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Assessing Export Platforms: The Case of Tunisia

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Assessing Export Platforms: The Case of Tunisia¹

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Executive Summary

Tunisia has become a leading exporter whose success is unrivaled by the other African countries. Manufactured exports have grown from 23 percent of total exports in 1980, to 53 percent in 1996. Correspondingly, the value of exports has grown faster than the overall economy, at an average of 8.7 percent in constant prices between 1987 and 1996. Nevertheless, Tunisia's penetration of external markets has merely kept pace with the world's increase in exports. Factors such as export policy, export incentive strategy, and infrastructure need to be further enhanced in order for Tunisian firms to remain competitive exporters.

The country's success has also been attributed to its liberalized exchange rate as of 1992, its relatively inexpensive labor force, its proximity to Europe, its political stability, and its export platforms. These export promotion strategies—economic free zones, temporary admission facilities, duty exemption programs, and bonded warehouses—have contributed greatly to the substantial growth of manufactured exports, particularly during the late 1980s and early 1990s. This study surveys exporting firms in Tunisia to determine the efficacy of Tunisian export strategies from their standpoint.

Ten firms and seven export-related agencies were interviewed in July 1998. Of all the factors considered, firms were most content with their location and least content with the country's physical infrastructure and delays in ports. Responses to the labor situation were mixed, acknowledging the cheap, abundant employees, but noting the low retention and skill levels. The firms varied in their rating of the customs officials as well. While many appreciated the changes that have decreased export-clearance and import-clearance times, firms complained bitterly about the speed with which customs agents reviewed documentation. In terms of the communications facilities, some progress has been made in the price and maintenance, but prices are still exorbitant and firms report that it still takes weeks or months to have a phone line installed. Internet connectivity remains costly and slow, but the number of internet users is growing. Relatively poor ratings were given to gas, electrical, water, and sewage services.

Tunisia's advantage in manufactured exports relative to the rest of the world is, without a doubt, declining. This survey suggests that customs administration, transportation networks, and utilities service were considered most in need of improvement. The findings, though limited, do corroborate previous studies and records of Tunisia's export trends. In the coming years, as the export policies and practices are enhanced, it will be important to refine and develop promotion strategies that respond to the needs of the exporting firms.

Introduction

In Africa, the “Tunisian miracle” in manufactured exports might be considered the understudied analog of the well-known “Mauritian miracle.” Manufactures have supplanted oil as the chief export; the share of manufactured exports in total exports has grown from 23 percent in 1980 to 53 percent in 1996. Correspondingly, the value of exports has grown faster than the overall economy, at an average of 8.7 percent in constant prices between 1987 and 1996. Over the same period that Tunisia has increasingly added value to its exports, much of Africa has lost ground in this respect.

What explains Tunisia’s strong, consistent, and diversifying export growth? Surely a reasonably liberalized economy contributes to this, as does a well-trained and relatively cheap labor force; good, well-maintained infrastructure; proximity to Europe; and political stability. Tunisia’s index of economic freedom ranks between Poland (2.95), Turkey (2.8), and the U.S. (1.9).³ According to the *Africa Competitiveness Report 1998*, the quality of Tunisian labor is the highest in Africa.⁴ Average Tunisian wages (\$1.80) in the manufacturing sector in 1997 were comparable to those of the Czech Republic (\$2.40), Poland (\$1.80), and Hungary (\$1.50). In terms of infrastructure, there are 6 international airports serving 166 flights a week to Europe; 8 commercial ports serving 6,000 vessels and 22 million tons of traffic per year; 2,000 km of railway used to transport 12 million tons of goods per year, and 19,000 km of roads. Distances to Europe are short, and shipping costs are competitive. Containers can be shipped from Tunis to ports in France, Italy, and Spain within 33 hours. It takes less than 2.5 hours to fly from Tunis to Paris, Rome, Madrid, and Frankfurt. Therefore, an important aspect of Tunisia’s comparative advantage relative to its Asian competitors is the “just in time” production and delivery to European markets. Further, like Mauritius, Tunisia has enjoyed preferential access to European markets. As an associate member of the European Union, Tunisia is allowed preferential access for most of its exports, with the exception of certain textiles and agricultural products. Finally, Tunisia is a relatively stable and democratic country, shaped largely by political reforms adopted since 1987.

Although all of these factors are quite impressive for the chief supplier of olive oil to the Roman Empire and a leading supplier to the world today, it is important to note that this success has occurred in various stages over the country’s history. In the 1970s and 1980s, Tunisia’s protectionist fiscal and credit policies shielded the economy from external, and internal, competition. The deleterious effects of the local economy’s anti-export bias were offset partially by the development of the off-shore sector during this time period. Legislation promulgated in 1972 allowed the operation of totally-exporting firms. Significant trade reforms were undertaken in the late 1980s and early 1990s, including a liberalized and uniform investment code in 1993, which increased the gains in export growth from the preceding period. Specifically, in 1987, the share of international trade in GDP was 54 percent, and in 1997, it represented 71 percent.⁵ In 1986, 76 percent of imports were subject to prior authorization; in 1995, under 10 percent.⁶ Still, Tunisia’s penetration of external markets has merely kept pace with the world’s increase in exports. In current prices, the share of Tunisian exports in world exports was constant, at 0.11 percent, between 1990 and 1996.⁷

Tunisian authorities signed a free trade agreement with the European Union in 1996, and its preferential treatment in European markets is scheduled to be phased out over a twelve-year period. Since this began, the focus on Tunisia has begun to focus on Tunisia’s viability and competitiveness in exports, particularly

³ Heritage Foundation, *Index of Economic Freedom* (Washington, DC: 1998).

⁴ Harvard Institute of International Development (HIID) and World Economic Forum, *Africa Competitiveness Report 1998*.

⁵ Central Bank of Tunisia, *Annual Report 1997*, p. 99.

