The challenges and practice of metal industries into global supply chain integration: A literature review

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Abstract: The objective of this study was to investigate the current research practices and existing progress research published on supply chain management and supply chain integration in an attempt to provide a research agenda for future investigations. Mainly the secondary data analysis and methods employed for the investigations. Particularly a systematic literature review analysis from 115 papers published from 16 important journals in the supply chain, logistics, Industrial management & data systems, supply chain management: an international journal and operations management during the period 1997 to 2018 was employed. This paper has identified relevant supply chain integration research studies that have contributed to the development and growth of manufacturing industries performance and competitiveness to the SCI and SCM fields. The analysis of the relevant articles gaps and miss-concepts in the previous literature provides to reduce universality and insufficient ordinary view, confusion of supply chain integrations were investigated. The gaps and investigations were done based on their methodological porches, objectives, analysis and research finding. Mainly the gaps, miss concepts and challenges concepts in the previous literature were identified and grouped in

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PUBLIC INTEREST STATEMENT

This study examined and investigate the previous literature progress in relation to evolution, revolution, characteristics, driving factors, methods of integration, and the roles of supply chain integration. Mainly the study is analyzing and investigated the existing research published on supply chain integration in an attempt to provide a research agenda for future investigations. Using systematic literature review analysis from 3217 paper around 115 published articles was reviewed and incorporated for the analysis and gap identifications. With six stage and procedures of systematic literature review, the progress and theoretical gaps of the previous researches were done. In this extent, the literature review included in the different phases of the research process: data collection, analysis, presentation, result and discussion, conclusion, implications, and future research directions are presented.
five issues. Moreover, the gaps and recommendations for future research are consolidated into a research agenda that provides practitioners to evaluate existing SCI & SCM issues and seek ways to develop a conceptual framework on SCI of manufacturing industries to global supply chains.

**Subjects:** Engineering & Technology; Industrial Engineering & Manufacturing; Industrial Design; Production Systems; Manufacturing & Processing; Manufacturing Engineering; Logistics; Sustainable Engineering & Manufacturing; Manufacturing Technology

**Keywords:** supply chain integration; systematic literature review; global supply chain; supply chain management; enabler and inhibitors

### 1. Introduction

During the Era of globalization, improved and competitive manufacturing sector have a great impact to enhance the country’s relative economic performance. In this context, the competitiveness of the country determined by the relative performance of the industries. The manufacturing sector’s performance in recent years has been characterized by steady growth, improved labour productivity, but sluggish employment growth (Baily & Gersbach, 1995; Deloitte, 2016; Giffi et al., 2016). Nevertheless, in Eastern Africa, the performance of manufacturing industries is weak and poor (Kimechwa, 2015; Mwilu, 2013; Sintayehu Asmamaw, 2016). As a result of the weak performance records, manufacturing sector regrettably plays a rather limited role in promoting Gross domestic product (GDP) growth and job creation compared with other regions. This is due to a number of factors faced in Eastern African manufacturing industries includes improper resource utilization, frequently suffer from low productivity, problems on technology, problems in infrastructure distribution, problems skill manpower (Deloitte Touche Tohmatsu Limited, 2016; Fasika Bete Georgise & Thoben et al., 2013; Srouf, 2009; Watson et al., 2004).

The sector also suffers from a number of structural and policy constraints, including limited access to finance, electricity, transport infrastructure, some are landlocked, resource problems, and ICT networks. On the other hand, in the past decade, East Africa has been the fastest-growing region in Africa and is home to several of the fastest-growing economies in the world (At et al., 2016; Gigineishvili et al., 2014). Despite this, the growth of basic metal and engineering industries in region’s economies contributions are remaining limited. Because of this, the GDP contribution of the basic metal industry sector is much lower compared to other manufacturing sectors (Abtew, 2014; Dametew & Ebinger, 2017; GRIPS/JICA, 2016; MoI, 2013). Besides, the conventional manufacturing and management systems may be in a state of decline of the sectors. While a new approach that used could have an embryonic change to basic metal industries. In order to respond to a fast-changing business environment, companies began to pursue a strategy of improvement systems from a long-term perspective, rather than the conventional management paradigm such as short-term profit maximization. To improve regional performance and compete in a global changing scenery, Eastern Africa basic metal industries must restructure themselves in the competitive position. For these reasons, firms are now looking at protects cost, quality, technology, resource, systems, and other competitive advantages as an approach to track in a globally competitive and sustainable firm growth. However, the way of achieving organizational competitiveness and excellence were the big questions on manufacturing firms (Kitaw & Goshu, 2017). Thus, implementing holistic and representative improvement systems are critical. However, in numerous systems, supply chain integrations is the meditations for improving the firm’s performances and comparative advantages. Even though implementing supply chain systems cannot be taken as a grant for organizational improvement and sustainable development. Rather, it is critical that supply chain systems practicing in relation to the context of nations, individual organizations within them focus their policies, firm size, geographical location, culture, and resources in a coordinated way for competitive advantage. While different study (Gregory & Simiyu, 2015) shows that the effects of supply chain collaboration practice on the performance and
competitiveness of steel manufacturing industries. Though the importance of supply chain integration on firm performance and competitive advantage is defined but till the way to implement is not clear. Currently, researchers and practitioner’s intentions are increase to investigate on the performance, design, and analysis of the supply chain system and related issues. This consideration is mainly a result of the rising costs of manufacturing, the shrinking resources of manufacturing bases, shortened product life cycles, the levelling of the playing field within manufacturing, and the globalization of market economies (Beamon, 1998). While most of the research a need to study the issue of supply chains to apply in manufacturing and other sectors. This the prerequisite for supply chain study on implementing into the scenario, context of manufacturing industries and management systems. In addition, supply chain literature directs, still there is a need to investigate in addressing the development, growth, processes in regional and global trends, business trends, geographical effects, environmental impact, technological trends, the influence of information technology in supply chain (Frohlich & Westbrook, 2001). Therefore, the field of a supply chain can progress by keeping track of these changes. Consecutively, according to the previous research (Lambert & Cooper, 2000), further study on the implementation of supply chain on to identifying the supply chain members with whom it is critical to link, what processes need to be linked, and what type/level of integration applies to each process link also incorporated and needs to study. Furthermore, in spite of the enormous researches conducts in supply chain integrations, still infancy on the area of supply chain integrations implementation to basic metal industries in different situations like economic level, geographical, cultural and technological (Dametew et al., 2016; Maleki & Cruz-Machado, 2013). Thus, identify existing gaps in the growth of the supply chain and proposed future solutions, a systematic literature review approach has been used.

