

High-Tech Hurdles in an Emerging Market¹

AMMAN, JORDAN

In the 1980s and early 1990s export manufacturing was the rage of international business in the developing world. However, by the time the mid-90's rolled around, export manufacturing was already passé as the business world was consumed with tales of "high-tech" fortune and fame. While the rise of high-tech software and advanced electronics industries did not directly impact the ongoing business rationale of building low cost export manufacturing centers throughout the developing world, savvy businessmen were eager not to be left behind in the wake of the next big wave. In the Hashemite Kingdom of Jordan, a young, U.S.-educated entrepreneur felt this tug of opportunity. Having already established Jordan Investment Group, a successful diversified export manufacturing business, he now set his sites on introducing a high tech venture in his mix of production operations. He would soon find, however, that without adequate due diligence, the path to high tech manufacturing success was not without its hurdles.

Jordan Investment Group (JIG), a publicly held Jordanian company listed on the nascent Amman Financial Exchange, was founded in 1993. JIG specialized in attracting international partners to jointly establish production facilities in Jordan that leveraged the country's key export advantages. These advantages included a low cost, relatively well-educated labor force, free trade with the U.S. and European Union, strategic geographic positioning, gateway positioning to Middle East markets, and an attractive foreign investment climate.

JIG's core business involved setting-up joint venture production facilities from the ground up, and coordinating the subsequent management and supervision of the projects. Given Jordan's advantageous labor and tariff climate, most of the foreign companies that elected to partner with JIG were interested in producing low skill, high-tariff/quota goods from Jordan – principally textiles, garments, and light manufactured goods. Once established, the joint venture facilities became subsidiaries of the JIG holding/management company. JIG

offered two basic business models to its international partners – projects in which it invested its own capital (which was usually a maximum of 30%), and projects to which it provided fee-based set-up and operational services without investment, or zero equity projects. For companies that wished to reap the advantages of entering a low cost production environment without assuming the risk of setting up an operation alone, JIG represented an ideal partnership vehicle.

According to JIG corporate policy, foreign production partners were expected to be responsible for all export marketing and sales distribution activities, as well as the transfer of all required technical knowledge. Riding the emerging market export manufacturing boom of the 1980s and early 1990s, JIG established twelve separate Jordanian manufacturing facilities in industries as diverse as garments, batteries, jewelry, electronics, and plastics. Its roster of joint venture partners read like a who's who of international manufacturing. By 1998, JIG had already emerged as the single largest private sector employer in Jordan with a full-time staff of over 6,500 and annual revenues approaching \$450 million. Indeed, JIG was identified as a shining star of the emerging markets in general and the Arab Middle East in particular. JIG was even talked about as a potential issuer of equity on a European or U.S. exchange—a feat that would have been a first in the Arab world.

A New High-Tech Direction?

In early 1997, with the hope of being the first Jordanian company to become a high-tech producer, Jordan Investment Group initiated conversations with the senior management of Globetronics, a major U.S.-based electronics firm with production facilities in the U.S. and Greece. Over the past five years, Globetronics had watched its global competitiveness erode as it was unable to match the low manufacturing costs of rival companies operating primarily out of the Far East. Having been forced to steadily cut prices, Globetronics'

Western-based production facilities were rendering the company's profit margin increasingly slim. As a result, Globetronics initiated discussions with suppliers in the Far East, but decided on the Jordanian market, despite the fact that Jordan's labor costs (e.g. \$110-\$150/month) were roughly twice those of China's (\$40-\$70/month). Globetronics executives were attracted to Jordan because of its free trade status with the U.S. and E.U., its close proximity to Western markets, and its moderately competitive labor market.

Initial discussions between Globetronics and JIG centered on the prospects of setting up an electronics production facility in Jordan that would be used to fulfill certain Globetronics orders currently produced in Greece. Up until this point, JIG's subsidiary operations were almost entirely restricted to lower value-added export goods. Producing 'high-tech' electronics for a well-known international partner was seen as a potential breakthrough project on a number of levels:

- The project would mark a major technical elevation of JIG's production focus.
- The project could act as the seed for a number of additional projects in this field.
- The project would provide a hedge against the potential erosion of Jordan's regional labor wage competitiveness in lower value-added areas such as its mainstay—apparel manufacturing.

