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IRAQ PRIVATE SECTOR GROWTH AND EMPLOYMENT GENERATION

May 1, 2006

Iraq Competitiveness Analysis

Final Report

IZDIHAR
IRAQ PRIVATE SECTOR GROWTH AND EMPLOYMENT GENERATION

This publication was produced for review by the United States Agency for International Development. It was prepared by the joint venture partnership of The Louis Berger Group / The Services Group under Contract # 267-C-00-04-00435-00.



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The IRAQ IZDIHAR project is funded by the United States Agency for International Development (USAID) and implemented by the joint venture partnership of:

THE Louis Berger Group, INC.
Engineers Planners Scientists Economists

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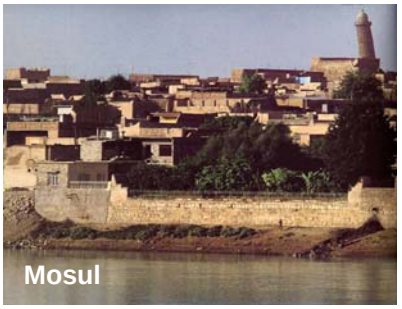

Mosul


Imam Al Dor

1. Introduction

At the outset of this study in early 2005, the situation for investors and businesses in Iraq was one of deep uncertainty. An appointed provisional government – the fourth administration in less than two years – had just left office. The first free election, for a government to serve for only one year in order to draft a constitution, had just taken place. A new Iraqi Dinar had been in circulation for just over a year. Conflicting legal regimes and provisional decrees were in place and remain. Uncertainty was rife and armed violence persistent. It was against this backdrop that the research for this work began.

Normally the human sources for a study of this nature would consist of interviews with government officials, industrialists, consumers, and a variety of domestic organizations and academic experts. Press reports, business and professional journals, trade publications and academic studies often provide supplemental information, analytical material, and a large body of anecdotal information that can be tested against reality on the ground. That would be supplemented by the information available to major international organizations such as the World Bank, IMF, and so forth, relying on government sources and their own research. In the case of Iraq, the usual methods of research can not be applied in the normal way and few if any sources are reliable.

Beyond the problems of the data themselves, the lack of security throughout 2005 has made even routine meetings with government officials difficult to schedule. As well, there was a general lethargy in government, partly because the previous government's term was by definition limited to one year.

Under these circumstances, any analysis of competitiveness can only be put forward with caution. Nonetheless, there is information, and there is a history of industrial activity. Regional and world markets are more easily analyzed and assessed than those in Iraq, allowing some reasonably reliable deductions about the flow of goods to Iraq and potential exports of certain Iraqi products.

The stated development goal of the Government of Iraq (GOI) is to:

Transform Iraq into a peaceful, unified federal democracy and a prosperous, market- oriented regional economic powerhouse that is fully integrated into the global economy.1

The number one obstacle to achieving this desirable outcome is the lack of security. Another major question concerns the heavily subsidized state-owned enterprises (SOEs). Privatization is presently under consideration. Both problems must be resolved before significant economic progress can be attained.

In Iraq's private sector modern business principles and practices are not widely observed, and minimal access to financing is an impediment. The lack of modern office equipment or

[1] Government of Iraq, National Development Strategy, 2005.

computers, and antiquated bookkeeping and accounting systems, retard the development of small and medium sized enterprises.

Iraq has applied for membership in the WTO, and with accession would be obliged to open its markets and to reduce the tariffs and trade barriers which have protected domestic industry to date. In addition, Iraq's reliance on an oil-based economy has adversely affected both employment and private sector growth. The oil sector accounts for 74 percent of GDP, and 98 percent of foreign currency earnings. Oil is profitable but volatile as a primary source of government revenue and not a significant source of employment. Economic diversification must be a high priority for the GOI.

This paper identifies industries which possess intrinsic advantages (or relatively fewer disadvantages), and therefore should be able to compete in an open market with as little assistance from the public sector as possible. It also seeks to identify sectors that benefit from physical proximity to large markets, in this case the domestic Iraqi market.

The methodology contains the following four steps:

- **Step 1**: Develop a long list of potential industries.
- **Step 2**: Screen the long list to eliminate low-potential industries, thereby creating an intermediate industries list.
- **Step 3**: Screen the intermediate list using market and development criteria (explained below) to produce a short list of high-potential industries.
- **Step 4**: Analyze the competitive characteristics of each short-listed industry.

Each of 100 industries was evaluated using the following criteria to assess an industry's potential for future growth in Iraq:

- Industries which are currently active, or where downstream or upstream relationships exist with these industries.
- Industries with potential for job creation and human resource development.
- Industries with a potential to contribute to the business environment (cross-cutting industries).

This assessment enabled the list of 100 industries to be reduced to an intermediate list of 30 industries.

In Step 3, market and development criteria were used to further screen the list and reduce it from 30 industries to 10 industries. Ten industries were chosen arbitrarily as a manageable number that could be described in detail.

Two sets of criteria were used to undertake this selection:

- **Criteria Set 1**: The "Market Test" - This test considers supply, demand, firm strategy and structure, and the supporting cluster services available for each industry.

- **Criteria Set 2**: The "Development Test" - This test considers an industry's potential contribution to Iraq's broader economic development goals.

Table 2.2: Ratings for the 10 Selected Industries

Industry	Rating
Poultry production	A
Agri-processing	A
Fisheries	A-
Plastics	A+
Pharmaceuticals	A
Petrochemicals	A-
Mobile telecommunications	A-
Financial services	A
Tourism	A+
Cement	A+

Implementation

Each of the ten sectors which merit support should be studied in greater detail by qualified experts. It is certainly possible to describe theoretical implementation plans, or to adapt plans that have been applied elsewhere in the world. However, in light of the particularly difficult circumstances in Iraq, and because conditions are in any case different from place to place, a more careful analysis is required. For this work qualified experts should be able to analyze sectors in detail and devise workable implementation plans in thirty to forty five working days. For those sectors already studied in detail, qualified experts should be retained to carry out appropriate training programs in country or elsewhere, depending on circumstances.

For illustrative purposes we selected agriculture and food processing. The sector has great economic significance for Iraq, considerable potential for reducing massive import costs, it holds forth the potential to create jobs in the short and medium term and includes opportunities from the level of micro-finance up to investments in the tens of millions of dollars. Finally, and advanced preliminary draft of the Izdihar Investment Promotion component's study of the agriculture and food processing is available and is appended to this study. It is a model for the kind of specialized, follow-on studies that are contemplated for all the sectors and sub sectors identified by this study as holding significant promise deserving of particular support and encouragement. The specialized recommendations derived from follow-on studies must be useful to policy makers. They must explain the context, be precise in their recommendations, justifiable, and practical.


Abbasid Palace— Baghdad

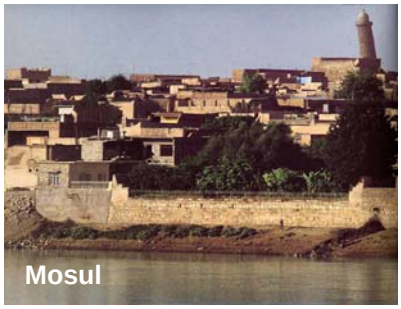

Parthian-style temple— Hatra


Mosul & city wall of Nineveh

IZDIHAR
IRAQ PRIVATE SECTOR GROWTH AND EMPLOYMENT GENERATION

Chapter One: Introduction


Khan Mirjan— Baghdad


Mosul


Imam Al Dor

Chapter 1: Introduction

1.1 Current Situation

At the outset of this study in early 2005, the situation for investors and businesses in Iraq was one of deep uncertainty. An appointed provisional government – the fourth administration in less than two years – had just left office. The first free election, for a government to serve for only one year in order to draft a constitution, had just taken place. A new Iraqi Dinar had been in circulation for just over a year. Conflicting legal regimes and provisional decrees were in place and remain. Uncertainty was rife and armed violence persistent. It was against this backdrop that the research for this work began.

Normally the human sources for a study of this nature would consist of interviews with government officials, industrialists, consumers, and a variety of domestic organizations and academic experts. Press reports, business and professional journals, trade publications and academic studies often provide supplemental information, analytical material, and a large body of anecdotes that can be tested against reality on the ground. In a more usual case, the information garnered from all these sources would be integrated with statistical material gathered from government directly, supplemented by the information available to major international organizations such as the World Bank, IMF, and so forth. They, in turn, derive much of their data from government sources and their own in-country research. In the case of Iraq, none of the usual methods of research can be applied in the normal way, few if any sources can be considered reliable, and everything must be vetted and tested under the loop of common sense.

The fundamental lack of security throughout 2005 has made even routine meetings with government officials difficult to schedule; pervasive insecurity and the threat of armed attack limit normal contacts with Iraqis, including members of the business community. Deteriorating security outside Baghdad, which has limited travel around the country for non-Iraqis – still possible as recently as early 2005 – has made it difficult to obtain satisfactory local support services. As well, there was a general lethargy in government, partly because the previous government's term was by definition limited to one year.

The Kurdish north is more stable than either the center or the south, and the Shiite south is also more stable that the center, but the fact remains that the national administration barely functions. This not only limits the ability of business and industry to operate, but also has a significant impact on the gathering of reliable data. Much statistical material is some years out of date. Rumors are rife, are repeated by an uncritical press, and frequently what seem to be trial balloons take on the character of divine writ. Hence, any analysis of Iraqi business, industry, trade and commerce must be treated with skepticism.

In the wake of recent elections, 2006 will apparently bring the fifth government since 2003. In the north there is a separate legal regime in many areas, that federal legislation will certainly supersede, but it is unclear when or how.

Therefore, any analysis of competitiveness prepared with an eye to identifying promising opportunities, and proposing potentially productive and competitive sectors, can only be put

forward with caution. Nonetheless, there is information, and there is a history of industrial activity. There are natural resources, and certain skills are present. In addition, regional and world markets for commodities and industrial goods and services are more easily analyzed and assessed than those in Iraq, allowing some reasonably reliable deductions about the flow of goods to Iraq and potential exports of certain Iraqi products.

With respect to the Iraqi domestic market, at present there is very little industrial production of any sort, and more than 70% of Iraqi food needs are provided by imports. Those two factors alone suggest possibilities, though they do not necessarily provide priorities.

1.2 Obstacles to Economic Development

The stated development goal of the Government of Iraq (GOI) is to:

> Transform Iraq into a peaceful, unified federal democracy and a prosperous, market-oriented regional economic powerhouse that is fully integrated into the global economy.[2]

The number one obstacle to achieving this desirable outcome is the lack of security. Assuring some degree of security requires expenditures which greatly increase the cost of doing business. It follows that these additional costs, and the inherent personal danger, discourage investment and business expansion, and significantly limit movement within the country.

The status and future of state-owned enterprises (SOEs) are presently under consideration, and these must be resolved before significant economic progress can be attained. Large SOEs established under the Baath regime controlled most sectors of industrial activity, and employed hundreds of thousands of Iraqis. Most of these firms received enormous government subsidies, including free utilities. Since 2003 most SOEs have ceased or reduced operations due to damage, looting or security problems; however, many of them are still paying salaries to employees. Although many SOEs may hold valuable assets in plant, equipment and raw materials, such subsidies and payments to inactive workers are a huge drain on Iraq's budget.

Iraq's private sector also faces challenges as modern business principles and practices are not widely observed in the business community. Minimal access to financing has also been an impediment: Most business expansion is funded largely from cash flow. The lack of modern office equipment or computers, and antiquated bookkeeping and accounting systems, retard the development of small and medium sized enterprises.

Iraq has applied for membership in the WTO, and with accession would be obliged to open its markets and to reduce the tariffs and trade barriers which have protected domestic industry to date. Given the increasing specialization and sophistication of global trade, Iraq's economy will continue to lag behind if it does not develop competitive industries.

The country's reliance on an oil-based economy has adversely affected both employment and private sector growth. The oil sector dominates the economy, accounting for 74 percent of GDP,

[2] Government of Iraq, National Development Strategy, 2005.

and 98 percent of foreign currency earnings. Oil, although extremely profitable, is also volatile and unreliable as a primary source of government revenue. In addition, the oil sector is not a significant source of employment. Diversification of Iraq's economy must be a high priority for the GOI.

The Iraqi Government, together with international donors, is taking some steps that would contribute to overcoming these obstacles, but a practical strategy for development is called for. While industrial development is essential to the economic growth and job creation that Iraq desperately needs, the heavy reliance on central planning by the previous regime did not encourage firms to be competitive in any sense in the domestic market, much less in international markets. Iraqi industry has been isolated for so long from the international economy that an aggressive focus on overcoming these disadvantages is needed in order to make up for the decades-long head start enjoyed by potential competitors.

1.3 Competitiveness and Clusters

1.3.1 Competitiveness Theory

Competitiveness theory is heavily influenced by the work of Michael Porter of Harvard University, author of *The Competitive Advantage of Nations*, and a widely acknowledged leader in the study of international competitiveness**.** From this beginning, the concept of competitiveness has moved from business, academia, and management circles into the sphere of economic development. While competitiveness actually happens at the firm level, a regional or national government creates the environment that allows its firms to sustain competitive advantage. An internationally competitive industry will then increase income and quality of life for its employees, later expanding its influence to suppliers and other related firms and industries.

In its basic form, competitiveness is productivity and, in business terms, productivity is the value of the output produced by a unit of labor or capital.[3] A firm that enhances the quality of its output will increase its competitiveness. A firm that uses labor or capital more efficiently to produce output will be more competitive. Regional or national governments can assist firms to increase the value of what they produce through laws, regulations, institutions and the strategic allocation of national resources, all of which can contribute to a favorable economic environment that allows firms to be more productive.

1.3.2 Clusters and Competitiveness

Clusters are geographic concentrations of similar or related firms and institutions, and are a key feature of internationally competitive industries. Successful clusters can be vertical (buyers and suppliers located close together) or horizontal (common customers, raw materials, processing plants, transport, or technology located in close proximity).[4]

[3] Michael Porter, *The Competitive Advantage of Nations*, 1990. p 6
[4] Ibid. p 148.