⁶ U.S. Embassy, “Country Commercial Guide, Tunisia, 1997,” p. 16.

⁷ International Monetary Fund, *Tunisia: Selected Issues, 1997*.

manufactured, labor-intensive ones.⁸ Various instruments for export facilitation have been used in the past, such as the temporary admission of imports and bonded warehouses, and other strategies are just now being implemented, such as export processing zones (EPZs). The purpose of this study is to examine the strategy and efficacy of each export platform facility in Tunisia. The study's empirical foundation is a survey of 11 exporting firms in Tunisia conducted in July 1998. These data, corroborated by published data and similar studies on the export sector, reveal that both export policies and practices, however successful they have been up to this point, must be enhanced in order for Tunisian firms to become more competitive exporters.

The study proceeds as follows. Section 1 briefly describes the broad economic environment. Section 2 reviews export facilitation instruments and current status of subscription to them. Section 3 describes the 1998 survey and its results, and Section 4 concludes.

1. The Macroeconomic and Trade Environment

On one hand, the contribution of sound macroeconomic management to export growth in manufactured exports in the last decade is readily identified, and has been covered by export-led growth literature and, more specifically, the export platform literature. While laws passed in the 1970s encourage exports from Tunisia, the macroeconomic imbalance, particularly the misalignment of the exchange rate, predictably discouraged exports for much of the period from early 1970 to late 1992.

As the macroeconomic indicators in Table 1a show in part, Tunisia's initial experimentation with fixed exchange rates was flawed, producing relatively more volatility than stability. In early 1970, instability in the French franc transmitted instability to the dinar, which was pegged informally to the French franc. In response, Tunisian authorities pegged, first, to the German deutsche mark and, in subsequent moves, to a basket of currencies that included the Belgian franc, the Dutch florin, the French franc, the German deutsche mark, the Italian lira, the Spanish peseta, and the U.S. dollar. While linked to the deutsche mark alone during the mid-1970s, the dinar's real appreciation was substantial. This appreciation was reversed largely by pegging to an enlarged basket of currencies: the dinar depreciated by 73 percent between 1975 and 1984, inducing recession, crises involving balance of payments, and further pressure on the exchange rate.

Rather than adding currencies, the final round of the fixed-rate experimentation involved manipulating the weights of the constituent currencies, but this did not help the situation. A series of nominal depreciations between 1986 and 1989 were also unsuccessful, given that the real exchange rate had appreciated by 18 percent.

Liberalization of the exchange rate for current account purposes was finally adopted as an element of a broader, more ambitious economic reform program in 1992. An inter-bank spot exchange market was established in 1994.⁹

Not surprisingly, real exchange rate misalignment was costly to trade growth in Tunisia. Exporters were taxed more heavily than importers, based on the fact that appreciation occurred in relatively longer

⁸ In addition, Tunisia is a member of the World Trade Organization (WTO) and as such has agreed to consolidate over 900 tariff ratings ranging from 17 to 52 percent on both agricultural and manufactured products, opening the economy further to imports.

⁹ The complete discussion of this appears in a paper by DormaH and Shabsingh (1999), which includes a more extensive explanation of Tunisian exchange-rate policy in recent years, and includes developments in liberalization of the spot and forward markets in 1997.

periods and greater magnitudes than depreciation did. However, to the extent that these policies yielded instability in macroeconomic fundamentals, all involved in international trade were penalized, regardless of their status as importer or exporter. Indeed, exporters of Tunisian manufactures are involved on both sides of the international trade transaction, and experienced relatively stagnant growth between 1980 and 1985. Exchange rate policy reversal allowed these exporters to exploit more fully their earlier trade reforms, and the systematic increases in the share of manufactured exports in total exports that followed correspond to the relaxation of the constraint on gains from trade in higher-value-added manufactures.¹⁰ Table 1b contains data on the evolution of manufactured exports and elucidates this point.¹¹ Prior to the 1980s, Tunisia's chief export was oil. By 1997, energy exports constituted less than 10 percent of all exports, and manufactured exports constituted 85 percent.¹² Furthermore, 85 percent of the 1,376 foreign-owned manufacturing firms located in Tunisia were re-exporting 100 percent of their production to other markets.¹³

Table 1a. Tunisia macroeconomic data, 1980–98.

Year	Real GDP Growth (Percent)	Growth of Real Manufacturing GDP	Inflation Rate	Change in Real Exchange Rate
1980	7.43	12.05	..	-1.47
1981	5.53	12.99	..	-0.71
1982	-0.40	2.81	..	-0.75
1983	4.74	5.74	..	-1.69
1984	5.74	6.52	8.90	-0.18
1985	5.62	3.88	7.25	-0.69
1986	-1.54	-0.91	6.16	-14.44
1987	6.62	2.29	8.23	-14.18
1988	-0.12	3.91	7.20	-1.90
1989	2.21	19.06	7.74	-1.34
1990	7.93	-21.90	6.55	-2.74
1991	3.98	3.94	8.19	2.12
1992	7.75	6.46	5.82	2.08
1993	2.14	4.93	3.97	-3.73
1994	3.16	3.42	4.73	0.79
1995	2.35	8.84	6.24	2.18
1996	6.95	2.80	3.73	0.67
1997	5.51	6.92	3.65	-0.07
1998	4.96	6.03	3.16	0.16

Source: World Bank, *World Development Indicators 1998*; International Monetary Fund, *International Financial Statistics 1998*; <http://www.tunisiaonline.com/development/t14.html>

¹⁰ The term “higher- (lower-) value-added manufactures” will take on two meanings throughout the paper. In the first instance, it will refer to manufactures which attract high (low) relative prices in the world market and to which the home country adds a fixed but small percentage of value, e.g., electronics (food processing and lower-end textiles). In the second instance, “higher-value-added manufacture” may refer to a manufacture that attracts either a high or low relative price in the world market, but a greater proportion of manufacturing takes place, or value is added, in the home country. The context given should guide the reader on the proper interpretation of the term.

