The Evolution of Motorola’s Global Financial Supply Chain Strategy

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Abstract
This paper charts the progress of Motorola’s global cash management strategy encompassing Motorola’s internal factories worldwide, Motorola’s customers and suppliers, and partner banks in the US, Europe and Asia. It explains how their financial supply chain strategy has evolved over a period of over thirty five years from a relatively simple internally focused system into a fully integrated global system that enables the flow of currency and associated foreign exchange processes to mirror the Just-In-Time (JIT) flow of products throughout the supply chain. The performance of the finance systems is analyzed using detailed statistical techniques including six-sigma. The strategy is characterized by incremental changes punctuated by significant shifts in the strategy, organizational design and information systems. It is demonstrated that the financial processes that connect Motorola with its suppliers enable the supply chain to behave more like a single, cohesive unit rather than a collection of autonomous organizational units.

1. Introduction
The globalization of markets has attracted increasing attention in the academic and business literature and although there is continuing debate into the extent and nature of globalization in terms of market behavior and trends, the structure of supply chains and organization design, it is widely accepted that all types of businesses must develop their production and marketing strategies in a global context. This is particularly true in the high technology and banking markets, which have been at the forefront of globalization. In this paper we examine the globalization process in Motorola’s financial supply chain. The strategy analysis incorporates theory elements from the strategy, IS and operational management literatures. An outline of the relevant theory concepts is given below.

In his seminal article, Levitt [1] identified the importance of the globalization of markets, and in particular the standardization of products to suit global markets. Although the overarching trend towards common, global standards and products have been questioned, and the importance of local requirements have received more attention, the trends described and forecasted by Levitt have been of particular importance in high-technology markets. The Internet, cheaper travel and the availability of low-cost manufacturing have all contributed to the homogenization of many high-tech consumer markets, particularly computing, mobile phones and software. These market changes have been accompanied by the emergence of global organizations, which have defined and shaped their strategies in order to take advantage of global standards and increased standardization, whilst also recognizing the importance of local market requirements. Other examples of global technical standards include GSM in the mobile phone industry and de facto standards defined by dominant market shares e.g. computer operating systems, Microsoft’s office productivity software and eBay’s shopping platform.

The critical element of any global strategy is to be able to manage and co-ordinate operations efficiently in order to achieve economies of scale and maintain or lower their operating costs. Dicken [2] makes a distinction between the notion of ‘pure’ globalization exemplified by Ohmae [3] and more complex developments where geography and local product design are reflected in the structure and management of international supply chains. An important analytical tool that emerges from the discussion of globalization is the network concept of inter-linked organizations, typically formed into a supply chain that manages the flow of raw materials, product assembly, manufacturing and distribution through shared business processes and Information Systems.

Multinational organizations have gained huge benefits from the integration of management processes within their organizations through the use of Enterprise Resource Planning (ERP) systems that have been accompanied by the development of shared information systems along the supply chain, either by simple EDI systems or more sophisticated electronic business standards such as RosettaNet. The supply chains...
chain management literature typically focuses on the operations management aspects of supply chain, e.g. the benefits of integrating manufacturing and marketing [4] and the benefits of sharing information between separate companies to support the coordination of inventory management [5]. More recently an increased emphasis has been placed on the global aspects of supply chain management [6] including the proposal of a theoretical governance framework. However, there are very few documented cases of global strategies in action that capture the evolution and benefits gained from integrating management processes along the supply chain through a description of operations and systems development in a dynamic context.

This paper describes the development and evolution of Motorola’s global financial supply chain strategy over the period 1976 to 2009. It identifies the major factors that shaped the strategy, notably the external, market catalysts for change, the impact and interaction with strategic partners and the enabling effects of Information Systems that connect Motorola to a global business network of customers and suppliers involved in the manufacturing and banking supply chains. A research framework that shows the relationships between external factors, strategy evolution and performance is shown in figure one. The framework is used to structure the case analysis and defines the strategic themes and operational variables that are used to describe and analyze the case data.

![Figure One: Research Framework](image)

2. Methodology

The objectives of the research were to understand the evolution and performance of the financial supply chain strategy of Motorola and its global partners over a significant time period. Of particular importance was to understand the inter-relationships between external factors such as globalization of markets and common systems on the development and evolution of the financial supply chain strategy, and to measure the actual outcomes and performance based on detailed operational statistics combined with judgmental evaluation and interpretation of the data by key informants within the company working closely with the researchers. The research therefore involved a detailed exploration and analysis of the strategy content, process and outcomes within Motorola based on longitudinal data profiles. The data collection process involved detailed interviews and discussions with senior management within Motorola and one of their bank partners, and included full and open access to relevant internal management reports and operational data.