Hence, the main objective of this paper is to investigate the current developmental changes in supply chain literature and identification of knowledge gaps in the field of supply chain integration and development of conceptual models. To study the basics of practical and theoretical research gaps of basic metal industry supply chain integration literature examines the issue of supply chain integrations and supply chain management sectors. Moreover, the study address and review the development of the main concept, trends, area of supply chain integration in line to the evolution and revolution, theories, characteristics and span of supply chain integration, the importance, driver and enablers of supply chain, supply chain integration methods and strategies, the issue of supply chain performance measurements are explored. While this literature review study provides a theoretical knowledge to supply chain integration and supports to empirical findings for this study. The successive part discusses the systematic literature review technique pursued to undergo this literature review research process. The statistical and citation analysis of selected articles considered (Figure 1). Section 3 elaborates the evolutionary paths that supply chain management and supply chain integration has developed through and the different associated changing agents and the resulted supply chain fields. Section 4 deals with the basics,
characteristics, impacts, and supply chain integrations, methods/tools of supply chain integration, performance measurement and supporting theories are studied. While section 5 discusses and concludes the results concerning the gaps in previous work and the directions of future research paths were incorporated.

2. Literature Review Methodology

2.1. Systematic Literature Review to Supply Chain Integration Literature

The methodology adopted in this literature review is a systematic review approach which has been originated in clinical (medical) researches and adopted by (Foo et al., 2010) for management field researches (Table 1). However, the literature review is to study the basics and fundamentals of the supply chain that can enable us to learn and understand for supply chain (management and integrations); and provide a coherent research agenda for supply chain integration. This mainly attempted to incorporate, the evolution of supply chain, theories, and characteristics of supply chain integration, enablers, barriers, span of supply chain integration and methods of supply chain integrations, the Supply chain Performance measurement, and related issues are included.

2.2. The Rational on Systematic Literature Review Approach for Supply Chain Integration

In this study, the systematic literature review approach can be employed. Because the systematic review has numerous advantages. For instance, the previous study (Glass, 1976; Kitchenham Barbara, 2007; Scandura et al., 2000) shows that a systematic review requires an extensive review of articles following a list of specific steps to ensure the most relevant information with regard to a specific area is obtained in an unbiased way (Choong, 2014). A systematic literature review ensure a clear judgment and sequence that can be traced (McLean et al., 2014), replicate the investigation of a subject in prior research and hence ensures the loyalty, the completeness and rigorous (Flamigni & Dolci, 2010) quality of the review than the traditional one (Kitaw & Goshu, 2017). Thus, the adaptation and implementation of systematic literature review is provided to the foundation for the approach used in this study due to their rigor in reviewing the literature and for the systematic way of presenting findings. Therefore, this study has six procedure which is adapted from the study of Choong (2014), Kitaw and Goshu (2017), Roman et al. (1999), and Rupert Lawrence Matthews (2012) to make use of an iterative and incremental procedure in the review.

Although the selection criteria for the search databases and research articles has been considered to the subject coverage, scope and type of information provided, research methods, citations, the reputations of the source, contents of study variables and results of the study (Jilcha & Kitaw, 2016; Hall et al., 2011) were considered. These are considered by different engineering and management researchers (Choong, 2014; Hall et al., 2011; Rupert Lawrence Matthews, 2012; Yitagesu Yilma Goshu*, 2016) to conduct researches using systematic literature process to provides a better evaluation of the specific subject or area of literature. The major databases were subsequent are Emerald Insight, Science-Direct, Inderscience, ABI/Inform ProQuest and Taylor and Francis. In the next stage, search terms have been identified and articles search conducting has been carried out. Thus, supply chain, supply chain integration, supply chain management, the drivers and inhibitors of the supply chain, supply chain integration tools and supply chain performances measurement were used as a steering word used for the research articles. While initially 3,217 articles were identified from the selected database in concise to the words mentioned in the above. Following assessing the 423 articles, 2,794 excluded because of that have little or no discussion or result about SCI/SCM, 22 articles added web search and 445 papers were selected and taken forward for further investigation. Although based on the significance of the article, from side to side of the abstract, result, methods and keyword screening operation were made, some materials were added and besides selected materials again were further reduced. In this stage, the total number of relevant articles were reached 445 in number. Finally, in the filtering analysis, 115 materials were screened and reduced for the most important data considering the Key results in line to the evolution of SCI, the theories and characteristics of
Table 1. The procedure of systematic review process and results followed

| Stage one | Stage two | Stage three | Stage four | Stage five | Stage six |
|-----------|-----------|-------------|------------|------------|-----------|
| Identification of the Database | Identification search term, citation and conducting articles search | Exclusion analysis and quality assessment | Web/Internet search | Categorize SCI Concept, Methods and SCPMS | Categorizing significant articles |
| Key results | Key results | Key results | Key results | Key results | Key results |
| Databases (5) Journals (42) | Total articles were found (3,217) | Total articles removed (2,794) • Total number of relevant articles found (423) • Removed 92.45% • Found 7.55% | From Websites search • Articles added (22) • Total number of relevant articles Changed and decreases to (445) | Total articles removed (333) • Total number of relevant articles reduced to (112) | • Evolution of SC (12/25) • Characteristics and theories of SC (57/162) • Enablers and barriers of SCI (19/85) • Methods, approaches and tools for SCI (11/43) • Performance Measurements of SCI (13/42) |
| Identify databases and journals | Literature search 3,217 articles found (93% article, 5% book & PhD thesis, 2% company reports) | 2.79% excluded that have little or no discussion or result about SCI/SCM (53% little, 21% no discussion on SCI, 26% duplication) | Internet search for articles resulted in addition of 22 article | Filtering analysis removes 333 articles that have insufficient content about SCI, reputations, generalization of findings, and those having low citation | Categories of SCI major themes • Evolution of SCI • Theories and characteristics & Impacts of SCI • Span level, Enablers & barriers of SCI • SCI Methods • SCPMS |

Source: Adapted from Kitaw & Goshu, (2017), Choong, (2014), and Rupert Lawrence Matthews, (2012).
SCI, factors influencing SCI (Enablers & barriers), the methods of SCI and supply chain performance measurements. Thus, finally elimination of duplication and irrelevancy resulted in reducing the number of articles and the selected articles considered for literature review were reaching to 115 (Table 2). While a number of academic outlet journals/texts, including, among others, Supply Chain Management: An International Journal, Production Planning & Control, Industrial Management & Data Systems, Journal of Operational Management, International Journal of Production Economics, International Journal of Productivity and Performance Management, International Journal of Production Research, International Journal of Operations & Production Management, Journal of Cleaner Production, International Journal of Logistics Management, European Journal of Operational Research, International Journal of Physical Distribution & Logistics Management, Journal of Enterprise Information Management, Journal of Manufacturing Technology Management, Benchmarking: An International Journal, Structural Survey, Decision Support Systems, European Journal of Management and Business Economics etc. Have been dedicated to publishing research on Supply chain and related issues. These sources offer a true reflection of the SCM and SCI areas and have emerged as quality outlets for publishing research in this field. The other point is that the citation analysis is important to screen articles that should have sufficient citations and reputation from other authors. This citation analysis provides to involve counting the number of times an article is cited by other works to measure the impact of a publication or author. The study indicates that, there is no single citation analysis tools used rather than many, that collects all publications and their cited references. While from numerous citation analysis in this study employs Google Scholar provides citation counts for articles found within Google Scholar, Web of Science Scopus provide citation counts for articles indexed within it, used as citation analysis.