¹¹ To be sure, largely unabated growth in value added in manufacturing partially explains the success of manufactured-export growth. These data also appear in Table 1(b); however, their discussion is beyond the scope of this study.

¹² See also the Appendix that shows product concentration ratios of exports by sector of activity.

¹³ Foreign Investment Promotion Association, *Tunisie, Economie Emergente*, Tunis, 1998.

Table 1b. Tunisia trade and manufacturing data, 1980–98.

Year	Manufacturing Exports ^{1/}	Total Exports ^{1/}	Merchandise Exports ^{1/}	Manufacturing Value Added (1987 constant) ^{1/}	Manufacturing Exports/Total Exports ^{2/}	Manufacturing Exports/Merchandise Exports ^{2/}	Manufacturing Value Added/GDP ^{2/}
1980	797.8	3517.5	2233.7	1062.4	22.68	35.72	11.79
1981	833.7	3487.0	2503.7	1200.3	23.91	33.30	11.87
1982	820.3	3002.0	1983.5	1234.1	27.32	41.35	11.12
1983	812.2	2869.5	1871.5	1304.9	28.30	43.40	14.17
1984	752.9	2721.0	1796.3	1390.0	27.67	41.91	14.84
1985	724.2	2699.9	1627.3	1444.0	26.82	44.50	15.09
1986	1051.6	2721.9	1759.6	1430.9	38.64	59.76	15.77
1987	1297.7	3376.9	2152.4	1463.6	38.43	60.29	15.09
1988	1617.5	4242.2	2392.9	1520.8	38.13	67.60	16.83
1989	1937.5	4479.8	2932.4	1810.6	43.25	66.07	16.96
1990	2417.5	5353.4	3498.3	1414.1	45.16	69.11	16.89
1991	2547.3	5277.7	3699.5	1469.9	48.26	68.85	16.95
1992	2943.8	6157.5	4039.9	1564.8	47.81	72.87	16.53
1993	2857.1	5930.5	3804.5	1641.9	48.18	75.10	17.07
1994	3475.3	7021.1	4584.5	1698.1	49.50	75.81	18.29
1995	4346.5	8031.4	5474.6	1848.2	54.12	79.39	18.84
1996	4403.6	8251.6	5517.4	1899.9	53.37	79.81	18.25
1997		8303.6				78.00	17.82
1998		8603.7					17.85

^{1/} US \$, Millions. ^{2/} Units in percent.

Notes:(1) The values of exports for the years 1997 and 1998 were obtained by converting dinar values into dollar values using end-of-period exchange rates reported in IFS (1999). (2) The shares of manufacturing in GDP for the years 1997 and 1998 were calculated from data obtained from <http://www.tunisiaonline.com>

Source: World Bank, *World Development Indicators 1998*.

2. Export Facilitation Policies

Tunisia's continued success in manufactured exports is not attributable to purely macroeconomic phenomena, however. Clearly trade reform in Tunisia, particularly reform of exports, preceded and coexisted with the macroeconomic reform. With the exception of the seminal 1972 legislation which allowed exporters to operate in a broader range of sectors, most export incentives were instituted in the late 1980s and early 1990s. A special incentive system was established and was fortified by new industrial investment codes in 1987 and 1993. The upshot is a harmonized and less regulated system. For example, whereas prior government approval was required for all investment, the new system requires approval only in limited cases. Firms that qualify for full export status—manufacturers or service providers exporting at least 80 percent of output or agricultural producers exporting at least 70 percent—also qualify for off-shore status. Investment incentives applicable to exporting firms are summarized in Table 2.

Table 2. Summary of tax treatment of exporting firms.

Tax Type	Taxable Firms	Provisions
Income (Natural Persons)	Totally or partially exporting ^{1/}	<ul style="list-style-type: none"> • First ten years of exporting; 100% income derived from exports is deducted from the income tax base • Beyond first ten years of exporting; 50% deduction of income generated from exports from income tax base
Corporate	Totally or partially exporting	<ul style="list-style-type: none"> • First ten years of exporting; 100% profit derived from exports is deducted from the corporate tax base • Beyond first ten years of exporting; 50% deduction of profit generated from exports from corporate tax base
Customs	Totally or partially exporting	<ul style="list-style-type: none"> • 0% taxation of imported raw materials or semi-finished goods (or tax equivalent if locally acquired) • 0% taxation of imported capital goods • Application of duties for temporary imports and for bonded warehousing
Customs	Partially exporting	<ul style="list-style-type: none"> • Standard taxation on sales to domestic market
Value-added tax and consumption taxes	Totally or partially exporting	<ul style="list-style-type: none"> • Suspension of these taxes on goods, products, and services necessary for export operations

^{1/} Totally exporting firms are production or service firms whose output is totally destined for consumption abroad or for Tunisia with the intention of being consumed abroad. Partially exporting firms are those for which not all output is destined for consumption abroad.

Source: Republic of Tunisia, *Investment Incentives Code* (1996).

If their products do not compete with domestic products, totally-exporting firms may also sell up to 20 percent of their manufactured output in the domestic market. Partially-exporting enterprises are treated similarly with respect to tax incentives. However, incentives for reinvesting profits are limited to the benefits that apply to all firms, and refunds of import duties are granted only if the imported equipment is not made by a local producer. Finally, firms are eligible for the same exemptions and incentives as totally-exporting firms, if they work exclusively with totally-exporting firms or firms established in EPZs.

In addition to the tax incentives, measures to facilitate exports have also attracted participants to the export sector. There are few restrictions on the recruitment of foreign management.¹⁴ With the introduction of the SYNDA computer system, processing exports through customs has been reduced to a maximum of one day, which is comparable to most export-oriented industrialized countries.¹⁵ The creation of the *guichet unique*—combination of the Customs Office and the Office of Ports—has also streamlined customs procedures and reduced delays, most significantly on the export side.