The case study method was chosen because it enabled new theory development concerning financial supply chain strategy related to information systems and operational performance measures, including six-sigma, and it enabled the researchers to uncover aspects and inter-relationships of complex phenomena in an organizational setting [7, 8]. There is a strong tradition of using case study research to study information systems in practice [9, 10, 11] and it has been shown to be an effective methodology to evaluate the role and impact of information systems within an organizational context. An important point to note regarding the theoretical validity and generalizability of the results is that the empirical results are generalized to a theory which can be further developed and extended by additional research, both individual case studies and survey type research [12].

3. Motorola

Motorola has played an iconic role in the development of mobile and wireless communication products in the US and globally. Since its inception, it has launched a series of innovative and technology-leading devices starting with mobile radios in the 1930s through to web 2.0 phones and services in the past year. In addition to its technology, other defining features of the company include its international outlook, its leading role in the implementation and continued development of the six-sigma framework and its Information Systems infrastructure which enable it to manage geographically disparate manufacturing and financial entities on a global scale. This paper builds on an earlier case study of Motorola and Citibank [13], by extending the timeframe from 1993 to 2009, which provides a unique opportunity to
illustrate how long-term changes in global systems and strategies are implemented in practice, and how their performance can be measured and evaluated.

The traditional financial process introduces uncertainty into the supply chain. The more powerful organization will typically demand that the price of an international transaction is agreed in their preferred currency. As foreign exchange rates will fluctuate between the time of the sale and when the payment is received, the supplier is exposed to a foreign exchange risk that is not realized until the completion of the transaction. It is common for large organizations to delay payment beyond the agreed credit period. An additional problem for the suppliers is the uncertain date for the payment due to the operational inefficiencies of the customer’s financial process and the banks processing the payments [14]. The uncertainty increases the financing cost of the suppliers, as they have to hold higher cash balances. The uncertainty introduced by a powerful organization increases the costs within the supply chain. Certain payment dates allow the supplier to arrange cheaper sources of finance. Motorola appreciated and realized these issues very early on and built a global netting system that started to address them.

3.1. The original netting system

The original cash management system connected over one hundred Motorola entities worldwide through a centralized netting system based in London. The system would reduce the amount of foreign exchange that would need to be converted and the number of payments between Motorola’s operations. Each Motorola would enter its payment instructions on a weekly basis. The payments consisted of inter-company payments, e.g. Motorola US and Motorola Germany, and payments between Motorola companies and their external suppliers. The system would then carry out a defined set of business processes:

1. Offset payments and receivables within Motorola to reduce the total payments volume internally.
2. Net off the foreign exchange by matching international payments between all of Motorola’s companies and their suppliers to reduce the volume of weekly foreign exchange deals required. So for example, if Motorola US is making a payment of €200,000 to a European supplier, and Motorola France is making a US dollar payment of $230,000 to an American supplier, then the two payments can be matched to reduce the actual amount of foreign exchange required. This is achieved by making the dollars in the US subsidiary available to Motorola France, and vice versa. This is a simple dyadic example, and the actual system was much more complex because it matched international payments across the whole group of companies in a wide range of currencies.
3. An electronic file of payments was forwarded to Citibank, their global bank partner. Motorola sent remittance advices directly to suppliers so that they would know the exact payment date.

3.2. The need for change

By 1993, Motorola had established a worldwide netting system that provided a mechanism for coordinating almost $5bn. of global payments between separate Motorola operating companies, and with external suppliers. Significant cost savings were being achieved in the areas of international bank payments, foreign exchange and operating savings gained from simplification and centralization of the treasury management function. However, there were significant operational and HR issues that needed to be addressed in order to develop the system further and fully exploit its strategic potential. The main operational problem that required immediate attention was the quality of supplier data that enabled the payment and remittance advice processes.

Any inaccurate or incomplete data on suppliers resulted in the payment being rejected by the electronic system and in its place a check was issued. However, this led to further problems if the beneficiary details were inaccurate and of the 70,000 payments made in 1993, several hundred failed each month or were delayed and required additional work. The relatively small number of staff in the treasury department who had experience of how the netting system worked also meant that the company was over-reliant on key individuals for specific knowledge. This exacerbated operational difficulties and also made it more difficult to understand the root causes of payment errors.

