

***A SOFTWARE-BASED SYSTEM FOR SUPPLIER
COMMUNICATION AND USMCA CERTIFICATE REQUEST AND
CORRECTION PROCESS IN INTERNATIONAL BUSINESS***

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ABSTRACT

The US-Mexico-Canada Agreement (USMCA) has created extensive documentation obligations necessary to establish qualification for preferential tariffs for trade within North America. Despite their criticality, many organizations continue to utilize manual, email-based processes to manage their USMCA Certificates of Origin (COOs). This creates many challenges including errors, delays, vulnerability of being audited, and failures to meet compliance. The goal of this study was to evaluate an organization's current manual process for managing USMCA certificates within a Global Electronic Manufacturing Services (EMS) Company (XYZ) and to analyze twelve actual examples that represent various forms of manufacturing, including automotive, retail, aerospace, textile, and food. The descriptive research design used a combination of first-hand observation and secondary data to identify systemic inefficiencies within XYZ's USMCA certificate management systems; to propose an around-the-clock, software-supported workflow for effective management of certificates; and ultimately to achieve significant improvement in operational performance

through application solutions. The research results indicate that automated, centralized repositories for managing certificates, supplier portals for inputting information directly into the system, and contemporaneous real time tracking of compliance all provide significant reductions in errors, improve readiness for an audit; and generate a quantifiable savings from duties. This study provides safety, significant recommendations for logistics companies that want to update their trade documentation to comply with recent requirements.

KEYWORDS: USMCA, Certificate of origin, Trade Compliance, Supply Chain Management. Digital Documentation.

1. INTRODUCTION

1.1 International Trade, Shipping and Logistics Environment

International Trade as An Instrument for Economic Growth, Globalization, & National Development Throughout history, International Trade has been one of the most important planks of the economy. International Trade through complete commodities, including raw materials, finished goods, technology, and services, has provided countries with many opportunities that they could not provide for their citizens domestically by engaging in cross-border trade. Countries & their economies, despite being different from each other, have created a significant amount of interdependence & have expanded the volume & complexity associated with traditional shipping & logistics operations through continued globalization. Shipping & logistics is at the core of International Trade; hence, it serves as the mechanism that moves goods globally from manufacturers to end-customers located outside the manufacturer's country. The process associated with moving goods globally from a manufacturer to a customer includes several significant activities, including but not limited to transportation planning, freight forwarding, customs, warehousing, documentation, etc. Of all these activities, documentation is one of the most critical activities as it ensures proper legal compliance associated with moving goods and providing clear evidence of successful customs clearance. Innovative technologies such as containerization, digital freight platforms & real-time tracking systems have contributed to the modernization of shipping, warehousing & overall logistics related to International Trade; however, documentation-related processes (i.e., record-keeping) are generally still performed manually in an uncoordinated manner. The imbalance between the modernization of the physical logistics component of International Trade and that associated with documentation represents an operational gap and creates inefficiencies, which continue to be

primary technology-related challenges to contemporary Supply Chain Professionals

1.2 Role of Trade Agreements and Regulatory Compliance in Logistics

Legally binding trade agreements create an arrangement between countries in order to facilitate trade through reducing tariffs, simplifying customs procedures, and creating common standards. Regulatory Compliance involves complying with local customs laws, trade agreements, rules of origin and documentation requirements mandated by countries exporting to or importing from each other. Non-compliance can result in the rejection of a shipment, the imposition of financial penalties, and legal action. Regulatory Compliance is no longer considered "a support function" but rather "a strategic requirement" for organizations involved in transportation and logistics operations. Non-compliance with trade regulations exposes the organization to many types of risk including the Seizure of a shipment, financial penalties, the loss of trading privileges, and damage to their reputation. As Customs Authorities have now moved to using a risk-based inspection model, documentation accuracy has become the key component in determining how quickly a shipment moves through customs.

1.3 Introduction to USMCA and the Certificate of Origin

The USMCA replaces NAFTA and outlines how the three countries, the U.S., Mexico, and Canada shall interact economically through their respective industries and services. One of the most integral parts of the USMCA trade agreement is that of the "Certificate of Origin." The Certificate of Origin provides a means for importers to receive preferential tariff treatment when importing goods from Canada or Mexico. To be entitled to receive such preferential tariff treatment, a Certificate of Origin must include the following mandatory information: exporter information; producer information; description of goods; appropriate tariff classification; applicable origin criteria; and signature of an authorized party. The USMCA requires companies to take steps to ensure their Certificates of Origin are accurate and complete and that customs authorities will review and scrutinize the Certificate; therefore, if there is a divergence from the Certificate's accuracy, preferential tariff treatment could be denied or additional duties would be assessed to the company. Thus, managing certificates properly is critical to businesses operating under the provisions of the USMCA.