As well, articles with less than 10 citations and published two and half years or more from the date of record of citations were excluded.

3. Literature Review Analysis and Discussion

3.1. The Evolution and Revolution of Supply Chain Management

In the history of the supply chain the process, firms use supply chains in different ways at the different time (Figure 2). While the frame of the supply chain revolution has traced and passed the following phases, the revolution of logistical military operational solutions, transportation management systems, the logistics, and physical distribution, fragmental logistics process from 1940 s-1960 s were worked and used. In this stage better focus was also placed on warehousing and materials handling process by the organizations. While in the early1980 s (1970 s-1980) ineffective supply chain decisions were taken from principally functional perspective. Since this period was a transformation process and planning and operation process done in an isolated manner. This is the tradition systems of supply chain and logistics. While the transformation and supply chain incremental phase (1980 s-1990 s) were the benefits of aligning organizations, along with the associated business objectives (Esposito & Passaro, 2009). This stage is the transition period for contemporary supply chain system and the negative effects of individual business underlined by corporate leaders. In addition, for executives and underlying business processes performance incentives, cost reduction through the technological application and the importance of IT base planning were developed (Kitaw & Goshu, 2017). This era is also, the era of specialization, companies improve their overall competence in the same way that outsourcing manufacturing and distribution has done and focused on their core competencies and assemble networks on best class domains specific partners to contribute the overall value chain and improve the overall performances of the systems. Following in 2000 s own wards the era of globalization and specializations, the business process is done using digitalizing and internet-based business process to facilitate ordering, production, logistics, planning, inspection and warehousing systems.

Meanwhile, individual business are participating and connecting their business process in to the global economy directly, using digital platforms to participate, to learn how doing business, then
Table 2. Overview of journals and selected papers with percentage citations from total of 115 articles

| Publisher                  | Name of Journals                                           | Number of Selected papers | Year of Publications From 1997 to 2017 | Number of Cited more than 15 (in % from the total of selected Articles) 91%(115) | Number below 15 cited a (in % from the total of the selected article) 9% (115) |
|----------------------------|------------------------------------------------------------|---------------------------|----------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Emerald insight            | 1 Supply Chain Management: An International Journal        | 18                        | 2000-2012                              | 17.52%                                                                            | 1.20%                                                                           |
|                            | 2 International Journal of Operations & Production Management | 12                        | 2006-2016                              | 10.73%                                                                            | 0.86%                                                                           |
|                            | 3 The International Journal of Logistics Management        | 5                         | 205-2017                               | 4.06%                                                                             | 0.27%                                                                           |
|                            | 4 Industrial Management & Data Systems                     | 5                         | 1999-2016                              | 5.00%                                                                             | 0.40%                                                                           |
|                            | 5 International Journal of Physical Distribution & Logistics Management | 4                           | 2000-2016                              | 3.25%                                                                             | 0.32%                                                                           |
|                            | 6 International Journal of Productivity and Performance Management | 3                           | 2004-2011                              | 2.43%                                                                             | 0.22%                                                                           |
|                            | 7 Journal of Enterprise Information Management             | 2                         | 2005-2016                              | 1.42%                                                                             | 0.26%                                                                           |
|                            | 8 Other Emerald/Journal of Manufacturing Technology Management, Benchmarking: An International Journal, Structural Survey | 5                        | 2003-2015                              | 4.06%                                                                             | 0.34%                                                                           |
| Elsevier                   | 9 Journal of Operations Management                         | 18                        | 2001-2014                              | 16.00%                                                                            | 1.44%                                                                           |
|                            | 10 Int. J. Production Economics                             | 12                        | 1999-2016                              | 11.00%                                                                            | 0.96%                                                                           |
|                            | 11 Decision Support Systems                                | 3                         | 2007-2012                              | 2.43%                                                                             | 0.24%                                                                           |
|                            | 12 European Journal of Operational Research               | 1                         | 2004                                   | 1.00%                                                                             | 0.00%                                                                           |
|                            | 13 European Journal of Management and Business Economics   | 1                         | 2016                                   | 0.81%                                                                             | 0.00%                                                                           |
| Taylor and Francis         | 14 Production Planning & Control                           | 7                         | 2004-2014                              | 5.69%                                                                             | 0.23%                                                                           |
| International Publisher    | 15 Other Journals                                          | 6                         | 1997-2012                              | 5.60%                                                                             | 0.12%                                                                           |
|                            | 16 PhD thesis                                              | 11                        |                                        | 0.00%                                                                             | 1.23%                                                                           |
| Total                      |                                                           |                           |                                        | 115                                                                                | 91%                                                                              | 9%                                                                               |

The table shows the selected papers incorporated in this systematic literature reviews. According to the table most of the papers were selected from three powerful publishers such as Elsevier, Taylor and Francis and Emerald insight. As well around 2% of the total paper were also included from different international publishers.
doing business, develop competitive systems, formulate cooperation with firms and to attain profit economic benefits (Dametew & Ebinger, 2017; James Manyika, 2016; Wellman, 2016). As well in this era business organizations implement ERP systems, cloud computing, and inert of thing in their supply chain systems.

To sum up, the progress of supply chain management and supply chain integration changes in four major stage focus, single, arrow concepts traditional activities, multicultural traditional management systems, transformation mutual and computer based systems to multi-dimensions, more improve the drivers and enabling strategies targets. Though supply chain advancements improve throughout the evolution's in a year from simple, traditional, blocked and individual systems to make multidimensional web-based controlling and management systems to make things within unlimited bounder's both globalized and specialization supply chain integration systems. Since the evolution and revolution of supply chain occurs due to various drivers of supply chains.

