

# DEVELOPMENT MODEL OF MATERIAL SUPPLIERS FOR AUTOMOTIVE INDUSTRY IN THAILAND.

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## ABSTRACT

This research aims to analyze the components. In the development of raw material suppliers with influence in the supply chain That affects the operational efficiency of raw material suppliers In the automotive industry of Thailand Analyze relationships Of the development factors of raw material suppliers in relation to raw material suppliers That affect the operational efficiency of raw material suppliers in the automotive industry of Thailand, find the causal factor model In the development of raw material suppliers That affects the operational efficiency of raw material suppliers In the automotive industry of Thailand and present strategies for developing raw material suppliers for the automotive industries, both government and private sectors By explaining mixed-oriented research The research sample group is the chief executive and staff. Working in the procurement and procurement of 400 automotive company in Thailand. The tools used in the study are Questionnaire and small group meeting This research aims to analyze the data by using the data obtained from the collection to check the integrity. And correct before analyzing the data with the software package By using statistical techniques named (Structural equation modeling: SEM)

This research found that Model for the development of raw material suppliers in the automotive industry in Thailand Have a positive influence On the operational efficiency of raw material suppliers Which can be used as a guide to drive the automotive industry further.

**Keywords:** Material Supplier; Automotive; Industry In Thailand.

## INTRODUCTION

Thai automotive parts industry Has expanded investment and aimed to develop technology Produce for higher efficiency continuously Until able to produce a variety of parts As well as quality And the production standard is at the level that world-class car and motorcycle manufacturers accept to be able to export To increase sales to various countries. At present, the automotive parts industry in Thailand creates jobs for More than 100,000 workers have 1,657 manufacturers and 2,237 factories, most of which are manufacturers. Is SMEs and is concentrated in the industrial area in Bangkok And nearby provinces such as Samut Prakan which Found that the number of component manufacturers is the largest factory, followed by Rayong and other provinces Such as Chachoengsao, Chonburi, etc. The

factory is usually located near the automotive manufacturing plant. In general, manufacturers Auto parts will have a market to organize. Selling parts in 2 main markets, namely

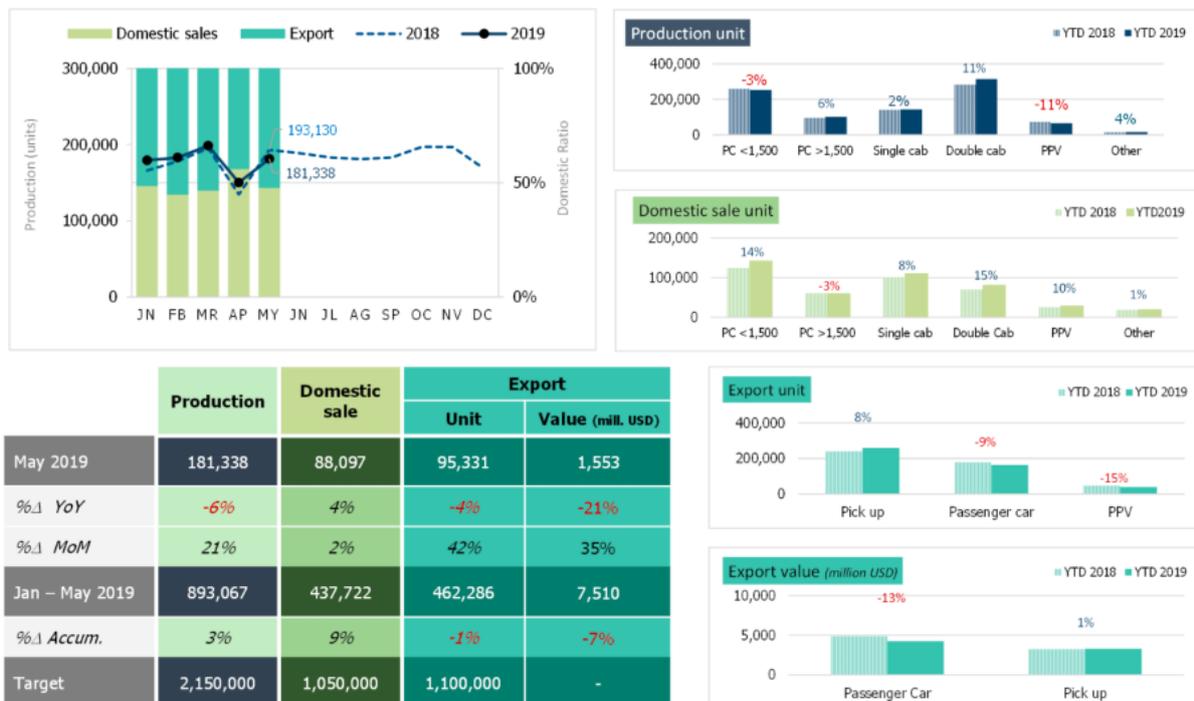
1. Parts Market Original equipment market (OEM) The manufacturers have to produce automotive parts for new cars and motorcycles for the upcoming automotive camps. Set up production bases in Thailand for assembly, export and distribution of vehicles. In the country, the demand for vehicle parts The vehicles in this group depend on the amount of production of cars and motorcycles.

