7	18.7
1998	18.9	19.0	18.7	17.8
1999	17.1	17.0	16.9	16.9
2000	16.9	16.9	17.0	17.0
2001	17.0	17.3	17.2	17.3
Real effective exchange rate				
1990	108.3	109.5	95.9	86.3
1991	61.3	61.7	63.5	52.0
1992	54.4	58.9	63.0	67.1
1993	70.7	72.6	74.6	78.0
1994	84.2	59.9	57.7	57.0
1995	57.3	53.3	51.9	52.4
1996	54.3	57.0	55.7	56.4
1997	59.1	60.6	62.4	63.2
1998	64.8	65.3	64.9	62.2
1999	59.5	59.3	59.3	58.7
2000	59.0	57.5	57.1	57.2
2001	57.2	59.7	59.8	60.6

Source: International Monetary Fund.

Algeria: Summary of the Tax System, 2002
(All amounts in Algerian dinars)

Tax	Nature of Tax	Exemptions and Deductions	Rate														
1. Tax on income and profits																	
1.1 Tax on overall income of individuals (<i>Impôt sur le revenu global des personnes physiques</i> - IRG)	Levied on overall Algerian-source net annual income of individuals domiciled in Algeria for tax purposes. Overall net income (the tax base) is defined as the sum of total net income from the following:	<p>Persons whose overall net annual income does not exceed the maximum tax bracket for zero percent IRG rate, i.e. DA 60,000.</p> <p>Persons with motor, mental disabilities, blind, deaf, whose monthly salary is below DA 12,000.</p> <p>The foreign diplomatic community in Algeria, on a reciprocity basis, as well as the activities of young entrepreneurs and others as described in the budget law.</p> <p>Twenty-five percent deduction for the first two fiscal years on activities of veterans of the independence war.</p> <p>Thirty percent deduction on reinvested profits.</p> <p>Thirty-five percent deduction is granted to bakers.</p> <p>(i) Industrial and commercial profits Replaces the former BIC. Tax base calculation:</p> <ul style="list-style-type: none"> • presumptive method, for two groups of taxpayers with annual turnover of no more than DA 1,500,000 (sales) or DA 800,000 (others); • actual profit method for persons whose activity yields higher turnover than the above amounts, including 	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Taxable income bracket</th> <th style="text-align: left;">Rate</th> </tr> </thead> <tbody> <tr> <td>Up to 60,000</td> <td>0</td> </tr> <tr> <td>60,001-180,000</td> <td>10%</td> </tr> <tr> <td>180,001-360,000</td> <td>20%</td> </tr> <tr> <td>360,001-720,000</td> <td>30%</td> </tr> <tr> <td>720,001-1,920,000</td> <td>35%</td> </tr> <tr> <td>Above 1,920,000</td> <td>40%</td> </tr> </tbody> </table>	Taxable income bracket	Rate	Up to 60,000	0	60,001-180,000	10%	180,001-360,000	20%	360,001-720,000	30%	720,001-1,920,000	35%	Above 1,920,000	40%
Taxable income bracket	Rate																
Up to 60,000	0																
60,001-180,000	10%																
180,001-360,000	20%																
360,001-720,000	30%																
720,001-1,920,000	35%																
Above 1,920,000	40%																

Algeria: Summary of the Tax System, 2002
(All amounts in Algerian dinars)

Tax	Nature of Tax	Exemptions and Deductions	Rate						
	those granted concessions, wholesalers, and rental operators for equipment and goods, including durable consumption goods.								
	(ii) Noncommercial profits (as defined in tax code). Tax base calculation: <ul style="list-style-type: none"> • actual profit method, for annual income above DA 300.000; • administrative assessment, for income below DA 300.000. 								
	(iii) Agricultural income (as defined in Arts. 35, 36, and 37 of the law, and in place of the former CUA)								
	(iv) Capital income.	DA 200,000 exempted on incomes from CNEP accounts. Income from shares on the official stock market is exempted from IRG tax for 5 years beginning with the 1998 fiscal year. Income from negotiable bonds and securities of banking institutions with a maturity exceeding five years are exempted from the IRG tax for five years beginning on January 1, 1998.	Ten percent; Thirty percent for income from bearers' notes (bons de caisse anonymes). For CNEP accounts and investments with a maturity exceeding five years (including incomes from mutual funds): One percent if less than DA 200,000 Ten percent for the fraction of income above DA 200,000.						
	(v) Property income: Rental of real estate (whether developed or not).	Eighty percent on rents for housing if rental income is lower than DA 180,000							
	(vi) Wages, salaries, pensions and annuities. A tax withholding at the source is applied to monthly income at the rate of	<table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;">Category</th> <th style="text-align: left;">Discount rate</th> </tr> </thead> <tbody> <tr> <td>Single</td> <td>10%</td> </tr> <tr> <td>Married</td> <td>30%</td> </tr> </tbody> </table>	Category	Discount rate	Single	10%	Married	30%	
Category	Discount rate								
Single	10%								
Married	30%								

Algeria: Summary of the Tax System, 2002
(All amounts in Algerian dinars)

Tax	Nature of Tax	Exemptions and Deductions	Rate										
	<p>15 percent.</p> <p>Temporary or occasional work is subject to withholding at the source at the rate of 15 percent. If the amount does not exceed DA 500,000, there is no further taxation.</p> <p>(vii) Capital gains from the sale of buildings (whether developed or not). The tax rate on such capital gains is 15 percent.</p> <p>Realized gains from the sale of a property resulting from estate bequest are not included in the tax base.</p>	<p>Deduction of hundred percent if the sale occurs more than 15 years after the date of acquisition or establishment of the property;</p> <p>Deduction of 80 percent if the sale occurs between 10 and 15 years following the date of acquisition or establishment of the property;</p> <p>Deduction of 60 percent if the sale occurs between 6 and 10 years after the date of acquisition or establishment of the property;</p> <p>Deduction of 40 percent if the sale occurs between 4 and 5 years after the date of acquisition or establishment of the property;</p> <p>Deduction of 30 percent if the sale occurs between 2 and 4 years after the date of acquisition or establishment of the property.</p>											
1.2 Payroll tax	<p>Flat-rate payment (<i>Versement forfaitaire-VF</i>), allocated in full to local governments.</p> <p>It is a monthly tax levied on all those paying wages. The tax base is identical to that of the IRG.</p>	<p>Temporary exemption of 3 years for new enterprises created by young entrepreneurs.</p> <p>APSI regime (investment promotion scheme).</p>	Four percent on wages										
1.3 Estate tax (<i>Impôt sur le patrimoine</i>)	<p>The tax base is the net value of all property and assets belonging to individuals who:</p> <ul style="list-style-type: none"> • are fiscal residents in Algeria, whether their goods or properties are 	<p>Furniture. Jewels and stones. Gold and precious metals as well as other physical movable property are not required to be declared. Professional items.</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">$<8,000,000$</td> <td style="width: 40%; text-align: right;">0.0%</td> </tr> <tr> <td>8,000,001–10,000,000</td> <td style="text-align: right;">0.5%</td> </tr> <tr> <td>10,000,001–20,000,000</td> <td style="text-align: right;">1.0%</td> </tr> <tr> <td>20,000,001–30,000,000</td> <td style="text-align: right;">1.5%</td> </tr> <tr> <td>30,000,001–50,000,000</td> <td style="text-align: right;">2.0%</td> </tr> </table>	$<8,000,000$	0.0%	8,000,001–10,000,000	0.5%	10,000,001–20,000,000	1.0%	20,000,001–30,000,000	1.5%	30,000,001–50,000,000	2.0%
$<8,000,000$	0.0%												
8,000,001–10,000,000	0.5%												
10,000,001–20,000,000	1.0%												
20,000,001–30,000,000	1.5%												
30,000,001–50,000,000	2.0%												