In increasing order of importance, the strategies that have aided in initiating and maintaining strong export growth in Tunisia are: export processing zones, duty drawbacks and exemptions, and bonded warehouses. Each facility is described below.

¹⁴ Price Waterhouse, *Tunisia Information Guide* (Tunis: 1998).

¹⁵ MTC Consulting, “Etude sur l’offre de biens tunisiens” (Tunis: 1998).

Economic free zones, or zones franches

Economic free zones began operating in Tunisia in 1994. At the very least, they have offered firms the aforementioned investment incentives available to totally-exporting firms as well as the basic enclave infrastructure. At most, zone authorities serve as a “one-stop shop” for firms investing in the zone, such that each firm has a single agent liaison who contacts the numerous agencies for approval and aids the firms in completing the procedures required to begin operation.

All transactions executed in the free zone must be in foreign currency or in dinars, which can be easily converted. Suppliers of goods and services to other enterprises in the zone are subject to the rules governing exports and international trade. While EPZ privileges have been extended to suppliers to encourage growth among domestic suppliers to EPZ firms, only a small proportion of tradable inputs are obtained from the domestic market. Products manufactured by EPZ firms or their suppliers are taxed as imports in the Tunisian market.

The Bizerte EPZ—northwest of Tunis in the direction of Algeria border—charges 3 euros (US \$3.12) per square meter for use of land within the site. The other EPZ, Zarzis, is located in the extreme south, close to the Libyan border. Land in this site costs US \$3 per square meter for manufacturing firms, and US \$5 per square meter for retail and service firms.¹⁶ Each free zone has a port nearby, although neither is particularly close to the Tunis-Radès port, which handles the majority of Tunisia’s container traffic.

The Bizerte free zone is closer to being fully functional than the Zarzis zone. The shipping and overall infrastructure at Bizerte is more developed, since it has converted land formerly used as a naval base. A new road between Tunis and Bizerte was completed in early 1998, the railway network extends to the port, and the Tunis-Carthage Airport is less than one hour away. The Bizerte Free Zone authority has issued licenses to 400 enterprises, 140 of which are totally-exporting. These enterprises are almost equally divided among agriculture (31 percent), industry (including shipbuilding, 36 percent), and services (33 percent).¹⁷

It appears that the *zone franche* will be operated like a typical industrial zone in Tunisia, with zone management responsible for renting space, building and maintenance of zone infrastructure, and security of the area. It is unclear whether the zone management will provide centralized on-site customs-administration services for all zone subscribers, or whether each firm will operate its own bonded warehouse with a customs official stationed within it.¹⁸

Temporary admission of imports and duty exemptions

In general, importing inputs into Tunisia is easier than ever before. Import licenses, which were required previously for nearly all products, are now required for only a limited number, roughly 8 percent, of imports. Elimination of this non-tariff barrier has accommodated an increase in imports of intermediate goods, which in turn has increased the value added on a wide range of manufactured exports. However,

¹⁶ Agence de promotion de l’industrie, “Coûts des facteurs de Production en Tunisie et Comparaisons Internationales” (1997).

¹⁷ Société de Développement et d’Exploitation de la Zone Franche de Bizerte, “La Zone Franche de Bizerte: Le Cadre Idéal pour Vos Investissements” (1998).

¹⁸ The model of the free zone in Tunisia seems to be an extension of the relatively successful model of the industrial zone. In 1997, there were 62 industrial zones. Many firms in industrial zone export 80 to 100 percent of their sales, and at least some industrial zones have customs officials on the premises. Nonetheless, export incentives derive exclusively from the export activities of the firms, rather than from the zone itself. There are, for example, no tax concessions for industrial zones, and space in these zones, while available, may be very expensive.

antithetical to this greater access to imports, the Government of Tunisia has implemented a number of new tariffs. For instance, the maximum rates on a wide range of goods has been raised from 43 percent in July 1996, to 287 percent in 1997.¹⁹

Inputs that are converted into exports are admitted duty-free. Within six months, firms using this temporary admission facility must present documentation that they have exported the good for which the import was an input. This facility applies to both partially- and totally-exporting firms, and appears to be a widely-used, straightforward system. For exporting firms, temporary imports have been encouraged by greater efficiency in terms of the procedure. Previously lengthy and cumbersome procedures were required to obtain authorization for temporary imports. These have since been replaced by a two-day procedure that requires only the presentation of a basic request and a bank guarantee.²⁰

The process for the duty exemption program also appears to be straightforward. The rules are presented in Table 2. At the time of importation, firms present evidence in support of exemption of inputs and capital goods, and evidence showing a lack of competing goods in the domestic market. However, in reality, firms question two aspects of this application procedure. First, raw materials are exempted only if there is no local equivalent, and this may be difficult and time-consuming to prove. Second, it is argued by some firms that coverage of duty exemptions is not broad enough. Furthermore, goods that involve complex procedures, or goods that are inputs in non-traditional, technologically-sophisticated exports, are excluded occasionally from exemption, based on inspection by a customs agent.

Bonded warehouses

In response to the 1972 legislation that created off-shore firms which were not confined to a distinct geographic location, it was necessary to provide a mechanism by which import and export procedures might be localized and streamlined.²¹ Bonded warehouses were introduced for this reason and have allowed the export sector to evolve spontaneously throughout Tunisia. Bonded warehouses employ an on-site customs official so that goods can be inspected and processed readily, prior to shipping. In recent years, bonded warehouses have alleviated the problem of queuing in ports. As with the temporary-import mechanism, both partially- and totally-exporting firms may apply for bonded-warehouse status.