2. Replacement parts market Or Replacement Equipment Market: (REM) is a market for spare parts for replacement of old parts that are broken. Or wear and tear according to the operating conditions in which the parts Each piece will have a different usage life. Manufacturers that produce to enter the market This substitute has both Large, medium and small operators therefore make the parts that are produced with a wide range of quality both Genuine parts, counterfeit parts and artificial parts which will be distributed to the spare parts of the automotive camp. Normally, the service center will store a lot of spare parts instead. Will focus only on the spare parts used in Frequently repairing motor vehicles only.

Factors that will affect the Thai automotive industry include Oil prices that will affect the Middle East market, the trade war between the US America and China, Europe's economy is expected to fall. , Disqualification of GSP Thai products , As for the factors in that country Good economic overview There are election announcements, measures to help low-income people, which will help the money flow in the economic sector. The company produces various camps. Will launch a new model, do promotion Which will help stimulate purchasing decisions.

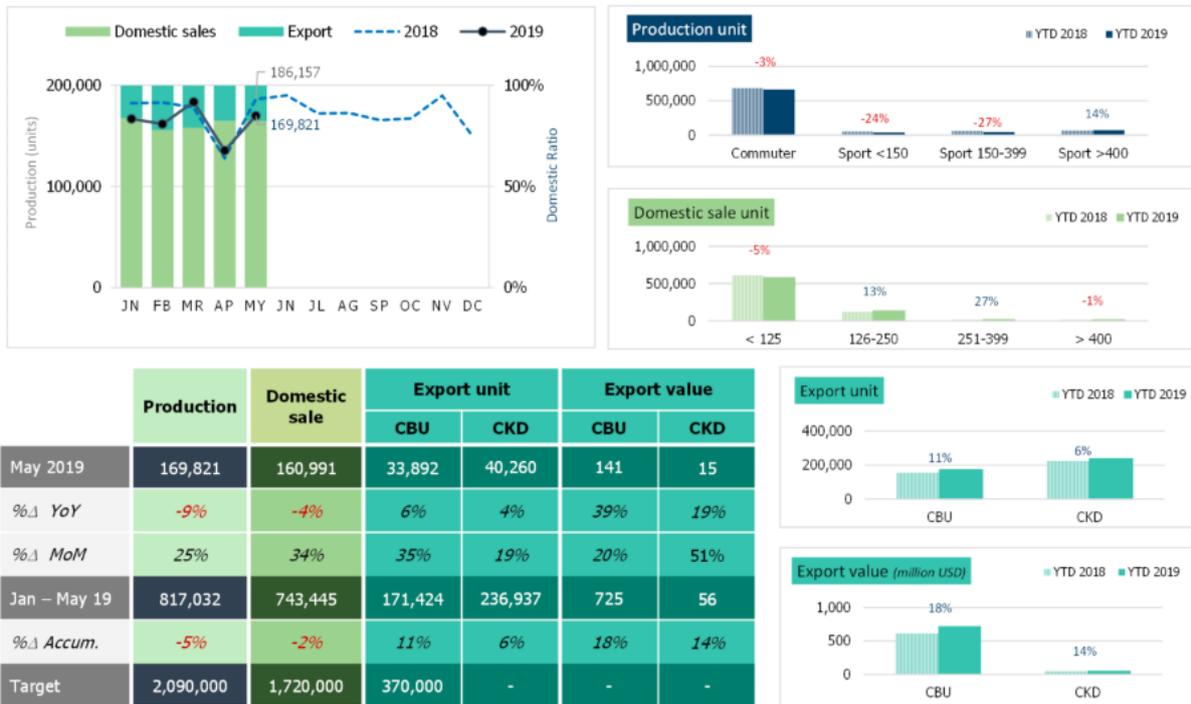
### Current situation of Thai Automotive Industry May 2019