The principal method used to tackle the operational problems was the application of the manufacturing statistical process control method, six-sigma. The objective of six-sigma was to eliminate defects in the manufacturing process. Motorola originally developed the technique in 1981 and had reaped significant rewards [15]. Motorola has also been the recipient of the coveted Malcolm Baldrige quality award based on
its innovation and application of these techniques in manufacturing (see [16] for a discussion of the impact of the Baldridge awards on a range of leading companies). However, the use of these techniques in a finance function was a new venture, and took considerable effort and training to make it work. Similar to manufacturing the finance function was focused on the improvement of the certainty of the process.

The results from the application of six-sigma to global payments are shown in figure two below.

![Six Sigma for Global Payments (1993 to 2009)](image)

Figure 2. The dynamic improvement in six-sigma performance for Motorola's global payments 1993-2009.

To give an idea of the scale and complexity of the operations, the total volume of supplier payments rose from around 70k per annum in 1993 to almost 100k in 1998 with an average payment value of $62k. Inter-company payments between Motorola operating companies rose from 10k to 21k over the same time period with an average value of $715k.

In terms of actual payments affected, a 3-sigma level equated to problems with around 7% of total payments so in 1995 there was some type of operational problem with almost 6,000 payments out of a total of 92,000. The issue was that rejected payments had to be re-inputted to the netting system in time to complete the process. Operational issues at the bank also introduced error rates as high as 20%. It can be seen that the initial improvements from 1993-1998 were significant. By 1998, the sigma level had risen to 4.7. The factors that help explain this rapid improvement were the increased focus on quality processes within the treasury function and the operating companies, particularly on measuring, improving and controlling the accuracy and completeness of bank data for suppliers. To improve the quality of the process, errors had to be corrected at their source, within the operating company ERP systems. Rather than the Treasury making the corrections the cash was refunded to the operating units until the details were checked for the next cycle. Naming and shaming the business units with the worst quality issues also applied peer pressure.

The catalyst for further significant improvement over the period 1999 to 2001 was the improvement of the consistency of the data originating from the introduction of standard Oracle ERP implementations. The slight dip in 1998-1999 is explained by the fact that this was a transition period during which the Oracle systems were introduced. In 2005 the colocation of the banking systems, in China, with the internal production management systems was a logical development because the payment instructions are initiated by production and supply chain management activities. Production management and banking processes use common data and the close integration of the Information Systems further increased the accuracy and timeliness of this data. There have been continuous improvements since 2005 and in 2010 it has reached a point where further improvements will only yield minimal benefits because the number of payment failures per month is now very small, i.e. less than 10 per month that was equivalent to 5.4 sigma. The errors could be resolved relatively quickly and easily using manual processes.

3.3. Growth and evolution of the cash management strategy

The growth pattern in payment volumes is shown in figure three.

![Payment Volumes ($M.)(1993-2009)](image)

Figure 3. Growth in Motorola's payment volumes

There was steady growth in payment volumes over the period 1993-2000 and the peak coincided with the dot-com bubble. In 2001, Motorola sold its government and defense business to General Dynamics, and in 2004, its semiconductor division was set up as a separate company, ‘Freescale Semiconductors’. In
2006, the automotive division was sold to Continental AG. Together with other market and regulatory factors, these sales partly explain the fluctuation in payment volumes. However, for the purposes of this paper, the important result here is to demonstrate the scale and complexity of the operational requirements facing the cash management function. From the perspective of the treasury function, an overview of the strategic changes and the resulting outcomes for the period 1976-2005 is shown in table 1.