Export facilitation policies have contributed unambiguously to the inclusion of Tunisian firms in global manufacturing processes. The European Union, for example, accounts for 80 percent of its exports, namely textiles, and 70 percent of imports, a large proportion of which are inputs. Still, export-enhancing policies may have been too successful in linking Tunisian companies to the global production chain. Such measures may have created distortions with respect to its domestic firms, and, thus, the domestic economy as a whole. This point will be discussed further in the concluding section.

3. The Firm Survey and Results

After reviewing each of the export incentives, one must consider the efficacy of each in terms of promoting Tunisian exports. To this end, ten firms and seven export-related agencies were interviewed in July 1998.

¹⁹ United States Embassy, "Country Commercial Guide: Tunisia, 1997," p. 3.

²⁰ Op. cit., and MTC Consulting, "Etude sur lo'offre de biens tunisiens" (Tunis, 1998).

²¹ Firms in Tunisia are considered off-shore if foreign capital accounts for a minimum of 66 percent of equity and if at least 80 percent of production is exported. On-shore firms have no more than 49 percent foreign equity, if non-industrial, and up to 100 percent, if industrial.

The survey

Firms in the sample were not selected randomly, but were based on referrals by Tunisian counterparts and on availability. Interviews were conducted with *presidents directeurs-generaux* (managers, or chief executive officers) and chief financial officers. Interview times varied widely, ranging from 45 minutes to 2.5 hours.²² Firms were asked about costs, production, sales, labor, infrastructure, export procedures, and the decision to locate in Tunisia. Few managers could reply to questions about the latter, either because this decision pre-dated their employment, or because they were unaware of the factors affecting the decision. In addition to interviewing enterprises, a subset of the firms' survey questions was posed to two of the seven export-related organizations, because they seemed to represent a broad constituency of exporters.

Firm characteristics

Most firms in the sample are small, whether measured by sales or employment, which is common among Tunisian firms. Only two firms generated sales of more than \$3 million in 1997. Data on the firms are reported in Table 3.

By employment, the majority of the workers in most firms are Tunisian. Full-time foreign employees, if present, filled positions in the managerial ranks. In terms of the origin of capital, firms are mixed. Overall, just under half are owned by Tunisians. Three are subsidiaries of foreign firms. Two firms—a trading company and a maker of specialty jeans—are the products of government divestments, such that the Government of Tunisia maintains ownership of 49 percent of one firm. This ownership data is broadly consistent with economy-wide foreign direct investment data available. France, Germany, Italy, Belgium, and the U.S. are the largest investors in Tunisia, listed in decreasing order.

Firms in the sample are largely export-oriented and, further, are connected little to the domestic market. Three firms sell under half of their production to the world market, while four furnish goods exclusively to the rest of the world. Firms reported that Turkish and Moroccan firms are their chief competitors. Compared to the population of Tunisian manufacturers, the sample under-represents those who produce entirely for export. Here, two firms among the seven with foreign capital in the sample are totally exporting, whereas among all foreign-owned manufacturers in Tunisia, more than 85 percent produce goods destined abroad.

Enterprises spanned the gamut of activity, from pure trading to software development to electrical cable manufacturing. Electronics firms are over-represented in this study, and textile firms are under-represented relative to the distribution of manufacturers in the economy. At the same time, this sample, though not random, is surprisingly representative in terms of Tunisia's relatively successful and ongoing transition from lower- to higher-value-added exports. This transition is occurring either by increasing the range of manufactures, or by integrating backwards. In the first instance, MISFAT began operations in 1979 as a manufacturer of air, gas, and oil filters. By 1990, and again in 1997, it had extended its product

²² The large variance in interview times is explained by the fact that the first surveys were *de facto* pilot surveys. The survey was streamlined after the first few interviews, thereby reducing interview times from 2.5 hours to roughly 1.25 hours. Also, firms often furnished summaries of their operations (rarely in the form of an annual report, but summaries nonetheless), which eliminated the need for a number of questions.

line to include products involving more technologically-advanced processes, namely shock absorbers. In the second instance, UT Automotive Tunisia has produced electrical cable using imported wire and cable components. The firm plans to begin producing their own cable components in the next year, increasing the value added of its output by approximately 10 percent.

Table 3. Summary of characteristics of firms.

Name	Year Founded	Activity	Export (%)	Current Incentives Used	Nearest Port (km)	1997 Income US\$ '000s	Ownership
ABB Maghreb Services		Electronics			8 ^{1/}		Foreign: 100%
Comète Engineering	1987	Technical consulting; software development	20 ^{2/}	Few apply to exporting services	4 ^{3/}	2,000	French: 19%; Belgian: 31% Tunisian: 50%
Maghreb Alimentation (CPC Foods)	1984	Dehydrated foodstuffs	35	Industrial zone; no VAT; temporary imports	0 (factory in Hammamet)		Foreign: 52% Tunisian: 48%
MTC Consulting		Firm restructuring consulting					Tunisian: 100%
MISFAT1 ^{4/}	1979	Air, gas, gas-oil, oil filters	40	Industrial zone; >10 ^{5/} temporary imports	8	1,185 ^{6/}	Tunisian: 100%
Société Industrielle d'Amortisseurs (MISFAT2/RECORD)	1990	Shock absorbers	60–70	Industrial zone; <10; temporary imports	8	1,442	French: 20% Tunisian: 80%
MISFAT3	1997		100	Industrial zone; wholly exporting; temporary imports	8		Tunisian: 49% Italian: 51%
Pantalouisir	1980	Denim jeans	100	EPZ; >10; bonded warehouse	0 (Bizerte)	2,500	Tunisian: 100%
SCIT		Spare parts, foodstuffs, construction materials, electronics trade	100	Totally exporting; suppliers use bonded warehouses	8	11,440	Tunisian private: 51% Tunisian government: 49%
Systel (Lucent Technologies)	1991	Telecommunications sales and engineering	55	Industrial zone; <10; temporary imports	4	6,000	American: 100%
Tunisie Porcelaine		Porcelain tableware	60	Industrial zone; temporary imports	4, 8		Tunisian: 100%
UT Automotive Tunisia	1998	Electrical (automobile) cables	100	Industrial zone; <10; bonded warehouse, temporary imports	8	3,000	American: 100%

^{1/} Distance to Radès, La Goulette ports. ^{2/} An approximation from company literature. ^{3/} Distance to Tunis-Carthage Airport. ^{4/} The three MISFAT firms are independent, although they share a common president. ^{5/} “< 10” and “> 10” denote how long the firm has been in operation and, therefore, which tax advantages apply. Advantages associated with membership in an industrial zone seemed minor and influence little export decisions. ^{6/} Share capital.