#### 1. Motor vehicle : Current situation



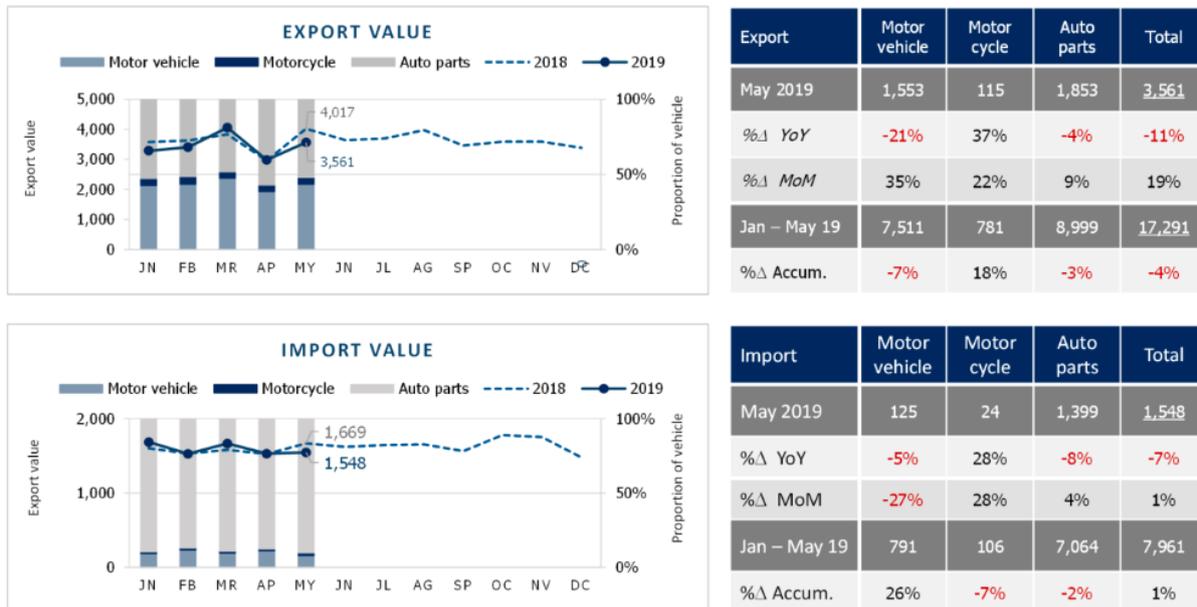
Data source by Automotive Industry Club, The Federation of Thai Industries  
 Analyze by Next Generation Automotive Research Center, Thailand Automotive Institute.

## 2. Motorcycle : Current situation



Data source by Automotive Industry Club, The Federation of Thai Industries; Data exclude Triumph Motorcycle and Harley-Davidson except export value.  
Analyze by Next Generation Automotive Research Center, Thailand Automotive Institute.

## 3. Trade Value (Million USD)



Data source by MOC information and communication technology center with cooperation of the Custom department.  
Analyze by Next Generation Automotive Research Center, Thailand Automotive Institute.

## LITERATURE REVIEW

Supplier development in the specialized literature Improving the relationship between buyers and suppliers. Lead to competitive advantage. Profitability . For the first author for the development of raw material suppliers, It is a very effective procurement tool Leenders research has become increasingly attractive for the development of raw material suppliers. It has evolved to the present. "The company's efforts. improve the potential (Krause, 1997). In particular, Krause's study found that short-term focus is often focused on the short-term and long-term needs of the company. Implementation of the raw material supplier development project. There are limits to the process of the relationship. The process of purchasing. studied the relationship and relationship development with suppliers. In many industries in India, such as the automotive industry. Steel industry If the supplier of the raw materials develops together with the company, it will be beneficial. The overall efficiency of the operation. In addition, considerations from many suppliers to reduce Risks in the production process. The development of communication within the supply chain. This has a direct effect on the company's performance. which is also studied in India. Over the years, there have been studies. Theories and concepts of raw material development by Jin Su. found that strategic procurement affected the relationship with major buyers. Supplier evaluations have a strong influence on the relationship between buyers and suppliers. The factors are. Long-term supply plan aligns with company's plan. Develop long-term supplier relationships. And management emphasizes the development of raw material suppliers. It is the company's supply strategy. The focus is on developing a common relationship between buyers and suppliers of raw materials. Prakash J. Singh Damien Power found that there were influential factors such as long-term relationships with suppliers. Considering the benefits of raw material suppliers. Get information to improve the quality and quick response of raw material suppliers. Together, the company gains more benefits. In Thailand, there is a study in the context of cluster development, increasing the capacity industry in Thailand, and studying the influence of competitive advantage factors of business organizations. The impact on the increase of revenue from sales of goods or services of business organizations. After joining the cluster group (Benchapol, 2008).