3.2. The characteristics of supply chain integrations
In literature, it is clear that there is a large discussion about the characteristics, requirement, dimension, impacts, importance, the levels of supply chain integration and supply chain management (Chandra & Kumar, 2000; Cheng et al., 2010; Gregory & Simiyu, 2015; MacCarthy et al., 2016). While the literature still lacks consensus, it needs to investigate the necessary and sufficient conditions among these requirements so that based on these ground scholars and practitioners can design suitable SCI. For instance, Cagliano et al., 2006 investigates that, integration of both information and physical flows along the supply chain, are highly influenced by the adoption of the lean production model, whereas emerged from the adoption of ERP have no significant influence. According to this study, the investigation of the impact of consistent adoption of internal and external practices on performance needs further investigation and open to researchers. However, due to the dramatic change of manufacturing flexibility, improvement of information technologies, rising of product demand an product verity, digitalizing of systems, shorter product life cycles, increased global competition combined with differences in local demand, increased outsourcing, and turbulent market conditions, the concepts, and strategies of supply chain integration are changed (Mikkola & Skjøtt-Larsen, 2004). Although (Mikkola & Skjøtt-Larsen, 2004) also found that, supply chain linkages on combined power, benefits, and risk reduction, have positive impact on supply chain performances. Since supply chain integration emphasizes collaboration rather than control (Turrisi et al., 2013).

But the limitations this are only recommended for further investigation for the impacts of operational performance and logistics performance, however, information sharing, flexibility, product, and system quality issue should be considered. Additionally, supply chain consists of all
supply chain parties in involved, to participate directly or indirectly, in product development, marketing, operations, distribution, finance, and customer service, so as to satisfy customer requirement and customer expectations (Sunil & Peter, 2007). As well, the supply chain consists of all the activities and process associated with the flow of goods and information from the raw material stage to the end consumer of the product and service (Felea & Albâstroiu, 2013). This is the comprehensive concepts for defining supply chains integration. Since we argue that, supply chain encompasses the linkage and connected network of individuals, organizations, firms, sectors, resources, information's, activities and technologies involved in the manufacture and sale of a product or service, so as to the delivery of raw material from a supplier to a manufacturer, and ends with the delivery of the finished product or service to the end user, even beyond that. Though the integration of internal functions within a company and effectively linking them with the external operations of suppliers, customers, and other channel members, provides to enhance competitive performance (Kim, 2006). This achieved by a closed linkage and proper supply chain management systems of firm organizations. Moreover, supply chain management is to manage and coordinate integrative systems, tasks, and process among the members of the supply chain firms, so as to improve performance and competitiveness. Besides, competitive advantages are conditions that allow a company or country to produce a good or service at a lower price or in a more desirable fashion for customers. These conditions allow the productive entity to generate more sales or superior margins than its competition. Competitive advantages are attributed to a variety of factors, including cost structure, brand, and quality of product offerings, distribution network, intellectual property, and customer support. Since effective and efficient supply chain integration enhances definite flows of, materials, product, services, information, money, and decisions, to provide the highest value to the customer expectations at low cost and high delivery times (Alie Wube Dametew et al., 2016a; D. F. B. Flynn et al., 2009). This efficiency and effectiveness of supply chain system improve firm performance and competitiveness.

3.3. The enablers & barriers of supply chain integrations (SCI)

From the previous literature study, the enablers and factors that impact supply chain integrations were investigated in this section. However, the researchers have found different results on related to this enabler and inhibitors of supply chain integrations. For instance (Wang et al., 2016) indicate that inter-organizational relationships include communication, personal affection and credibility, integration has a positive impact on enhancing commitment, power and trust, between organizations. As well (Abdullah & Musa, 2014) found that information sharing and the level of information integrations between firm organizations have improved the performance and competitiveness of, the supply chain firms. This improvement leads to provides trust within supply chain firms. According to the above results, the level and extent of information shearing and information integrations between firm organizations highly affect the performance of supply chains. In addition to this, the level and application of technological improvement and digitalize systems have positive impact on supply chain integrations. For instance, cloud computing system requires the mediating supports on supply chain integration, and this impacts on operational and the entire performance of manufacturing industries positively (Dashtbayaz & Mohammadi, 2015). The firm performance expresses in terms of quality, financial, flexibility of the supply chain systems. For example, knowledge, technology, production design and resource integration directly related and impact on quality performance for manufacturing companies (Alie Wube Dametew et al., 2016b). Thus, firm quality performance is improved through integrated supply chain systems.

While financial performance is improved by the implementation and adoption of e-business technology through reduction of supply chain cost including (online purchase order systems, supplier catalogues, electronic data interchange (EDI), and electronic linkage with suppliers lead to measurable improved performance (Johnson et al., 2007)). So, e-business technology and information technology integrations have a positive impact on financial performances in supply chain firms. Thus, e-business and information technology are considered as the enablers of supply chain integrations. Despite the fact that, the level of adoption and the implementation of e-business technologies and level of technology have different impacts on the performance of supply
chains (Dametew & Ebinger, 2017; Petersen et al., 2005). But their result doesn't show what extent and level of e-business technologies impacts on supply chain performances. As well, supplier's performance influenced by the combined effect of information and knowledge integrations. Meanwhile, this can be achieving through integrated and closest supplier–buyer relationship (Rashed et al., 2010).

Moreover, technology, information, and measurement systems considered as the enablers and barriers to successful supply chain collaboration and supply chain integrations (Fawcett et al., 2008). These variables (technology, information, and measurement systems) have an impact on culture, trust, aversion to change, and willingness of people or supply chain firms. Although technology, information, and measurement systems are the enablers of supply chain integrations. In our scope, the deriving power and the bridges of the enabler or barrier or effective supply chain integration and collaborations are people rather than the above factors. Other factors are under the control of the knowledge and skill of peoples. Supply chain firms should invest in higher level for the improvement, and building of people, so as to improve and enhance the entire supply chain system. In addition, interpersonal relationships (IPRs) include (personal affection, communication, and credibility) and inter-organizational relationships (IORs) including (trust, commitment, and power), have a positive influence on supply chain integrations (Wang et al., 2016). These means interpersonal and inter organizational relationships and integrations are the enablers of supply chain integrations for strategic development, information follow, and process coordination and system integrations. Further (Guan & Rehme, 2012) found that vertical supply chain integrations have the driving power for supply chain performance and considered as a potential means for the manufacturer's downstream integration. However, in the right vertical integrations improves and achieve for business improvement, resource utilization, and competitive advantages. But, the driving forces of vertical integrations include both external factor (technical complexity, customer demands), and potential benefits (learning/strategic, partnership with customers, higher margin/better services) of supply chain integrations. In this scenario, technical complexity and the number of customer demand on supply chain are the enablers and the inhibitors of supply chain integration. Since the number of customer demand and technical complexity on supply chain results in higher margin and enhancing strategic integrations.