1.4 Challenges in Manual USMCA Certificate Management

Most shipping and logistics companies are still relying on manual, emailed methods to handle the USMCA certificates of origin. Without a central method to track the process, abundant visibility gaps create problems between departments. I believe that using manual methods to verify USMCA certificates of origin may allow for missing critical details, causing the parties to not follow rules and regulations. There are additional follow-ups, delayed supplier response times, and no good version control. This adds up and puts companies at risk for audits or fines, which is not a good thing. As more regulations are added to the international trade process, more companies feel that they need to digitalize documents and processes. Digital document systems will provide companies with streamlined workflows and a consolidated area for data while allowing for automated notification systems that can lead to increased efficiency and accuracy. Based on this, I believe that the use of digital documents will allow for a smoother process of obtaining USMCA certificates from the point of start to approval, but I have my doubts regarding supplier delay as it pertains to the success of a digital workflow.

1.5 Problem Statement

The use of manual and email-based management of USMCA certificates presents various challenges to efficiency and compliance. The primary issues include lack of visibility and tracking, high incidence of error, significant time-consuming factors, and no version control. Management is not able to find consolidated reports on the status of certificates, pending corrections to certificates, nor on supplier performance. The reliance on human performers also increases the likelihood of human error in this environment: the quality of document verification is solely based on an individual's level of expertise, and without any consistency to validation rules, errors can go undetected, especially when performing personnel turnover. In addition, these manual systems do not allow a proactive compliance management environment, thus forcing organizations into a reactive compliance structure with respect to customs authorities, instead of being proactive in their attempts to solve issues related to compliance

1.6 Objective of the Study

The following objectives have been established for this research study:

1. Analyse and evaluate current process for managing USMCA Certificates of Origin and determine areas for improvement.
2. Analyse challenges in communicating and coordinating with suppliers to obtain accurate USMCA certificates.
3. Evaluate the impacts of manual documentation on compliance, efficiency, and time-to-ship.
4. Analyse the utilization of digital tools and system-supported software in tracking and managing USMCA certificates.
5. Identify gaps and inefficiencies in the verification and corrections processes of supplier-sent USMCA Certificates of Origin.
6. Propose a conceptual digital workflow for the efficient management of USMCA certificates.

2. REVIEW OF LITERATURE

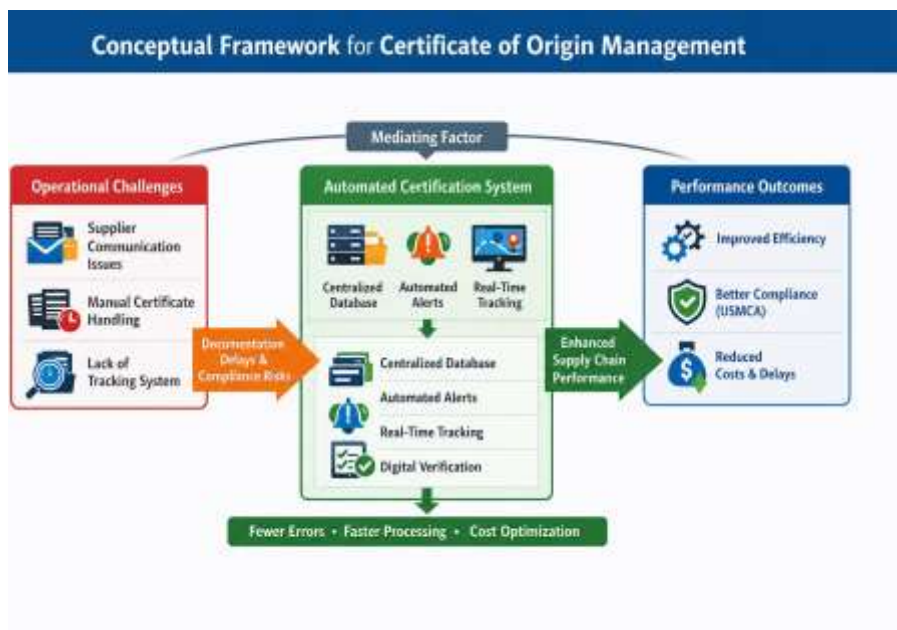
The success of international supply chains depends on the accuracy, timely submission, and compliance with trade documentation. The chief document that facilitates international trade is the Certificate of Origin which verifies that the products shipped have been produced in accordance with the different rules of preferential trade agreements (such as USMCA). Christopher (2016) identifies that trading inefficiencies and financial risk are greatly attributable to errors in documentation, delays in submission, and the lack of verification processes.