Basically, SCM involves collaboration, co-ordination and integration across internal departments, external organizations and throughout the supply chain. A supply chain is a network of processes and facilities that performs the functions of procurement of materials, transformation of these materials into products, and the distribution of these finished products to customers. Further, Christopher (1988) defined SCM as "the management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole". The theory of supply chain management is governed by the belief that value must be added to a process faster than cost, for the product or services to be advantageous to the organizations involved in its creation. To improve performance, organizations have to adopt SCM approach and consider the supply chain as a whole. SCM has the potential to assist the organization in achieving both cost and profit maximization Supplier development can be considered as an indicator of a cooperative buyer-supplier Buyer- supplier relationships have started to be researched but have not been linked to supplier development specifically. The effect of an improved relationship needs to be studied for achieving CAs

The current study attempts to identify what are the success factors for supplier-buyer relationship from the supplier's perspective and supplier development and how the supplier-buyer relationship can be improved under the condition of supplier development and the supplier-buyer relationship from the supplier's perspective. Hence, the aim is to develop a more thorough understanding of the outcomes of a supplier-buyer relationship improvement

from both buyer's and supplier's perspective, under the conditions of supplier development to achieve competitive advantages, leading to profitability. Furthermore, the study analyses the effect of the improved supplier-buyer relationship for achieving competitive advantages leading to profitability.

Supplier relationship management Managing relationships with suppliers is a concept that focuses on The main supplier Burns (1998). "SRM as a customer and supplier develop a close and long-term relationship. The development of close relationships and long-term collaboration. As a long-term collaborative partner, technology means exchanging information. As well as development or design. Joint products. Speaker of the Advisory Center of Excellence National Institute for Productivity. A well-executed SRM approach can provide competitive advantage, fuel growth and brand development, reduce cost, improve efficiency and effectiveness and reduce supply side risk or at least help understand it so it can be mitigated. However, SRM is not something that can simply be 'bolted on' , it is an organization-wide philosophy that needs to be embraced by all if it is to deliver these benefits and so we start by understanding what SRM is and how it works in practice.

The way organizations look after, interact and manage their suppliers is not a single subject, but forms part of the literature on purchasing, logistics, operations management and also marketing. It is perhaps no surprise that there is some confusion regarding the various different approaches and terminology that seem to exist. To make sense of this we need to look at how these approaches have evolved. Rewind the clock to the 1960s and the intervention with suppliers was decentralized to the extent of focusing on warehouse management, transportation and operations management). In the 70s and 80s 'centralization' drove new ways for supplier management and as the 'quality' movement' arrived organizations embraced Deming, Kiakan, Total Quality Management, Total Cost Management and Continuous Improvement. The way organizations viewed suppliers began to change and objectives to optimize cost, quality and customer service came to the fore. The Japanese showed the world how partnerships with suppliers could add great value to an organization. Companies slashed the number of suppliers, awarding contracts to survivors and empowered the winners to manage lower tier suppliers. The rest of the world tried to copy the model but something got lost in cultural translation. Amongst these were American companies who made some superficial changes to supply chains but the fundamental nature of the relationship with suppliers changed little and relationships remained largely adversarial. Today some automobile giants continue to have adversarial relationship with their suppliers whilst others including Toyota and Honda can boast effective partnering models

The concept of 'supply chain management' gained momentum in the 1990s where, for the first time, the supply base was seen as an important enabler to help organizations achieve their aspirations and targets. Companies started to develop strategies for their entire supply chains with visions, objectives and goals being set; a new type of relationship with certain important suppliers was emerging. The development of logistics capabilities in the relationship of the various groups will result in rapid. And mobility within the supply chain. The combination of different acting individuals. Exchange of information Satisfaction and good relationship. (Saninmool V.(2017).

The Philosophy of supplier relationship management (SRM) emerged around the millennium as a single, overarching strategic approach to bring some order to the different types of supplier intervention that enabled the firm to reach its goals. The concepts of 'supplier management', 'supplier performance measurement' and 'supply chain management' naturally fell under the SRM umbrella as approaches relevant for certain groups of suppliers.