Tunisian firms are not located far from ports, air and sea, nor from mostly adequate road and rail networks. More than half of firms are located in industrial zones, which, as mentioned earlier, have their own infrastructure. Only one company is currently in a free zone, and one additional firm currently in an industrial zone is contemplating a move to a free zone in the coming year, in large part to take advantage of the tax incentives (and greater space for manufacture, distribution, and storage).

One common thread in exporting firms interviewed that was not mentioned in Table 2 is a palpable dissatisfaction with the price and quality of local inputs. Labor and raw materials will be discussed in turn.

Labor

Labor in Tunisia is relatively cheap, and it is plentiful. While data on the minimum wage are readily available for Tunisia, as is usually the case in countries with EPZs or a significant export sector, the minimum wage conveys little information about the prevailing wage among the relevant firms.²³ As an alternative source of data on the labor market, one might look at the distribution of employees in manufacturing, shown here in tables 4a and 4b. However, the distribution of labor across sectors appears bimodal. That is, there is an elastic supply of highly skilled workers, such as engineers, and of unskilled workers, mainly young women. Between the two types of labor, there is apparently little else. The result, given the empirical evidence from firms, is both an inefficient allocation of labor and a relatively higher wage bill than might be found at comparable firms facing a continuous labor supply schedule.

Table 4a. Enterprises and employment in manufacturing industries of Tunisia, 1997.

Industry	Number of Enterprises	Number of Employees
Agribusiness	16	804
Chemicals	6	307
Building Materials	8	151
Mechanical and Electrical	118	12144
Textiles	763	76322
Leather and Footwear	96	8060
Miscellaneous	45	2276
Total	1052	100064

Source: Foreign Investment Promotion Agency, "Invest in Tunisia" (1998).

Table 4b. Employment by gender and economic activity in Tunisia, selected years.

Sector	Division of male labor force (percent)		Division of female labor force (percent)	
	1980	1990–97	1980	1990–97
	Agriculture	33	23	53
Industry	30	33	32	32
Services	37	44	16	27

Source: World Bank, *World Development Indicators 1999*.

²³ For more on the divergence in EPZ and non-EPZ wages see International Labor Office, "Labor and Social Issues Relating to Export Processing Zones" (Geneva: 1998).

According to Table 4b, the proportion of women participating in industrial work has remained constant over the past three decades in Tunisia. Nonetheless, exporting manufacturers hire many unskilled young women. Turnover is high in the unskilled ranks, because those with minimal experience (e.g., one year), can easily find a job since this type of labor is scarce. As well, many of the women are single when they begin work may get married within a fairly short period (e.g., teenagers who begin work and get married within two years), and do not return to the assembly line once children are born, which generally follows marriage in fairly rapid succession. Retention incentives and replacement costs appear to be significant, though none of the firms in this survey volunteered the precise magnitude of this cost.

Another additional cost to manufacturers is derived from a bifurcated labor market. Managers must hire extra layers of workers to oversee factory processes in order to compensate for the lack of experienced workers in internationally competitive industries. One manager described it as hiring a “supervisor to supervise the supervising supervisor.” Firms incurred extra labor costs and extra costs associated with delays from additional inspection.

A third problem cited by firms in the sample is the inefficient allocation of resources that results when senior managers perform tasks typically executed by mid- (to lower-) level managers or workers. A frustrated manager cited an instance in which he had to deploy several senior engineers to deliver time-sensitive products to a customer abroad, a job typically performed less expensively by a courier or the equivalent of a courier. In this respect, the shortage of skilled and semi-skilled labor among internationally competitive firms in Tunisia appears to affect both manufacturing and service sectors equally.

Raw materials

To encourage integration of the domestic economy with the off-shore economy, firms in Tunisia are required to procure raw materials from domestic firms if they are available. As mentioned in section 1, these suppliers then receive the tax advantages of an exporting firm, and these inputs are exempt of duty when purchased by the exporting firms. Yet, firms reported in interviews that the variability of prices are higher and quality not comparable to those of imported inputs. Several in the sample suggested that this measure, rather than stimulating competitiveness among domestic firms, served simply as a transfer from firms in the export sector to firms serving the domestic market. Domestic suppliers, in effect, are being subsidized and protected rather than incubated and strengthened.

Rankings

Firms were asked to rank policies and infrastructure characteristics within Tunisia that might be particularly useful to exporters. Specifically, they were asked about customs administration, physical infrastructure, location, zone administration, support services, communications facilities, and utilities. Overall, firm or zone location was given the best score (2.5), which is between “average” and “above average” with respect to competitiveness or export promotion. Physical infrastructure was given the worst score (3.0), which is “average.” In several instances, the score reported by managers relied on, or was a composite of, three benchmarks: the European (global-competitor or emerging-market) standard, the past Tunisian (pre-reform) standard, and the African (developing-country) standard. While it is difficult to ascertain which benchmark was relevant for each response, this study attempts to provide context to the greatest extent possible in the discussion below. The results are largely consistent with similar studies of the export sector and presented in Table 5. Each ranking is considered in turn below.

