
Annex**Iraq's procurement for its weapons of mass destruction programmes¹****A. The scope and role of procurement from the 1970s to 1990**

1. In the early 1970s, Iraq embarked on a programme to modernize its industrial infrastructure and upgrade its armed forces. It created a military and industrial complex that incrementally incorporated weapons programmes which were heavily dependant on imports of foreign technology, arms, equipment, tools, parts and materials. The foreign assistance varied from supplies of items and sales of licensed technology to the construction of turn-key facilities in Iraq. With total control over Iraq's considerable oil resources and ongoing development of the petrochemical industry, the Government of Iraq was perceived as a solid business partner by its foreign suppliers.

2. In the course of investigation and verification by UNMOVIC, it was established that in the period from the mid-1970s to 1990, more than 200 foreign suppliers had provided major critical technology, equipment, items and materials that were directly used by Iraq for its chemical warfare, biological warfare and missile programmes. The suppliers included governmental agencies and organizations, private companies and individuals who acted as brokers and middlemen. About 80 branches of foreign banks outside of Iraq were involved in transactions related to those acquisitions. In addition, dozens of trans-shipment companies were involved in the delivery of items and materials to Iraq. While there were cases where suppliers were aware of the final end-use of equipment and materials delivered to Iraq, there were also cases where the providers were unaware of the intended end-use or end-user of the items they sold.

3. From the 1970s to the mid 1980s, Iraq procured technology, equipment and materials from foreign suppliers, manufacturers and distributors. During this period, there were no international controls over the export of dual-use chemical and biological items or missile technology.

4. The mechanics of the procurement were relatively simple at that time. They involved the creation of operational accounts in Iraqi banks, the Central Bank of Iraq and the Rafidain Bank, corresponding accounts in foreign banks, direct interactions with prospective suppliers and the preparation and execution of contracts. The shipping of goods to the point of entry in Iraq was normally the responsibility of suppliers.

Tightening trade controls

5. In 1984, in response to the findings of the United Nations special investigatory mission that chemical weapons had been used in the Iran-Iraq war, a number of Governments introduced systems of licensing to govern the export of some chemicals that could be used for the production of chemical weapons. In 1985, a

¹ The information supplied in the present document has been limited to what is relevant to the mandate of UNMOVIC: chemical and biological weapons and delivery systems with a range greater than 150 km.

group of countries that came to be known as the Australia Group collaborated on developing and implementing such measures as an informal mechanism to harmonize measures taken individually. Those measures allowed exporting or transshipping countries to minimize the risk of unknowingly assisting chemical weapons proliferation. Additional measures involving the licensing of the export of dual-use chemical and biological equipment and related technology were introduced by members of the Australia Group later in the 1980s.

6. The Missile Technology Control Regime was established by seven States in 1987 as an informal and voluntary group of countries that decided to coordinate national export licensing efforts as a measure of preventing proliferation. The aim of the Missile Technology Control Regime is to restrict access to non-members of missiles, complete rocket systems, unmanned aerial vehicles and related technology for those systems capable of carrying a 500 kg payload at least 300 km and systems intended for the delivery of weapons of mass destruction.

7. As Iraq has acknowledged, measures undertaken by members of the Australia Group, the Missile Technology Control Regime and other individual States significantly affected the development of Iraq's chemical, biological and missile programmes in the late 1980s. Iraq's chemical warfare programme started to experience procurement difficulties, and thus shortages in precursor chemicals and equipment for the production of chemical warfare agents due to the newly introduced export controls. Its biological warfare programme failed in its attempts to procure fermentation equipment for a dedicated biological warfare production facility. The Missile Technology Control Regime guidelines restricting transfers to non-members impacted the implementation of Iraq's project to develop a two-stage missile jointly with a foreign country and slowed down progress in the development of other missile projects.

Iraq's response

8. Those measures, however, did not completely stop the flow of dual-use equipment and materials to Iraq due to the following reasons:

(a) Iraq established a sophisticated procurement network consisting of a long chain of brokers, intermediaries, bank accounts and transportation companies that enabled it, if necessary, to procure items using false end-user certificates issued for non-Iraqi third parties (see chart 1);

(b) After experiencing increasing problems in importing technology and materials from States that had implemented appropriate licensing systems, Iraq largely switched its procurement efforts to companies or subsidiaries that operated in countries where such measures had not yet been developed, introduced or fully implemented;

(c) Mindful of the difficulties it had experienced in the acquisition of dual-use equipment and materials and the likelihood that such difficulties would increase in the future, Iraq attempted to procure and store some items in excessive quantities in order to secure and meet possible future needs.