The initial discussions with senior Globetronics management in the U.S. involved setting up a joint venture cost center facility in Jordan that would be used primarily to source a major, multi-year tender for the production of advanced cell phone components, a tender that Globetronics was bidding on concurrently. It was envisioned that the Jordanian facility would also be used to handle orders that exceeded the capacity of the Globetronics plant in Greece, as well as certain higher volume runs that do not require an especially sophisticated technological manufacturing process. By establishing a manufacturing plant in Jordan's low labor cost, tariff-free environment, Globetronics hoped to achieve a 40%-60% savings on its direct production costs, compared to its Greek facility.

From the outset, there were a number of peculiar elements to the negotiations that should have raised flags within JIG management. First, Globetronics insisted that the initial business plans for the Jordan project be developed out of Globetronics' corporate planning offices in the U.S. As a result, Globetronics researched and imputed the labor expense, facility, material, and other factor costs for the prospective Jordan venture on its own. The agreed business plan would then serve as the basis for the eventual joint venture contract, and in particular the financial terms of investment. Prior to the Globetronics project, it was JIG that had always insisted on devising the business plan for its joint venture partners. This rule allowed JIG to maintain better control

of the planning stage and recognized JIG's on-the-ground knowledge and expertise in local manufacturing economics. Globetronics also insisted that the actual joint venture contract be drafted by their own internal legal team, as opposed to adopting JIG's standard, tested framework agreement for doing business in Jordan. Complicating matters further, during the final stage of negotiations, it became known that Globetronics had in fact not won the major, multi-year contract to supply the cell phone components—thus already depriving the prospective Jordanian project of its largest initial source of demand. And finally, it became increasingly clear that Globetronics would expect JIG to be the sole investor in the project as well as to cover the substantial training expenses. This last point, if accepted by JIG, would mark a major divergence from JIG's corporate investment policies. Drawn by the allure of the high-tech world, and perhaps overly eager to enter this joint venture, JIG showed willingness to compromise on all of these points.

After a series of negotiations, an agreement was reached which was to be submitted to the JIG Board of Directors. The agreement stipulated the following key business terms:

1. Jordan Investment Group was the sole investor in the Jordanian electronics operation to be called "Jordan Electronics."
2. Globetronics had the option to take a 50% partnership in the venture within three years of contract signing.
3. JIG compensated Globetronics for all training costs (\$150,000) and knowledge transfer (\$180,000) to the all-Jordanian, full-time staff that included thirty advanced engineers.
4. JIG immediately purchased a refurbished production line from Globetronics' Greek facility, valued by Globetronics at \$400,000.
5. Globetronics was responsible for supplying the facility with the entirety of its product orders at pre-determined prices.
6. In the event that Globetronics did not submit a sufficient number of orders to the Jordanian facility, Globetronics was responsible for subsidizing the facility's operations up to \$35,000 per month for the first year of operation (i.e. if the Jordanian plant received \$10,000 in orders in a given month, the subsidy would be \$25,000 for that month).
7. The initial business plan devised by Globetronics projected a substantially profitable operation using one production line and a two-shift operation.

Despite the significant business concessions, the ambiguity over how much the facility would be called on to produce in the short term, and despite lingering questions about the business plan drafted by Globetronics, JIG decided to sign the agreement. Led by an ambitious Chairman and CEO, JIG was clearly determined to establish its first high-tech Jordanian operation at virtually any cost. The JIG Board of Directors felt comfortable enough with the risky nature of this venture to move forward given the close nature of the relationship between JIG and the top management of Globetronics, and the worst-case-scenario subsidy clause written into the contract.

Initial Operational Challenges

The new high-tech joint venture, Jordan Electronics, began operations in March 1999 with a planned staff build-up to seventy-five by the end of month one. Although the core engineer training period at the Globetronics facilities in Greece was deemed successful, and despite constructing a highly specialized facility in Jordan on time and at sufficient standards of quality, Jordan Electronics did not see its operations get off to a quick start. As feared, product orders did not arrive from Globetronics at levels that would ensure profitability.

Given this lack of initial production demand, the Jordanian plant could only afford to remain open approximately one week per month, slowly ramping up to a steady one-shift operation. Furthermore, product orders arriving in Jordan called for low volumes of a large spectrum of product types. This diversity of product requests required frequent and costly adjustments to the single production line, thus decreasing the profitability of the plant further.