The number of suppliers, proximity to suppliers, supplier selection and evaluation, planned capacities in each facility, have an impact on the supply chain (Sezen, 2008). But effects on resource and output performances of supply chain systems are highly influenced by the supply chain design. Although supply chain integration and information sharing are lower effects than supply chain design effects. Thus, supply chain designs are the enablers of supply chain to improve the performance of supply chain systems in firm organizations. The result of study (Lorentz et al., 2012) indicates that increased geographic dispersion in both the upstream and downstream supply chain results in the decline of perfect orders, and increases order fulfilment cycle time. This implies the geographical spreading has a negative impact on supply chain integrations. Outsers believe that this negative effect is found due to upstream supply chain on higher costs of warehousing and logistics administration, whereas in the downstream side, increasing inventory costs, inventory days of supply, and cash-to-cash cycle times as well. Meantime, make-to-stock organizations endure less from the supply chain diffusion associated effects on order fulfilment cycle time in comparison to companies that utilize more pull-type production and inventory approach. Though in brief, findings show that information sharing (Abdullah & Musa, 2014), the way and level of supply chain integration (Wang et al., 2016), supply chain digitalization (Dashtbayaz & Mohammadi, 2015; Johnson et al., 2007), information technology, knowledge, geographical dispersion (Aliie Wube Aliie Wube Dametew et al., 2016b; Lorentz et al., 2012), firm complexity, supply chain design (Sezen, 2008) and organizational relationships are considered as the enablers of supply chain integration. Accordingly, the proper implementation, using and applications of these enablers are enhance efficiency, effectiveness, performance, and competitiveness of supply chain subsystems in different ways. Furthermore, Dametew & Ebinger, (2017) found that technological innovation has a great impact on the performance of basic metal industries in terms of
productivity, information sharing, resource utilization, knowledge and technology transfer) and achieve sustainable competitive environments. Further elaboration shows that the technological capability of developing nation basic metal industries in adoption, invention, modification, improvement process is poor. As a result, the performance and competitiveness of the sector are weak and poor. Meanwhile, the poor, weak, improper implementation, null usage of these enabler and geographic scattering (Lorentz et al., 2012), weak-linkage, problems of trust in firm organizations (Abdullah & Musa, 2014) are found as a barrier of supply chain integrations. In addition, lack of resource sharing (integration), lack of organizational compatibility, lack of information sharing, lack of responsibility sharing, and lack of planning of supply chain activities are also considered as the barriers in supply chain integration (Li, 2014). Finally, in this sub section, it has been explored several concepts, from prior literature in predicting the enabler, barriers of supply chain integration and dimension of supply chain performances. While the extents of literature has only utterly, studied and addressed in specific topic (factors or enabler and barriers) and considered limited dimensions of supply chain integrations.

Furthermore, the enabler and inhibitor of internal or external supply chain integrations were not properly defined, classify, declare and quantified as a proper manner. For instance, Reads (2014) shows that problems in information and the troubles of trust between firms organizations are considered as external berries. Supply chain, barriers and does these barriers not affect internal supply chains as well, and what extent this barriers influence external supply chains? Although information shearing is the critical and biggest impacts on internal supply chains not only external supply chain (Z. Abdullah & Musa, 2014). In addition, inter-organizational relationship and information exchange/shearing highly impact the firm performance supply chain integrations(this is external impacts). There are misunderstanding and confusion between researchers result and findings. Though this confusion needs empirical investigation and further studies. While scholars and practitioners are increase their attention on supply chain integrations, but the knowledge of investigating the enabler and barriers of supply chain integrations are still infant (Zhao et al., 2008). In particular, the concepts need search to be provided, clear, explicit, the combined effect of variables, dimension of supply chain integration, and put forward new insight into the relative dimension and driving force (enablers and barriers) of supply chain integrations, enhancing performance and competitiveness are critical.

3.4. Methods and Strategies of Supply Chain Integration
A previous study (Stevens, 1989) shows that supply chain process begins with the source of supply and ends at the point of end-user and consumers. Though organizations integrating their systems with other supply chain partners, they use and apply many approaches, system, and strategies to facilitate day to day process. As well, there have been few studies defining and developing supply chain integration models and strategies forward to supply chain firms they practice. Zhang et al. (2015) were developed a conceptual model for supply chain integration and integration elements consist and concentrated as the strategic, managerial, operational, and fundamental levels (bottom line). According to the result, the model is comprehensive because have normative nature guide managers to integrate resources and activities in supply chain management by helping them to recognize the contents of supply chain integration and interface model that serves supplements the SCOR model with the function of describing the interfaces between supply chain partners. As well, it helps engineers and managers striving to develop supply chain integration software systems. Besides, Nurmiilaakso & Kotinurmi (2004) investigates supply-chain integration by using extensible mark-up language (XML) and the technology provides straightforward exchange of data as XML documents between the trading partners in a supply chain. Even though XML in itself does not specify what information to share, when and how. But, e-Business frameworks have shown standardizing business documents, business processes and messaging in supply-chain integration. Accordingly, Stevens (1989) integrated supply chain development requires the management of material flow should guide and considered from strategic, tactical, and operational perspective. By itself, companies are having to face up and respond to a number of issues, and developing an integrated supply chain strategy can be considered as a three phase
processes including competitive environment evaluation, supply chain diagnostic review, and supply chain development. After this analysis, Stevens (1989) develops a model for supply chain integration and the model consists baseline integration, functional integration, internal integration, and external integration stages.

According to this result, supply chain should integrate into this four layers starting from baseline integration, functional integration, internal integration and end to the external integrations state. Further, issues the level, the way of interaction and cooperation of supply chain firms. Papadonikolaki et al. (2015) identified that interactions of the supply chain actors and supply chain integration lies in organizational structures, roles, and interactions and integrate the industry. Some researches focused on the manufacturing process and product types. While (Christos Tsinopoulos, 2015) founds manufacturer organizes and product newness’s are the two dimensions that impact configurations of supply chain integration suppliers and customers integrated and the four key supply chain configurations (customized; ramp-up; recurring; coordinated) where considered on supply chain process. This analysis shows that the researchers have not developed one common supply chain integration strategies on supply chain firms, rather they use different concepts as a strategy. This implies that, depending on the type and the level of the firm, scholars developed different supply chain integration strategies. Also, based the firm conditions researcher and scholars focus on different aspects when integrating firms in a supply chain process. For instance, Stevens (1989) supply chain integration innovative model encompass baseline integration, functional integration, internal integration, and external integration stages achieves the effective and efficient collaboration and cooperation of supply chain firms. Besides, Mikkola & Skjøtt-Larsen (2004) found, mass customization, postponement and modularization are strategies for managing supply-chain integration among supply chain firms.