Multiple studies stress the significance of Supplier Relationship Management (SRM) on accurate documentation maintenance. Monczka et al. (2015) found that effective SRM improves communication among parties, builds trust, and reduces the chances of suppliers providing inaccurate documentation. Traditionally, the management of documentation in global supply chains has been a manual and paper based process resulting in greater potential for errors and delays. Chopra and Meindl (2019) also provide evidence that manual documentation systems are often void of real-time visibility, which leads to operating inefficiencies, delayed shipments and increased costs.

In addition, Baldwin (2020) states that not complying with trade agreements can result in penalties, delayed shipments and the loss of preferential tariff benefits which have a direct bearing on an organization's profitability and competitive position. Organizations can increase the capability to track documentation submission, audit for compliance, and generate audit reports by using ERP

integrated systems or Cloud-based document management software (Kshetri, 2018). Mentzer et al. (2001) has found that there were many communication gaps existing between global suppliers and multinational corporations.

2.1 CONCEPTUAL FRAMEWORK STRUCTURE



Using insights found from twelve case studies and the analysis of challenges currently being addressed, we propose a conceptual software-enabled workflow model to manage the certificates associated with the USMCA (United States-Mexico-Canada Agreement). The proposed model consists of five phases that are fully integrated and form a closed loop for compliance purposes.

Phase 1: Automated Certificate Request

Automated certificate requests are created by the system and sent to suppliers when a new shipment is initiated. Requests will include shipment information that has already been filled in, product descriptions, and HS codes that will assist suppliers with the submission of their certificates. Automated reminders will be sent at regular intervals until submission.

Phase 2: Structured Supplier Portal Submission

Suppliers submit their USMCA certificates through a portal that has a standard format that includes input data fields for each of the nine data elements required by USMCA. Bilingual portals give suppliers from outside North America a way to submit their certificates without errors. The submissions will also be validated at the time of submission via the portal if there are errors due to missing information or incorrect format.

Phase 3: Automated Internal Validation

Submitted certificates are compared to shipment data, HS code databases, and any applicable regulations in an automated manner to identify discrepancies. If there are discrepancies, the system will note them and route the certificates to the appropriate compliance officer for review. Validation logs will be maintained for audit purposes.

Phase 4: Correction Workflow and Re-submission

When documents have been identified as having errors, correction requests (with well-defined instructions for their corrections) will be generated and sent to the supplier through the system portal. The system will track instances of documents entered into the correction process using time stamps and provide version control for all document corrections. All approved certificates will be automatically referenced to the shipment record to which they correspond.

Phase 5: Centralized Storage, Monitoring and Reporting

All approved certificates will be stored in one central location where they can be tracked by their expiration date. There will also be automated notification sent to the appropriate parties at 60, 30 and 7 days prior to each certificate's expiration date requesting either a renewal or a response. All certificate status information, metrics related to supplier performance, compliance rates and outstanding action items will be available on management dashboards for real-time viewing. Reports needed for audit purposes will be available on request.

3. RESEARCH METHODOLOGY

3.1 Research Design

This research will use a Descriptive Research Design to examine the manual supplier communication and USMCA documentation process as it currently stands to identify problems with it and inefficiencies that exist in this process. A Descriptive Research Design is suitable for understanding the present workflow and documentation processes, finding delays, errors, and gaps in communication, analyzing the way the current system operates, and establishing a clear picture of the operational challenges of the company. This format allows for the collection of both qualitative and quantitative data allowing for comparisons between the existing manual system and the proposed software solution.

3.2 Data Collection

The researcher used Primary data collected by way of direct staff interaction through direct observations, real time case analysis for customers seeking USMCA certification (including documentation issues, delays, and gaps in communication), as well as informal discussions with employees working in the area of logistics and documentation for an understanding of the challenges faced and solutions implemented. Secondary data was obtained through a review of organizational sources and relevant reference materials, including company records (related to USMCA certificates), internal reports, process guidelines, online sources, and trade compliance materials to understand the current system, validate the Primary data findings and provide theoretical support for the research study.