Clusters are important to competitive advantage and are mutually reinforcing. When one firm or industry begins to increase its productivity, it will demand a similar level of quality from its suppliers. Suppliers can generate successful downstream industries. Employees that gain skills at a competitive firm will be able to transfer skills to new firms as they are established. Information and innovation move quickly through a cluster, creating a vibrant and dynamic center of economic activity.[5]

The concept of clusters has helped define competitiveness for several decades. As a development tool, policymakers can influence competitiveness by improving the business and regulatory environment and, where appropriate, nurturing a regional industry cluster with specific interventions and assistance.

1.3.3 Clusters in Iraq

Date harvesting and processing constitute a cluster of sorts in the country, and this particular industry is at present receiving full attention from domestic and foreign business and industry. The United States government has seen fit to allow duty free import of Iraqi dates even though the US is itself a producer. The cultivation and export of dates appears to be adequately covered elsewhere (including the subject of seminars by the Izdihar program), and thus is not treated in this paper.

The application of Porter's theory of cluster development assumes some degree of existing industry, some concentration of skills, or some existing stream of trade and commerce that has resulted in a discernable advantage or potential advantage. In the case of Iraq, two problems confront us. One is that – with the possible exception of the petroleum sector and related industries – no internationally competitive or potentially competitive clusters appear to exist. This is partly the inevitable result of central planning, combined with the impact of international sanctions. With the possible exception of one or two segments in agriculture, the bases of most potential clusters are dilapidated state-owned enterprises staffed by a work force with outdated skills.

The second problem complicating an attempt to apply a widely recognized methodology to the problem of developing the Iraqi economy is that the central planning process did not have competitiveness as its goal. It was seeking a road to autarchy, military prowess, industrial showplaces, and the resultant opportunities for domestic propaganda. Since Iraq had no significant, competitive industries outside agriculture even before the Saddam period, it is difficult to identify industries that either a) can developed on the basis of natural resources or natural features: petroleum and related sectors, aspects of agriculture, tourism; or b) are services that underlie all modern societies and will be in demand here as well: telecommunication, financial services, and so forth. Hence, while the idea of competitive clusters can be used as the starting point for an examination of the Iraqi economy, any attempt to propose a support program based on the cluster approach would be to repeat the errors of the centrally planned economy.

[5] ibid p. 151.

The cluster concept does offer a practical approach for promoting growth at the local and regional level. This works well in the Iraqi context, since climate, geography, resources, historical industrial activity, and current security levels vary widely throughout the country. Consequently, a focus on local economic activity is more appropriate than a national perspective.

A local and regional approach is also more likely to be successful than a national approach, as the GOI is consumed by major political issues, and individual ministries are adjusting to their new roles in a post-Saddam era. Iraqi industry, however, must move on, and a cluster approach can help improve productivity for individual firms in select industries over the short term.

1.4 Key Elements of the Competitiveness Analysis

Job Creation: Iraq will create jobs if it can encourage the creation of firms that can produce local products that are better, cheaper, and meet customers' needs more effectively than potential imports. Currently, Iraq imports practically everything. Industries in several regional economies -- notably Turkey, Iran, Saudi Arabia, and Jordan -- have developed significantly, and now manufacture products that are better and cheaper than Iraqi products. Even if no new policies are introduced, jobs will be created in Iraq, but these jobs would be primarily in retail trade.

Industries: This competitiveness analysis treats economic activities at the industry level. Once the key industries that are most likely to succeed are identified, some assistance may be needed to help companies streamline business practices, acquire technology, learn skills, and thereby develop products or services that can be sold in the marketplace. This company-level action does not substitute for the need to improve the overall business environment, and such programs are often critical in enabling specific industries to survive and prosper. However, several programs already are underway in Iraq. They include, among other activities, the range of projects under USAID's Izdihar program, the World Bank's small business assistance program, International Finance Corporation projects, and various efforts undertaken by bilateral donors. The method utilized here emphasizes working at the industry level and, at the same time, seeking improvements in the business environment that will directly assist key industries.

Local/Regional Clusters: The concept of competitiveness also recognizes that the role of regions and sub-regions is fundamental to developing an economy that will support continued economic growth. The interventions outlined here have a specific geographic focus whenever possible, to gain clustering advantages. It should be noted, however, that this approach may not be appropriate for all industries, and that this principle is not applied in all cases.

SOE Privatization: Competitiveness development generally supports private sector firms. In the case of Iraq, the public sector has taken on increasing importance over the last four decades. In the current economy, SOEs are being either partially or fully liquidated. Iraq has more than 200 SOEs, and while they are mostly obsolete, and therefore uncompetitive, some firms do possess useful assets such as existing plant and equipment, infrastructure, and human capital. A restructured and privatized SOE can serve as an anchor firm that develops links to SMEs, and which helps create a stronger local industry than would otherwise be possible.

SME Development: In addition to Iraq's SOEs, which represent a large percentage of the industrial economy, the private sector in Iraq consists primarily of small and medium enterprises (SMEs) numbering approximately 100,000 (an estimated 99 percent of all firms). However, the SME sector has been isolated for so long that it has lost any chance at competitiveness.

Domestic Markets: Iraq has a population of 27 million persons, and in the immediate term, represents the target market for the activities which are treated in this paper. Competing in the export market is not an option for Iraqi industry at this time.

1.5 Caveats for the Methodology

Not all industries form clusters. The cement industry in Iraq, for instance, is comprised of a handful of firms located in each of the three regions of the country. Cement manufacturing goes to the raw materials.

An emphasis on the domestic market in the immediate term does not imply import substitution to subsidize non-competitive Iraqi industries. For example, although Iraq imports a large quantity of automobiles, this may not necessarily mean that Iraq can produce them at lesser cost for consumers. The industries that represent import substitution should not be encouraged simply for this reason. This paper identifies industries which possess intrinsic advantages (or relatively fewer disadvantages), and therefore should be able to compete in an open market with as little assistance from the public sector as possible. It also seeks to identify sectors that benefit from physical proximity to large markets, in this case the domestic Iraqi market.

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IRAQ PRIVATE SECTOR GROWTH AND EMPLOYMENT GENERATION

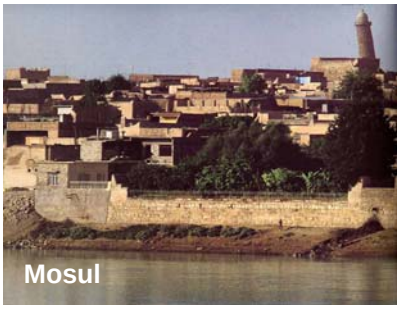
Chapter Two: Methodology


Abbasid Palace— Baghdad


Parthian-style temple— Hatra


Mosul & city wall of Nineveh


Khan Mirjan— Baghdad


Mosul


Imam Al Dor

Chapter 2: Methodology

2.1 Introduction

Figure 1 illustrates the step-by-step methodology for developing a short list of those industries which will be selected for more detailed analysis. This methodology contains the following four steps:

- **Step 1**: Develop a long list of potential industries.
- **Step 2**: Screen the long list to eliminate low-potential industries, thereby creating an intermediate industries list.
- **Step 3**: Screen the intermediate list using market and development criteria (explained below) to produce a short list of high-potential industries.
- **Step 4**: Analyze the competitive characteristics of each short-listed industry.

Steps 1-3, and their results, are described in detail below. The competitive analysis of each short-listed industry (Step 4) is contained in Chapter 3. See Table 2.1 for a summary of the methodology for short-listing industries.

2.2 Step 1: Develop Long List (100 Firms) of Potential Industries

In accepted practice, the first step in developing a list of industries for a country begins by examining industry contributions to GDP and employment, as well as the share of the country's trade in the world economy.[6] This analysis would also typically include an evaluation of a country's Revealed Competitive Advantage (RCA) or Export Specialization Index (ESI). This process would produce a list of the most competitive industries in a given country. Most of this information, however, was unavailable for Iraq. When data were available, they indicated very small or negligible industry contributions, reflecting Iraq's limited trade and weak economic condition. Accordingly, the list contained in Step 1 was drawn from desk research, anecdotal accounts of economic activity, and the limited statistical data that could be obtained.

[6] "Industry" is defined here as specific branches of manufacture and trade. Thus, industries may vary in size and in employment. For example, "dairy farming" is considered an industry, rather than the broader sector of agriculture. All such industries must be in the formal sector to be considered. Industry definitions are derived from the US standard NAICS codes.

Figure 1.1: Step-by-Step Methodology

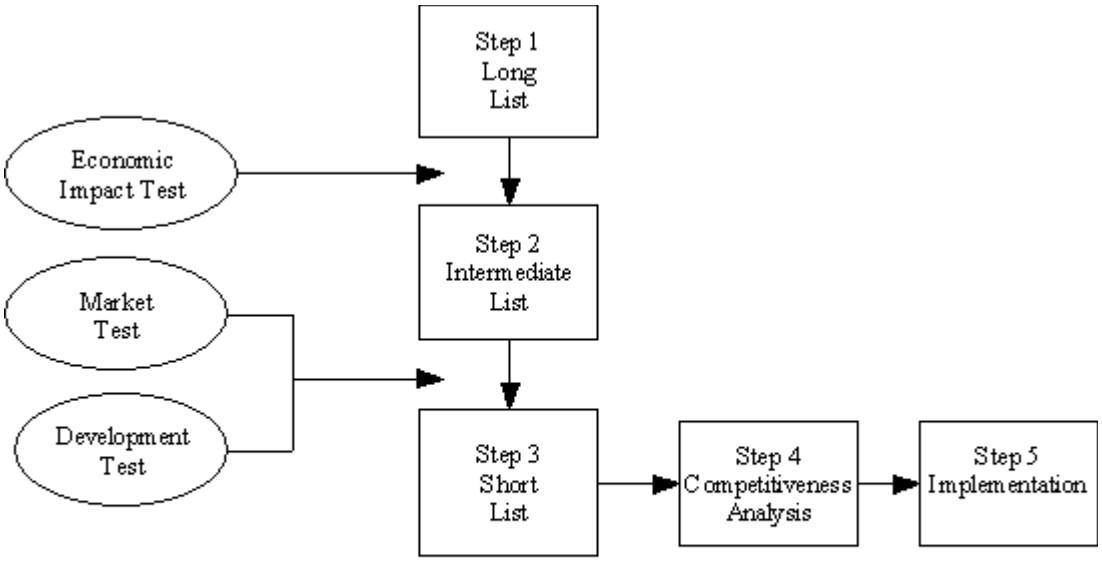


Table 2.1: Summary of Methodology for Short-Listing Industries

Steps	Description of Analysis/Work	Selection Criteria	Data Sources	Results of Analysis	Industries Qualified
Step 1 Develop long list (100 industries)	Examine current, historical and possible future industrial base	- Sufficient level of prior economic activity in Iraq - Current economic activity in Iraq - New industries into which Iraq has the possibility to enter	Donor-financed academic, government and NGO studies Current news sources	Long list of industries	100
Step 2 Develop intermediate list (30 industries)	Analyze companies representing long list of 100 industries	– Currently active in Iraq – Potential for job creation and human resource development in Iraq – Contribution to the business environment	Interviews with firms, policymakers and experts based in Iraq/region Desk research	Intermediate list of industries	30
Step 3 Develop short list (10 industries)	Apply criteria to intermediate list of 30 industries	- Quality of factors necessary for basic operations of industry ("market test") - Contribution to Iraq's broader economic development goals "development test")	Interviews with firms, policymakers, and experts based in Iraq/region Desk research	Short list of industries	10
Step 4 Analyze competitiveness of selected short-listed industries	Analyze competitiveness of final list of 10 industries	- Degree of inter-firm rivalry - Presence of cluster/ supporting industries - Presence of supply - Quality of demand - Consistency with development objectives	Interviews with firms, policymakers and international experts based in Iraq/region Desk research	Prioritized short list of industries, with ratings	10

Three criteria were used to make an initial identification of 100 potentially compatible or desirable industries, based on location, characteristics, and development objectives: These criteria were:

- Sufficient level of prior economic activity in Iraq.
- Current economic activity in Iraq.
- New industries which Iraq has the potential to enter.

Using these criteria, a list of 100 potential industries across a wide range of sectors – including agriculture, heavy industry, and light manufacturing, among others – was compiled. A list of the 100 potential industries that were identified using this process can be found in Appendix 1 at the end of this Chapter. This list then provided the starting point for the field research conducted in Step 2.

2.3 Step 2: Develop Intermediate List (30 Industries)

This report has utilized reviews of recent press coverage concerning private sector activity in Iraq, and an effort was made to verify claims derived from press materials. Still, due to the unique and uncertain nature of the current situation, this evaluation is not based upon a completely controllable methodology, but rather upon the best available information, not always reliable.

Each of the 100 industries was evaluated using the following criteria to assess an industry's potential for future growth in Iraq:

- Industries which are currently active, or where downstream or upstream relationships exist with these industries.
- Industries with potential for job creation and human resource development.
- Industries with a potential to contribute to the business environment (cross-cutting industries).

A rating of A, B, or C was subsequently assigned to each industry according to how well each industry satisfied these three criteria. Table 2.2 below provides the basis for each rating, with a grade of A representing the highest level of contribution for each criterion.

The rating system was used to produce a list of 30 industries having a score of at least A-. The grades assigned to each of the 100 industries are shown in Appendix 3 at the end of this chapter.

Table 2.2: Grading Industry Potential

Criteria	Rating A	B	C
Active industries	Strong Potential	Moderate Potential	Low Potential
Job creation	Current growth	Potential growth	Low/no growth
Cross-cutting benefits	Growth strongly benefits all sectors of the economy	Growth may benefit some other sectors of the economy	Isolated growth and/or potential
Result of ongoing projects	Existing projects having development synergies	Planned projects may have development synergies	No synergies with current or planned projects

The resulting list of 30 industries is the basis for a more detailed assessment of each industry, thereby reducing the list to those industries with the greatest promise.

2.4 Step 3: Develop Short List (10 Industries)

In Step 3, market and development criteria were used to further screen the list and reduce it from 30 industries to 10 industries. Ten industries were chosen arbitrarily as a manageable number that could be described in detail.