9. Consequently, in order to continue the acquisition of goods, Iraq tried to adjust its procurement network to meet emerging international trade norms. Those changes involved the use of legitimate commercial organizations in Iraq, such as the State Organization for Oil Refineries and Gas Industry, and governmental trading

agencies and companies, such as the Technical and Scientific Materials Importation Division, as front companies for the procurement of dual-use items and materials. The State Organization for Oil Refineries and Gas Industry handled contracts for Iraq's chemical warfare programme under the cover of the oil industry, and the Technical and Scientific Materials Importation Division was an acquisition unit to support activities within the Technical Research Centre, which included Iraq's biological warfare programme.

10. Depending on the nature of the goods procured, acquisitions were also made through other agencies that could better provide a cover for them. For example, some laboratory equipment and materials used by the biological warfare programme were procured through the Ministries of Agriculture, Oil and Health, and some machine tools for missile projects were procured through the Ministry of Industry.

11. Further adjustments included the use of networks of brokers and middlemen (see chart 2). Operating from offices registered in third countries where end-user certificates were issued, the brokers and middlemen acted between Iraq's front importation companies and foreign trading companies, thus preventing Iraqi companies from directly contacting foreign manufacturers and affiliated official distributors. Foreign trading companies, acting on behalf of brokers and middlemen, then procured the required goods from manufacturers and distributors. To cover the final destination of goods, brokers and middlemen arranged for multiple transshipments by freight handlers. The goods were not delivered to Iraq but to a neighbouring country in the region, where they were transported to Iraq by an Iraqi shipping company acting on behalf of the end-users or their agencies (see chart 3).

12. The length of the procurement chain depended on the geographic location of the manufacturers and the existing trade regulations in their countries. Accordingly, the creation of additional bank accounts in multiple foreign banks was required to support such a sophisticated procurement mechanism at each phase and location of its functioning, significantly increasing the final cost of items and materials procured in this manner. Iraq procured over 1,000 tons of precursor chemicals for the production of chemical warfare agents using the mechanism outlined above. In one case, Iraq procured several hundred tons of a key chemical precursor from a foreign supplier using a false end-user certificate.

13. To bypass extensive procurement procedures that would involve a paper trail, Iraq often entered into cash deals with foreign brokers and individuals, when they were accepted. The cash was delivered to Iraq's governmental institutions abroad and disbursed by Iraqi officials affiliated mainly with the Iraqi Intelligence Service.

14. The successful procurement of dual-use foreign technology, equipment, items and materials was crucial for Iraq's development of all of its proscribed weapons programmes:

(a) In the area of chemical weapons, most of the production plants and units constructed and used by Iraq to manufacture chemical warfare agents were designed by foreign contractors (but not as dedicated chemical weapons agent production plants). The vast majority of the chemical processing equipment came from foreign suppliers, and about 95 per cent of all precursor chemicals used for the production of chemical warfare agents was procured outside Iraq;

(b) In the area of missiles, Iraq relied on imported components for its indigenous missile systems. Iraq also imported machinery, tools and raw materials in an attempt to produce indigenously some missile systems and components;

(c) In the area of biological weapons, equipment used for biological warfare research and development, most equipment used in the production of biological warfare agents and bacterial isolates and other items, such as bacterial growth media, were also procured from foreign suppliers. In contrast to chemical weapons, for which specific equipment was procured directly for their production, because of the problems involved with imports during the late 1980s, the equipment used for the production of biological warfare agents was largely taken from facilities that had earlier acquired the equipment for legitimate purposes. In addition, Iraq utilized civilian facilities, including a plant constructed by a foreign contractor, to produce vaccine against foot-and-mouth disease, for the production of biological warfare agents.

Munitions

15. Iraq's chemical warfare programme relied mainly on the adaptation of conventional munitions for the dispersion of chemical warfare agents. Those munitions were initially imported from foreign sources as either empty conventional munitions or as specifically designed chemical weapons. Iraq soon developed a significant capability to indigenously produce any number of types of chemical warfare munitions. The munitions chosen by Iraq for its chemical warfare programme were linked to the availability of suitable delivery systems, such as artillery guns, rocket launchers, aircraft and missile systems. Some of those munitions were later used by Iraq for biological warfare agents. Thus, the acquisition of foreign conventional munitions, their parts and components and means to manufacture them was another part of the procurement efforts in support of Iraq's proscribed weapons programmes.