Making matters worse, the “worst-case-scenario” monthly subsidy clause did not cover the losses that Jordan Electronics was forced to absorb. Subsidies included, Jordan Electronics was consistently losing approximately \$23,000 on a monthly basis. Finally, in mid-1999, Jordan Investment Group discovered that the \$400,000 production line that had been purchased from Globetronics was in fact worth only \$200,000 at a fair international market value. Upon discovering this conspicuous—and possibly suspicious—pricing abnormality, Globetronics conceded to decrease JIG’s monthly equipment purchase payments from \$8,000 to \$4,000 per month. Nonetheless, trust in the partner was at an all-time low, as was hope for the future of this so-called ‘breakthrough’ emerging market high-tech venture.

A number of reasons were discussed within JIG as to why the plant was failing, and specifically why the partner company was not standing by the venture as had been originally anticipated. It was clear for that Globetronics Greece, the ‘big brother’ operation of Jordan Electronics, was not passing off enough demand to sustain the spill-over Jordanian operation. But there were deeper dynamics at work as well. It soon became

clear that certain elements within Globetronics, especially from the offices in Greece, were clearly not interested in seeing the Jordan project succeed. This was not a new kind of challenge that JIG encountered in managing relations with its partners. Representing a lower-cost production alternative, companies such as JIG are frequently perceived as a threat by the workers and middle management in countries where production costs are higher and thus less competitive. It was indeed very possible that the middle management of Globetronics Greece saw Jordan Electronics as a long-term threat to the feasibility of its own operations and thus was thought to be sabotaging the Jordanian venture through debilitating business practices.

Despite these initial challenges, Jordan Electronics succeeded in achieving ISO 9000 certification and passed all production quality requirements necessary to eventually achieve Globetronics renown Certified Manufacturer “Alpha-3” award for quality. Moreover, Jordan Electronics consistently delivered its orders to Globetronics Greece on a timely basis and at acceptable standards.

Limited Operational Progress

After a string of joint meetings and communications, it was decided during the third quarter of 1999 that responsibility within Globetronics for coordinating Jordan Electronics’ operations would be moved from Globetronics’ Athens production facility to U.S. headquarters. This shift occurred simultaneously with a number of positive confidence building measures. Globetronics agreed to raise the subsidy ceiling from \$35,000 per month to \$50,000 per month. The \$180,000 knowledge transfer payment was postponed with interest for twelve months, and a regular weekly video conference call was instituted between Jordan Electronics and the Globetronics Greece plant to better coordinate quality, maintenance, and planning matters. Finally, Globetronics agreed to increase the prices it paid to Jordan Electronics for short-run orders that required JIG to incur special set-up costs and agreed in principle to lower the number of overall products requested for production.

While these positive developments were underway, Globetronics Greece began to experience a marked upswing in orders. This business improvement coupled with improved trust and communication with Jordan translated into a significant increase in orders for Jordan Electronics throughout the third and fourth quarters of 1999. Activity at the Jordanian plant was eventually ramped up to a steady two shifts per day, still on one production line.

In December of 1999, the VP of Operations at JIG met with operations management at Globetronics Greece to formulate realistic projections of Jordan Electronics’ financial position for FY2000. Holding constant the best case scenario of

Q3/Q4 order levels and assuming the single production line capacity, it was still projected that Jordan Electronics would lose \$180,000 in year FY2000—a far cry from Globetronics's original single production-line business plan projections for the Jordanian facility.

Current Status

Despite the high hopes within Jordan of a high-tech success story, after three quarters of operation, it had already become abundantly clear that the current structure of Jordan Electronics' operations was uneconomical and could not be deemed a sustainable operational reality. The December 1999 joint planning session clearly underscored the fact that for the Jordanian operation to be profitable, it would need to substantially increase production capacity (with a parallel increase in guaranteed orders) so as to achieve the necessary economies of scale. In this spirit, joint plans were initiated for the expansion of the Jordan Electronics facility. A second production line would be installed, and JIG was promised that this new line would be delivered by Globetronics in mid-January 2000. Payment terms were to be equal to that of the revised terms of the initial production line. Globetronics and Jordan Electronics also agreed that to support this second line, an additional investment of \$20,000 would be required by JIG to cover building modifications and collateral equipment purchases.

JIG was willing to cover this additional investment in the name of a profitable future, however, Globetronics soon moved to postpone the delivery of the new line until February 2000, and then again until June 2000. This peculiar delay, attributed officially to internal Globetronics bottlenecks, reignited larger concerns about the quality of the partnership.