Algeria: Summary of the Tax System, 2002
(All amounts in Algerian dinars)

Tax	Nature of Tax	Exemptions and Deductions	Rate
	located in Algeria or outside Algeria; • are not fiscal residents in Algeria, but have goods or properties located in Algeria.		>50,000,000 2.5%
1.3.1. Real Estate tax <i>(Impôt sur la propriété immobilière)</i>			
1.3.1.1 Tax on developed property <i>(Taxe foncière sur les propriétés bâties).</i>	Allocated in full to local governments. Annual tax on houses, factories, and all developed properties, fixed factory equipment, building lots, and land for industrial and commercial use.	Exemption for the buildings housing the diplomatic and consular missions on a reciprocity basis, new constructions (for 7 years), and constructions used for the activities of young entrepreneurs, and social housing belonging to the public sector. Exemption of property allocated to public service and not generating income, property belonging to the central government, local governments, or public institutions and for administrative use. The following are exempted: owner-occupiers with a monthly income of less than twice the minimum wage (SNMG) and whose developed property tax is less than DA 800.	Three percent, determined according to the fiscal rental value by square meter of taxable area. Exempted individuals are subject to an annual contribution of DA 100.
1.3.1.2 Tax on undeveloped property <i>(Taxe foncière sur les propriétés non-bâties).</i>	Allocated in full to local governments. Annual tax levied on undeveloped properties.	Some temporary exemptions are granted by the law. Property belonging to central and local governments.	Three percent for agricultural land Five percent otherwise
1.3.2. Transfer and registration duties <i>(Droits de mutation et d'enregistrement)</i>	Transfer duties on the net value of property. For transfers as a result of death, the rate is based on the amount transferred and the degree of kinship. Lease and insurance documents, contracts, and documents establishing	Transfers of central and local governments' property and HLM offices are exempt. Certain specific exemptions are provided for socioeconomic objectives.	Fixed taxes of DA 500 to DA 3000 Transfer of assets and shares Assignment of claims Exchange Transfer of goodwill Establishment of firms of capital

Algeria: Summary of the Tax System, 2002
(All amounts in Algerian dinars)

Tax	Nature of Tax	Exemptions and Deductions	Rate
	or modifying companies are subject to fixed and/or proportional duties.		stock 1-2% Sale of movable property 5% Direct inheritance per blocks of assets 0-50% Transfer of buildings 5% State transactions 5%
1.3.3. Recordation tax (<i>Taxe de publicité foncière</i>)	Tax based on the net value of taxes stated in documents pertaining to property transfer and mortgage registration, memoranda and subrogation, reduction, and satisfaction.		1%
1.3.4. Cleanup and environmental tax (<i>Taxe d'assainissement</i>)	Tax levied to the benefit of municipalities where a household waste removal service is operating.		DA 375 per household when less than 50,000 inhabitants DA 500-1000 per household dwelling DA 1,000-10,000 per commercial, professional or craftsmanship dwelling. DA 5,000-20,000 for prepared land. DA 10,000-20,000 per commercial, professional or craftsmanship dwelling generating large waste. Rates are determined in each commune following APC deliberations and view of authority in charge.
1.4 Corporate profit tax (<i>Impôt sur les bénéfices des personnes morales ou des sociétés—IBS</i>)	Levied on all total annual profit or net income earned in Algeria by companies, whatever their form or purpose, except as exempted by the law (Art. 138). Tax is initiated by a taxpayer filing before April 1. However, withholding at the source is done for:	Chargeable to all companies except: <ul style="list-style-type: none"> • partnerships and joint ventures in accordance with the commercial code; • civil corporations not established as joint stock companies; • other special regimes provided for under the finance law (which may opt to pay the corporate profit tax). 	General rate: 30 percent Reduced rate: 15 percent (for reinvested profits) Specific rates: Income from stocks: 20 percent (distributed

Algeria: Summary of the Tax System, 2002
(All amounts in Algerian dinars)

Tax	Nature of Tax	Exemptions and Deductions	Rate
	<ul style="list-style-type: none"> • income from stocks and securities; • income from loans, deposits. • income foreign companies that do not have permanent bases in Algeria for service providers, and profits of sales depending on the duration of possession, as follows: 70 percent for a duration under 3 years, and 35 percent for over 3 years. 	<p>Exemptions:</p> <ul style="list-style-type: none"> • activities of young entrepreneurs; • activities declared of priority: for 3-6 years, depending on establishment; • consumer cooperatives; • associations of disabled persons; • theater activities; • tourism enterprises: for 10 years; • sport-oriented enterprises or commercial companies: 5 years; • regime APSI (investment promotion scheme). 	<p>dividends)</p> <p>Income from loans and deposits: 10 percent</p> <p>Financial income (notes): 30 percent</p> <p>Income from companies without professional base in Algeria: 18 percent</p> <p>Income of companies providing management services: 20 percent</p> <p>Gross income of maritime transportation companies: 10 percent (except if reciprocity)</p>
2. Tax on production and consumption			
2.1 Value added tax (VAT) (<i>Taxe sur la valeur ajoutée</i> - TVA)	<p>VAT is levied on sales, building construction, and services other than those subject to special taxes of an industrial, commercial, or artisanal nature, carried out in Algeria, regardless of the legal status of the parties and the form or nature of their involvement. VAT is also optional for exporters, oil companies, or other VAT payers, enterprises benefiting from duty-free purchases. Producers, wholesalers, branch corporations, and related activities, are subject to this tax.</p> <p>The proceeds of VAT are distributed as follows (Art. 161):</p> <p>85 percent to the central government budget</p>	<p>Exemptions: retail resale, agricultural sector, activities subject to specific indirect taxes, merchandise exports, and individuals with total turnover sales below or equal to DA 800,000 for service providers and up to DA 1,500,000 for all others, are exempted from the VAT.</p>	<p>Reduced rate 7%</p> <p>Regular rate 17%</p> <p>VAT proceeds are distributed as follows (Art. 161):</p> <p>For domestic transactions:</p> <ul style="list-style-type: none"> - 85% Central Government budget - 10% for the FCCL - 5% for the communes <p>For imports:</p> <ul style="list-style-type: none"> - 85% Central Government budget - 15% for the FCCL