16. In the early 1980s, Iraq contracted a foreign company to perform a number of static and dynamic field tests, outside Iraq, of conventional artillery projectiles filled with materials to simulate chemical weapons and artillery rocket warheads specifically designed to hold liquids of a density similar to the chemical agent mustard. The performance characteristics, such as the nature and extent of dispersion of the liquid payload, were evaluated as were the optimal parameters, such as the burster tube length and charge strength, thereby indicating the prospective use of those munitions. After the tests had confirmed the suitability of such shells and warheads, Iraq procured assemblies for 50,000 artillery projectiles and 25,000 rockets from that company for its chemical warfare programme.

17. Another company supplied Iraq with an additional 35,000 pieces of similar artillery projectiles. A third foreign company supplied Iraq's chemical warfare programme with 22,000 rockets with several different versions of warheads, some designed to hold a payload with characteristics that matched particular chemical warfare agents Iraq had produced. The same company also supplied Iraq some 6,500 rockets with warheads specifically designed to hold the chemical warfare agent Sarin.

18. While continuing to import munitions that were suitable for its chemical warfare programme, Iraq also tried to achieve a higher degree of self-reliance in munitions production. Iraq was able to produce indigenously artillery and bomb

casings and to assemble a variety of aerial bombs using manufacturing equipment and components that had been imported for the production of conventional munitions.

Procurement data

19. Given the critical role that dual-use technology, equipment and materials acquired from foreign suppliers played in Iraq's development of its weapons of mass destruction programmes, the evaluation of procurement data proved to be one of the major tools for the investigation, mapping and verification of Iraq's declarations concerning such programmes.

20. Procurement data is a combination of the information, documents and records relating to specific actions taken by Iraq for the acquisition of items and materials. They include: communications and negotiations with prospective suppliers; notes of meetings to discuss requirements; tenders describing services required and items and relevant specifications; offers made by suppliers; and the preparation and implementation of contracts, including insurance documents, bills of lading, trans-shipment information, customs documentation and final delivery certifications of contract implementation by end-users. Procurement information is also available through financial statements, such as the opening of operational accounts in corresponding banks issuing letters of credit and a variety of money transfers from the accounts of end-users in Iraq to Iraqi banks involved in the transactions.

21. The experience of United Nations verification in Iraq shows that despite Iraq's extensive concealment policy and practices, it was still possible to find evidence of its procurement activity. The nature of the procurement process was such that multiple fingerprints of past acquisitions existed not only at various organizations in Iraq, including ministries, agencies, establishments and banks, but also outside Iraq, in countries of suppliers and third countries through which goods were trans-shipped. United Nations inspectors obtained data from the following sources:

(a) Procurement data provided by the Governments of former suppliers to Iraq was the major source of information at the beginning of the verification process. It provided an important insight into Iraq's acquisitions in connection with its proscribed weapons programmes and helped determine the completeness of Iraq's declarations. However, the degree of cooperation by Member States in providing such information varied, and several important aspects of Iraq's procurement activities could not be clarified with former suppliers and their respective Member States due to their unwillingness to disclose the nature and extent of their assistance to Iraq's weapons programmes. The demonstrated ability of the United Nations verification body to maintain the confidentiality of information provided was an important prerequisite for Member States to maintain the supply of such information. Member States provided their most sensitive procurement information only after they had been satisfied that the United Nations verification body was successfully securing such information;

(b) Direct contacts with former suppliers (legal entities and individuals) established with the support of Member States and independently by the United Nations provided first-hand information on Iraq's requirements with regard to specific items and materials, their types and quantities and any special adaptations, and on the performance of contracts Iraq had concluded;

(c) Another important source of information was data collected by individual Member States and shared with the United Nations inspectors. That data included very specific information on contacts among various Iraqi agencies, facilities and third parties, middlemen and suppliers outside Iraq;

(d) The evaluation and analysis of the procurement data provided by Iraq in its declarations was another important source of information. While Iraq was aware that the United Nations inspectors had obtained information from some of its foreign suppliers and other sources, it was not aware of the exact nature or scope of the information provided. As a result, in many cases Iraq unilaterally provided information and identified suppliers that had not been known to the inspectors;

(e) Through on-site inspection activities, inspectors were able to identify the origin of the items and materials and the manufacturers and supplying organizations from brands, serial/model numbers, labels, packaging and shipping markings on crates that often contained the code identification of the end-users. They included chemical processing and biological equipment, precursor chemicals, bacterial growth media and munitions acquired from foreign suppliers;