Table 5. Rankings by Tunisian firms of export-related infrastructure, 1998.

Firm, or organization	Customs Administration	Infrastructure	Location	Zone Administration	Support Services	Communications Facilities	Utilities
1	2	4	2	3	3	3	3
2	3	3	3	2	2	2	3
3	3	2	3	3	N/A	2.5	2.5
4	3.5	2	2	3	N/A	2	3
5	3	3.5	2	3	N/A	3	N/A
6	2	3.5	3	3	N/A	3	3
7 ^{1/}	1	1	N/A	N/A	N/A	N/A	1
Average	2.75	3.00	2.50	2.83	2.50	2.58	2.90

Key: 1 = Excellent; 2 = Above Average; 3 = Average; 4 = Below Average; 5 = Poor.

Note: "Zone Administration" refers to any zone, industrial or free, relevant for the firm sector.

^{1/} Responses by last organization are excluded from the average, as it represents government and not firms.

Source: HIID Survey of Tunisian Firms and Organizations in the Export Sector, 1998.

Customs administration

Managers rated the operations and procedures of customs officials 2.75, between average and above average. While many appreciated the changes that have recently been instituted to bring export-clearance times down to two days and import-clearance times down to four, they also complained bitterly about the speed with which customs agents reviewed documentation. More specifically, international suppliers to the Tunisian market have experienced appreciable delays and losses at the Customs Office, for example when using letters of credit payable upon receipt of goods in Tunisia.²⁴ All agreed that current and future competition with Mediterranean countries and the Asian financial-crisis countries is exposing the recurrent shortcomings of Tunisian customs administration. Firms who supply the European market and specialize in "just in time" production and delivery were especially critical of delays in import processing. This view seems representative of a vast number of enterprises, because Tunisia's clothing industry is the largest supplier of denim jeans to the European Union, is comprised of many small, family-owned firms, and relies heavily on just-in-time production.

Import clearance times that are becoming less competitive may explain, in part, the increasing penetration by distant countries into Tunisian export markets, when cost advantage of local inputs should be attenuated when transportation costs are taken into account. In men and boy's clothing, for instance, Tunisia's share in imports to the European Union has been nearly flat, increasing from 1.0 to 1.4 percent between 1988 and 1997. At the same time, China's share has increased from 3.8 percent to 11.7 percent. This issue will become even more critical as a system of preferences with respect to European markets is replaced gradually by a system based on country, customs, and firm competitiveness.

²⁴ United States Embassy, "Country Commercial Guide, Tunisia 1997," p. 29.

Infrastructure

The category of export-facilitating infrastructure that ranked poorest is the overall Tunisian infrastructure within the country, namely transportation. By assigning infrastructure a 3.0 on average, firms reported that there was nothing exceptional about the country's infrastructure. A number of firms expressed their desire to have the roads surrounding them widened to accommodate delivery and distribution trucks. Others expressed a desire to expand the road network as a whole. Similar studies have concluded that while road networks are extensive and well-maintained in the northern part of Tunisia, their growth is not keeping pace with increasing commercial and private traffic in the major cities.

Ports received some criticism as well, and firms attributed occasional delays to the excess traffic and slow processing in ports. The largest port, the Tunis-Radès terminal, has been cited by the business community as being in need of modernization and the ability to handle container traffic more efficiently. It has also been noted that freight costs are prohibitive by international comparisons due to lack of competition in the transportation and port-infrastructure sectors.²⁵

Location

The relatively high marks given to location—overall ranking between “average” and “above average”—have at least two interpretations. First, most firms consider Tunisia itself well-situated geographically, given its proximity to all regions of Europe. Further, this offers some export to neighboring countries when the political and economic environments prohibit production within the country. A second interpretation focuses on the situation of industrial and free zones. Industrial and free zones are generally constructed along major corridors close to seaports and airports. This interpretation may exaggerate the merits of location given the composition of the sample: most firms that were accessible during the survey period were within an hour of Tunis. It is uncertain whether firms near Zarzis or in the interior would have rated location so highly.

Zone administration and problem solving

All but one firm ranked zone administration and problem solving as average, taking into account both industrial zones and free zones. Most responses refer to industrial-zone administration, which appears to include a minimal range of activities. The least developed industrial zones furnish rental space and security. The most developed zones provide additional services, such as business and customs services, similar to enclave EPZs. With only one free-zone firm in the sample and with limited country experience with EPZs, little can be inferred from this result with respect to export facilitation.

Support services

For most firms it was difficult to distinguish the above category from this one. As a result, there were few responses. Nonetheless, the ones given seem to be generally consistent with those reported in “zone administration and problem solving.”

²⁵ MTC Consulting, “Etude sur l’offre de biens tunisiens” (1998), p. 54.

Communications facilities

When deciding on the proper score to assign communications facilities, most enterprises compared the condition of their present facilities with that of their previous ones. In the recent past, service was poor, prices were exorbitant, and access to telephone and internet services was limited. Currently, one can observe some progress. Service and maintenance are better, but, for domestic and relatively unknown firms, it is still reported to take weeks or months to have a phone line installed. Telecommunications prices are lower than before, but they are still high by international standards, as can be seen in Table 6. Whereas it costs FF 2.97 (US\$ 0.49) per minute for a firm in France to call New York, it costs FF 11.08 (US\$ 1.83) for non-totally-exporting firms and FF 8.86 (US\$ 1.46) for totally-exporting firms to make the same call from Tunisia. According to SANGO Net (a South African internet service provider), as of mid-1998, there were roughly 5500 internet users in Tunisia, including most private companies, which was an increase from 200 users in 1997.²⁶ SANGO Net also lists six internet service providers (ISPs) in Tunisia that serve the public sector and two ISPs for the private sector and residential use.²⁷ Nonetheless, internet connectivity remains costly. It takes several months for authorization and installation, and, once installed, it costs \$1800 per year for basic access on a dedicated telephone line (low-speed transfer) and \$21,000 per year (plus local telephone line charges) for a higher speed 64-kilobyte-per-second line. Certainly, the fact that there was, until mid-1997, one sole legal provider of internet access, the Tunisian Internet Agency, augmented cost by limiting competition. It is unclear in mid-1998 whether the Tunisian Internet Agency still controlled internet access. A further constraint that limits access to high-speed data transmission and to the internet is the desire of the government to manage simultaneously political and security concerns and increasing demand for information-technology access. Like telephone coverage, managers appreciate progress in connectivity but believe these services can be obtained faster, more cheaply, and more consistently.