Two sets of criteria were used to make this selection:

- **Criteria Set 1**: The Market Test - This test considers supply, demand, firm strategy and structure, and any support services available for each industry.

- **Criteria Set 2**: The Development Test - This test considers an industry's potential contribution to Iraq's broader economic development goals.

2.4.1 Criteria Set 1: The Market Test

The selection of these criteria is inspired by the work of Professor Michael Porter of the Harvard Business School[7] who argued that a nation can create new factor endowments by interventions which improve labor, knowledge base and technology to enhance competitive advantage. This paper utilizes four factors which describe the environment in which firms operate and which, taken together, can reveal market opportunity for the industry in question.

The four criteria used in this analysis are:

- *Firm strategy, structure, and rivalry.* Increased rivalry promotes innovation and often results in increased comparative advantage. This criterion examines ownership structure, size of firms, pricing, and presence, and activities of domestic and foreign investors. The analysis measures industry maturity and the ability to adapt to market conditions and changes.

  Industries with the highest degree of firm rivalry were rated A, since this would encourage firms to innovate and streamline costs to remain competitive. Industries with less intense rivalries were rated B, and the industries with the lowest degree of company rivalry were rated C.

- *Supply conditions.* This category rates the quality of input factors such as labor, natural resources, and utilities. The stock of factors at a given time is less important than the expected changes and trends, because local disadvantages in production factors can force innovation. For example, labor shortages or scarce raw materials may require firms to develop new methods, and this in turn can lead to a comparative advantage.

  Industries with an outstanding supply base were rated A, since this helps to make firms more competitive. Industries with lower quality suppliers were rated B, while those with the lowest quality supply base received a C.

- *Demand conditions.* This category identifies the presence and quality of customers for an industry or the products and services of a cluster. Strong demand conditions exist when buyers favor quality over price. A strong, demanding local market encourages innovation and improvement, thereby creating comparative advantage. Both domestic and international demand were examined, with greater preference given to industries with high domestic market demand.

  Demand conditions were rated A where buyers are sophisticated and have higher quality standards. Less intense demand conditions were rated B, and industries with the least demanding conditions received a C rating.

- *Support and related industries and institutions.* If services are lacking, companies are less able to compete. By contrast, when local support industries are competitive, businesses

[7] Porter, Michael. *Competitive Advantage of Nations,* Free Press, 1990.

enjoy more cost-effective and innovative inputs. There is a wide variety of support and related industries and institutions, including private sector service providers, input suppliers, government institutions, donor organizations, NGOs, and business associations, among others.

Industries that have access to better infrastructure are rated A. All categories were equally weighted in the ranking exercise.

2.4.2 Criteria Set 2: The Development Test

These criteria measure the contribution of each industry to the broader economic development goals of the USAID program of assistance to Iraq: Job creation, economic diversification from oil production, and regional economic growth. It was assumed that all 30 industries analyzed here would contribute to the diversification of the economy.

These development objectives include:

1. *Job creation.* Increased employment is critical to the future economic growth of Iraq. It is estimated that up to 50 percent of Iraqis are unemployed or underemployed. Some industries, such as agriculture, are highly labor intensive and can contribute to the social goal of turning currently unemployed persons into productive participants in the economy.

   A grade of A was given to industries that could create more than 5,000 jobs. Industries with the potential to create 1,000 to 5,000 jobs received a B, while those likely to generate less than 1,000 jobs received a C.

2. *Encouraging regional economic growth.* Regional development is the key to developing underutilized resources in areas outside the capital.

   Industries located largely outside Baghdad received an A rating because of the potential for decentralization. A rating of B indicates potential growth both in Baghdad and outside, while a C rating was assigned to industries concentrated in the Baghdad metropolitan area.

3. *Human resource development.* This screen presents a measure of the skill level of new jobs created and an indicator of productivity gains.

Grade A was assigned where the majority of jobs require university-level training. The grade of B was assigned to jobs requiring high school training, and most of the jobs created by a C rated industry would require less than a high school education.

2.3.3 Applying Both Sets of Criteria: The Market Test and the Development Test

Each of the 30 industries on the intermediate list was rated using the seven factors contained in the Market Test and the Development Test (*i.e.*, firm strategy and structure, supply conditions, demand conditions, support and related industries, likelihood of job creation, likely contribution to regional growth, and likely contribution to human resource development.

The 10 top-scoring industries and their rankings are shown in Table 2.3 below. The results of the ranking for each of the 30 industries across the seven criteria, and the average score for each industry, can be found in Appendix 4 at the end of this chapter. A detailed analysis of these 10 industries is the subject of the following chapter.

Table 2.3: Ratings for the 10 Selected Industries

Industry	Rating
Poultry production	A
Agri-processing	A
Fisheries	A-
Plastics	A+
Pharmaceuticals	A
Petrochemicals	A-
Mobile telecommunications	A-
Financial services	A
Tourism	A+
Cement	A+

Appendix 1: Long List of Potential Industries

Agriculture/Livestock

1. Date farming
2. Citrus farming
3. Cut flowers
4. Oil palm processing
5. Fresh fruits and vegetables
6. Other horticulture products
7. Coffee production
8. Tea production
9. Herbs and spices
10. Sheep production
11. Beef production
12. Poultry production
13. Lamb production
14. Wheat production
15. Dairy production
16. Marine fisheries
17. Commercial fisheries
18. Tobacco
19. Agro-processing
20. Grain products
21. Forestry and logging
22. Vegetable oil
23. Sugar processing and refining
24. Salt processing

Location-Based Services

25. Veterinary services
26. Security firms
27. Health services
28. Mining, limestone
29. Mining, phosphate
30. Transport services, trucking
31. Transport services, air
32. Transport services, sea
33. Other logistics services
34. Management of ports
35. Print & Broadcasting
36. Publishing
37. Fixed telecommunications
38. Mobile telecommunications
39. Telecommunications infrastructure
40. Tourism

Manufacturing

51. Fertilizers
52. Plastics
53. Automotive light assembly
54. Wool
55. Cotton
56. Leather processing
57. Silk manufacturing
58. Cement
59. Agricultural equipment
60. Construction
61. Automobile manufacturing
62. Semiconductor manufacturing
63. Bio-medical research and services
64. Scientific R&D services
65. HVAC equipment manufacturing
66. Power plants
67. Ceramics and glass
68. Hydropower
69. Geo-power
70. Optic fiber
71. Tire and rubber production
72. Metallurgy

Professional Services

73. Automotive design
74. Call centers
75. Business process outsourcing
76. Specialty trade contractors
77. Culinary arts
78. Music production
79. Retail banking
80. Commercial banking
81. Investment banking
82. Securities (finance) firms
83. Fashion design
84. Traditional handicrafts
85. Insurance
86. University education
87. Vocational education
88. Retail services
89. Engineering services
90. Property development
91. Internet services

41. Ship and boat building 42. Ship repair 43. Furniture manufacturing 44. Textiles 45. Frozen food processing 46. Footwear manufacturing 47. Apparel manufacturing 48. Food processing 49. Beverage manufacturing 50. Chemicals (petrochemicals)	92. Computing services 93. Computer programming 94. Computer repair 95. Optics and imaging 96. Film production 97. Jewelry 98. Legal services 99. Accounting services 100. Business Support Services

Appendix 2: Top-Ranked 30 Industries

Industry	Rating
Tourism	A+
Agricultural equipment	A+
Cement	A+
Management of ports	A
Transport services, air	A
University education	A
Transport services, sea	A
Transport services, trucking	A
Date farming	A
Vocational education	A
Retail services	A
Commercial banking	A
Fisheries	A
Pharmaceuticals	A
Marine fisheries	A
Retail banking	A
Poultry production	A
Consumer electronics	A-
Chemicals (petrochemicals)	A-
Fertilizers (petrochemicals)	A-
Fixed telecommunications	A-
Mobile telecommunications	A-
Print & broadcasting	A-
Automotive light assembly	A-
Furniture manufacturing	A-
Plastics	A-
Sugar processing/refining	A-
Leather processing	A-
Tobacco	A-
Ceramics and glass manufacturing	A-
Business process outsourcing	A-
Computer programming	A-
Apparel manufacturing	A-
Cotton production	A-

Appendix 3: Ratings for 100 Industries

Industries		Active industries	Job creation	Cross-cutting benefits	Result of ongoing projects	Average Marks
Agriculture/Livestock						
1	Date farming	**A**	**A**	**B**	**A**	**A**
2	Citrus farming	**A**	**B**	**B**	**B**	**B+**
3	Cut flowers	**C**	**B**	**C**	**C**	**C**
4	Oil palm processing	**B**	**A**	**B**	**C**	**B**
5	Fresh fruits and vegetables	**A**	**B**	**B**	**B**	**B+**
6	Other horticulture products	**A**	**B**	**B**	**B**	**B+**
7	Coffee production	**C**	**C**	**C**	**C**	**C**
8	Tea production	**C**	**C**	**C**	**C**	**C**
9	Herbs and spices	**B**	**B**	**C**	**C**	**C+**
10	Sheep production	**A**	**A**	**B**	**C**	**B+**
11	Beef production	**A**	**A**	**B**	**C**	**B+**
12	Poultry production	**A**	**A**	**B**	**A**	**A**
13	Lamb production	**A**	**B**	**B**	**B**	**B+**
14	Wheat production	**B**	**B**	**B**	**C**	**B-**
15	Dairy production	**B**	**B**	**B**	**B**	**B**
16	Marine fisheries	**A**	**A**	**B**	**A**	**A**
17	Commercial fisheries	**A**	**A**	**B**	**A**	**A**
18	Tobacco	**A**	**A**	**A**	**C**	**A-**
19	Agri-processing	**A**	**A**	**A**	**A**	**A**
20	Grain products	**B**	**B**	**B**	**C**	**B-**
21	Forestry and logging	**C**	**C**	**C**	**C**	**C**
22	Vegetable oil	**A**	**C**	**B**	**C**	**B-**
23	Sugar processing/refining	**A**	**A**	**A**	**C**	**A-**
24	Salt processing	**C**	**C**	**C**	**C**	**C**
Location-Based Services						
25	Veterinary services	**B**	**B**	**B**	**B**	**B**
26	Security firms (protection)	**A**	**C**	**B**	**A**	**B+**
27	Health services	**B**	**A**	**A**	**A**	**A**
28	Mining, limestone	**A**	**A**	**C**	**B**	**B+**
29	Mining, phosphate	**A**	**A**	**C**	**B**	**B+**
30	Transport services,	**A**	**B**	**A**	**A**	**A**

	sea					
31	Transport services, trucking	**A**	**B**	**A**	**A**	**A**
32	Transport services, air	**A**	**B**	**A**	**A**	**A**
33	Other logistics services	**B**	**C**	**A**	**B**	**B**
34	Management of ports	**A**	**B**	**A**	**A**	**A**
35	Print & Broadcasting	**A**	**C**	**A**	**A**	**A-**
36	Publishing	**A**	**C**	**A**	**C**	**B**
Industries		Active industries	Job creation	Cross-cutting benefits	Result of ongoing projects	Average Marks
37	Fixed telecommunications	**A**	**C**	**A**	**A**	**A-**
38	Mobile telecommunications	**A**	**A**	**A**	**C**	**A-**
39	Telecom infrastructure	**A**	**B**	**A**	**C**	**B+**
40	Tourism	**A**	**A**	**A**	**A**	**A+**
Manufacturing						
41	Ship and boat building	**B**	**B**	**B**	**C**	**B-**
42	Ship repair	**B**	**B**	**B**	**C**	**B-**
43	Furniture manufacturing	**A**	**A**	**A**	**C**	**A-**
44	Textiles	**B**	**A**	**C**	**C**	**B-**
45	Frozen food processing	**A**	**A**	**A**	**C**	**A-**
46	Footwear manufacturing	**C**	**B**	**C**	**C**	**C**
47	Apparel manufacturing	**A**	**A**	**B**	**B**	**A-**
48	Processed foods	**A**	**A**	**A**	**C**	**A-**
49	Beverage manufacturing	**B**	**B**	**C**	**C**	**C+**
50	Chemicals (petrochemicals)	**A**	**A**	**C**	**A**	**A-**
51	Fertilizers (petrochemicals)	**A**	**A**	**C**	**A**	**A-**
52	Plastics	**A**	**B**	**A**	**A**	**A-**
53	Automotive light assembly	**A**	**A**	**C**	**A**	**A-**