3.3 Case Study Methodology

The purpose of a case study is to provide in-depth explorations of actual cases that illustrate the complexity of a phenomenon. This research examines a total of twelve case studies across multiple industries (e.g., Automotive, Agriculture) and provides insight into the challenges experienced during the United States-Mexico-Canada Agreement (USMCA) certification process such as: delays, errors in the documentation process, and poor communication. Each case study was conducted systematically (to facilitate the identification of root causes associated with each challenge, the evaluation of corrective measures taken and identification of generalized observations to support recommendations for change).

4. CASE STUDY ANALYSIS

4.1 Overview of Selected Case Studies

Twelve case studies have been selected from multiple sectors: Autofill/Automobile; Retail; Aerospace; Textile/Fabric; Food; and Electronics Manufacturing. This provides a good representation of the types of challenges and solutions experienced in relation to USMCA.

Table 1 below provides a summary comparison of these 12 case studies with their respective industry sector.

Case	Company	Sector	Software Used	Key Outcome
1	Ford Motor Company	Automotive	SAP GTS	91 % Reduction in Errors. \$4.2 Million Savings
2	General Motors	Automotive	Oracle GTM Cloud	96 % Reduction in Expiration. \$1.8 Million Savings
3	Magna International	Auto Parts	MIC OCS	Reduction in Cycle Time from 23 Days to 6 Days
4	Walmart Inc.	Retail	Descartes Visual Compliance	98 % Compliance with SKUs Recouped \$6.7 Million
5	3M Company	Diversified Mfg.	ONESOURCE Global Trade	Responded to Audit Requests Averages 11 Days to 6 Hours
6	Celestica Inc.	EMS	Ezopen Trade Compliance	73% Reduction in Duplicate Data Entry
7	Mabe	Appliances	SAP GTS + Origen Tech	Created 2,200 Declarations within 9 Months
8	Bombardier	Aerospace	Oracle GTM Cloud	No issue found by US Border Protection in Audits/Inspections
9	Levi Strauss & Co.	Textile/Apparel	Assent Compliance	Improved Traceability of SKUs 31% to 87%
10	Caterpillar	Heavy	SAP GTS + ABC	RVC Rate Improved from 91% to

	Inc.	Equipment		99.7%
11	Loblaw Companies	Retail/Grocery	Livingston International	Improved Compliance Rate for Certificates 52% to 97%
12	Grupo Bimbo	Food Manufacturing	Custom ERP Portal	Improved SKU Traceability from 89% to 100%

5. FINDINGS AND RECOMMENDATIONS AND CONCLUSION:

5.1. KEY FINDINGS

Twelve case studies provided an overview of the challenges and solutions to USMCA certificate management across twelve automotive manufacturers that shared many of the same types of USMCA certificate compliance and administration issues.

1. Ford Motor Company (USA)

The high effort and frequent error manual management of USMCA certificates created challenges within the Ford supply chain. A combination of slow supplier responses to requests for USMCA certificates (floorstock) and the complexity of RVC calculations requiring manual processes has resulted in delays, compliance risk, and increased workload for Ford's compliance department.

2. General Motors (USA)

General Motors experienced significant challenges managing the lifecycle of USMCA certificates due to many expired certificates due to limited methods of tracking certificates. There were shipment delays due to expired certificates, along, with significant financial exposure.

3. Magna International (Canada)

Magna faced inconsistencies within its USMCA certificate management processes, as Genesis had inbound suppliers' declarations and outbound manufacturer's certifications managed differently. This created inaccurate data, resulting in the need for repetitive manual corrections. The dual role of managing certifications and declarations increased complexity of adherence to standards.

4. Walmart Inc. (USA)

The reliance on supplier self-certification created very limited means for Walmart to verify the accuracy of its compliance. Errors as to the origin of goods were discovered very late in the compliance process and increased the exposure of incorrect USMCA claims and duties.

5. 3M Company (USA)

Decentralized certificate storage in divisions caused audit responses to be slow. Different formats/systems then caused lack of visibility and increased duplication of work. This in turn reduced enterprise level compliance controls.

6. Celestica Inc. (Canada)

The study showed that using certificates to comply with customers in the EMS industry was ineffective. Repeating supplier data for many different customers resulted in errors/delays when trying to coordinate information. Manual processes will not allow a company enough growth to keep implementing them.

7. Mabe (Mexico)

The study showed that moving from a NAFTA to USMCA in collecting declarations from suppliers required all declarations to be collected again; language barriers and several tracking requirements due to being IMMEX compliant made it much more difficult. Manual tracking posed a higher risk to duty lost and more audit findings.