Table 6. International comparison of telecommunications costs, 1997.
(French francs)

Country	Monthly Rental	Local Calls (3 minutes)	Long Distance Calls (3 minutes)	International Calls (1 minute)		
				Brussels	New York	Tokyo
France	68.00	0.74	4.45	2.47	2.97	6.55
United Kingdom	79.30	1.10	2.44	2.63	2.19	7.13
Germany	83.06	0.81	6.08	3.24	4.86	8.10
Italy	101.95	0.72	5.10	3.70	4.32	11.11
The Netherlands	81.67	0.99	1.98	3.14	5.61	11.57
Tunisia						
Normal tariff	506.42	0.18	3.49	5.91	11.08	11.08
Preferential tariff	506.42	0.10	1.96	1.48	8.86	8.86

Notes: 1. To calculate the monthly rental charge, it was assumed that the telephone service is within a radius of 3 km. (The monthly rental does not include the fixed cost of up-front installation charges.) 2. The long distance rates are averages of inter-city call costs. 3. Preferential tariffs apply to totally-exporting firms.

Source: Agence de Promotion de l'Industrie, "Coûts des Facteurs de Production en Tunisie et Comparisons Internationales" (1997), pp. 26–32.

²⁶ *ibid.*, p. 8.

²⁷ SANGO Net, <http://www3.sn.apc.org/africa/tunisia.htm>

Utilities

Relatively poor ratings were given to gas, electrical, water, and sewage services. There was little discussion about utilities, but when firms did mention them they complained of delays in repairs and imperfect maintenance. In contrast, other reports, such as the U.S. Embassy's Commercial Guide to Tunisia, suggest that these services are generally reliable. Firms responses, then, might have been influenced by the interruptions in service due to extreme temperatures that occurred during the survey period.

4. Summary and Conclusion

Tunisia's advantage in manufactured exports relative to the rest of the world is, without a doubt, declining. In real terms, the growth rate of manufactured exports has slowed significantly in the 1990s, from 12.8 percent in 1987–91, to 4.0 percent in 1992–97.²⁸ Before the mid-1980s, one could point to macroeconomic phenomena (such as inflation rates or exchange rate policy) to explain unrealized gains from trade. In the current period, Tunisia has produced a consistently stable macroeconomic environment, and this can no longer be identified as the critical inhibitor to exports. While the firm-level evidence presented here is limited in scope, it does suggest that changes in export-promoting facilities can enhance competitiveness. In this regard, customs administration, transportation networks, and utilities service delivery and provision were considered most in need of improvement. Features of the labor and other factor markets impose high costs and constrain exports of manufactures. The isolation of the domestic market from the export-oriented market further limits the opportunities in the manufacture and sale of Tunisian exports.

Certainly, Tunisia has proved to be a successful exporter relative to other African countries. Nevertheless, it requires a reassessment of its basic export strategy, policies, and infrastructure to support it in light of the ongoing international competitiveness. On one hand, several initiatives, have already been undertaken for this purpose and are ahead of free trade with the European Union, including the *mise-à-niveau* firm restructuring program which aims to make Tunisian firms internationally competitive. On the other hand, exporters find change slow in the export sector and indeed, in the economy as a whole, so the positive effect of this program may prove less distinctive after a longer time period.

This results of this modest survey corroborate the evidence of exporters, but further research is certainly warranted, as much remains unexplored in the "Tunisian miracle" of exports. An extension of this work might examine the extent to which technology and labor are transferred among exporting firms, and between exporting and domestic firms. An analysis of these data might reveal whether and how internationalization is affecting manufacturing (and other sectors) in Tunisia. Further development of educational, and more specifically vocational, opportunities, as well as further liberalization of the domestic economy will likely mitigate the problems facing internationally competitive firms. Another extension of this research would be the comparison of Tunisian export success with those of other countries in Africa. This would supplement the global comparisons presented here, in order to take into account features that might be specific to the African export experience.

²⁸ World Bank, "Tunisia-Export Development Project," <http://www.worldbank.org/pics/tn55814.txt>

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Appendix.

A1. Product concentration indices in Tunisia, 1980–96.^{1/}

	1980–86	1986–91	1991–96
Four-product concentration ratio	0.495	0.361	0.423
Share of 4 largest exports	0.772	0.644	0.626
Export shares			
Unprocessed primary	0.567	0.328	0.223
Processed primary	0.012	0.016	0.020
Manufactures	0.420	0.652	0.757
Key exports			
Textiles, apparel, leather, and footwear (US\$)	3.89E+08	8.49E+08	2.22E+09
Share in total exports	0.202	0.333	0.467
Share in manufactured exports	0.486	0.504	0.612
Electronics (US\$)	29921833	1.01E+08	2.96E+08
Share in total exports	0.016	0.040	0.062
Share in manufactured exports	0.037	0.060	0.082
Petroleum and petroleum products (US\$)	8.7E+08	4.8E+08	5.11E+08
Share in total exports	0.454	0.188	0.108
Share in primary exports	0.777	0.558	0.454

^{1/} Based on the four largest two-digit SITC products in total exports.

Source: Statistics Canada, *World Trade Analyzer 1998*.