54	Wool production	**A**	**C**	**C**	**C**	**C+**
55	Cotton production	**A**	**A**	**B**	**B**	**A-**
56	Leather processing	**A**	**A**	**B**	**B**	**A-**
57	Silk manufacturing	**B**	**A**	**C**	**C**	**B-**
58	Cement	**A**	**A**	**A**	**A**	**A+**
59	Agricultural equipment	**A**	**A**	**A**	**A**	**A+**
60	Construction	**A**	**C**	**B**	**A**	**B+**
61	Automobile manufacturing	**C**	**A**	**B**	**C**	**B-**
62	Semiconductor manufacturing	**C**	**A**	**C**	**C**	**C+**
63	Pharmaceuticals	**A**	**A**	**A**	**C**	**A-**
64	Other scientific R&D services	**A**	**A**	**B**	**C**	**B+**
65	Pulp & paper manufacturing	**C**	**C**	**C**	**C**	**C-**
66	Power plants	**A**	**C**	**B**	**A**	**B+**
67	Ceramics and glass	**A**	**A**	**B**	**B**	**A-**
68	Hydropower	**C**	**C**	**A**	**A**	**B**
69	Geo-power	**C**	**C**	**A**	**A**	**B**
70	Optic fiber	**C**	**B**	**C**	**C**	**C**
71	Tire and rubber production	**A**	**C**	**C**	**C**	**C+**
72	Metallurgy	**A**	**B**	**C**	**C**	**B-**
Professional Services						
73	Automotive design	**C**	**C**	**C**	**C**	**C**
Industries		Active industries	Job creation	Cross-cutting benefits	Result of ongoing projects	Average Marks
74	Business process outsourcing	**C**	**A**	**A**	**C**	**B-**
75	Other bus process outsourcing	**C**	**A**	**C**	**C**	**C+**
76	Specialty trade contractors	**C**	**A**	**B**	**C**	**B-**
77	Culinary arts	**C**	**C**	**C**	**C**	**C**
78	Music production	**C**	**C**	**C**	**C**	**C**
79	Retail banking	**A**	**B**	**A**	**A**	**A**
80	Commercial banking	**A**	**B**	**A**	**A**	**A**
81	Investment banking	**C**	**B**	**A**	**C**	**B-**
82	Securities (finance)	**C**	**B**	**A**	**C**	**B-**

	firms					
83	Fashion design	**C**	**C**	**C**	**C**	**C**
84	Handicrafts	**A**	**A**	**C**	**C**	**B**
85	Insurance	**C**	**B**	**B**	**C**	**C+**
86	University education	**A**	**B**	**A**	**A**	**A**
87	Vocational education	**A**	**A**	**A**	**B**	**A**
88	Retail services	**A**	**A**	**A**	**B**	**A**
89	Engineering services	**A**	**A**	**C**	**C**	**B**
90	Property development	**B**	**C**	**A**	**B**	**B**
91	Internet services	**B**	**A**	**A**	**C**	**B+**
92	Computing services	**B**	**A**	**C**	**C**	**B-**
93	Computer programming	**A**	**B**	**A**	**B**	**A-**
94	Consumer electronics	**A**	**A**	**A**	**C**	**A-**
95	Optics and imaging	**C**	**C**	**C**	**C**	**C**
96	Film production	**C**	**C**	**C**	**C**	**C**
97	Jewelry	**C**	**B**	**C**	**C**	**C**
98	Legal services	**B**	**B**	**B**	**A**	**B+**
99	Accounting services	**B**	**B**	**A**	**C**	**B**
100	Business support services	**B**	**B**	**B**	**C**	**B-**

Appendix 4: Industry Assessment Using Market and Development Factors

Industry	Market Test				Development Test			Average Rating
	Firm Struc	Supply	Demand	Supp. Serv.	Jobs	Region	HRD	
Fisheries	**A**	**A**	**A**	**B**	**A**	**A**	**B**	**A-**
Mobile telecom	**A**	**A**	**A**	**A**	**B**	**A**	**B**	**A-**
Plastics	**A**	**A**	**A**	**B**	**B**	**A**	**A**	**A**
Agri-processing	**A**	**A**	**A**	**A**	**A**	**A**	**A**	**A**
Poultry production	**B**	**A**	**A**	**B**	**A**	**A**	**B**	**A-**
Financial services	**B**	**A**	**A**	**B**	**B**	**B**	**A**	**A-**
Tourism	**B**	**A**	**A**	**B**	**A**	**A**	**B**	**A**
Petrochemicals	**B**	**A**	**A**	**C**	**A**	**A**	**A**	**A**
Pharmaceuticals	**B**	**B**	**A**	**B**	**A**	**A**	**A**	**A-**
Cement	**A**	**A**	**A**	**A**	**B**	**A**	**A**	**A**
Education	**C**	**B**	**B**	**C**	**A**	**B**	**B**	**B-**
Print and broadcasting	**C**	**B**	**B**	**B**	**C**	**B**	**A**	**B-**
Logistics services	**B**	**C**	**A**	**C**	**B**	**B**	**B**	**B-**
Health services	**B**	**B**	**B**	**C**	**C**	**B**	**B**	**B-**
Computer programming	**B**	**C**	**B**	**C**	**C**	**B**	**A**	**B-**
Consumer electronics	**B**	**C**	**B**	**C**	**B**	**B**	**B**	**B-**
Agricultural equipment	**C**	**B**	**B**	**B**	**B**	**B**	**C**	**B-**
Tobacco	**C**	**C**	**A**	**C**	**B**	**B**	**C**	**B-**
Telecom	**A**	**A**	**B**	**A**	**C**	**B**	**A**	**A**
Processed foods	**B**	**C**	**B**	**C**	**B**	**B**	**C**	**B-**
Leather processing	**C**	**C**	**B**	**C**	**B**	**B**	**C**	**C+**
Furniture manufacturing	**C**	**C**	**B**	**C**	**B**	**B**	**C**	**C+**
Design services	**B**	**C**	**C**	**C**	**C**	**C**	**B**	**C**
Business process outsourcing	**B**	**C**	**C**	**C**	**C**	**C**	**B**	**C**
Apparel manufacturing	**C**	**C**	**C**	**C**	**B**	**B**	**C**	**C**
Pulp and paper	**C**	**C**	**B**	**C**	**B**	**C**	**C**	**C**

processing								
Glass and ceramics manufacturing	**C**	**C**	**B**	**C**	**B**	**C**	**C**	**C**
Sugar processing and refining	**C**	**C**	**B**	**C**	**B**	**C**	**C**	**C**
Cotton manufacturing	**C**	**C**	**B**	**C**	**B**	**C**	**C**	**C**

IZDIHAR

IRAQ PRIVATE SECTOR GROWTH AND EMPLOYMENT GENERATION

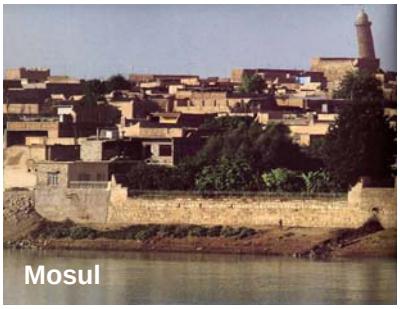
Chapter 3: Industry Analysis


Abbasid Palace— Baghdad


Parthian-style temple— Hatra


Mosul & city wall of Nineveh


Khan Mirjan— Baghdad


Mosul


Imam Al Dor

Chapter 3: Industry Analysis

What follows is a treatment of the industries and sectors that have been selected as needing and deserving support and encouragement. With the notable exception of plastics and related products, we have presented information about the nature of the sector, the reasoning behind the choice, and the situation in Iraq at present.

We have treated the plastics sector differently than the other sectors. The wide scope of possibilities, and the fact that potentially it could supply numerous markets around the world, that dozens of companies might produce hundreds of different products for domestic and foreign use, makes this the only sector in Iraq that has the potential to support a significant industrial cluster.

3.1 Plastics, Polymers, and Related Products

Modern industrial life relies on plastics, polymers and related materials that are derived from petroleum. Plastics are used for thousands of commercial, industrial, and consumer applications. Virtually every product from sewing thread to the most sophisticated spacecraft uses plastics in some form or other. Various plastics replace iron, copper, and lead for plumbing, pipes, and conduit. They replace natural rubber materials in almost every application. They offer alternatives to many natural fibers, are the basis of hundreds of different kinds of packaging, and shroud the bumpers of our cars and the components of our computers, many of those components themselves made of various plastics. To delineate all the possible applications of plastics and their markets would be superfluous. A list of classifications by industry sector, taken from the website of the American Plastics Council follows in the table below.

Because petroleum is the basis of the modern plastics industry, and because Iraq has the second largest proven oil reserves in the world, this sector presents the only obvious area where Iraq has a huge competitive advantage. Therefore, everything possible should be done to encourage the development of opportunities to add value at every point along the chain of production. To simply export raw petroleum to the rest of the world is to resign Iraq to the modern equivalent of supplier of materials in the age of colonialism.

The breadth and complexity of the sector, trends in world demand for precursor chemicals, resins, and finished products require a separate analysis that is inherently beyond the scope of this study. To it must be added an analysis of safety and regulatory matters, and consideration of the environmental issues that surround both the manufacture and the use of plastics and their precursors.

Table 3.1

The primary end use applications for each of the major market categories are as follows:
TRANSPORTATION: Motor vehicles and parts, including: autos, truck and bus bodies; parts for autos and trucks, including engines and electrical ignition systems; truck trailers and containers, including special purpose vehicles (i.e. fire truck) other than military. Also, aircraft and parts; ships and boats; railroad equipment; motorcycles and bicycles; missiles and space vehicles; recreational vehicles including golf carts; military, land, air and marine vehicles.
PACKAGING: Bottles, jars, vials; drums, pails, cans, barrels, buckets; caps, closures, aerosol parts; food containers excluding disposable cups; coating for all types of packaging; flexible packaging including bags, household and institutional refuse bags and film; boxes and baskets; personal care packaging products; pallets, crates, spools, reels, bobbins, tape, strapping, twine.
BUILDING AND CONSTRUCTION: Pipe, conduit, and fittings including pipelines, drainage and irrigation systems; plumbing fixtures; siding, siding accessories, soffits, fascia, skirts for mobile homes; flooring; insulation materials; roofing materials; partitions, panels; agricultural film; doors, windows, sills; bathroom units, steps, gratings, railings; skylights, countertops, drainage downspouts; air-supported structures.
ELECTRICAL AND ELECTRONIC: Home and industrial appliances including washers and dryers, air conditioners, lighting fixtures (affixed), freezers and refrigerators; small appliances; radios, TVs, telephones, office machines; electric equipment including electric power equipment, motors and controls, measuring and control equipment, lighting and wiring equipment, current-carrying equipment, non-current-carrying wire devices, pole line hardware; communications equipment; electronic components including tubes, semi-conductors, capacitors, resistors, coils and transformers, magnetic tape and audio, printed circuits, records and tapes, X-ray equipment; batteries, wire and cable.
FURNITURE AND FURNISHINGS: Rigid furniture including household, case goods, dinettes, lawn/garden furniture, headboards, occasional pieces, also office, institutional, and school furniture; stadium seating; benches for public buildings; churches and restaurant furniture; store fixtures; counter tops; flexible furniture including household upholstered furniture, cushioning, frames, simulated wood components for upholstered

furniture, decorative pillows, bedding, bed pillows; carpets and carpet components including backing; curtains, house furnishings, awnings, blinds, household portable lamps and furniture accessories, wall decorations and coverings.
CONSUMER AND INSTITUTIONAL PRODUCTS: Disposable food serviceware including cups, dinnerware, tableware, kitchenware, drinking straws; luggage, buttons, hardhats, handbags, apparel; lawn and garden equipment (non-electrical); picnic jugs, ice chests, flower boxes; healthcare, medical products and personal care items including combs, brushes, prosthetic devices, medical tubing, blood packs, syringes, IV bags; toys and sporting goods (not vehicles) including plastic pools, liners, fishing line, life jackets; laboratory supplies; footwear; signs, displays, credit cards, placemats, ashtrays, mats.
INDUSTRIAL/MACHINERY: Engine and turbine parts (except outboard); farm and garden machinery and equipment, construction equipment, mining equipment, oil field equipment, material handling equipment; machine tools (including hand power tools and hardware); industrial equipment; fishing and marine supplies (including commercial buoys and markers); chemical process equipment; ordnance and firearms.
ADHESIVES - INKS - COATINGS: Adhesives and sealants; paper coating and glazing; printing ink; paints, varnishes, enamels; insulating varnishes and magnet wire enamels; core binder, foundry facing.
ALL OTHER (Not Elsewhere Classified): Other sales of resins that cannot be classified under any other major market category. Includes sales to resellers and compounders.

3.2 Cement

Demand for cement in Iraq is expanding due to massive reconstruction efforts. That trend will almost certainly continue as conditions stabilize and efforts are made to meet pent up housing demand. Indeed, the natural growth of the Iraqi population in and of itself is sufficient to drive the market for cement and construction materials for many years to come, irrespective of commercial and industrial construction and the repairing of neglected infrastructure. Large state-owned firms dominate the Iraqi cement industry, and there are also imports of cement. Plans are now afoot to privatize the state owned companies.

After initial attempts to pass a generic privatization law foundered, the Ministry of Industry and Minerals has issued public tenders for more than twenty smaller cement factories at the provincial level, and at least three were accepted and have gone to foreign companies. The Ministry remains interested in privatizing the major state operations.

3.2.1 Definition

The Iraqi cement industry is comprised of manufacturers and distributors of Portland cement, sulfur resistant cement, white cement, and lime. Production requires the extraction and processing of quarried materials, processing and packing..

3.2.2 Firm Strategy, Structure, and Rivalry

Domestic production. The Ministry of Industry and Minerals operates three firms -- one each in northern, central, and southern Iraq. Together they have 14 factories. In 2002 they reported $91 million in revenue, $15 million in the north region, $34 million in the central region and $42 million the south. In the wake of the war and insurrection, production has fallen from 7.1 million tons in 2002 to only 461,000 tons in 2004.[8] Construction of 10 new plants is planned. In addition to the Ministry-controlled plants, the Kurdistan regional government operates cement facilities in Kurdistan.

Foreign investment. With the anticipated privatization of the state owned cement operations and imports continuing to enter the market, a large and competitive market can be expected to emerge in Iraq. An Egyptian construction firm (OCI) recently signed a 12-year lease for a cement factory near Suleimaniyah. Another factory in Kurdistan, to be established by a Kurdish company, is proposed.

Prices. Profitability and prices are distorted due to a lack of competition. Before 2003, prices were fixed at $10 per ton. Current prices are reportedly $80-$110 per ton, but as low as $65 per ton in Kurdistan, despite high subsidies. In 2003, operating margins exceed 40 percent including fuel and electricity subsidies. Without subsidies they would not be profitable.[9] Since

[8] Iraq: Statistical Appendix, IMF Country Report No. 05/295, August 2005.
[9] CPA SOE Company Profiles, 2003.

the time of that report the security situation has changed for the worse and production has declined.

There are press reports that Iran is exporting cement to Iraq at $55-60 per ton to Iraq.[10] And the Kuwait Cement Company announced that it was exporting 40,000 tons of cement to Iraq, although the price has not been disclosed.[11] However, in the absence of proper customs procedures it is difficult to verify this information independently.

3.2.3 Supply Conditions

Iraqi cement facilities are neither modern nor efficient. None has been updated since 1990 to meet the high levels of demand, the Ministry has begun rehabilitating some of the plants and had planned to double current production capacity by the end of 2005. The needed technology and equipment are capital intensive, however, and additional investment will require substantial access to finance, which is itself just beginning to be privatized.

Technology. General neglect and the economic boycott had their impact on the cement industry as on others. A lack of available spare parts and the funds to acquire the spare parts needed to upgrade.