Their study believes that mass customization, postponement, and modularization strategies shaped and influenced by opportunities for modularization and interface constraints. This represents and the cumulative effect from interface compatibility effects, component customization, value inputs, and supplier-buyer interdependence or trust. While (Kamal & Irani, 2014; Stevens, 1989) the main concerns from the analysis found that supply chain integration is the key to the success supply chain firm, through effective and efficient integration of internal and external supply chain firms. Proper supply chain integration provides to shear adequate information, resource, technology, in the right place, at the right time for each supply chain members. Since these objectives can be achieved by implementing adequate and organized supply chain strategies and methods. However, in the current industrial world, organizations need to use appropriate supply chain integration strategies, so as to improve their system and could be competitive in the global markets. From numerous strategies (Stevens, 1989) innovative model is appropriate for our further studies. Thus, the author adopted (Stevens, 1989), innovative supply chain integrations strategies in the context of basic metal industries and the scenario of the existing process, so as to meet the goal and the objective of the dissertations. Meanwhile, a detailed (Stevens, 1989) supply chain integration and supply chain strategies have their features and characteristics, moreover they have their own impacts on supply chain integrations process. The first stages of models are baseline integration. In this stage, it is characterized fragmented, independent and often incompatible control systems and procedures covering sales, manufacturing, planning, material control, purchasing, company planning is a very short term. As well, the second approach comprises its functional integration of the company. This approach focuses principally on the inward flow of goods, cost reduction rather than performance improvement. Accordingly, the third approach it requires the internal integration of the end to end planning in the individual company. The strategy is characterized by medium-term planning, emphasis on efficiency rather than effectiveness ensuring what is done, is done well, rather than ensuring that the right thing is done (Stevens, 1989). Accordingly, in the last supply chain integration approach is consists of internal and external levels of supply chain integrations. Due to the coherence, smooth and compressive nature from, few supply chain strategies (Stevens, 1989) have better on supply chain integration process.
in various firms. Thus, depending on the complexity of the basic metal supply chain scenario, this integration strategies will be adopted.

3.5. Supply Chain Performance Measurements

Supply chain performance measurement provides a measurement of the performance and levels of supply chain efficiency and effectiveness of firm performances. So, supply chain performance measurement provides to evaluate and measures the extent, how the process is done, address a problem and the improvements, and evaluate the degree to which a customer’s requirements are met. While performance efficiency also provides to measures how economically a firm’s resources are employed while as long as an expected extent of customer satisfaction. As a result, measuring and evaluating supply chain performance can facilitate a greater thoughtful of the supply chain, positively influence actors’ behaviors and improve its entire performance of organizations (Shankar Rai & Giri, 2015). Due to lack of clarity and comparability concerns in this area, there is no guidance or set rules under which can be measured supply chain performance (Azfara et al., 2014) context-dependent process, tolerated and contextual measuring scenario (Richard Cuthbertson, 2011). Based on supply chain firm environment investigating the proper performance measurement system, performance indicator and performance measurement tools is a critical task. For instance, Chan (2003) found that there may be more than one way of measuring a performance including on a time, cost basis but firms better to adopt only one kind of performance measurement. Also Beamon (1999) shows performance measurement on strategic and the measurement emphasize from the perspectives of resource measures, output measures, and flexibility measures of organizations. As well, Nudurupati et al., (2011) found that the significant roles of management information system on performance measurement systems are studied. According to the result even if the implementation of the system has a significant impact on the organizational improvement but, due to high investment cost and uncertainty about the scale of impact on the firm, most organizations are not properly used it. Additionally, the collaborative performance measurement system development and implantation is difficult in companies operating in supply chain network (Azfara et al., 2014). Even though the synchronized existing business processes and the data before the design and the implementation of new performance measurement systems on their firms are crucial and important things on firm improvements. Depending on the firm type and supply chain condition, different performance measurement process should be employed, for the sustainability and improvement of the overall business process.

Moreover, Ambe (2014) firm performance measured interims of quality, cost and time rather than other criteria like flexibility, technology, efficiency and effectiveness. In addition, study results show that manufacturing industries still largely use financial and productivity performance measures for measuring their supply chains. These traditional performance measures have their own limitations that make them less relevant in (Fasika Bete Georgise et al., 2013) today’s competitive business environment. This means, financial performance used as a performance indicator of the achievement and failures of supply chains. Selecting and classification of proper performance measurement tool could be other challenging and needs to further investigation and the main tasks of the field. Since performance measurement is an indicator or litmus paper of an organization, used to assess, reporting how well an organization or business is achieving its desired objectives (Upadhaya et al., 2014). Some performances measurements commonly used in business organizations include the balanced scorecard, the supply chain operations reference model, the logistics scorecard, economic value added, quality management programs, logic model e.t.c are common. Quality management programs (e.g., TQM, Six Sigma, Kaizen, EFQM) used as tools for performance measurement which intended to improve the quality of manufacturing and service offerings. For example, the Baldridge national quality program measures businesses in seven key perform indicators. This provides to assess performance on a wide range of key business indicators: leadership, strategic planning, customer and market focus, measurement, analysis, and knowledge management, human resource focus, process management, business results (Lizasoain et al., 2015). While supply chain performance is measure using enterprise feedback
quality management (EFQM) in such a way that, provides to study the strength and challenges on the firm, through consulting the organizations with respect to wide-ranging criteria of supply chain firm excellence (Mahalli, 2013). It depends on the firm strategies and organization excellence, firms use any type, quality management programs as performance evaluation of the firm.

A logic model is a performance measurement tool used to map the relationship between organizational activities and impacts (i.e. results). Though, in the supply chain, the logic model provides to use in planning, program design, communication, implementation, measurement design, and evaluation design in a supply chain firms. Some logic model like costing (ABC/ABB/ABM) provides the link between resources and processes. Firms apply the logic model, it is possible to maps resources consumed to activities conducted to results of organizations are able to establish resources to results linkages. For instance, activity-based costing (ABC) in a business process that provides to estimate the cost of products and services by assigning overhead costs to direct costs. This enhances and assigning the costs to the activity rather than a whole project or a product. Since, in the supply chain, firms consist of different phases with different level of activities, and the finical performances better to measure with operational effectiveness, measuring the cost involved in each activity becomes imperative to the firms. The balanced scorecard (BSC) is a strategic planning and management system tool that provides a method of linking organizational strategies to activities and business results (Norton, 1992 and 1996). Since balanced scorecard consists of a strategy map and linked measures and indicators. As the strategy map is essentially a special kind of logic model depicting the organization from four distinct perspectives and Key performance indicators (KPIs) of BSC includes a financial perspective, the customer perspective, the internal process perspective, and the growth perspective. Since these four perspectives are interdependent and hierarchical; growth is driven by constant learning and innovation, which leads to the refinement of internal processes. The improvement in internal processes through the KPI balanced scorecard, then helps to drive increases in operating efficiency which result in higher customer satisfaction and increased financial performance. Whereas the logistics scoreboard (LSB) is designed based on key aspects below to measure supply chain performance business value of supply chain management and key aspects are logistics financial performance measurement, logistics productivity measurement, logistics quality measurement, logistics cycle time measurement. Supply chain operations reference (SCOR) model is well-known supply chain performance measurement tools and design to organize around the five primary management processes of the plan, source, make, deliver, and return. Also, the SCOR model provides as a simulation-based analysis tool, that provides to map, benchmark, and improve supply chain operations (Persson, 2011). The SCOR-model is a business process reference model, the model provides to link process elements, metrics, the best practice and the features associated with the execution of a supply chain in a unique format. The spans of the SCOR model include customer interactions (order entry through paid invoice), all physical material transactions (supplier’s supplier to customer’s customer, including equipment, supplies, spare parts, bulk product, software, etc.) and all market interactions (from the understanding of aggregate demand to the fulfilment of each order) (Kasi, 2005).