Algeria: Summary of the Tax System, 2002
(All amounts in Algerian dinars)

Tax	Nature of Tax	Exemptions and Deductions	Rate																
	15 percent to local governments																		
2.2 Domestic consumption tax (<i>Droit intérieur de consommation</i>)	Tax on the consumer goods listed in the left-hand column. The chargeable event consists of consumption of the taxable goods. As to gold, silver or platinum artifacts, tax recovery as well as guarantee rights occur when put to test (checking out the legal title and stamping). Alcohols, wines and other alcoholic beverages, gold, silver or platinum artifacts.	Levied on exported products, including alcohol (which is tax-free when used for industrial purposes).	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Product</th> <th style="text-align: right; border-bottom: 1px solid black;">Rate (DA)</th> </tr> </thead> <tbody> <tr> <td>A. Beer</td> <td style="text-align: right;">3,610/hl</td> </tr> <tr> <td>B. Cigarettes</td> <td></td> </tr> <tr> <td> a. dark tobacco</td> <td style="text-align: right;">1022/kg</td> </tr> <tr> <td> b. light tobacco</td> <td style="text-align: right;">1245/kg</td> </tr> <tr> <td>C. Cigars</td> <td style="text-align: right;">1453/kg</td> </tr> <tr> <td>D. Smoking tobacco</td> <td style="text-align: right;">602/kg</td> </tr> <tr> <td>E. Other tobacco</td> <td style="text-align: right;">700/kg</td> </tr> </tbody> </table>	Product	Rate (DA)	A. Beer	3,610/hl	B. Cigarettes		a. dark tobacco	1022/kg	b. light tobacco	1245/kg	C. Cigars	1453/kg	D. Smoking tobacco	602/kg	E. Other tobacco	700/kg
Product	Rate (DA)																		
A. Beer	3,610/hl																		
B. Cigarettes																			
a. dark tobacco	1022/kg																		
b. light tobacco	1245/kg																		
C. Cigars	1453/kg																		
D. Smoking tobacco	602/kg																		
E. Other tobacco	700/kg																		
2.4 Tax on petroleum products	Tax on domestically consumed petroleum products established by Article 62 of the budget law for 1996, to the benefit of the State. The 2001 Budget Law changed the computation of the tax from an ad-valorem tax to a specific tax.	Exported products are exempted.	<table style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Premium gasoline</td> <td style="text-align: right;">777.5 DA/hl</td> </tr> <tr> <td>Regular gasoline</td> <td style="text-align: right;">629.5 DA/hl</td> </tr> <tr> <td>Fuel oil</td> <td style="text-align: right;">68.9 DA/hl</td> </tr> <tr> <td>Gas oil</td> <td style="text-align: right;">163.8 DA/hl</td> </tr> <tr> <td>Propane</td> <td style="text-align: right;">35.65 DA/35kg</td> </tr> <tr> <td>Butane</td> <td style="text-align: right;">25.20 DA/13kg</td> </tr> <tr> <td>GPL</td> <td style="text-align: right;">260.8 DA/hl</td> </tr> </tbody> </table>	Premium gasoline	777.5 DA/hl	Regular gasoline	629.5 DA/hl	Fuel oil	68.9 DA/hl	Gas oil	163.8 DA/hl	Propane	35.65 DA/35kg	Butane	25.20 DA/13kg	GPL	260.8 DA/hl		
Premium gasoline	777.5 DA/hl																		
Regular gasoline	629.5 DA/hl																		
Fuel oil	68.9 DA/hl																		
Gas oil	163.8 DA/hl																		
Propane	35.65 DA/35kg																		
Butane	25.20 DA/13kg																		
GPL	260.8 DA/hl																		
2.5 Tax on professional activities (<i>Taxe sur l'activité professionnelle</i>)	Turnover tax on individuals or companies subject to IRG or IBS. Allocated in full to local governments.	Several including APSI regime (investment promotion scheme).	2.6 %																
3. Taxes on international trade																			
3.1 Custom duties (Droits de Douane)	Levied on imported goods	Investment goods and products directly used in hydrocarbon prospecting and exploitation.	Five percent, 15 percent, and 30 percent; all duties are assessed ad valorem on C.I.F. values. Some imports subject, in addition, to Temporary Additional Duty of 48 percent which will be progressively phased out by January 2006.																

Algeria: Summary of the Tax System, 2002

(All amounts in Algerian dinars)

Tax	Nature of Tax	Exemptions and Deductions	Rate
3.2 Service fees (<i>Redevance Douanière</i> , RD and <i>Redevance pour</i> <i>formalité Douanière</i> , RFD)	Flat fiscal duties on imports.	Same as for customs duties.	0.4 % RD and 2 % RFD; all duties are assessed ad valorem on C.I.F. values.

INTERNATIONAL MONETARY FUND

ALGERIA

**Selected Issues
Supplemental Information**

Prepared by Khanjar Wabel Abdallah, (MED)

Approved by the Middle Eastern Department

February 7, 2003

	Contents	Page
I.	Key Features of the Algerian Labor Market	2
A.	Background	2
B.	Labor Force Dynamics.....	3
C.	The Structure of Unemployment	7
D.	The Informal Sector	9
E.	Wage Trends	9
II.	Policy Responses and Remaining Challenges	10
A.	Policy Responses	10
B.	Remaining Challenges	14
 Tables		
1.	Labor Force and Unemployment, 1990–2001	4
2.	MENA-Comparative Employment Elasticity, 1990–2000	6
3.	Evolution of Employment Regulation Schemes, 1997–2001	12
 Figures		
1.	Growth of Labor Force and Unemployment, 1990–2001	5
2.	Unemployment Rate by Age Group, September 2001	7
3.	General Civilian Government Employment and Wage Bill as Share of GDP in Algeria, Morocco, Tunisia, and Egypt	11

LABOR MARKET DEVELOPMENTS, CHALLENGES, AND POLICIES

Since the mid-1980s, Algeria has shared with other countries of the Middle East and North Africa (MENA) region rising unemployment due to the combination of stagnant growth and demographic pressures. Despite rapid civil service expansion and active labor market policies, employment growth in Algeria has failed to match a labor force growing by an estimated 250,000 people a year. Mounting unemployment, which disproportionately affects the young, has progressively deteriorated social conditions and largely contributed to the mounting social discontent in recent years. The first section of this paper looks at the key features of the labor market in Algeria, and the second part describes past and current policy responses and remaining challenges.