Inputs and raw materials are presently in short supply. Packaging materials are currently imported but could be produced domestically. There are plentiful sources of raw materials in Iraq, including limestone and gypsum, but no modern extraction technology.

Power sources. There are electricity shortages in Iraq and service is undependable the fluctuating electricity supply disrupts production processes, and most factories lack back-up generators. Because of these problems, the government is importing electricity from Turkey to support its cement factories.[12] Yet, cement facilities continue to be heavily reliant on electricity subsidies.

Labor supply. Sufficient unskilled labor exists to serve the cement industry. State-owned firms are reported to employ 10,800 workers outside Kurdistan, but many are unskilled or insufficiently trained.

Land. The state owns the land on which the cement facilities are located and leases it at $100 per square foot. However, there are restrictions on foreign land ownership, and on long-term leasing that must be removed if foreign investment is to be encouraged.

[10] *Iran Daily*,"Moves to Boost Cement Production," Sadeq Dehqan, 7/7/05.
[11] Orient Consulting Center, Kuwait, www.occkw.com, 2005.
[12] "Turkish Electricity to Operate Cement Factories in Iraq," Middle East North Africa Financial Network, October 31, 2004.

3.2.4 Demand Conditions

Domestic cement demand is high and is increasing, but is mostly being met mostly by imports. There are great market opportunities for Iraqi cement producers in the domestic market.

Public-sector demand. Much current demand is driven by U.S.- and donor-funded reconstruction projects In 2005, an estimated 2,500 projects valued at $5.7 billion were underway.[13] A housing shortage estimated at 1.4 million units, and the need for schools and other public buildings, creates additional demand. The Iraqi Minister of Housing and Construction has said that more than $1 billion has been devoted by Iraqi investors to establish housing projects throughout the country, and it has been said that Iraq will request a $1 billion grant to support the country's Housing Fund as part of further efforts to solve the housing crisis.

Private-sector demand. The public sector currently is the major customer for cement, but before the war 70 percent of cement revenues were generated by the private sector. Reform of the financial and banking sector will spur residential and commercial construction.

3.2.5 Support and Related Industries

As the private economy recovers, the private sector will provide support to the cement industry with services such as packing, marketing, and transportation.

Government. If the current privatization programs are enacted, government agencies will be obliged to transform themselves from operator to regulator.

Financial services. Financial services are not yet adequate for the capital-intensive investment required for factory expansion, nor for the repair or purchase of new equipment and spare parts. Donors and government sources can provide short-term funding while foreign investor capital is being sought.

Security. The lack of security is an obstacle in the way of the national cement industry, although conditions in the north are considerably more stable.

[13].National Development Strategy 2005-2007, June 30, 2005, Iraqi Strategic Review Board, Ministry of Planning and Development.

3.3 Petrochemicals

The Iraq petrochemical industry consists of three large state-owned enterprises headquartered near Basra, where some 75% of production takes place. In 2002, the last year before the overthrow of the Saddam Hussein regime, the sector had estimated revenues of $50 million. As with cement, this sector represents a potentially important source of revenue and employment opportunities for Iraq

3.3.1 Definition

The petrochemical industry produces chemicals derived from petroleum and natural gas. Those chemicals, in turn, are the basic inputs for thousands of consumer products, automotive components, and a variety of durable and non-durable goods. The production process consists of: (1) obtaining feedstock from oil refineries; (2) processing it through "crackers;" (3) final processing; (4) delivery to distributors; and (5) delivery to the end customer, mostly manufacturers.

3.3.2 Firm Strategy, Structure, and Rivalry

The petrochemical industry is state-owned and presently not competitive in world markets.

State Company for Petrochemical Industry is located in Basra. Its main products include ethylene, chlorine, and caustic soda, in addition to vinyl chloride monomer, PVC, and low density and high density polyethylene. They say that their facilities cost $1.2 billion, in 1976, a very large sum, if accurate.

After the overthrow of the previous regime, company management suggested that it could be self-sustaining if gas and electric utilities became more dependable. World Bank industrial analysts have suggested that the ethylene plant is worth saving, but that all other production lines are uncompetitive and should be shut down. The facilities have massive maintenance needs after 13 years of sanctions, but remain operational. The CPA estimated the cost of rehabilitation at $50 million.[14] SCPI is said to have had operating margins of approximately 40 percent in 2002.

*State Companies for Fertilizers Southern Region, o*perating out of Basra, and the *Northern State Company for Fertilizers Industry* in Baiji. Both produce urea, a basic nitrogen fertilizer, as their main product. They claim an operating margin of 33 percent, even while selling 90 percent of their production at one third of market rates. Already in 2003 they were down to operating at 50% capacity. Under the previous government, and certainly in the era of sanctions, the domestic market was protected from outside competition. A joint study by the UN and the World Bank estimated that full capacity would represent 1.5 million tons of

[14] CPA SOE Company Profiles, 2003.

fertilizer, thereby creating significant export potential.[15] However, both firms have benefited from heavily subsidized raw materials and electricity.

Foreign investment. Iran has expressed interest in investing in Iraq's relatively nascent petrochemical industry by supplying feedstock.[16] Potash Corporation of Saskatchewan Inc., a Canadian firm that is the largest potash producer in the world, and the second largest nitrogen producer, reportedly has expressed interest in working with the Iraqi government to produce urea.[17]

Iraq's state-owned petrochemical firms will require restructuring in order to be competitive in global markets and conform over the longer term to WTO requirements. This will require massive foreign investment.

3.3.3 Supply Conditions

Because Iraq has extremely large known gas and oil reserves, it has a potential natural advantage over competitors in the petrochemical sector if it can modernize successfully. This will require significant investment and extensive technical assistance.

Labor. These state-owned operations reportedly employ some 8,000 persons. However, as a public enterprise they can be expected to have inflated payrolls and little experience at the company level in either procurement or marketing, functions carried out in Iraq by government officials.

Inputs. The industry's main input is natural gas, found in great abundance in Iraq. Historically it was provided at below-market, subsidized prices.

Transportation. The presence of raw materials and proximity of the port of Basra suggest a potential comparative advantage for expanding and developing a petrochemical cluster.

Technology. Because of sanctions and protection from competition, the industry had neither the possibility nor the compelling necessity to modernize. The CPA estimated that rehabilitating the southern division would cost approximately $50 million. SCF North was built in 1989 with technology from Kellogg, USA (ammonia) and Stamicarbon, Holland (urea), and was reputed to be one of the best operations of the Ministry of Industry and Minerals, operating at 80 percent capacity in 2002. SCF South, built in 1978 with Snag Progetti technology from Italy, was assessed in 2003 as being relatively well maintained, but needing more technology upgrades than its sibling.[18]

[15] Schmidt, Christian,"Joint Needs Assessment: State-Owned Enterprises". United Nations/World Bank, October 2003.
[16] *Tehran Times*, July 2005.
[17] USAID/Iraq interview.
[18] Schmidt, Christian, "Joint Needs Assessment: State-Owned Enterprises". United Nations/World Bank, October 2003.

With some assistance and upgrading of facilities and technology, the industry should be in a good position to take advantage of the growing international demand for petrochemicals.

3.3.4 Demand Conditions

Agricultural production depends heavily on fertilizer. Large domestic demand for petrochemicals and fertilizer kept sales consistent for both Iraqi fertilizer companies. Until now, exports have been minimal: In 2004 Iraq exported only $521,000 worth of fertilizer.

Previous demand. SCPI's largest customer was the Iraqi military (ethylene and other products), accounting for 50 percent of sales. The firm also supplied chlorine, PVC and ethylene. The Ministry of Agriculture purchased 90 percent of urea production for distribution to farmers.

Future demand. Significant local demand for fertilizer and high transportation costs give local manufacturers an advantage over imports. The international market for petrochemicals is large and growing as well. Global demand for polyethylene is expected to increase to 87 million tons in 2010, up from 54 million tons in 2002. Neighboring Syria is a potential market, and East Asia is an important target market: China imports 40-50% of its needs of certain types of petrochemicals, and the CPA estimated that Southeast Asia possibly could utilize 60 percent of Iraqi fertilizer production (approximately 1 million tons), even if the plants were operating at full capacity.[19]

3.3.5 Support and Related Industries

Existing and growing worldwide demand for petrochemicals makes this industry an excellent prospect for growth. In addition, it leads naturally to the development of industry clusters, and benefits from proximity to inputs and to inexpensive transportation. In Iraq, gas fields are nearby, as are deep water port facilities at Um-Qasr.

Government. The Ministry of Industry and Minerals owns and operates the petrochemical production facilities, and the Ministry of Agriculture and the Iraqi military were the primary customers.

[19] CPA SOE Company Profiles, 2003.

3.4 Pharmaceuticals

The Iraqi pharmaceutical industry consists of two main public sector companies. It can benefit from privatizing the existing state-owned manufacturing facilities, and from direct technical assistance. Incentives for small and medium sized enterprises can encourage the development of smaller firms and support industries. Cross-cutting programs can help to develop the industry.

3.4.1 Definition

The pharmaceutical industry includes firms manufacturing biological and medicinal products, processing botanical drugs and herbs, isolating active medicinal principals from botanical drugs and herbs, and those that manufacture pharmaceutical products.[20] Iraq's two manufacturing companies have facilities spread across the country. Most supplies, however, are imported by a centrally controlled mechanism, and then distributed nationwide.

3.4.2 Firm Structure, Strategy, and Rivalry

Before 2003 the pharmaceutical market was dominated by the large state-owned enterprises. They supplied 60 percent of market needs and the remainder consisted of imports. Since 2003, the state share has declined dramatically due to production problems and increased competition from foreign products imported by NGOs and other donors.

State Companies for Drugs and Medical Supplies: Ninawa and Samarra are the only manufacturers in the country. They produce pharmaceuticals, including tablets, syrups, oral drops, and a variety of other products. Most of their products are generic versions of branded drugs. Prices and production levels were centrally controlled on a cost-plus-30-percent basis. The Samarra facilities are reported to be old but in good condition. However, both companies are operating at limited capacity due to electricity and raw material shortages. These companies produce good quality products and should find a large domestic market if they can keep current with developments in the field, obtain the necessary inputs, and operate their facilities under reasonable conditions.

Kimadia. All procurement and distribution of pharmaceuticals is facilitated by Iraq's medical supply chain management company, Kimadia. A private entity prior to 1968, it was nationalized and is now a department of the Ministry of Health. Under the previous regime, Kimadia was centrally controlled and badly administered. In fact, the senior management fled the country when the company was reorganizing shortly after the war. Plans for privatization have been discussed.

After the war and seizure of regime assets in 2003, the CPA allocated $125 million to the Ministry of Health and Kimadia to buy critical medical supplies and equipment. In 2004, the procurement budget grew to more than $500 million.

[20] Census.gov, NAICS Definition.

Donor-supplied pharmaceuticals. With the influx of humanitarian aid since 2003, donors have provided free or highly subsidized pharmaceuticals to Iraq. They have replaced local products, most of which are now out of production. Kimadia was provided with medicines under the Oil for Food Program. Some of those stocks and existing stocks of locally produced medications are reported to be warehoused around the country, but some were also looted and have found their way into private pharmacies.

3.4.3 Supply Conditions

The staffs of these state owned enterprises have varying levels of scientific knowledge and production skills but have not been required to market their products in a competitive atmosphere. Procurement and distribution are managed internally by Kimadia and the Ministry of Health.

Production capacity, skill, and technology. In the immediate aftermath of the war, Kimadia's import department was unable to certify the quality of imported products because their testing facilities were looted and destroyed. Since then, U.S. Food and Drug Administration certification processes were to have been adopted for the short term. Security at these two SOEs is not a problem since they are located in relatively safe locations, although their facilities have suffered some damage. As with all industries, however, expansion is severely limited by security constraints in general.

Raw material inputs. In the past, Jordanian agents have procured inputs for the Iraqi operations. Current production is severely limited by a lack of inputs, resulting in low output and poor quality. According to one report by the CPA, local investors are reportedly interested in entering into partnerships for the domestic manufacture of inputs for the pharmaceutical industry.

Labor, skilled and unskilled. The two enterprises together employ some 4000 people, including unskilled factory workers and skilled staff. However, training and investments in technology will be necessary in order to achieve international safety and quality standards.

Utilities. Unreliable electricity and gas supplies hinder production at present.

3.4.4 Demand Conditions

Domestic demand for pharmaceuticals is met primarily by imports, using both public and private distribution channels. In the longer term, export possibilities may develop if capacity is expanded and products improved. Jordanian and other Arab world producers are already active in the region.

Public demand. Iraq's population of 27 million is very young and growing rapidly.

Donors. Oil for Food funds are still being used to purchase drugs. In addition, other donor programs and U.S. peacekeeping initiatives are supplying medicines to Iraq.

Private demand. Previously, Kimadia distributed 20 percent of the Iraqi state production to private pharmacies. However, Kimadia is now operating inefficiently and losing market share. With economic recovery and increased security, the private sector should be able to expand even beyond present levels.

Exports. In the long term, good export potential for manufactured pharmaceuticals exists. Potential export targets identified by a recent CPA study included markets in the Middle East and East Africa.

3.4.5 Support and Related Industries

Because Kimadia dominated Iraqi commerce in pharmaceuticals, few support industries developed, but privatization of the industry can provide an impetus to expanding the sector.

Government. In the past, the Ministry of Health regulated the pharmaceutical industry and monitored controlled substances, but at present the Ministry, like other agencies of government, is having difficulty controlling imports and commerce.

Marketing agents. Currently, this function is performed predominantly by Kimadia, but there are also licensed private imports of some products.

Pharmacies. Pharmacies operate as direct providers of medicines and medical suppliers to consumers. Kimadia is currently the main source of medicine for pharmacies, although access to imports is likely to increase as the economy recovers. Pharmacies, like other retail businesses, have suffered from looting and insurgent activities in general. The nationwide network is strong, however, with the potential to recover and improve services when the political climate and improved security permit.

Financial services. Like all Iraqi industry, pharmaceuticals suffer from poor financial services. Importers lack basic financial services such as easy and quick wire transfer procedures.