Table 1. The evolution of Motorola’s financial supply chain from 1976 - 2009

<table>
<thead>
<tr>
<th>Date</th>
<th>Key Events and Strategic Changes</th>
<th>Results and Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>All payment data were collected in Chicago and controlled from Geneva. The currency netting system was implemented. The original system exploited a COBOL email system that connected all the Motorola companies together and enabled them to share data quickly and easily.</td>
<td>Reduction of cash flows within the organisation and the establishment of a simple global system.</td>
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<tr>
<td>1988</td>
<td>The European treasury management function was moved to London. Secure electronic links with Citibank enabled the electronic payments process to be extended to suppliers.</td>
<td>The skills required to manage an international treasury were readily available in London. The treasury was also close to its key banking suppliers. A significant increase in the scale of the netting process was achieved.</td>
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<tr>
<td>1991</td>
<td>The IT infrastructure composed of the global email system, leased lines and Value-Added-Networks (VANs) enabled the sharing of data between Motorola, its bank and its suppliers on a worldwide basis.</td>
<td>Strategic alliance with Citibank developed further through the use of EDI systems. Option to move to another supplier retained with the use of an industry standard for the payment orders.</td>
</tr>
<tr>
<td>1992</td>
<td>Development of EDIFACT standards for supplier remittance advice.</td>
<td>The process made the payment process more transparent and enabled the suppliers to easily identify payment delays. Suppliers received significant benefits in terms of timely payments and advanced notification of payment dates from the electronic remittance advice message.</td>
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<td>1993</td>
<td>The electronic payment system was used for all payments greater than $14k. Worldwide checks were used for payments with a value less than $14k and also for payments that did not have sufficient banking details to be paid electronically. All inter-company payments within the Motorola group are electronic payments.</td>
<td>The poor quality of the payment data resulted in a high level of repairs and delays to higher value payments combined with the significant use of checks because of incomplete suppliers’ electronic bank details.</td>
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<tr>
<td>1993</td>
<td>Introduced the ability to collect payments through the netting system. Hedging of foreign exchange risk was included in the netting cycle (based on forecasts).</td>
<td>Centralising the collection of funds increased the efficiency of the netting process. Motorola reduced its costs to trade foreign currency. The efficiency of Motorola’s hedging process was increased, which reduced the level of foreign exchange exposure.</td>
</tr>
<tr>
<td>1996</td>
<td>Started to use purchase order details to improve the visibility of foreign exchange exposure. The netting system was used to process the transactions required to hedge the foreign currency exposure.</td>
<td>Management of the foreign exchange risk was moved from forecasts to real time data at the point the risk was generated, i.e. when the purchase order is raised.</td>
</tr>
<tr>
<td>1997</td>
<td>Dutch BV European cash management centre was used as the in-house bank.</td>
<td>Centralised the management of surplus cash and short term funding in Europe.</td>
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<tr>
<td>1997</td>
<td>The netting system was used to collect insurance payments on a worldwide basis for the captive insurer.</td>
<td>The inclusion of insurance payments increased the scale of the netting system and reduced the transactional costs of currency trading and foreign exchange processes.</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
<td>Description</td>
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<tr>
<td>1997</td>
<td>To introduce competitive pressures to resolve the quality issues - a multibank payment capability was developed. Payment files were split between Citibank and JP Morgan.</td>
<td>The service levels of the two main relationship banks could be compared. Splitting the business also put the banks’ pricing under pressure.</td>
</tr>
<tr>
<td>1997</td>
<td>Reduced the lower limit for checks to $7k.</td>
<td>More payments were processed electronically, which benefitted suppliers in terms of improved cash flow and improved quality of the payment process. The process increased the cost to Motorola, although the cost to Motorola was significantly less than the benefit to suppliers.</td>
</tr>
<tr>
<td>1997</td>
<td>Introduced Automated Clearing House (ACH) payment process. This significantly reduced Motorola’s cost to process payments.</td>
<td>The cost for making an ACH payment is significantly lower than an international wire payment. There is greater consistency in the time taken for suppliers to receive the funds.</td>
</tr>
<tr>
<td>1998</td>
<td>Semiconductors division was on SAP. Motorola moved to Oracle. Some parts of the company remained on SAP after 3 years but 85% on Oracle.</td>
<td>Centralising the treasury process was reasonably straightforward at Motorola because most of the manufacturing operations were using the same version of an ERP system.</td>
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<tr>
<td>1998</td>
<td>Asian Services Centre set up in China to manage and process all Asian payments. Six-sigma techniques were used to track the operational performance.</td>
<td>The services centre integrates the Oracle manufacturing platform with the banking systems, which gives operational advantages in terms of business process design, data consistency and accuracy of payments.</td>
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<tr>
<td>1999</td>
<td>Globalized treasury cash management function</td>
<td>The service provided by the treasury was extended to Asia.</td>
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<tr>
<td>2002</td>
<td>Processing errors reduced to the point that all payments could be paid electronically.</td>
<td>The suppliers benefited from receiving lower value payments earlier.</td>
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<td>2003</td>
<td>Back office systems and operations were improved using six-sigma methodology, which exploited the improved accuracy from the new Oracle system. System enhancements were also carried out during this period.</td>
<td>Incremental process improvements related to the Oracle system continued to improve the certainty of the payment date for suppliers and further improved the quality of the financial processes.</td>
</tr>
<tr>
<td>2004</td>
<td>Motorola’s semiconductor division was sold. The netting system was a mainframe system that was included as part of the sale – a new solution was therefore required.</td>
<td>The treasury only had eight months to replace the netting system.</td>
</tr>
<tr>
<td>2005</td>
<td>New netting system was implemented which was based on an outsourced solution from ABN AMRO (now part of RBS).</td>
<td>Outsourcing the netting was the most pragmatic solution compared to the other two main options. (1) Renting space on another IBM mainframe was deemed to be too expensive and also tied Motorola to old technology, (2) Developing a new version to run on servers was too expensive and unlikely to be completed on time.</td>
</tr>
<tr>
<td>2005</td>
<td>Third party payment processing was transferred to China (with the exception of US payments).</td>
<td>An improvement in scale efficiencies was achieved. In addition, a dedicated specialist team further reduced errors in the payments and foreign exchange processes.</td>
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<tr>
<td>2005</td>
<td>JP Morgan was chosen as the sole supplier of payment processing outside the US.</td>
<td>Although Motorola appeared to weaken its negotiating position in a sole-supply banking relationship, the arrangement generated operational benefits because it made it easier to resolve payment errors and service levels were also improved.</td>
</tr>
</tbody>
</table>
2007 Major acquisition of Symbol Inc. required the treasury system to be integrated with SAP in addition to the existing Oracle system.