I. KEY FEATURES OF THE ALGERIAN LABOR MARKET

A. Background

1. **Population growth in Algeria has been historically very high.** Between 1977 and 1987 the population grew at an annual average of 3.1 percent, and remained at a still high 2.8 percent in the late 1980s before tapering off to an average of 2.3 percent during the 1987–98 period and 1.5 percent in 1999–01 (Table 1). This fast growth has translated into rates of growth in the young adult population (ages 15–34) in excess of 3.8 percent per year during the 1980s (extremely high rates of growth by international standards). According to United Nations estimates, the comparable rates of growth of the young adult population for the 1990s were 3.1 percent for the MENA region and 2.8 percent for all developing countries. Despite the progressive aging that took place in the 1990s, the age structure of the population remains young. In 1998, 48 percent of the population was under the age of 20, down from 55 percent in 1987.
2. **From independence to the mid-1980s,** Algeria's answer to the demographic challenge has been to follow a state led development path emphasizing human capital development and giving high priority to employment and the social sectors. Buoyant fiscal revenues strengthened by strong economic growth averaging about 6 percent annually allowed for the maintenance of average expenditures on education and health of about 10 percent of GDP. Basic social indicators improved dramatically. During those years of high growth, civil service employment grew faster than the labor force in order to support the rapid expansion of public services in education and health and to provide jobs for the educated workforce.
3. With the advent of the 1986 oil shock,¹ Algeria underwent a prolonged economic crisis that slashed growth to a mere 1.5 percent per year on average over 1987-2001, thus contributing to rising unemployment and poverty.

¹In 1986, the price of crude oil fell by almost 50 percent compared to 1985.

B. Labor Force Dynamics

4. **Increased participation rates.** The very high rates of growth of the working age population are compounded by increasing participation rates. According to data from the population censuses, crude activity rates² increased from 18 percent in 1977 to 23 percent in 1987 and 27 percent in 1997. During that same period, the participation rate among those aged 15–64 steadily increased from 36 percent to about 48 percent on account of both rising male and female participation rates. It is true that this rapid acceleration occurred from a particularly low initial level (below that of other countries in the region), attributable to the large school enrollment and low participation of women. However, female labor force and participation rates appear to be growing especially fast despite increased schooling, which initially had led to declining participation rates for young women. According to census data, female employment grew at a rate of about 6.2 percent per year from 1977 to 1987 compared to 4.8 percent for males, and female participation rate for the working age population (15–59 years old) surged from about 9 percent in 1991 to 15 percent in 2001. The largest increases were for women of prime working age, 25–29 and 30–34.

5. **Employment lags behind labor force growth.** As a result of the higher rates of population growth of the earlier decades and the rapid growth of participation rates, the labor force grew much faster than the population in the 1980s and up to the mid-1990s, averaging 4 percent in 1981–95, before slightly tapering off to an estimated average of 3.1 percent in 1996–01 (Table 1). In 2001, the labor force was estimated at about 9 million (29 percent of the population).

6. **Since 1985, the pace of employment creation** has been insufficient to absorb the large number of new entrants in the labor force, thus resulting in rising unemployment from 10 percent in 1985 to close to 30 percent in 2000 (Table 1 and Figure 1). However, the Algerian definition of unemployment is wider than that of International Labor Organization's (ILO) and may thus tend to overestimate Algeria's unemployment rate compared to other countries.³

² The crude activity rate is the ratio of economically active population to total population.

³ According to the ILO, the "employed" are those who worked for at least one hour for pay, profit, or any other remuneration during the reference week of the survey or census conducted; those who worked zero hours but were actively seeking work are classified as unemployed. In Algeria, the labor force sample survey defines the unemployed as "all those who declare themselves to be unemployed" in the reference week, who are "not occupied during that week, and who are looking for work and ready to work if required." Thus, individuals who are underemployed (effectively working only for a few hours a week or holding a job only during the reference week) can classify themselves as unemployed.

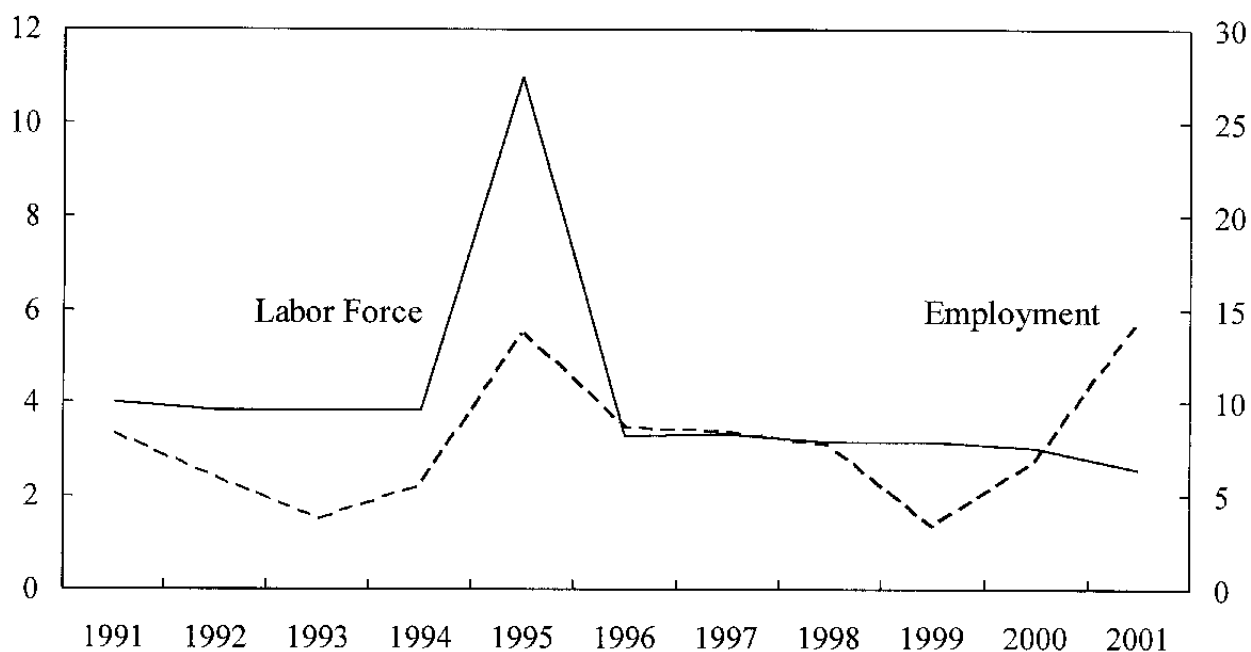
Table 1. Algeria: Labor Force and Unemployment, 1990–2001