The Iraqi industry is an excellent candidate for privatization. It should also improve its technology through the acquisition of new licenses from international pharmaceutical companies.

3.5 Tourism

Iraq is the cradle of civilization, the Biblical Fertile Crescent, and is home to some of the greatest ancient sites in the world. The Tigris and Euphrates rivers have supported life in Iraq for more than five thousand years. In addition, the Iraqi landscape ranges from snowy northern peaks in winter to excruciating desert sands and dramatic marsh lands that are home to a way of life little changed little from ancient times until well into the twentieth century.

The ancient Babylonia and home of many ancient civilizations, Iraq also has some of the most significant shrines in Shiite Islam, along with sites associated with Biblical Judaism and Christianity. In the nineteenth and early twentieth centuries Iraq, like Egypt, and the Anatolian areas of Turkey, was the location of some of the most famous archeological excavations in history.

Wars, totalitarian rule, the opprobrium of much of the world, and economic sanctions have clouded the image of Iraq and kept foreign travel to a minimum for more than thirty years. Modern tourist infrastructure is essentially non-existent in Iraq, historic preservation at best a neglected concept, and twenty first century education in many parts of the world generally pays little attention now to ancient civilizations. Creating a modern tourist infrastructure and identifying markets for a potential tourist industry is a complex task.

The most prominent pilgrimage sites in Iraq are the city of Najaf and its near neighbor Karbala, destinations for Shiite Muslims from all over the world. They are among a few places -- Jerusalem, Mecca, Bethlehem, for example -- that draw thousands of visitors but have no inherent need to advertise or promote their attractions. Therefore, despite an important agricultural sector in the region, providing services to a mass tourist trade is an obvious strategy for high value economic growth in and around Najaf.

The Kurdish north, which is safer and more stable than much of the rest of the country, offers relative security and a more rapidly developing infrastructure. The geography is dramatic, and there is potential for winter sports and a variety of other outdoor activities.

The riverine areas of the Tigris and Euphrates valleys, and the marsh areas of the south that are being partially restored and rejuvenated, are beautiful and interesting. Palaces and other properties of the former regime are excellent candidates for restoration and conversion to recreational use.

3.5.1 Definition

The tourism industry is composed of numerous service businesses. Some arrange or assemble travel programs and tours, while others provide accommodations. Still others provide transportation, accommodations, meals, and a variety of other services. In addition, there are numerous purveyors of goods ranging from souvenirs and trinkets to books, maps, jewelry, and other wares. Tourism usually develops naturally in clusters around a transportation hub, political or cultural capital, historic site, scenic or natural feature, or some developed project or facility

3.5.2 Firm Structure, Strategy, and Rivalry

Except for major airlines and hotel chains, most of the tourism industry consists of small and medium sized enterprises, though frequently the state itself owns important shrines and much important infrastructure such as airports.

In order to appreciate the potential for developing Iraq's atrophied tourism industry, regional developments are instructive. The pattern of the Muslim pilgrimage traffic to Mecca is one useful example, and there are very successful tourism industries in Greece, Egypt, Turkey, and Israel, especially in regard to European and North American tourists. Similarly, Iraq possesses treasures of ancient history, religious and cultural locales, and archeological sites.

Religious centers in Iraq. Najaf and Karbala, south of Baghdad, are sacred cities to Shiite Muslims and draw visitors from Iran, Pakistan, the Gulf countries and elsewhere. The tourism cluster in Najaf includes lodging, restaurants, internal transportation, memorial facilities, and cemeteries.

Developments in Kurdistan. Kurdistan offers relative calm for Iraqi tourists, compared to the more dangerous areas farther south. Thousands of Iraqi tourists reportedly traveled to Kurdistan during the summer months of 2005.[21] One popular destination is Lake Dukan, a reservoir in the mountains of Suleimaniya province; in September all rooms were said to have been booked in the area. To support tourism, the Kurdish Government is reported to have approved the construction of 50 new hotels and ordered guidebooks to be printed in Arabic, English, and Kurdish. In addition, the area is now more accessible thanks to the recent re-opening of the nearby Irbil airport with weekly flights from Istanbul, Amman, and Damascus.

Other sites in Iraq include Lake Hannabiya, ancient Babel, and the Ziggurat of Ur. Ur, the reputed biblical birthplace of Abraham, was for centuries the capital of ancient Sumeria. The Ziggurat is partly restored.

Potential foreign investment. Three Kuwaiti real estate groups, working with Iraqi investors, reportedly plan to invest $100 million to build a hotel in Najaf.[22]

[21] "See Kurdistan and Live: The Dream Getaway for Iraqis" *The Daily Telegraph*, September 5, 2005.
[22] UPI Business News, October 13, 2005.

3.5.3 Supply Conditions, 3.6.4 Demand Conditions

Transportation infrastructure. Travel in Iraq remains extremely dangerous, and only once the security situation improves will it be possible to contemplate significant tourist traffic beyond pilgrimage visits.

Security. Aside from religious tourism, there is no other current demand for foreign tourism in Iraq. Until recently Najaf and Karbala drew approximately 2 million religious tourists annually. Tourism boomed in the two cities in the months after the fall of former leader Saddam Hussein. By some accounts, an estimated 10,000 Iranian religious tourists came per day, a level that might bring in as much as $2 billion a year.

3.5.5 Support and Related Industries

A world class tourism industry requires a wide range of transportation, lodging, health, hospitality, travel, and other services presently lacking in Iraq.

Public-sector institutions. Iraq's Tourism Board is apparently in operation. In 2004 it had a staff of some 2,500 in 14 centers nationwide, tasked with checking the standards of hotels and restaurants. The Board is trying to implement tourism projects such as developing an area of Baghdad along the Tigris River that is commonly known as Wedding Island.

Repairing Najaf's infrastructure. The recent conflict is estimated to have caused more than $500 million in damage to Najaf. Projects are underway to restore the infrastructure there and improve transportation links to the outside world. A private sector organization supported by the USAID Izdihar program has opened a business training center that emphasizes the tourism sector. U.S.-funded rehabilitation programs for schools, clinics, roads, sewers and water infrastructure, are estimate at about $200 million. A new airport, railway lines and railway station, and a modern bus terminal are contemplated.

3.6 Fisheries

Between 1991 and 2000 the Iraqi regime destroyed more than 90 percent of the Mesopotamian marshes by building berms, diverting river flows, and draining. According to the United Nations Environmental Program (UNEP), one result was a decline of more than 50 percent in marine fish landings. The fisheries industry was also hurt by sanctions that have prevented international trade in fish or fishery products since 1990.

3.6.1 Definition

The southern marshlands of Iraq were the site of important fishing activity, and there are small fish farms in various parts of the country. In addition, there has traditionally been off-shore fishing in the Gulf.

Iraqi fish production is consumed locally. The most recent statistics showed that 82% of domestic consumption was of fresh fish, 14 percent live, and 4 percent frozen,[23] which in Iraq means shipped and held on ice. Consumption of fish is presently 0.8 Kg/year per capita, about one third of the pre-war level.

Despite the almost complete disappearance of the marshes due to river diversion and draining, aquaculture should undoubtedly be included in an agri-food processing plan for four reasons:

1. It is certainly viable in the Tigris-Euphrates riverine system, and in Iraq's abundant ponds and natural lakes.

2. It can provide a badly needed source of protein in the short term.

3. It has a positive, high potential impact on rural employment.

4. It is compatible with a vast range of investment, beginning at the level of micro-finance, and depending upon the production technology (extensive, semi-intensive, intensive). Higher investments characterize the intensive system of aquaculture; the common forms being tank culture and cage culture.

[23] Republic of Iraq, *Country Profile*, prepared by the Mission of Iraq to the United Nations, 2003.

3.6.2 Firm Structure, Strategy, and Rivalry

Catching and raising fish, and the production and marketing of fish products in Iraq, is a private sector activity. Many fish farmers operate at the subsistence level, but some have achieved a larger scale. There are clams of as many as 1,900 fish farms across Iraq, but the current figure is hard to verify. In any case, the previous regime subsidized the fishing industry and such supports are no longer in place.

Inland Fisheries. The Tigris and Euphrates Rivers and their branches are the main sources of inland fresh water in Iraq. Inland fresh-water bodies cover between 600,000 and 700,000 hectares and include natural lakes (39 percent), reservoirs (13.3 percent), rivers and their branches (3.7 percent), and marshes (44 percent).[24]

Production from inland fisheries has declined over the past decade. From 1981 through 1997 average production was 18,800 tons per year, declining to 8,000 tons in 2001. Flows in these major river systems have been reduced in recent years by extensive damming. Some early assessments after the overthrow of the regime were that inland waters could yield 30,000 tons at full capacity, but environmental changes and degradation may make this assessment unrealistic.[25]

Marine fisheries. Iraq has a limited coastal area, but there is marine fishing in the Persian Gulf. Annual marine fish production has declined from around 38,000 tons in the 1980s to between 12,000 and 22,800 tons between 2000 and 2001.[26] The industry now is entirely small scale and fishermen use low-tech fishing techniques [27]

3.6.3 Supply Conditions

Since 2003, great efforts have been made to restore the marshes and revive the fishing industry, but major dams across the border in Turkey have reduced the river flows significantly. USAID and other international donors have supported programs to restore the marshes. As of August 2005, the marshes had recovered almost 40 percent of their former levels, according to UNEP. Satellite imagery shows the southern marshlands at about 3,500 sq. km. after having dwindled to just 760 sq. km. in 2002. This restoration activity has led to a significant increase in fish catch.

Labor availability. Though many fishermen may have been displaced, skilled workers are available. If the marshlands are restored sufficiently, many have expressed the desire to return to their previous lives in fishing communities.

[24] Iraq Fishery Country Profile, FAO, February 2004.
[25] Iraq Fishery Country Profile, FAO, February 2004
[26] *Country Profile – Iraq*, Coastal and Marine Ecosystems, World Resources Institute, Earth Trends Environmental Information Portal, earthtrends.wri.org. WRI states 12,000 in 2000. Federal Research Division of the U.S. Library of Congress (/lcweb2.loc.gov/frd/cs/profiles.html) states the catch was 22,800 in 2001
[27] Iraq Fishery Country Profile, FAO, February 2004.

Transportation infrastructure. The fish industry suffers from the usual weak and dangerous transportation links that typify Iraq.

Security. In a country where crime is endemic this industry suffers as well.

3.6.4 Demand Conditions

Local fishermen cannot catch enough fish to satisfy local demand and Iraq currently imports 60-70 percent of its food requirements overall; increased local fish production could reduce this import dependence.

3.6.5 Support and Related Industries

Government programs. The Ministry of Agriculture is supposed to oversee the fisheries industry, issuing licenses and carrying out zoning, and other regulatory functions, but is reported to be less active since the beginning of the post-1991 economic sanctions. The Ministry of Water Resources administers the marshlands restoration program with donor assistance.

Inputs and technology. Modern fish farming, whether in ponds, rivers, or lakes will require a hatchery program, technology, and training, along with support from the appropriate public agencies and specialist scientists. However, according to the Food and Agriculture Organization (FAO) there are few technicians, laboratories, or research and development facilities in Iraq.

Neighboring countries, including Kuwait and Bahrain, have invested heavily in their fishery industries and Iraq lags behind.

Processing services . There is no packing industry. Most fish are purchased live, or have been transported whole, sometimes on ice. A small percentage may have been cleaned, or otherwise prepared for market.

Associations for the fishery industry. Iraq is a member of the Regional Commission for Fisheries, which addresses regional fisheries and management issues.

3.7 Telecommunications

The Iraqi telecommunications sector is an extremely fruitful area for investment and job creation, and modern telecommunications is an integral element of economic growth. The previously existing telephone system relied on various generations of Yugoslavia, French, Chinese, and lately American technology, but the number of lines is extremely small less than – 2,000,000 lines in all of Iraq and less than one million in Baghdad. The recent war destroyed a part of that already limited infrastructure, which has since been repaired. Nonetheless, telecom penetration in Iraq is infinitesimal compared to the potential presented by a country with more than twenty five million people.

Iraq is already experiencing a boom in information and communications technology investment, and the mobile telecommunications industry is one area where foreign investors are active, welcome, and necessary.

3.7.1 Definition

This industry includes companies primarily engaged in operating, maintaining, or providing access to services or technologies enabling the transmission of voice, data, text, sound, and video using wireless telecommunications networks. It also includes operations engaged primarily in purchasing access and capacity from network owners and operators, and reselling telecommunications services to businesses and households. Cellular communications are a large component of this industry. In addition, information technology is now a motor of economic development in modern societies and Iraq is almost totally without such capacity. While the changes in the telecommunications sector came very quickly after the fall of the previous regime, other developments have lagged. The virtual total absence of such infrastructure will present significant opportunities for Iraqi and foreign business.

3.7.2 Firm Structure, Strategy, and Rivalry

Both foreign and local public and private investors are active in the Iraqi mobile telecommunications sector. The industry is profitable worldwide even in post-conflict emerging markets.

Non-Kurdistan firm structure. The state-owned Iraq Telecommunication and Posts Company is the sole provider of landline and postal service in Iraq, but mobile licenses were awarded to three companies in December 2003. Each was given an initial regional monopoly: Orascom Telecom Iraq Corp. in the central region of Iraq, Asiacell, a group of companies from Arab countries, and Sanatel in the north (Kurdistan), and MTC Atheer Telecom in the south. These three began to compete when they were allowed to expand nationwide in January 2005. Orascom, majority Egyptian, recently acquired its Iraqi affiliate, Iraqna, casting a vote of

confidence in the market. Each company is accusing the other of unfair trade practices, a common characteristic of competitive markets. [28]
MTC Atheer launched services in southern Iraq in March 2004, and today has more than 1.3 million subscribers in the south and in Baghdad. Atheer is expanding its infrastructure rapidly, and increasing investment in the country to a total of $430 million. The shareholder base is 75.4 percent public, and 24.6 percent is held by the Kuwaiti Government.