In the meantime, Globetronics proposed that Jordan Electronics purchase its raw materials directly as a way to increase its profit margins by approximately 5%. JIG, which up until this point had purchased its raw materials on a purely consignment basis, was somewhat wary to take on this additional function as it would involve shouldering a number of new risks, including quality responsibility, storage requirements, and uncertainty of production quantity projections.

Options For The Future

An urgent meeting was scheduled with the CEO of Globetronics Global in the U.S. to discuss the future of his company's relationship with Jordan Electronics. This high-powered executive was considered a personal friend of the JIG CEO, and he had played a key role in getting the Jordanian project off the ground in the first place. Regrettably, the Globetronics CEO's presence in the subsequent business relations with JIG had been largely absent. Nevertheless, the

Globetronics CEO was still perceived to be sympathetic to the plight of the Jordan project.

The leadership of Jordan Investment Group was convened to discuss its strategy for the meeting with Globetronics. It was absolutely imperative that the operation reach a sustained break-even, if not profitability, by the end of FY2000. This meeting was critical to charting a joint course that was achievable.

The following options, or combination of options, were on the table:

1. Insist that Globetronics exercise a 50% partnership option on Jordan Electronics.

The original joint venture agreement between Globetronics and JIG made Jordan Electronics a wholly-owned subsidiary of JIG and gave Globetronics the option to invest up to 50% in the operation at any point during the first three years of operation. Now, a year into the contract, it had become abundantly clear that not having Globetronics formally invested in the plant was a strategic mistake for JIG. As a full-fledged partner, it was anticipated that Globetronics would be far more diligent in utilizing the factory to full capacity as well as treating the Jordanian operation in 'good-faith,' the latter issue having been a source of great tension in year one.

2. Expedite the shipment of the second production line, and convince Globetronics to shoulder expansion costs and increase number of orders to Jordan Electronics on a sustained basis.

Contrary to the original Globetronics-supplied business plans; Jordan Electronics would never achieve break-even unless it achieved the economies of scale that necessitated a second production line and an increased flow of orders. While Globetronics may not have broken any laws in signing an unachievable business plan, JIG did feel that they had moral authority on this point, and would be able to leverage it during the negotiations.

3. Raise price of products purchased from Jordan Electronics, in particular the price of short run orders.

Raising prices on the order would be an easy way to solve Jordan Electronics' profitability dilemma. However, by raising prices too far, the Jordanian operation ran the risk of destroying its price competitiveness with respect to its big brother operation in Greece, thus undercutting the primary relevance of its existence.

4. Further delay payment of knowledge transfer expense by an additional year. Maintain partial subsidy of \$25,000 a month for 2000 regardless of whether Jordan Electronics reached the \$50,000 monthly orders target.

While the first part of this request was quite realistic, the second part would tread in troubled waters. JIG was already aware that Globetronics was uncomfortable with maintaining the subsidy in any scenario. Subsidizing a low cost manufacturer had apparently raised quite a few eyebrows internally within certain circles of Globetronics.

5. Pursue a strategic partnership with another electronics producer and distributor.

JIG had quietly built relations with other major U.S. and European-based electronics companies over the past year. While the terms of the joint venture agreement did not permit JIG to receive orders from other electronics outfits, a potential option would be to cancel the current joint venture agreement and begin fresh with a new partner on better business terms. While in some way this appeared to be an attractive option, JIG was mindful that it would be responsible for meeting a number of penalty clauses in the original contract and would probably be forced to compensate Globetronics immediately for those payments, which it has managed to defer up until this point.

Jordan Investment Group's once promising, and still breakthrough, high-tech manufacturing venture was certainly at a crossroads. Looking back, the entrepreneurial JIG CEO regretted some of the hasty high-tech over-exuberance that brought the venture to this uncertain point. Naturally, if he had insisted on better due diligence and more conservative business terms from the beginning, this meeting with the Globetronics Global CEO might now be a courtesy call and not a make-or-break event. If he had only better anticipated the internal tensions that the existence of a supposedly threatening Jordan Electronics would create within the Globetronics Greece organization, he would have been able to structure the deal on safer ground. Mistakes were made, but he could see light at the end of the tunnel. There were avenues for advancing the venture and he remained convinced that high-tech production in an emerging market economy like Jordan was very viable.

1. This case was written by Avinoam Green of Georgetown University under the supervision of Professor Richard Linowes. It is written as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