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	(In thousands; unless otherwise specified)											
Population	25,022	25,643	26,271	26,894	27,496	28,060	28,566	29,045	29,507	29,950	30,386	30,836
Growth, in percent	1.2	2.5	2.4	2.4	2.2	2.1	1.8	1.7	1.6	1.5	1.5	1.5
Labor force	5,851	6,085	6,318	6,561	6,814	7,561	7,811	8,072	8,326	8,589	8,850	9,075
Growth, in percent	4.8	4.0	3.8	3.8	3.9	11.0	3.3	3.3	3.1	3.2	3.0	2.5
Total employment	4,695	4,852	4,968	5,042	5,154	5,436	5,625	5,815	5,993	6,073	6,240	6,597
Growth, in percent	26.1	3.3	2.4	1.5	2.2	5.5	3.5	3.4	3.1	1.3	2.7	5.7
Formal employment, by sector	4,117	4,236	4,280	4,273	4,325	4,505	4,641	4,719	4,858	4,898	4,977	5,199
Growth, in percent	13.7	2.9	1.0	-0.2	1.2	4.2	3.0	1.7	2.9	0.8	1.6	4.5
<i>Of which:</i>												
Agriculture	1,000	1,040	1,055	1,035	1,023	1,084	1,154	1,144	1,180	1,185	1,185	1,328
Industry	550	547	541	532	528	519	502	487	493	493	497	503
Construction	672	674	669	659	667	678	705	723	740	743	781	803
Services	822	870	880	876	896	932	954	987	1,030	1,057	1,074	1,109
Administration	1,073	1,105	1,135	1,171	1,211	1,292	1,326	1,378	1,415	1,420	1,440	1,456
Informal employment and other ^{1/}	578	616	688	769	829	931	984	1,096	1,135	1,175	1,263	1,398
Growth, in percent	...	6.6	11.7	11.8	7.8	12.3	5.7	11.4	3.6	3.5	7.5	10.7
Unemployment	1,156	1,233	1,350	1,519	1,660	2,125	2,186	2,257	2,333	2,516	2,610	2,478
Unemployment rate, in percent	19.8	20.3	21.4	23.2	24.4	28.1	28.0	28.0	28.0	29.3	29.5	27.3

Source: Algerian authorities.

^{1/} Including military draft and irregular employment.

Chart 1. Algeria: Evolution of Labor Force and Employment, 1991-2001
(In percentage change)



Source: Algerian authorities and IMF staff.

7. **In 2001, 2.5 million Algerians were unemployed,**⁴ up 13 percent from 1996 and more than twice the level of 1991, while formal employment,⁵ at 5.2 million in 2001, grew by only 12 percent since 1996 and 23 percent since 1991. Even accounting for the growth of the informal sector, total employment, at 6.6 million in 2001, grew by only 17 percent since 1996 and 36 percent since 1991. In 2001, for the first time in over a decade, unemployment fell in absolute level.

8. **Algeria's elasticity of employment to growth was high in 1990–2000** by international and regional standards (Table 2). Over this period, employment elasticity to non-oil GDP, at 1.7, was the highest among countries of the Middle East and North Africa (MENA) and Gulf Cooperation Council (GCC) countries. However, employment growth could not match the rapid growth of the labor force and Algeria lagged behind other MENA countries in employment elasticity to labor force. The lack of job opportunities thus reflects inadequate output growth rather than a low employment content of growth.

⁴ Data provided by the Planning Authority for 2001. These data differ slightly for labor force and employment from data for September 2001 published by the National Statistical Office (ONS), which show 2.3 million unemployed, although the resulting unemployment rate, at 27.3 percent, is the same for the ONS and the Plan.

⁵ Excluding the informal sector, military draft, and irregular employment (Table 1).

9. **Sectoral elasticities show that government employment accounted for a meaningful share of employment growth.** While real GDP remained virtually flat during 1985–95, total employment expanded by 31 percent, from 4.06 million to 5.32 million; of this, government employment rose from 900,000 to 1.25 million. Sectoral elasticities have also fluctuated widely during 1991–95. In agriculture, the most labor-intensive sector, the elasticity of employment to GDP growth was close to one. In the rest of the economy, the average elasticity during 1991–95 was very high as public enterprises continued to recruit despite stagnating output.

10. **Nonhydrocarbon sector growth has been consistently weak from 1990–00.** Considering the highly capital-intensive nature of the hydrocarbon sector, job creation takes place mostly in the nonhydrocarbon sectors where average growth during 1990–00 period was a paltry 1.7 percent a year, significantly below the labor force growth rate (Table 2).

Table 2. Algeria: MENA-Comparative Employment Elasticity, 1990–2000
(Average annual percentage change; unless otherwise specified)

	Employment growth	Labor force growth	Non-oil GDP growth	Employment elasticity to non-oil GDP	Employment elasticity to labor force
Algeria	2.9	4.2	1.7	1.7	0.7
Egypt	1.5	1.4	4.0	0.4	1.1
Iran	2.2	2.7	4.3	0.5	0.8
Jordan	4.2	3.9	4.8	0.9	1.1
Morocco	4.0	3.4	3.6	1.1	1.2
Pakistan	2.7	2.7	3.9	0.7	1.0
Tunisia	1.8	1.8	4.7	0.4	1.0
Turkey	0.6	0.5	3.6	0.2	1.2
GCC countries	...	...	...	1.4	...
MENA (excl. GCC)	...	...	...	0.8	...
Central America	...	...	...	1.0	...
Sub-Saharan Africa	...	...	...	0.6	...

Sources: World Bank; WEO; and Fund staff estimates.

11. **Algeria exhibited negative labor productivity growth over 1990–01.** With public sector productivity growth typically lagging behind the private sector, the high share of public employment came at a cost of negative productivity growth and a corresponding fall in real wages. A breakdown of labor productivity between capital deepening and Total Factor Productivity (TFP) growth shows that TFP growth has been negative on average over this period.

C. The Structure of Unemployment

12. **In view of the demographic trends in Algeria**, unemployment has affected mainly the young, those who live in urban areas, and those with mid-level education (typically secondary education). Unemployment spells last longer than a year on average.

13. **Youth unemployment.** The unemployment rate among the young is nearly twice the global rate, in line with trends in other Mediterranean countries. In 2001, about 46 percent of the labor force aged 20–24 were unemployed. The likelihood of being unemployed falls rapidly with age and among the labor force aged 30 and older only about 14 percent were unemployed (Figure 2). Given the large share of the young in the total labor force, this implies that the bulk of the unemployed are under 25 years old, thus raising major social and political concerns in part because of weaknesses of the social safety net.

14. **Education and unemployment.** Unemployment in Algeria disproportionately affects first time job seekers and those with lower educational backgrounds. In 2001, data from the Planning Authority show that over 68 percent of the unemployed had educational levels below the secondary level. The 16–19 years old represented 25 percent of unemployment in 1997.

Figure 2. Algeria: Unemployment Rate by Age Group, September 2001



Sources: Algerian authorities and IMF

15. **While in the early 1990s people with mid-level education** were severely affected by unemployment,⁶ from 1995 onwards the pattern appears to have shifted towards

⁶ Middle school graduates had the highest rates of unemployment in 1990 and 1991 followed by secondary school graduates (26–30 percent in 1991). The unemployment rate was lowest among those with post-secondary education (6 percent) and those with no education (14 percent).

increasing unemployment at lower levels of education. Unemployment appears to have increased substantially among illiterates, or for those with only basic literacy skills, or with a primary level of education. Notwithstanding this trend, primary school degree holders were generally more successful at finding jobs than secondary education holders because they were likely to work in the informal sector, as self-employed or home-employed, while the latter group typically lined up for the few jobs available in the formal sector and most notably the secure jobs in public administration. As recruitment in the public sector slowed down from the second half of the 1980s, graduates had to wait longer before being offered a job. During 1990s, there is evidence of lowered expectations of the unemployed with respect to accepting jobs matching their qualifications or desired job location. In 2000, according to the Planning Authority, 90 percent accepted a job below their qualifications, compared to 82 percent in 1990.