Kurdistan firm structure. Three companies operate the mobile telecommunications network in Kurdistan: KORE, AsiaCell, and Sanatel (formerly KurdTel). Mobile phones were operational in Kurdistan subsequent to the 1991 war. Iraqi businessman Faruk Rasool owns a majority of AsiaCell with 49 percent owned by Wataniya Telecom of Kuwait and the United Gulf Bank. It is a new entrant into the market with 1.3 million subscribers. Both Sanatel and KOREK operated before the war. Sanatel is owned by the Halabja General Trading Company.

In addition to these international firms with mobile licenses, other international investors, such as Investcom Holding, are said to be following the Iraqi situation closely, and are reportedly preparing to enter the market.[29]

3.7.3 Supply Conditions

The level of telecommunications-related investment indicates good supply conditions, although security concerns may slow potential growth. Telephone company employees have been kidnapped and cell sites have been attacked.[30] Obstacles to operating here with relative ease include the need for round-the-clock site security, a lack of suitable sites and site access, unreliable power supplies, and the need to import network equipment.[31]

The infrastructure needs improvement. Network coverage is spotty and often unreliable, but the influx of new funds into the industry should improve these conditions.

3.7.4 Demand Conditions

The absence of a reliable land network (only 4.5 percent of the population has access to a landline) suggests the scope of potential demand for telecommunications services. Table 3.1 shows that telecommunications access of all types is very low relative to the region.

[28] Noozz Research.
[29] Middle East North Africa Financial Network, MENAFM.com, 19 September 2005.
[30] Interestingly, the attacks stopped when the base stations were operational because even the insurgents want to have wireless access, according to Phil Moyse, Chief Technology Officer at AsiaCell . NEWS@2 DIRECT, AsiaCell Plans Iraq Expansion, Brad Smith, January 13, 2005.
[31] Middle East, Gulf and North Africa GSM Conference, Dubai, 11-12 September, lecture, 2005

Table 3.1: Information, Communications, & Technology (ICT) Use Index – 2004

Country	End 2003 ICT Use Index	End 2004 ICT Use Index
Bahrain	1.26	1.67
UAE	1.5	1.66
Kuwait	1.17	1.32
Qatar	0.92	1.21
Saudi Arabia	0.61	0.8
Tunisia	0.4	0.6
Oman	0.39	0.59
Lebanon	0.54	0.58
Jordan	0.49	0.57
Palestine	0.4	0.52
Morocco	0.3	0.38
Syria	0.23	0.31
Egypt	0.15	0.23
Algeria	0.15	0.28
Libya	0.19	0.28
Iraq	0.06	0.16
Total	0.27	0.35

Covers four ICT parameters: (1) PC installed base, (2) Internet users, (3) mobile phones, and (4) fixed lines. Index is calculated by dividing four parameters by the country's population. A higher Index score indicates more aggressive ICT adoption in the country in question.

Source: *Madar Research Journal,* vol. 3, nos. 1 & 2 (May 2005).

The World Bank estimated that the Iraqi telecommunications industry will require more than $1 billion in investment through 2007**.** Shortly after the fall of the regime Madar Research forecasted growth of 158 percent in mobile phone users over the period through 2008, and expenditures of more than $6.4 billion annually on ICT. The number of fixed-line users also is set to grow at a pace of 33-47 percent annually[32]

[32] *Madar Research Journal*, June 2003.

3.7.5 Support and Related Industries

Government. The principal regulator of all telecommunications is the Ministry of Communications, and the Telecommunications and Postal Company is the operator of the land line system. The Kurdistan regional government's Ministry of Transport and Communication regulates mobile service there. The same is true for the broader range of information technology products and services.

In March 2004 the National Communication and Media Commission (NCMC) was formed to regulate the telecommunications sector. In December 2004 the CPA issued exclusive mobile telecommunications licenses to the three companies mentioned above. These licenses were renewed in December 2005 for six months, and the NCMC is charged with replacing them with longer-term awards. The NCMC is also writing new telecommunications laws at this time.

Marketing services. There is a competitive middle market as mobile phone networks negotiate with networks of retailers to distribute their products.

3.8 Financial Services and Banking

Financial services are understandably concentrated around Baghdad, with smaller concentrations in the Kurdish north. Although private banks existed under the previous regime, regulations were onerous and the Central Bank exercised an intrusive level of control.

3.8.1 Definition

Commercial banks in Iraq accept deposits and make commercial, industrial and consumer loans. However, cash flow based lending was unknown here, and in most cases real estate was the only acceptable collateral. In late 2005 the first locally issued credit cards and debit were introduced. However, there are no Iraqi merchants accepting credit cards as of the time of writing. The newly issued cards simply allow Iraqi travelers abroad to avoid carrying large quantities of cash.

3.8.2 Firm Structure, Strategy, and Rivalry

Although previously dominated by the state, the independence and capabilities of the national financial system are slowly strengthening and private-sector banking is beginning to emerge.
Central Bank of Iraq (CBI). The CBI system is doing a reasonable job of assuring a stable exchange rate for the Dinar, and providing liquidity to Iraqi banks. In 2004, President Bush signed an executive order allowing the CBI to invest abroad through the Federal Reserve Bank of New York, thereby protecting its assets from seizure by creditors.[33] In March 2005, the Central Bank, an independent agency of the central government, began taking overnight

[33] Executive Order 13364 of November 29, 2004, Modifying the Protection Granted to the Development Fund for Iraq and Certain Property in which Iraq Has an Interest and Protecting the Central Bank of Iraq, *Federal Register,* vol. 69, no. 231, December 2, 2004.

deposits from banks, paying an interest rate of 2 percent on local currency deposits and 4 percent on foreign currency cash.

Private-sector banks. The CBI currently recognizes seven state banks and more than thirty (30) private banks. Although Iraq had private sector banks under the previous regime, they were generally prohibited from conducting international transactions, making payments or remittances, and issuing letters of credit. They were authorized to process these instruments in October 2003, but significant difficulties in these areas remained throughout 2005.

Public-sector banks. Two debt-ridden, state-owned banks, Rafidain and Rasheed, dominate the sector and offer checking accounts. However, Iraqis generally accept only certified checks that are reconfirmed by letter, and often they can only be cashed at the issuing branch, thus negating their theoretical utility. Both banks have extensive networks - together more than 360 branches - throughout Iraq. Iraq lacks centralized and integrated banking management systems.[34]

Public-sector Trade Bank of Iraq. Iraq's state banks can operate only with the help of international financial institutions. They suffer from insolvency and international debt claims and therefore can not conduct business abroad. To get around these difficulties, the CPA established the Trade Bank of Iraq (TBI) as an export credit agency for the government. It is responsible for facilitating import and export transactions by providing expertise and serving as a point of contact for international foreign institutions. TBI works with Iraqi commercial banks and a group of foreign banks led by J.P. Morgan Chase. As of March 2005, TBI had issued more than 1,600 letters of credit totaling an estimated $4.5 billion.

Of note is the recent instillation of a ATM machine in the Baghdad office of the TBI. As the first and still only ATM available to the Iraqi public the impact on the financial market is minor but illustrative of how much still needs to be done. Similarly, the TBI has begun issuing credit cards. Again, as there are not point of sales terminals in Iraq, its value is primarily to allow Iraqi travelers the opportunity not to have to carry large amounts of cash with them.

A positive development for the operation of the TBI is the Overseas Private Investment Corporation's (OPIC) decision to establish a $150 million dollar trust to guarantee the bank's letters of credit to exporters involved in Iraq reconstruction projects. The initial $70 million dollar transaction coordinated by Citigroup will aid in the provision of the goods and services needed to rebuild the country.

Foreign investors. As of this writing, foreign investment in the banking sector has begun. Jordan's Arab Bank will open a branch by the end of the year. HSBC recently bought a 75 % stake in the Credit Bank of Iraq and the IFC has acquired a 10% interest. HSBC Group has acquired a 70% interest in Dar es-Salaam Investment Bank. The Jordanian Export Bank (Saderat) has acquired 49% of the National Bank of Iraq. Iraq Holding Company (Kuwait) has

[34] *"Financial Reconstruction in Iraq*", John B. Taylor, Under Secretary of the Treasury for International Affairs, before the Senate Banking, Housing, and Urban Affairs Committee Subcommittee on International Trade and Finance, February 11, 2004.

acquired a 51% interest in the Bank of Baghdad. Ali Bank (Bahrain) as acquired a 49% interest in the Commercial Bank of Iraq. United Bahrain Bank has acquired a stake in the Bank of Baghdad. A'ayan Company Kuwait has acquired a 49% stake in Economic Bank for Investment. Kurdistan International Bank has been licensed, and has opened in Baghdad. Tigris & Euphrates Bank Company has been licensed, and is due to open an office in winter 2006. National Islamic Bank, (Yarmook) has obtained a licensed and opened an office. The Saudi Arabian Bank for Investment & Development has been licensed, and Ashoor Bank has been licensed and opened an office.

In addition, Standard Chartered Bank has been given approval, and Arab Banking Corporation (Bahrain) has opened a Branch within the Credit Bank of Iraq. The Housing Bank for Trade & Finance in Jordan, and the Jordan National Bank have both been licensed and have since opened representative. The Bank of Beirut has applied for a license and is presently awaiting approval.

Iran's Bank Melli, the Agricultural Bank of Iran, and the Agricultural Bank of Turkey are among the other foreign banks awarded licenses by CBI to operate in Iraq.[35] The UK-based merchant banker Merchant Bridge & Company Limited has launched Mansour Bank, a new commercial bank in Iraq capitalized at $38.5 million.[36]

Other trade finance mechanisms. The Export-Import Bank of the United States offers trade finance services. There is an agreement between Ex-Im and the Iraqi Ministry of Finance. TBI signed a framework agreement that enables Ex-Im to continue to support U.S. exports for Iraqi reconstruction, thus allowing TBI to access Ex-Im's $500 million facility to insure short-term letters of credit issued by, or on behalf of, TBI for purchases of U.S. goods and services. The facility approved its first transaction in April 2004. In December 2003, 15 other nations joined Ex-Im Bank in entering into framework agreements with TBI. Ex-Im Bank is said to be working with other nations to help them develop similar agreements.

Donor assistance. The International Finance Corporation has approved plans to establish an Iraq Small Business Finance Facility of up to $170 million to help Iraqi banks finance Iraqi small businesses. The Iraq Small Business Finance Facility provides technical assistance funding to develop Iraqi banks' capacity for lending to smaller businesses. It also extends term loans to certain Iraqi partner banks for on-lending to small local enterprises. An initial example of this program is providing a $12 million loan to support the small and medium enterprise (SME) lending operations of National Bank of Iraq, also known as Al-Ahli Bank of Iraq.

Other IFC programs are intended to directly address private sector banking capacity. For example, in September of 2004 the IFC's Private Enterprise Partnership for the Middle East (PEP-ME), a technical assistance program of the IFC launched a five-month training program

[35] Dow Jones Company, Inc., July 21, 2005.
[36] Middle East North Africa Financial Network, London banker launches Mansour Bank in Iraq, September 23, 2005.

in Amman, Jordan. Targeted at private bank managers, the program provided participants with five workshops in modern banking practices.

In addition to the OPIC TBI initiative mentioned above, OPIC created a $131 million dollar middle market lending facility arranged by Citigroup Export and Agency Finance based in Dubai. This $98 million dollar facility of Citibank's will is guaranteed by OPIC and has received additional funds from the Iraq Reconstruction and Relief Fund (IRRF) administered by the Iraq Reconstruction and Management Office (IRMO).

Other international organizations also are providing micro-credit throughout Iraq, and ACDI/VOCA and CHF non-profit development organizations are currently active. In early 2006 a USAID-supported project is training Iraqi banks in serving the lending needs of small and medium-sized enterprises. A loan guaranty corporation has also been established.

3.8.2 Supply Conditions

Technical expertise and experience. Although the banking network and regulatory structure are being assisted by a variety of outside experts, the lack of management and technical expertise in banking remain significant obstacles to economic development.

Security. Interbank transactions are difficult. Still, international banks such as HSBC are entering or preparing actively to enter the Iraqi market. However, the usual security concerns confronting all investors in Iraq prevent faster progress.

Capital availability. In theory, capital is slowly becoming more easily available due to the strengthening of the Central Bank of Iraq, and donor interventions. However, the weakness of the banking and financial services infrastructure means that potential borrowers are as yet no better off than before.

3.8.4 Demand Conditions

The legacy of the previous regime and a weak banking infrastructure combine to suppress demand for modern financial services in Iraq. Reconstruction efforts, the arrival of foreign banks, and an opening to global markets should increase the volume and sophistication of customer requirements. The National Bank of Kuwait has estimated that by 2009, Iraqi banks will hold some $20 billion in assets, approximately ten times more than current levels.[37]

Most business in Iraq still is conducted in cash and on a face-to-face basis. There are no automated networks. Even communication and coordination between branches of the same bank are difficult, and consumer confidence in the banking system is low. Combined with the

[37] Banking and Finance - Quarter 3 2005, Noozz Research, page 6.

impact of the ongoing insurgency, banks in Iraq face difficult challenges in trying to establish consumer confidence.

Security Financial Services, Inc has begun to offer pre-purchase credit cards under the MasterCard logo. These cards can be replenished at several different banks in Iraq and with the credit cards offered by TBI mentioned above, have proven very popular, indicating a strong demand for financial services.

Clearly the financial services industry has recognized the opportunity in Iraq, and has been able to enter the market. Despite the remaining difficulties, this sector offers a glimmer of hope in a troubled and insecure country. Certainly modern banking skills must be learned, but capable foreign investors bring those skills with them.

The Central Bank of Iraq and other agencies of government should be encouraged to continue with the process of licensing banks and reducing the regulations and restrictions on normal banking transactions. Likewise, the rapid development of micro-finance institutions, already underway under USAID-sponsored programs and with the cooperation of other American institutions, is welcome.

Every effort should be made to increase the offerings of modern financial instruments and support services in the financial sectors. Strategies should also be developed to improve communication services. This work should be carried on mindful of larger strategies to improve telecommunications in Iraq generally.

3.9 Poultry Production

3.9.1 Definition

Poultry production includes firms primarily engaged in breeding, hatching, and raising poultry for both meat and egg production. Poultry products are a major source of protein for Iraqis, a traditional element in local cuisine, and very popular.