(f) Document searches at various facilities in Iraq, including ministries, agencies, companies and facilities that were involved in different stages of the procurement process, from the preparation of tenders and relevant specifications to the acquisition of goods and their shipment to Iraq, provided information;

(g) Inspections of bank branches in Iraq and the evaluation of the accounts of organizations and establishments were other sources of information. To be more productive, that process required preliminary knowledge and understanding of the organizational structure of Iraq's proscribed programmes, their affiliation, budget and finance. Codes of bank accounts, contracts and letters of credit contained distinctive identifiers of budgeting organizations that financed the procurement;

(h) Interviews with Iraqi personnel at all levels involved in procurement, from senior managers to the truck drivers who transported the procured goods, also proved to be an effective tool in obtaining relevant information.

22. In several instances, procurement information was absolutely critical and enabled United Nations inspectors to make significant progress in the verification of Iraq's proscribed programmes:

(a) In the missile area, information provided by a former foreign supplier on Iraq's acquisition of operational missiles, including the quantity and serial numbers, was critical in the efforts to establish the material balance of those missiles;

(b) In the chemical area, very specific procurement data provided by suppliers helped inspectors identify dozens of items of undeclared chemical process equipment that had been procured for Iraq's chemical warfare programme;

(c) In the biological area, information provided by a former supplier, who had been identified through the examination of the original packaging of materials found in Iraq, included data on the specific types and quantities of bacterial growth media that Iraq had procured from it. That information was used by United Nations inspectors in pressing Iraq to disclose elements of its offensive biological warfare programme, which Iraq reluctantly did in 1995.

B. Sanctions and procurement

Period from 1991 to 1995

23. Following Iraq's invasion of Kuwait in 1990, the Security Council adopted a number of resolutions that imposed trade sanctions and weapons prohibitions and laid the basis for United Nations verification of Iraq's compliance with its obligations to eliminate its holding of weapons of mass destruction and related programmes.

24. It became apparent that even under the sanctions, certain dual-use items, such as vaccines, were being legitimately exported to Iraq. It is also known that during this period Iraq negotiated with foreign companies for the possible procurement of a variety of military and dual-use items, but there is no evidence that any of the items and materials sought during that period were actually used by Iraq in proscribed weapons programmes. Therefore, an export/import monitoring mechanism had to be introduced and made operational to cover such issues.

25. During the period from 1993 to 1995, a foreign individual acting under contract with several of Iraq's missile establishments and in close collaboration with the Iraqi Security and Intelligence Service visited three countries in order to obtain parts and components of range-proscribed missile guidance and control systems. In one country, he was able to find suppliers of those goods, to establish an office, to open multiple bank accounts and to procure and ship to a third country various missile parts and components through a chain of private companies and intermediaries. One of the shipments was intercepted by the authorities of the third country en route to Iraq, which subsequently handed over to the United Nations missile parts and components from previous deliveries.

Period from 1995 to 1998

26. In 1995, the Security Council authorized Member States to import petroleum and petroleum products originating in Iraq in order to fund the provision of humanitarian goods. It had already been noted that even under sanctions, certain dual-use goods, such as vaccines, had been legitimately imported into Iraq. In view of the likely increase in trade that the sale of oil would likely bring, it was decided to pursue the establishment of an export/import mechanism, as called for in the monitoring plan. Such a mechanism was established in 1996, which provided information to United Nations inspectors on exports and imports of relevance and was expected to be operational regardless of the status of sanctions.

27. During the period from 1996, when the implementation of the mechanism began, up to the withdrawal of the United Nations inspectors from Iraq in 1998, there was no evidence that Iraq had attempted to use any of its declared imports of procured goods for proscribed programmes. However, several instances of the procurement by various Iraqi facilities of declarable dual-use items and materials outside the scope of the mechanism were noticed by the inspectors. Iraq explained that those foreign goods had been obtained from local private trading companies, which it described as procuring from the "local market". The so-called local market was a sign of the development in Iraq of new procurement patterns involving private entrepreneurs and their networks rather than governmental institutions and trading companies. That procurement pattern was further developed and was used

frequently in Iraq's acquisitions after the departure of inspectors from its territory in December 1998.