16. **Another factor that has compounded the rise in secondary education unemployment** is the mismatch between the education received, mostly in the social sciences, with the job opportunities offered by the private sector. Data from statistical surveys show that, for 2001, 9.3 percent of the unemployed held a higher education degree, up from 3.4 percent in 1989, and 22.3 percent held a secondary school education, up from 19.9 percent in 1989. One reason for the high unemployment of the better educated may be that graduates were traditionally absorbed by the public sector, and schools developed their curricula accordingly. Another source of mismatch could be inefficient job intermediation. Only since 1990 are employers free to hire as they wish. All vacancies still need to be registered with the public employment agency (*Agence Nationale pour l'Emploi* (ANEM)), although ANEM's role has declined as firms increasingly developed their own recruitment channels. Finally, there is evidence of some rigidities at the supply level: University graduates typically prefer to line up for the few secure and well-paid jobs in the formal sector, especially the public sector, rather than accept insecure employment in the private or informal sectors, thus adding pressure to the unemployment in the formal sector.

17. **Urban and rural unemployment.** Reflecting the exodus from rural areas into cities, the urban population has been growing much faster than rural population, at about 4.8 percent on average during 1981–90 and over 6 percent during 1991–01. It is only in the mid-1990s that urban population growth began falling below 4 percent. Urban unemployment has constantly outpaced the national average as unemployment in agriculture is particularly small, considering the prevalence of self-employment and unpaid family employment in agriculture. In 2000, urban unemployment was 33 percent and rural unemployment 28 percent.

18. **Duration of unemployment.** Data on the share of long-term unemployed—those without a job for more than one year—in total employment are not available. Based on labor surveys, the average length of unemployment spells increased from 23 months in 1991 to more than 30 months in 1995. Average unemployment length peaks at 36 months for the 25–34 year age group, and duration is longer for men than for women. Anecdotal evidence indicates that the long-term unemployed in Algeria are likely to be much younger than, say, in Europe. The 16–19 year old tranche of job seekers face particular difficulties in finding employment, as they generally do not have the qualifications or experience and may be

called for the military service. This tranche represented 25 percent of the unemployed in 1997.

19. **The rigidities of the legislative labor framework** may have significantly contributed to deepening structural unemployment and lengthening its duration. Prior to 1990, The dismissal of workers was particularly difficult and costly for employers, and flexible work arrangements, whether in the form of short-term contracts or part-time work, were not allowed. As a result, employers limited hiring even during periods of relative growth, or turned to the informal sector to bypass the rigidities of the labor code. Law 90-11 and other labor code reforms introduced some flexibility in the labor legislation. In particular, no prior administrative authorization was needed for dismissal of workers for economic reasons and more flexible work arrangements were allowed. However, as noted below, further reforms are needed.

D. The Informal Sector

20. **The informal sector grew rapidly.** The formal sector in Algeria groups all public sector establishments as well as private sector firms with at least 10 employees and some of the small firms. The informal sector is composed of small firms as well as most of the self- and home-employed. Job protection legislation, minimum wage legislation, and sectoral or national wage agreements cover only the formal sector. The growth of informal employment, as recorded in official statistics (Table 1), has averaged an estimated 10 percent annually over 1991–97 and 6.3 percent annually over 1997–01. Labor market legislation and official wage settlements are nonetheless likely to be important for the informal sector as well, if only because job market legislation and official wage bargaining will strongly influence the relative size of the formal and informal sectors.

E. Wage Trends

21. Information on wages is scarce, except for the legally binding minimum wage (*saire national minimum garanti*, SNMG), which is set by the “tripartite” committee, which includes the government, the labor union (*Union Générale des Travailleurs Algériens*, UGTA), and employers at the national level, and to which the private sector is also legally bound. SNMG remained fixed at DA 4,000 from January 1994 to July 1997 (while consumer prices recorded a cumulative increase of about 85 percent during this period) before being raised by 50 percent over 15 months (July 1997-September 1998) to offset the adverse impact of high inflation. It was increased again by one-third in 2001.

22. **Civil servants’ wages are determined according to a salary structure which, in the past, was also valid for public enterprises.** Following the introduction of the new labor code in 1990, public enterprises have been granted more autonomy in the wage-setting process. However, civil service salaries still serve as a reference point in the determination of wages in public enterprises. Civil servants’ wages were raised by 10 percent in July 1997, by 5 percent in January 1998, and by 5 percent again in September 1998. There was no increase in 1999 and 2000. In 2001, wages were raised by 15 percent and more for those civil servants subject to the SNMG. Overall, according to World Bank data, real wages in the civil service have fallen sharply from 1991 to 1995, before stabilizing on average over 1996–2000.

II. POLICY RESPONSES TO THE UNEMPLOYMENT CHALLENGE

A. Policy Response

23. **In response to the above challenges, the authorities initiated a three-pronged approach.** First, the civil service was expanded in the early 1980s to absorb unemployment pressures; second, a number of employment programs were subsequently established; and third, a number of reforms of the institutional and legislative framework were carried out to improve labor market flexibility.