Besides, Kasi (2005) found that the SCOR model is strong on the technical dimensions but it is weak and not emphasis on the social dimensions of supply chain firms. On the other side, the performance dashboard is a performance dashboard is a dynamic management tool that is used by an organization to gauge performance and progress toward specific goals is a tool for organizing and providing ready access to performance information (Key et al., 2008). This provides to bring together key performance metrics of an organization or an individual on one display. The dashboard is often used in business intelligence or executive information systems to allow easy monitoring of key performance indicators. Since function as an organization magnifying glass, as a result of measuring, monitoring, and managing the business process. Meanwhile, form this performance analysis section, the author found that, the evaluation and assessment of supply chain firm performance were done in different contexts and scenarios. Temporarily according to this result from the numerous evaluation strategy or systems some are: performance measures
employed based on strategic (Azfara et al., 2014; Xu et al., 2007), operational or tactical focus (Beamon, 1999; Gunasekaran et al., 2004) levels. Since, this strategic, operational or tactical performance evaluation and measurement provides to enhance organizational productivity and firm profitability (Gunasekaran et al., 2004).

In addition, the performance measurements is applied based on reliability and responsiveness (Xu et al., 2007) flexibility; visibility; trust; cost and asset (Chan, 2003). However, the performance of the firm measured using cost, and resource utilization as quantitatively, whereas quality, flexibility, visibility, trust and innovativeness were evaluated firms as qualitative manner (Chan, 2003). Also, from this analysis found that the performance measures were used and practices based on the goals of the supply chain (Kurien & Qureshi, 2011; Otto & Kotzab, 2003), and the geographical separation of the firm and the development of the countries (Fasika Bete Georgise et al., 2013) were considered. On the other side, performance measurement has great power on measuring the traditional and non-traditional performance of the firms (Kazemkhanlou & Ahadi, 2014). This has an impact to strategically resource utilization of the firm, so as to enhance their objectives and goal achievements. Though, in this section, we have seen different issues related to supply chain performance measurements. As a result, according to this investigation supply chain performance measurement were employed a context-dependent process, it implies that the evaluation is based on the, issue of addresses, situation and scenario of supply chain firms (Gomes et al., 2004; Richard Cuthbertson, 2011). Doing so by considering the firm goal, strategies, geographical situation, and global impact on basic metal industries, we have to select proper type of supply chain performance measurements to, accomplished the objectives. Due to their capability provides to give information along the entire supply chain (Zhou et al., 2011), the SCOR model can be adopted as a performance measurement tool. Even though the SCOR model does not attempt to describe every business process or activity. Specifically, the model does not address sales and marketing (demand generation), product development, research and development, and some elements of post-delivery customer support. Additionally, the model is excluded from the areas of human resources, training, and quality assurance (APICS Supply Chain Council, 2012). To improve the limitations of the SCOR model, to make it better to implement and apply a synchronizing of the SCOR model with total quality management systems (TQMs) that will be helpful to investigate and measure supply chain integration performance and competitiveness of basic metal industries. Thus, at this stage, the problem of SCOR is answered by TQMs. As a consequence, the synchronized integrated models provide to capable of covering a wide range of supply chain issues in the manufacturing industries and supply chain firms as a whole. Since the synchronized supply chain performance measurement provides to shows encouraging changes in outcomes or impacts might be indicated that the program or strategy is performing well and there is no need to make any modifications to the program. As well, on the contrary, the performance measurement could be illustrated that there are no positive changes to influences or effects, indicating the program, strategy or its implementation is not performing as expected.

4. Result and Discussion
In the previous literature, review analysis and synthesise section, there are interesting and great progress have been observed in the field, concept and the progress of the supply chain integrations. Nevertheless, many research gaps were identified from the previous research works. The gaps and investigations were done based on their methodological porches, objectives, analysis and research finding. Mainly the gaps, miss concepts and challenges concepts in the previous literatures were related in the five issues. The first issue emphasizes with the single concept and confusion around the concept: In the previous section as presented, there were interesting progress and concerns have seen in supply chain process.

Even if, some researches believes that supply c and were emphases in small number of variables were considered and studied as a supply chain issue. The investigations was emphases singles or small issues of supply chain integration and studies excludes many aspects of supply chain integration issues on the performance and comparative advantages. For instance, Huo et al.,
(2014) considered supply chain integration used only financial performance and customer satisfac-
tions, while others (Kim, 2006) show that supply chain integration important for operational performance and product improvement, others (Shaohan Cai et al., 2010) believes that supply chain integration only used to improve quality and resource utilization of the firms. Supply chain benefits in flexibility, sustainability, technological capability, skill utilization, knowledge exchange, and risk minimization issues were not studied and emphases as an issue of supply chain integration. Likewise, others exclusively supply chain integration for competitiveness and effective information shearing impacts (Kim, 2009). However, in this extent researchers brings to the confusion around the concept of supply chain integration. Supply chain integrations might enhance a comprehensive output and contains to answer multi-dimensional issue rather than specific benefit and concepts. The study should be incorporated various issue and dimensions of supply chains.