The integration with the SAP system required significantly more effort than Motorola’s standard Oracle ERP system.

2008 European cash management office moved to Poland.

The basic advantages were to save overhead costs and also to access skilled staff.

1990-2010 In total, 12 release versions of the netting system were implemented, each one representing significant operational enhancements.

An incremental process enabled the quality of the process to be maintained. This was vital because with only a small treasury staff it would not have been possible to manually correct errors in a high volume, high value environment where the payment processes were time-critical.

The current organizational and banking arrangements for Motorola’s global cash management system are shown in figure four. The IT infrastructure within Motorola is now based on an Oracle enterprise system, which connects together all of the Motorola entities with a single, standard technology. The treasury system benefits from the operational ease of maintaining the integration with operating companies. The initiation of supplier payments originates from the Oracle production management system and payment instructions are sent to the global netting system. In the original system, Motorola used a bespoke, internally developed netting system but this was replaced by an outsourced solution in 2005, provided by ABN AMRO, which is now part of RBS.

The netting system collects all of the global payment instructions and offsets the value of intra-company payments between Motorola companies, and then nets off the foreign exchange payments in order to reduce the spot foreign exchange requirements. $20 billion of payments were input to the netting system in 2009. After netting the currency payments against each other, the resulting foreign exchange requirements were reduced to $3bn. To see how the performance of the system has improved over time, the foreign exchange requirements as a percentage of total international payments over time are shown in figure five.

Figure 4. Motorola’s global financial supply system in 2009

The netting system collects all of the global payment instructions and offsets the value of intra-company payments between Motorola companies, and then nets off the foreign exchange payments in order to reduce the spot foreign exchange requirements. $20 billion of payments were input to the netting system in 2009. After netting the currency payments against each other, the resulting foreign exchange requirements were reduced to $3bn. To see how the performance of the system has improved over time, the foreign exchange requirements as a percentage of total international payments over time are shown in figure five.

Figure 5. Motorola’s netted foreign exchange as a percentage of total payments

It can be seen that the volume of foreign exchange payments that are netted against each other has risen from 60% in 1993 to around 85% in 2009. While Motorola had developed a very efficient system to manage the conversion of foreign exchange and process payments, the issue of the foreign exchange risk was outstanding. Motorola accepted the foreign exchange risk from its suppliers as soon as a contract was agreed in a foreign currency. The time between the purchase order being agreed and the conversion of the currency to make the payment could be months (figure six). During the intervening period the exchange rate could move adversely. As a result, when a purchasing manager agreed a price they did not know the final cost.
Figure 6. The period exchange rates can change

To remove the uncertainty the purchase order details were extracted from the Oracle ERP systems and fed into the foreign exchange hedging system (Chart/Taurus) on a bimonthly cycle. The treasury would hedge (confirm the exchange rate) of the net exposure with Motorola’s foreign exchange banks, which were settled via the netting system. Although the process is not complex it was only possible due to the long-term effort to integrate the manufacturing and treasury systems. Once implemented the cost to Motorola of removing the foreign exchange risk from the supply chain was negligible.