Civil Service Employment

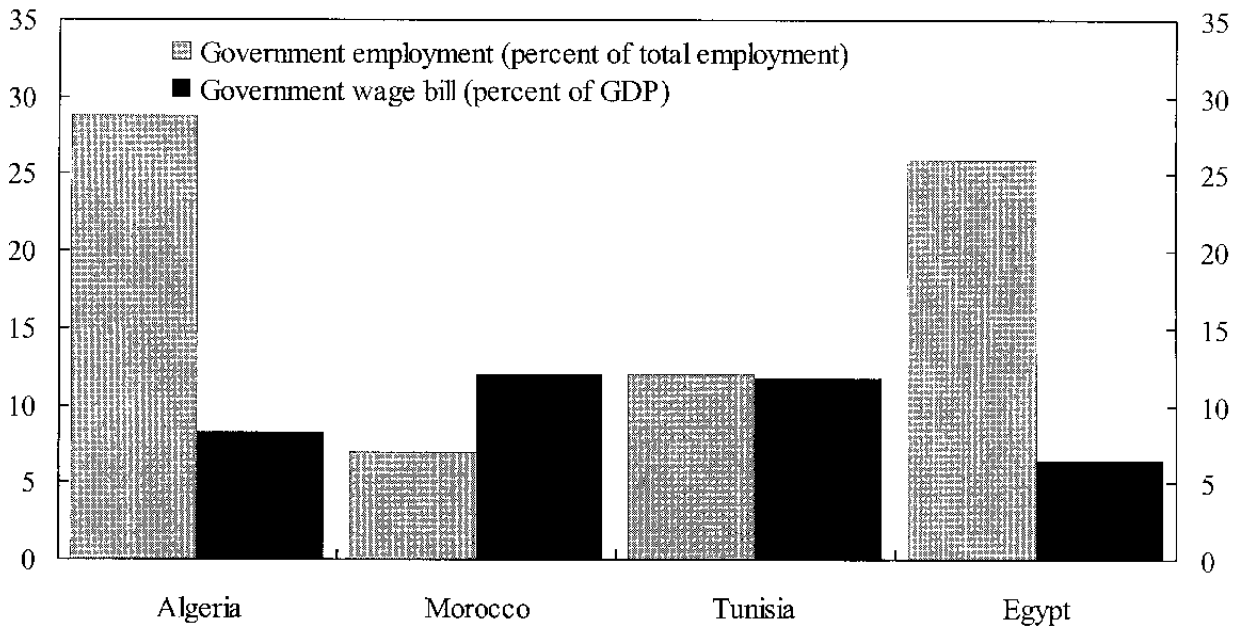
24. **The civil service was used as a tool to reduce unemployment, thus putting pressure on the government's wage bill.** During the years of high growth, civil service employment grew faster than the labor force to support the rapid expansion of public services in education and health and to provide jobs for the educated work force. The first attempts at adjustment included a decline of the wage bill from 12 percent of GDP in 1986 to 8 percent of GDP in 1991 through reduction in the real wage. However, as the economic situation deteriorated in the early 1990s, the civil service was again used to mitigate unemployment pressures. The 1994 stabilization program cut the government wage bill, as a result of a freeze in nominal wages, but with labor force pressure and the lack of alternative employment outlets (limited employment growth in the private sector and public sector retrenchment), the government allowed civil service employment to continue growing.

25. **However, the policy of containing the wage bill** in relation to GDP through real wage adjustments rather than reductions in the number of employees has reached its limits. The size of the civil service in Algeria is high even by regional standards (Figure 3). Data show that public administration is large in Algeria, compared to its north African neighbors. While there is room for reducing staffing in the civil service, further real salary cuts cannot be used as a means of diminishing the overall cost without seriously affecting the incentive system and the effectiveness of public services.

Active Labor Policies

26. **In response to high unemployment,** the government has actively promoted over the years a wide array of employment programs including wage subsidies, micro-credit, public works, employment services, and in-house training (Table 3). A large number of these programs have especially targeted the unemployed youth. However, those schemes, with few exceptions, have been inefficient, and their overall impact and coverage have been relatively low. Over time their main objective, which is to provide impetus for labor force insertion, was lost and they were increasingly relied upon, unsuccessfully, as a mechanism to absorb large-scale unemployment.

Figure 3. Algeria: General Civilian Government Employment and Wage Bill as Share of GDP in Algeria, Morocco, Tunisia, and Egypt (Latest average year, 1997–99)



Sources: World Bank.

Youth Employment Schemes

27. **Uneducated youth.** The main employment scheme targeting youth is the *emplois salariés d'initiative locale (ESIL)*, which aims at providing low-skilled youth with minimum qualifications and experience to enhance their employability. The ESILs work through subsidies that give businesses incentives to hire the unemployed. There were about 178,500 beneficiaries in 2001 (about 74,700 in full time equivalent). The efficiency of this scheme has been questioned because of the very low retention rate (during 1990–98, for the million jobs that benefited from this scheme, the retention rate at the end of the subsidy period was only 2 percent).

28. **Educated youth.** In 1998 the authorities created the *Contrats Pré-Emploi (CPEs)* whereby the government, through a monthly allowance amounting to the minimum wage, pays for the first year salary of first-time unemployed educated youth to enterprises who hire them. There were about 3,443 beneficiaries in 2001, down from 9,311 in 2000.

29. **Micro-enterprise schemes for the youth.** A new micro-enterprise scheme, in which more attention was paid to profitability of projects than in similar past programs, was introduced in 1997. This scheme is managed by the *Agence Nationale pour le Soutien à l'Emploi des Jeunes (ANSEJ)*, which is in charge of a first analysis of investment projects and of deciding whether they can be submitted to banks.

Table 3. Algeria: Evolution of Employment Regulation Schemes, 1997–2001

	1997			1998			1999			2000			2001		
	Permanent		Cost 1/	Permanent		Cost 1/	Permanent		Cost 1/	Permanent		Cost 1/	Permanent		Cost 1/
	Number of beneficiaries equivalent	jobs		Number of beneficiaries equivalent	jobs		Number of beneficiaries equivalent	jobs		Number of beneficiaries equivalent	jobs		Number of beneficiaries equivalent	jobs	
ESIL (<i>Emplois Salariés d'Initiative Locale</i>)	181,225	86,157	2,600	152,943	72,212	2,350	157,567	68,323	2,080	145,481	55,100	1,940	178,500	74,700	2,400
TUP-HIMO (<i>Travaux d'Utilité Publique à Haute Intensité de Main-d'Oeuvre</i>)	119,348	34,476	2,991	44,799	13,066	732	24,598	7,174	67	14,565	4,248	347	17,823	5,198	367
AIG (<i>Activités d'Intérêt Général</i>)	114,000	114,000	3,820	129,680	129,680	4,373	134,000	134,000	4,528	130,000	130,000	4,384	136,000	136,000	4,924
CPE (<i>Contrats de Pré-Emploi</i>)				6,140	6,140	250	12,191	12,191	1,140	9,311	9,311	680	3,443	3,443	890
ANSEJ (<i>Agence Nationale de Soutien à l'Emploi des Jeunes</i>)	207	207	1,760	21,630	21,630	3,000	44,175	44,175	3,000	31,077	31,077	4,000	21,000	21,000	4,500
Micro-Credit													5,850	5,850	
Total	414,780	234,840	11,171	355,192	242,728	10,705	372,531	265,863	10,815	330,434	229,736	11,351	362,616	246,191	13,081
Cost per job (in DA thousands)			47.6			44.1			40.7			49.4			53.1
Total cost (In percent of GDP)			0.40			0.38			0.34			0.28			0.31

Source: Algerian authorities.

1/ in DA million.

Even in the case of a positive answer by ANSEJ, banks still have the option of denying the financing request. A personal financial contribution is required from the applicant. The ANSEJ's contribution may take various forms: (a) an interest subsidy on the banks' loan; (b) an advance that must be repaid after the loan is paid off; and (c) a subsidy if the project is deemed promising enough. The efficiency of this scheme has not yet been assessed. According to the authorities, 16,000 projects were implemented in 1998, which could lead to about 47,000 newly created jobs.