3.9.2 Firm Structure, Strategy and Rivalry

Poultry farms in Iraq are privately owned and vary from small, family-owned establishments to large operations employing 700 people. However, in the less than three years since the fall of the Saddam regime, probably 70 of 75 or 80 Iraqi poultry producers have gone out of business or suspended operations. They are unable to compete with cheap imports, primarily from the United States and Brazil.

The Ministry of Agriculture (MOA) controlled and administered land ownership, managed water resources and delivery, and was the traditional importer of inputs such as corn and protein meal. The MOA subsidized the sales of these inputs to keep food prices low. Prior to the 1990 Gulf War, Iraq imported 37 million bushels of corn as inputs, which sanctions cut off; in 2004, only 3.7 million bushels of corn were imported.

Many imported poultry products are entering the market without being subject to taxes, or to health and religious standards. The US Grains Council received grants to help improve poultry production in Iraq, events which took place in 2003 – 04. USAID's ARDI program surveyed three private poultry farms in the north of the country. This survey found the farms were internationally competitive although they were only operating at 46 percent capacity due to a lack of sufficient electricity and equipment[38]. However, since then the domestic industry has declined dramatically.

3.9.3 Supply Conditions

The cost of production is very high due to the security premium paid on most inputs, and the irregular availability of power and water. Over two-thirds of Iraqi production takes place within a 50-mile radius of Baghdad, the area most affected by the ongoing insurgency.

Traditional competencies in the labor pool do exist for poultry production. However, many poultry farms lack adequate breeding technology and equipment, and inputs are currently in short supply. In addition, capital for modernization must be raised out of cash flow or existing capital. Cash flow-based business loans from financial institutions are essentially unknown in Iraq.

3.9.4 Demand Conditions

There is large local demand which is now being met by imports from the United States and Brazil.

3.9.5 Supporting and Related Industries

Nascent support services are emerging in the Iraqi economy. The Iraqi Poultry Producers Association (IPPA) was formed to improve industry practices and standards, but the decline of the industry in the subsequent eighteen months has meant that most poultry consumed in Iraq is now imported.

We calculate current poultry consumption to be about 4.5 Kg per person per year, compared to a pre-war level of 15 Kg. Given its lower cost as compared to red meat, and assuming that the situation in the country improves and the Iraqi economy grows, poultry consumption could easily increase in the future. A conservative figure would probably be 20 Kg, per person. With a rate of population growth that is the highest in the Middle East, Iraq represents a large potential market. At the current rate of 4.5 Kg per person the market already represents some 120 thousand tons per year, of which more than half is probably imported. With declining production and a market poised to triple or more, the opportunity is evident.

[38] U.S. Grains Council.

Nevertheless, introducing a successful poultry industry in Iraq probably requires a fresh approach, and a serious consideration of new, innovative business models from other parts of the world. Certainly Brazil and the United States provide valuable examples of the kind of integrated system that could be established in Iraq. A mother company supplies farmers with necessary know-how and expertise, with technology, with live broilers, and feed; the farmers enter the scheme with their labor and their chicken houses.

This integrated model offers the possibility of competing effectively with the imports that have destroyed much of the domestic industry while at the same time creating rural jobs, improving quality, and offering the possibility of better sanitation and quality control.

The USAID Izdihar project is completing a series of recommendations in this area in early 2006.

3.10 Agri-food Processing

Given the circumstances in Iraq, there is a temptation to provide an interminable list of constraints to development. Indeed, the agro-food processing sector suffers as well, and there are probably no more than a handful of sub-sectors that are significant from the standpoint of value, the potential for job creation, and the ability of Iraq to compete with imports.

1. First and paramount among the existing constraints is low real disposable income. International companies which operate globally only consider very large markets for investment. In Iraq only the basic food markets have achieved, or will achieve soon, the critical mass that justifies the required capital investment. The profile of Iraq's demand for food is still extremely basic, and certainly not sophisticated.

2. The pervasive presence of the public Food Distribution System (FDS), a publicly-funded, basic food-basket program, is a major factor in crowding out potentially efficient, private, market-oriented investment in the sector.

3. There is no regulatory scheme or even a basic alimentary code. Fair competition in the marketplace is impossible under these circumstances.

4. The available data and statistics are faulty, incomplete, and often non- existent, while investment decisions everywhere in the world are based upon good quality data and information about the market.

Nonetheless, there also good opportunities for investment in Iraq just around the corner, and they are driven by powerful forces:

1. Iraq's population will boom, reaching almost forty million people by 2025, to perhaps as many as fifty million by 2040. There is also a huge, growing population of young people whose consumption pattern will tend to be similar to that of the western world.

2. As time passes, more affluent Iraqis will soon adopt a more protein-rich diet.

3. In spite of the low disposable income some early entrants in the packaged food sector will soon gain consumer acceptance.

These phenomena have been observed universally as populations are exposed to processed food, and as incomes rise.

The development of a modern agri-processed food industry could add $10-15 billion to the Iraqi GDP, and should be a high priority for the newly elected government.

Developing certain agricultural sectors to meet domestic needs more efficiently and economically than imports should be done quickly in order to avoid potentially devastating foreign expenditures. In only twenty-five years, Iraq will suffer a food crisis unless a disproportionate share of petroleum revenues is allocated to cover massive imports of basic foodstuffs. The market drivers identified in our analysis - growing population, a diet richer in protein, and gradual demand for packaged food - are virtually irresistible.

Our analysis will deal with the poultry, dairy, edible oil, biscuit, tomato paste, and aquaculture sectors. We believe they should be given priority for the size of the opportunity they represent and their potential to create jobs. An integrated national food policy requires coordinated efforts in: agriculture; food processing; investment promotion, and regulation of the food sector.

There are clear opportunities and priorities to be addressed:

1. An agriculture team should lead in: Improving productivity, especially for wheat, but also for vegetables; a feasibility study to determine appropriate varieties of oil seeds to achieve self-sufficiency in edible oils, presently 100% imported, and to supply livestock feed; development of the aquaculture sector, an easy and quick means to develop a source of protein.

2. A processed food team must lead in developing a model for the dairy and poultry industries, considering as examples the integrated dairy operations in Saudi Arabia, and the decentralized poultry breeding system employed in Brazil.

3. The Iraq Investment Promotion Agency should: Target potential Turkish investors in the biscuit and snack, tomato paste, and dairy sectors; develop a reliable and current sectoral database and information system for these and other potential investors.

4. Government officials and Ministries must develop and enforce a new and modern alimentary code and food regulation protocol.

5. Finally, the existing government food distribution system should be converted into an instrument to create demand for a new Iraqi food processing industry in its nascent period.

By presenting explicit findings in this fashion, the appropriate agencies of government follow a precise, logical strategy of development that is intended to reduce costly import dependency in areas where Iraq can be competitive. It involves a variety of individual activities. Some of these sectors require significant investment in large, integrated production facilities that are self- sustaining and may have some role in forming clusters. Others involve centralized processing relying on inputs provided by dozens or hundreds of small suppliers. In such cases, a large company or investor becomes the locus of much activity and certainly represents the basis of a significant cluster.

In other cases, the large processor or producer is the purchaser of goods from numerous suppliers or growers. Again, small operations support a larger one, additional service companies can be expected to develop, and the emergence of competitors is likely, thereby leading to a larger cluster, and perhaps a regional industry.

There are sectors that represent development from the bottom up, where the presence of small producers can lead to the development of processing and marketing operations that are larger and more sophisticated than that which small operators can achieve alone. Cooperatives, joint ventures, and other kinds of companies are likely to be formed, and multiple, small clusters can be expected to emerge throughout the country.

IZDIHAR

IRAQ PRIVATE SECTOR GROWTH AND EMPLOYMENT GENERATION

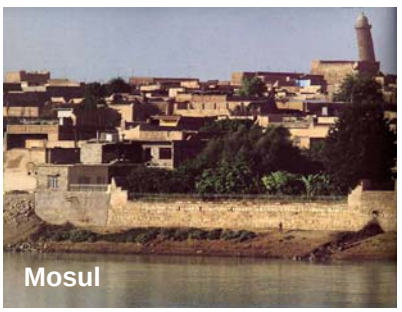
Chapter 4: Implementation


Abbasid Palace— Baghdad


Parthian-style temple— Hatra


Mosul & city wall of Nineveh


Khan Mirjan— Baghdad


Mosul


Imam Al Dor

Chapter 4 Implementation

4.1 Background

The sectors that have been identified for attention and support should be studied in greater detail by qualified experts. It is possible to describe theoretical implementation plans, or to adapt plans that have been applied elsewhere in the world. However, in light of the particularly difficult circumstances in Iraq, and because conditions are in any case different from place to place, a more careful analysis is required. For this work a qualified expert should be able to analyze each sector in detail and devise a workable implementation plan for that sector in thirty to forty five working days.

The assistance described below is designed to improve the economic performance of the selected industries through a coordinated channeling of public and private sector resources. All available technical assistance and capacity building, as well as capital investment, should be oriented toward improving the selected industry's firm strategy, to encouraging competitive rivalry, and to supporting related industries. This intervention is intended to bring about improvements in economic outcomes as increasingly strong industries make their contribution to regional economic growth and human resource development.

The desired results can only be achieved on the basis of a thorough understanding of the public and private entities that will implement this program. Experts with appropriate development and country experience will assess the selected industries and direct the recommended forms of assistance. These experts will work with international donors, local and national Iraqi government organizations, various US agencies, and a variety of private associations and financial institutions.

This chapter proposes a methodology for an intervention which will create jobs and promote local and regional economic development. A localized and targeted focus must be maintained as the adverse security and social conditions in Iraq demand fast and effective intervention.

4.2 Participants

The donor organization providing most economic and private sector development assistance in Iraq is the United States Agency for International Development (USAID), however, US assistance in Iraq is currently undergoing a re-organization of development and reconstruction work. In any case, all relevant institutions coordinate their efforts in order to increase effectiveness and reduce duplication.

Provincial Reconstruction Councils (PRTs) are currently being established under the supervision of the Iraq Reconstruction and Management Office (IRMO). They are designed to coordinate development assistance by establishing a local presence in order to understand local conditions and to define assistance needs more effectively for donors.

US Department of State (DoS), IRMO, USAID and U.S. Civilian Affairs offices will also be represented on these councils. Although still under development, PRTs will be staffed primarily by contractors and U.S. Civilian Affairs officers. As of this date PRTs have been established in Hilla (Babylon), Mosul, and Kirkuk. One is being formed in Baghdad but has yet to commence operations.

PRTs are also assigned specific geographic areas and will concentrate on certain sectors. This fits well with the development approach recommended here, with a focus on encouraging industries which, in many cases, are selected because of the advantages in their region, or because of their potential impact on regional development and job creation. The PRTs will cooperate with Provincial Reconstruction Development Councils (PRDCs), emphasizing the following areas:

Finance/Banking/Business

- Trade
- Banking
- State Owned Enterprises
- Private Enterprises
- Materials Cost

Labor and Unemployment

- Training
- Job Situation
- Wage Rate
- Household

Transportation

- Network
- Fuels
- Production
- Cost

Agriculture

- Production
- Economics
- PDS System
- Private Market

PRTs will play an important role in the allocation of the Commander's Emergency Response Program (CERP) funding. Although not directly disbursed by the PRTs, the $80 million allocation of CERP funds for PRDC projects fiscal 2005 demonstrates the importance attached to local stabilization and development efforts. PRDCs in selected provinces were authorized an additional $10M of CERP funding, and have identified 484 projects.

CERP funding Goals and Guidance:

- **GOVERNANCE CAPACITY BUILDING**
- **CRITICAL INFRASTRUCTURE REMAINS OPERATIONAL**
- **ECONOMIC STRATEGIC EFFECTS ARE SUPPORTED**
- **IMPACT OF CONFLICT ON IRAQI CITIZENS IS MINIMIZED**
- **SUCCESSFUL ELECTIONS**

Local government is also an essential counterpart as improving the ability of the businesses in each region to address regulatory, urban planning and financial issues is essential. Competitiveness development experts will coordinate with each of the organizations listed below and others in order to advise industries on regulatory, urban planning and financial issues.

- Provincial Councils, committees and staff
- Provincial Departments
- Qadas (Districts), Nahiyahs (Sub Districts), Neighborhood and City Councils
- Ministry Directors General and staff involved in local economic and governance issues.
- National Assembly

At the national level, close coordination with various ministries and government agencies will be important. With USAID assistance the Government of Iraq (GOI) is establishing an Iraq Investment Promotion Agency (IIPA) which will be instrumental in promoting regional economic development and investment in business and industry. For the time being this agency is operating under the auspices of the Ministry of Planning and Development Cooperation, although it is the intention of USAID and the GOI that it operate as a public private partnership agency with its own board of directors.

4.3 Competitiveness Development – Practical Application of Theory

It is proposed that a dedicated staff manage the program to support industries that meet the tests described in this Competitiveness Analysis. A national Competitiveness Director (CD) who is familiar with the full range of development and financial resources would oversee this initiative and a Competitiveness Specialist (CS) would provide support and be responsible for being the liaison with various development organizations. Together with short-term experts, the CD and CS make up a Competitiveness Development Team (CDT). Combining the continuity represented by a permanent staff with the expertise of qualified experts allows flexibility and promotes efficiency: resources will be applied only when the industry in question has a identifiable need. The emphasis will be on interventions that upgrade skills, expand the local and regional knowledge base and improve technology. Evaluations to determine the tenor and magnitude of development assistance will apply the criteria used in this analysis: The Market Test and the Development Test as outlined in the body of this study. Using this approach, effective programs of assistance can be developed for individual companies.

The methodology applied to this work is to: 1) analyze and identify possible opportunities through this document, a Competitiveness Analysis; 2) carry out detailed research about the promising sectors identified in the Competitiveness Analysis utilizing outside specialists in each sector; and 3) implement specific programs to promote investment and development based on the findings of the outside specialists, working in conjunction with the competitiveness development director and specialist. In turn, they and their outside specialists will cooperate with local institutions and other organizations as appropriate.