In the second issue is that in the type, influences, span and level of supply chain integrations. In this extent study shows that; the limitations that, some authors focused on in internal integration, others exclusively focus on external integration, some concerned on internal with supplier not customer, others internal with customers. For instance, B. B. Flynn et al., (2010) found that the improvement of supply chain performance highly influenced through internal and customer integration than supplier integrations. The result believes that supplier integrations have less impact on firm performances and competitiveness. While (Perols et al., 2013) show that supplier product integration and process integration, have appositive impact and higher impact on external technology adoption. According to these, two results B. B. Flynn et al. (2010), and Perols et al. (2013) the concept is contradicted, there were misunderstanding between the concepts and it need further investigations. For instance, B. B. Flynn et al., (2010) supply chain integrations less impact on firm performance but (Perols et al., 2013) study indicates that supplier integration have great impact on firm performances. The level and the extent of each supply chain integration impacts were not properly qualified. The direct effects and relation of the three layer of supply chain integrations includes manufacturer, supplier and customer integration simultaneously, at the same stages were not studied as well. The level and impacts of supplier integration, customer integration and internal integration effects on supply chain performances is the significant attention in this research dominion that needs further investigations. Further, Ragatz et al., (1997) shows that the effective integration of manufacturing firms to supplier through direct, cross functional, intercompany communication process have positive impact on new product developments. Accordingly, (So & Sun, 2010) supplier integration through information sharing, e-business systems and policy-based supplier have positive impacts on long-term relations for manufacturing firms. While the previous investigations above we observe that, there are no efforts were done, to show the inter-dimensional integration impacts on supply chain performances. While the horizontal relation supplier with customer, supplier with internal, internal with supplier and customer with customer relation were nor studied and incorporated. That means little or no research were conducted to explore the, customer to supplier integration, supplier to customer, internal-supplier, customer-internal integration impact and the whole supply chain firm performances.

Further, the impacts of supply chain enablers and inhibitors in supply chain commitment, power and trust, performance and competitiveness on the supply chain firms were studied and investigated. For instance (Wang et al., 2016) indicate that, inter-organizational relationships include communication, personal affection and credibility, (Abdullah & Musa, 2014) information sharing and the level of information integrations a positive impact on the performance and competitiveness of, the supply chain firms. However, impacts of enablers and inhibitor impacts on flexibility, quality, technological capability, financial performance, sustainability and knowledge creations were not studied. Thus, the link between level of impacts the various supply chain enablers and inhibitors with several performance level needs to further studies.

In the third concept is globalization and geographical focused supply chain studies. As we know that, we are in the era of globalization and front of digitalization. However, in the globalization era, there is no any border and boundaries for academicians and scholars to explore, investigate
systems, strategies, technologies and contribute their roles in global economy. Even though this study identifies that most of the research related to our issue were conducted in the scenario of developed, some emerging and little/or null in developing economies (Alie Wube Dametew et al., 2016b; Fasika Bete Georgise et al., 2013; Kamal & Irani, 2014). This hides the progress and fullness of the previous research studies and investigations.

The global and inter-regional integration and collaboration of manufacturing industries business process and supply chain integration process were not integrated. Proactive strategies supply chain integration strategies were not developed by the previous researchers to an integrated developing firm with developed industries. In order to integrate regional industries to the global supply chain, it also desires to develop an integrated supply chain integration models integrated at strategic, technical and operational level with supply chain influencing variables, supply chain dimensions (supplier, internal, customer and higher education integration), supply chain performances and supply chain evaluation levels.

The fourth issues are sector and industry focused supply chain studies. Globally metal sectors are the backbone, due to intermediate inputs in industrial production, construction sector, and covers large portion of total exports of the nations and fluctuations in metal prices can have important macroeconomic consequences. Since the improvement and progress of basic metal industry sector have great role on other manufacturing industries expansion, developments and economic transformations. Albeit, the previous studies more empathize on the development of improvement models, strategies related to non-metal industries including garment (Abdullah & Musa, 2014), chemical industries, textile (Georgise et al., 2014), but forget metal sectors. Accordingly, the fifth issue emphasis in the missed and less emphasized agenda and concepts. Though some studies were conducted in related to knowledge integration (Alie Wube Dametew et al., 2016b), supply chain integration with related to environmental issues (R. Abdullah & Hassan et al., 2014). But, depending the hotness and critical impacts on the current global economy for the issue of supply chain knowledge integration, supply chain performance measurement, supply chain integration in environmental, social and cultural issues were not more studied. Even if, they practice most developing countries firm adopted the green solutions into their business more tries to reduce the negative environmental effects rather than adopting a proactive approach to reduce the sources of waste or pollution (Seman et al., 2012). Therefore, this issues are needs to further investigation and solution developments. Though these gaps needs for further study and investigations so as to improve the performance and competitiveness of business environments. Generally, these gaps and miss-concepts in literature provides to reduce universality and insufficient ordinary view, confusion of supply chain integrations issues and process. While this literature investigation clearly shows the supply chain integration advancement, limitations and gaps of the previous studies and findings.

5. Conclusion, Implications, and Future Research Suggestion
This study is devoted to review literature in the issue of supply chain integrations and supply chain management on the various business process. Particularly the practices of supply chain process of the manufacturing industries in line with the evolution, revolution, the trends, the theories, characteristic, the type, the level, the impact, the enabler and barriers of supply chain integrations are studied. Furthermore, the methods and strategies for supply chain integration, the issue of supply chain performance measurements including the supply chain performance indicator, supply chain performance measurement tool and strategies are explored and studied. To conduct these, this study is adopted a systematic literature review approach. This study applied six procedures and more than 115 relevant articles are incorporated. Also, various selection criteria to the search databases and research articles are considered. Mainly this literature review is conducted to study the basics and fundamentals of the supply chain that can enable us to learn and understand for supply chain management and supply chain integrations, and provide a coherent research agenda for supply chain integration. Moreover, the analysis and investigation of this literature done from five viewpoints. The first issue, covers on the evolution, the revolution of supply chain management
and supply chain integrations. The evolution and revolution drivers of supply chain integrations are incorporated under this section. The second covers the characteristics, importance, the practices of the supply chain on the global manufacturing industry and the roles of supply chain and supply chain integrations on performance improvement are incorporated.

Mainly the concept of supply chain collaboration, cooperation, communication, partnerships, relationship alliances and cooperation in a supply chain are studied. Thirdly covers the type, level, barriers and enablers of supply chain integrations. The method and strategies, of supply chain integration and their benefits & impacts on various industries, viewed as in the fourth points. Finally, the issue of supply chain performance measurements including the supply chain performance indicator, supply chain performance measurement tool and strategies are explored and studied in the fifth. The synthesis, discussion, and evaluation of the concepts are done. Thus, the study examined the development, progress, advancement and the roles of supply chain integration in the global industry.

Likewise, the impact, the enable, driver, inhibitor, the tool and strategies of supply chain integrations are investigated. Furthermore, the potential contribution, challenges and miss concepts from the previous studies also examined in this study. In conclusion, this investigation are provided to contribute to future model development and make an action to supply chain integrations process improvements. The identified gaps of the previous result used as an empirical evidence provide to a spotlight to strategic decisions and system developments. Moreover, this study will contribute to literature because it presents the general view of the evolution, driver, enablers, the level and performance measurements of supply chain integrations and benefits to researchers who need to conduct research in these concepts. For future studies, develops supply chain integration strategies by considering this identified gaps results of each levels of supply chain performances. Correspondingly, driving factors of supply chain integration and the security issue impacts on overall business performances can be empirically investigate and the prioritization are important.

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