Public works schemes to fight poverty

30. The ***Indemnité d'Activités d'Intérêt Général (IAIG)*** is designed to provide compensation to the poor who are able to work. They can be hired below the minimum wage (DA 2,800 a month) on the basis of an eight-hour work day, in community-based activities such as reforestation and street cleaning. The modest remuneration was designed to ensure self-targeting of those who were ready to work at lower wages. In practice, the full minimum wage is sometimes paid, especially in urban areas. In 2001, there were about 130,000 beneficiaries of IAIG (compared to 500,000 in 1996). There is room for improving the targeting of this program, which currently may not clearly benefit the most disadvantaged.

Schemes targeting the unskilled unemployed

31. Another scheme, targeting the unskilled unemployed, is the ***travaux d'utilité publique à haute intensité de main d'oeuvre (TUP-HIMO)***, which offers temporary jobs paid at the minimum wage in labor-intensive, community-based activities such as road maintenance. The labor content of TUP-HIMO projects tends to be higher than in IAIG projects. There were about 14,600 beneficiaries of TUP-HIMO in 2001, sharply down from about 119,000 in 1997. TUP-HIMO projects are not financially sustainable. Private contractors are overly regulated and there are delays in payments. Beneficiaries are not involved in the selection of projects, which are legally owned by government agencies, and once projects are completed, the local communities are not responsible for their maintenance.

Schemes targeting economic layoffs

32. **In 1994, two schemes were created to assist workers laid off for economic reasons:** unemployment insurance and early retirements. They covered about 250,000 people in 1999. They are available theoretically to both the public and private sectors, but in practice they are essentially used in the context of public enterprise restructuring. The ***Caisse Nationale d'Assurance Chomage (CNAC)*** has expanded beyond its initial mandate of providing unemployment insurance and established programs of assistance in retraining, support for entrepreneurship and job search, and managerial assistance for enterprises facing difficulties. The unemployment insurance revenues derive from payroll taxes paid by both employers (2.5 percentage points of taxable wage) and employees (1.5 percentage points). In addition, every time an employee is fired, the employer is required to pay an initiation fee to the insurance company amounting up to one year salary (depending on seniority); moreover, the employee receives a severance package equal to three months salary. Unemployment benefits start after three months following registration with the unemployment agency and

extend from a minimum of one year to a maximum of three years at a rate of two months per contribution year to CNAC. Unemployment benefits are based on a reference salary (SR, computed as the average of the minimum wage (SNMG) and the average wage received during the last year preceding layoff) and decrease over the duration of the benefits period, with 100 percent of the SR in the first quarter, 80 percent in the second quarter, 60 percent in the third quarter, and 50 percent in the last quarter. Recipients also benefit from full social security coverage (medical insurance and family allowances), which lapse one year following the end of the unemployment benefits period.

Vocational and training system

33. **Algeria has a large vocational and technical training system** that is mainly operated by the Government. It provides about 290,000 positions to train skilled workers and technicians using institution-based training and apprenticeships. The system provides in practice a mechanism to absorb students dropping out of the formal education system and unemployed youth. Graduates of these programs are often ill-prepared for the job market and usually remain unemployed for long periods. The dropout rate is high (18 percent). The system has also weak linkages to the job market and its proposed qualifications could better match market needs. According to the authorities, its function needs to be assessed in order to improve its performance.

Reforms of the Institutional and Legislative Framework

34. **Aware of the structural issues underlying the growth of the informal market** and the reluctance of the formal private sector to increase employment, the authorities have initiated in 1990, a reform of the institutional and legislative framework to improve labor market flexibility and a reduction of taxes on labor. In particular, Law 90.11 on labor relations, which superseded the existing labor code, allowed employers greater flexibility in hiring and firing decisions and the use of short-term contracts. Other reforms allowed free negotiations over salaries and working conditions. Legislation on part time and work at home were introduced. Since 2001, wage-based contributions (e.g., the *versement forfaitaire*) have been reduced to foster employment opportunities, especially in the formal sector.

B. Remaining Challenges

Reducing the Role of the Public Sector in the Labor Market and Providing the Appropriate Incentives for the Private Sector to Take Over in Generating Future Growth and Employment

35. **The three-pronged approach of the authorities has slowed the deterioration of the job market.** Unemployment growth has dropped from an average of 13 percent in 1990–95 to around 4 percent in 1996–00, and the unemployment rate fell for the first time in over a decade to 27.3 percent in 2001 from 29.5 percent in 2000. The number of layoffs by enterprises has been falling consistently from 83,000 in 1998, to 314 in 2000 and 174 in 2001. Labor productivity has improved in the industrial sector since 1998.

36. **However, the above achievements come at a great cost** and would be short-lived if the private sector was not provided with incentives to unlock its potential and become a future engine of growth. Only private sector growth could absorb the projected 280,000 to 300,000 annual new entrants to the labor market in the next decade. For this to happen, steadfast implementation of reforms aimed at lowering the role of the public sector in the economy (restructuring and privatization of public enterprises and the financial sector) and freeing the private sector to grow and compete (trade liberalization, friendly environment for foreign investment, resolving the pending issue of land property rights, and developing long term financing options) is required.

Further Reforming the Institutional and Legislative Framework to Increase Labor Market Flexibility and Lower Labor-Based Taxes

37. **Notwithstanding Law 90.11 and other labor code** reforms implemented so far, there are still rigidities in labor market legislation and practices. In the case of dismissal of workers for economic reasons, although no prior administrative authorization is needed, the decision can be brought to a labor tribunal and lengthy delays can occur. Labor shedding is possible for restructuring public enterprises, but only as a last resort after collective negotiations (arbitrated by labor inspectors) fail to provide alternative solutions (including reduction of wages and/or working hours and early retirement). The high initiation fees imposed on firms by unemployment insurance may discourage hiring, and the long duration of benefits (up to 3 years) may discourage job search, thereby swelling the ranks of the long-term unemployed. Also, ANEM's monopoly over job search assistance and placement services (private employment firms are not allowed), its central management and absence of links with enterprises, and its lack of appropriate staff and information technologies, have greatly reduced its usefulness as a mechanism to mitigate coordination failures in labor markets.

38. **More importantly, labor-based taxes** (including social security contributions and other non wage costs) and taxes on labor-intensive activities in the formal sector remain substantial and continue to deter activities away from the formal sector, slow down the demand for labor in that sector, and exacerbate the shift of unskilled workers into the informal sector. More progress on this front would go a long way in alleviating employment growth shortfall and empowering the private sector to lead in generating employment.

Reforming the Educational and Vocational Training System

39. **The substantial levels of unemployment** among the educated population point to the need to urgently reform the educational system to provide skills profiles that are required by the growing private sector and international competitiveness. The employment schemes also need to be reviewed to increase their efficiency and targeting. Public work programs have produced good results, and problems relate mainly to better targeting mechanisms, eligibility criteria, and governance. With adequate self-targeting mechanisms (low wages and labor-intensive activities), they can effectively provide disadvantaged groups with temporary employment and a safety net, and can lead to infrastructure development. However, they are not cost-effective if the objective is to provide gainful permanent employment.