4. Case discussion and comparison with theory

Beyond the initial internal netting system, Motorola has maintained a focus on integrating its suppliers into the financial supply chain in the same way that operational improvements in the manufacturing supply chain have been achieved by sharing systems and business processes across organizational boundaries. One of the key outcomes of an integrated financial supply chain is that the uncertainty of when the international suppliers will receive payments and how much they will receive in their currency is largely eliminated.

The integration of financial processes along the supply chain is a logical and natural development that builds on the emergence of global integrated supply chains designed around logistics and manufacturing systems. Motorola’s willingness to share the financial and operational benefits of an integrated payments system with its suppliers is further evidence that the supply chain is the unit of analysis to focus on in order to understand how global trading networks function and operate. Motorola has also made the decision not to act opportunistically and to remove the uncertainty of the payment date. The certainty is possible because Motorola has automated the process. Most significantly Motorola has made the decision to pay on time and in the suppliers’ currency.

The internal operational processes developed by Motorola’s global treasury function are examples of best practice in the treasury management function. The strategic innovation lies in the use of the centralized treasury function to manage supplier payments and also to collect funds from customers. The collection of funds and the initiation of payments is a high-value and high-volume transaction process, which makes the emphasis and achievements in using six-sigma of critical importance. Without the very high quality based on automated systems, the benefits would be lost through increased administrative and banking costs. To get to this stage has required decades of continuous improvement and a strategic commitment to implementing quality strategies originally designed for manufacturing in a finance context.

The time and effort to duplicate the system should not be underestimated. Collecting the purchase order information required data to be extracted from the ERP systems used by each of the Motorola operations. Fortunately, Motorola had demanded that each of its operations install the same version of an ERP system to simplify the exchange of information required to manage its supply chain. As a result the Global Treasury only had to integrate once with the Asian services centre that operated the ERP system.

Rather than using the automated system to deal with multiple banks the choice was made to concentrate the business with sole suppliers. The scale of Motorola’s requirement for transactional banking services made them a valuable customer. In addition to offering competitive prices, the banks were willing to tailor their services to meet Motorola’s needs. To retain the business the banks are required to keep their focus on improving the quality of the transactional services and acting promptly to resolve any operational problems.

The fundamental barrier is that the senior management was willing to sanction an incremental development, over an extended period that primarily provides a benefit to the supplier base. The enlightened recognition was that by improving the efficiency of the financial process Motorola was able to increase the efficiency of the supply chain.

In summary, the case of Motorola’s global treasury has several unique and strategically important attributes. It is a clear example of the development of a
global financial supply chain that mirrors the manufacturing and network of relationships between Motorola and its global supply base. It builds on the theoretical concepts from the literature and illustrates with empirical evidence the benefits that can be achieved by adopting a global strategic perspective, supported by standardized information systems. In terms of the discussion about the scale and extent of the globalization process in different markets, money is arguably the ultimate commodity. The global treasury function, payment systems, banking arrangements and underlying information systems infrastructure is managed as a single entity. The national differences are relatively minor and are determined largely by local regulatory requirements that govern international payments. The human element of implementing a global system should not be forgotten. The stability of the management of the project greatly helped the process of reaching agreements with the finance functions within Motorola. Not a little tenacity was required to maintain the support to improve the process.

5. Conclusions and future direction

The evolution of the strategy over a long period of time is characterized by incremental improvements, often based on six-sigma concepts, punctuated by step-changes in organizational and information systems design. The overwhelming trend is towards a standard global treasury model to enable international banking and payments throughout the product supply chain. The movement of products and services is now supported by parallel financial and banking systems. As close collaboration is required between the trading partners within the supply chain to meet customer needs, the movement of funds has evolved to track the movement of goods in a concomitant manner rather than as a distinct and separate management function.

The case clearly illustrates how the strategic focus has shifted from attempting to optimize the performance of an individual company to improving the performance of the supply chain as a cohesive unit. This is reflected by the fact that a significant share of the benefits gained from integrating the financial supply chain are accrued by the suppliers. But this in turn has intangible benefits such as better co-operation and a willingness to adapt in the context of the overall relationship, including flexibility in the management of the manufacturing and logistics.

Much more research needs to be undertaken to ground the theoretical models of globalization in terms of the actual structure and operation of global business networks and systems. This case illustrates the importance of the dynamic element of the analysis. Measuring and evaluating strategic change over time is necessary in order to illustrate how global strategies are shaped by the involvement and impact of key managers and also to understand how broader events such as organizational restructuring and changes to banking and supplier relations have a direct bearing on the continuing evolution of the globalization process.

References