Period from 1999 to 2002

28. During the absence of the United Nations inspectors in Iraq from 1999 to November 2002, Governments of suppliers continued to provide to UNMOVIC notification of exports to Iraq as required under the export/import monitoring mechanism. However, Iraq did not provide its corresponding notifications to the United Nations during that period. Nevertheless, prior to the resumption of inspection activities in November 2002, Iraq provided aggregated data for that period on the procurement of items and materials subject to notifications in a set of its semi-annual monitoring declarations. Iraq also provided UNMOVIC with the notifications that had been continuously prepared by it from 1999 to 2002 but not sent to the United Nations.

29. A review of the semi-annual monitoring declarations, the procurement information obtained during inspections, interviews, and data retrieved through forensic computer exploitation indicates that, in addition to the development of the local market mentioned earlier, during the period from 1999 to 2002, Iraq had rebuilt and further developed its procurement network for the acquisition of foreign materials, equipment and technology. The network consisted of: State-owned trading companies established and controlled by the Military Industrialization Commission, with branches in foreign countries; the Iraqi private sector and foreign trading companies operating in Iraq and abroad; multiple intermediaries; chains of foreign suppliers of items and materials; bank accounts; and transportation companies. In several instances, the Iraqi State-owned trading companies had shares in foreign trading companies or were closely affiliated with local private trading companies.

30. Despite the Council's prohibitions, from 1999 to 2002 Iraq procured materials, equipment and components from abroad for use in its missile programmes. In several instances, the items procured were used by Iraq for the production of Al Samoud 2 missiles that were determined by UNMOVIC in February 2003 to be proscribed. At least 380 SA-2 missile engines were imported for this programme by Iraq's prime missile establishment through an Iraqi State-owned trading company controlled by the Military Industrialization Commission and through a local Iraqi trading company and a foreign trading company.

31. The same Iraqi governmental trading company was involved, through a contract with two foreign private companies, in procuring components and equipment for the manufacture and testing of missile guidance and control systems, including inertial navigation systems with fibre-optic and laser ring gyroscopes and Global Positioning System equipment, accelerometers, ancillary items and a variety of production and testing equipment. One Iraqi trading company was also involved in the procurement (through private trading companies) of different pieces of missile-related production equipment and technology. In addition several foreign private subcontractors were responsible for the implementation of specific parts of the general contract.

32. From 1999 to 2002, Iraq also procured a variety of dual-use biological and chemical items and materials without United Nations authorization. They included the acquisition by Iraq of some corrosion-resistant chemical process equipment and biological research equipment, such as DNA sequencers, that were used by Iraq for

non-proscribed purposes. Although the goods were acquired by Iraq outside the framework of the mechanisms established under Security Council resolutions, most of them were later declared by Iraq to UNMOVIC in October 2002, when Iraq submitted its backlog of semi-annual monitoring declarations.

C. Importance of procurement verification

33. The history of Iraq's development of its ballistic missile programme and its chemical and biological weapons shows that the acquisition of foreign technology, equipment and materials was critical for those programmes. The forms of foreign procurement by Iraq varied from supplies of individual items and sales of licensed technology to the construction of turn-key facilities.

34. The experience of international verification in Iraq exemplifies the importance of procurement verification as one of the tools used to achieve a disclosure of proscribed weapons programmes. Despite Iraq's extensive concealment policy and practices, it was still possible to find procurement activity as an indicator of an undeclared programme.

35. Although the introduction of export licensing by individual States significantly slowed down and limited Iraq's procurement efforts prior to 1991, it did not stop them completely. The provisions involving only the licensing of exports on the grounds of end-user certificates without on-site verification were not able to solve fully the problem of possible shipments of dual-use items and materials to Iraq.

36. Iraq has demonstrated its ability to make adjustments and modifications to its procurement techniques to overcome trade restrictions — to a certain degree even under sanctions. Such an ability demonstrates that a combination of effective export control measures taken by all potential suppliers, coupled with an international mechanism for export/import notifications of dual-use items to Iraq and on-site verification, is required in order to provide a sufficient degree of confidence that dual-use items and materials will not be used for proscribed purposes.