8. Bombardier Inc. (Canada)

The study showed that aerospace production schedules did not normally coincide with certificate validities under the USMCA - expired certificates usually exist during long production runs. Tracking documents manually makes it difficult to audit and retrieve documents quickly after being created.

9. Levi Strauss & Co. (USA)

Manual collection of yarn-forward documentation was difficult and incomplete, with the lack of traceability of a proper origin in multi-tier textile supply chains increasing the risk of unsupported USMCA claims.

10. Caterpillar Inc. (USA)

Calculating net cost method manually resulted in errors in determining costs, making coordination between finance and compliance departments complex. Calculating net cost using spreadsheets increased errors and exposure to audit risks.

11. Loblaw Companies Ltd. (Canada)

The study found that supplier confusion due to not having a prescribed CUSMA certificate form caused suppliers to provide incorrect or incomplete data, losing their ability to receive preferential duty benefits.

12. Grupo Bimbo S.A.B. De C.V. (Mexico)

The agricultural USMCA compliance assessment must be able to track the origin of each individual ingredient used. Manual tracking systems cannot support either multiple countries or multiple ingredients on one shipment and will, therefore, require excessive preparation efforts for audits.

5.2 RECOMMENDATIONS

The following recommendations aim to support accurate and consistent USMCA Certificates of Origin management:

- Consider the implementation of a centralized software system for managing USMCA Certificates of Origin to gradually replace the current system of Excel spreadsheet and email tracking.
- Require suppliers submit USMCA certificates through a universalised online portal in order to enhance the consistency of data submitted and decrease supplier follow-up requirements.
- Implement system-based validation checks of submitted USMCA certificates for missing data, incorrect origin criteria, and expired certificates prior to acceptance.
- Implement automated alerts of expiring certificates to help avoid the use of invalid or expired certificates for customs declarations.
- Establish a single standard format for USMCA certificates which all suppliers will use to prevent errors and avoid repeated correction of certificates.

- Provide clear directions, guidance notes, and sample certificates to suppliers in the supplier portal to facilitate accurate completion of USMCA in other words certificates.
- Maintain USMCA certificates in a centralised, searchable repository in order to improve access to the documents and to facilitate auditing efforts.
- Introduce a structured internal review and approval process for USMCA certificates before they may be used for customs purposes in order to provide enhanced compliance controls over the USMCA Certificates of Origin.
- Provide ongoing training sessions for internal teams on USMCA rules of origin, documentation requirements and system use.
- Generate regular compliance reports to monitor the timely response of suppliers to correction requests, identify trends in corrections, and determine total compliance gaps for USMCA Certificates of Origin.

5.3 Conclusion

The study investigated how the manual method for managing USMCA Certificates of Origin for shipping and logistics operations is currently done, focusing primarily on the global electronics manufacturing services company known as XYZ. The Twelve Real-World Case Studies analyzed during this research depicted multiple sectors, including Automotive, Retail, Aerospace, Textile, Food, and Electronics. Results from these twelve real-world case studies proved that today's international trade environment requires a new way of doing things; however, the current method (using manual email systems) does not fulfil today's requirements for compliance with current international trade regulations. An examination of evidence from the twelve case studies will demonstrate the effect that using a compliance software program has had; each of these organizations saw dramatic improvements in every measurable dimension uniformly across their chosen metrics. For example, Ford Motor Company's documentation error reduction was 91%, resulting in USD 4.2 million in savings per year to their labour costs. General Motors experienced a 96% reduction in incidents when certificates expired, enabling the company to save USD 1.8 million in retroactive duties. Walmart improved compliance verification levels from 34% to 98% for all of their cross-border stock-keeping units (SKUs), enabling them to recover USD 6.7 million in duty claims, thereby increasing their overall profitability.

This proposed conceptual model of a five-phase software-supported workflow for managing USMCA certificates will serve as the basis for transforming today's existing manual method of managing USMCA certificates to an automated process for compliance going forward. This model can be used across all industries and can be adjusted and scaled up or down depending on the size of each supplier's network.

The MBA Shipping and Logistics professionals will find this research invaluable as it combines theory and practice in regard to trade compliance. In addition to enhancing the efficiency of managing USMCA Certification, digitizing the certificates is strategically required in order to sustain competitive advantage, comply with regulations and improve supply chain performance within an ever-changing global trading landscape

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