Chart 1

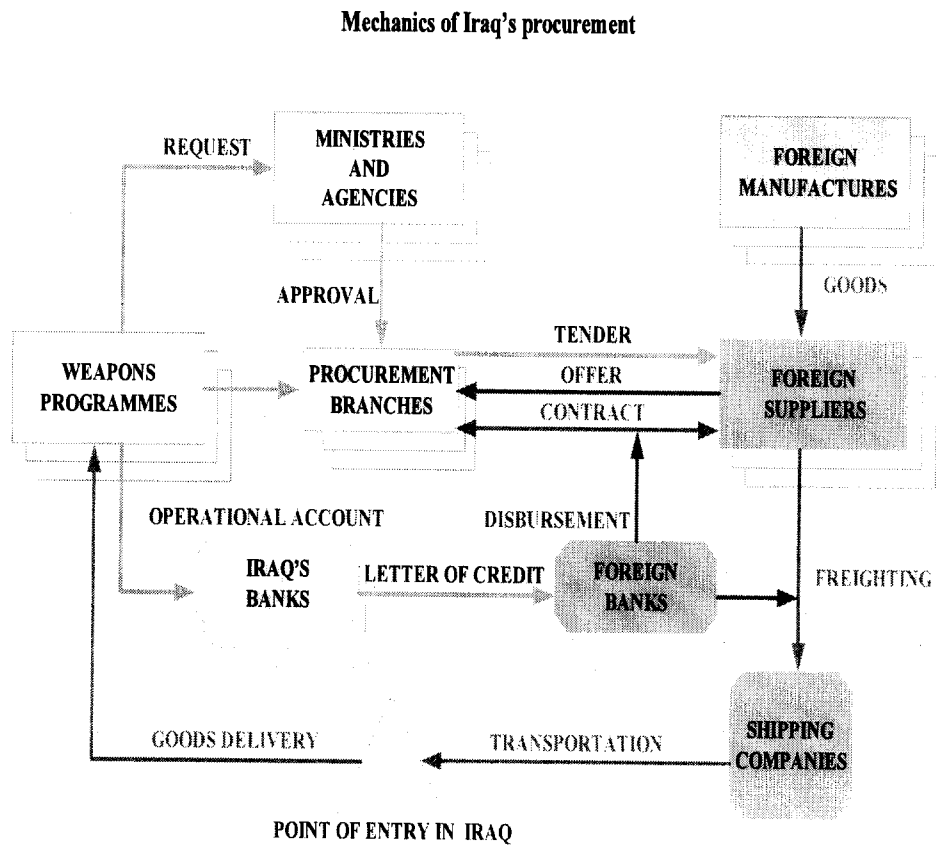


Chart 2

Iraq's procurement through brokers and middlemen

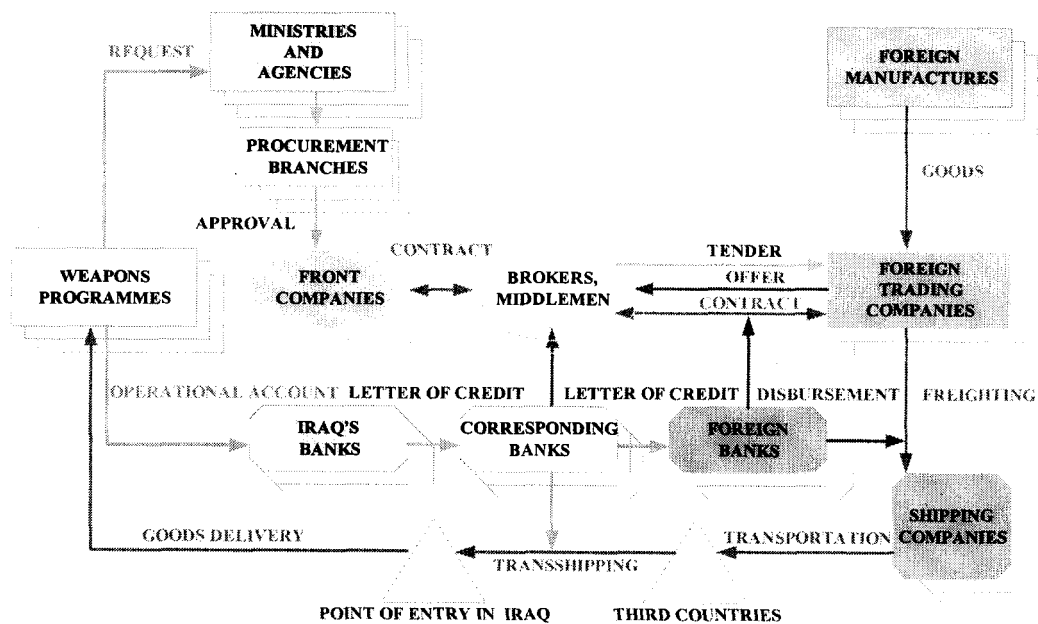


Chart 3