Furthermore, organizations began to recognize that by focusing on developing better relationships with the critical few most important suppliers they could create huge value from the supply base. Again this became part of the SRM approach for many organizations. In 2010 the world's first formal standard for supplier collaborative relationships was launched, initially as a British Standard (BS11000) and then an international standard (ISO11000) defining, for the first time, a framework for establishing and improving collaborative relationships between organizations enabling firms to achieve internationally recognized accreditation for putting such arrangements in place.

There are many different types of relationship we can choose or wind up in with a supplier. The challenge is ensuring we have the right one and we are as in control of the process as we can be. There is also much terminology out there with a variety of different labels that seem to mean different things according to who is using them; one person's strategic supplier is another's preferred supplier and so on. The point is, amongst these labels is a recognition that there are different types of supplier relationship. It doesn't matter what label is used, it matters that within this we adopt the right relationship with the right supplier and for the right reasons and we all understand what we mean. Table as below lists those commonly found and these are mapped according to the importance to the business.

**Table 1**  
**Type of Relationship**

Relationship type	Explanation	Typical nature of relationship
Arm's length supplier	A simple and commonly found Buyer/seller transactional Arrangement for named goods or Services.	Contractual fulfilment only, perhaps no or little interaction Beyond communicating the requirement and fulfilment.
Relationship type	Explanation	Typical nature of relationship
Subcontractor	A supplier, usually of services, Engaged to complete a specific Task or supply a package of work, Perhaps as part of a bigger Project or to deliver the entire Project. Examples might include Construction trades on a building Site, software contractors.	- Typically involves Communication of detailed Requirements and interaction Regarding technical or Specification matters. -May be working alongside Our people and other Subcontractors. -Can gain know-how of our Needs that can afford them An advantage.
Preferred supplier	Supplier who has a formally or Informally recognized status as One who is mandated or selected In preference of other suppliers.	-Potentially defined within A framework or master Agreement where the terms Of engagement, and perhaps Even commercial terms have Been agreed in advance. -Preferred status might be Defined within a list or Instruction to those with Buying authority. -Assumes and requires A degree of centralized Control over the companies Procurement.

Outsourced provider	A supplier who has taken on Responsibility to fulfil a core Activity and requirement or Function of a company, perhaps One previously fulfilled in-house. Examples include outsourced call Centre, cleaning, data management IT support.	-Close, day-to-day interaction at An operational level. -Relationship and contract built Around performance and Operational management.
Critical supplier	A supplier who fulfils a Requirement that we cannot do without, and where we cannot easily switch suppliers or source elsewhere.	Should be one where we work to develop a good relationship with the supplier, however many companies fail to identify critical suppliers and place themselves at risk.
Strategic supplier	A supplier who is of strategic importance and has something that can help enable our business to realize our goals and aspirations, eg innovation, complementary offerings, capacity, know-how, coverage.	Needs to be very close and collaborative in order to realize the potential but this often falls short.
Partner	Perhaps called an Alliance Partner, Technology Partner of Creative Partner, Parties have agreed to work together, perhaps with some sort of exclusive arrangement. The arrangement could be informal contract and even incentives might exist.	-Needs to be very close and collaborative in order to realize the potential but this often falls short. -Close day-to-day interaction in the area concerned
Relationship type	Explanation	Typical nature of relationship
Group company	A supplier who we own or is owned within the group.	Relationship should be as if one of us however if the company is separated by distance, culture or organizational structure of has recently been incorporated into the group the relationship can be no different to that of a preferred supplier.

Supplier performance In purchasing we seem to be very keen to measure things. Sindhuja PN, (2014) studied the concept of performance of suppliers. Data Security Within organizations and between organizations that are positively correlated with supply chains . This affects the performance of the supply chain. Factors that affect performance include: Agility (agility) Reliability (Cost) and Cost (Various responses) Ahimbisibwe, that factors affecting performance Operation of raw material suppliers. The research found that outsourcing contracts. Trust from buyers and suppliers opportunistic behavior is an important indicator of supplier performance. The factors that affect the performance . It is similar to Sindhuja's study in 2014. It found that it was possible to add value to the industry by focusing on the support of all stages. From start to finish, the competitiveness of a supply chain depends on the performance of the supplier for quality, price, and on-time deliveries. Although new product development will be important. The ability of suppliers. But most

research will focus on the ability of raw material suppliers. Cusumano and Takeishi (1991) have studied and found that the involvement of raw material suppliers in the development of new products will contribute to the reduction of workload. Departmental and core competence Of suppliers Improve the quality of the supplier. It will be a starting point to improve the quality of production. Getting involved from the beginning will make Understand more about the capabilities of suppliers by leveraging their knowledge of design. To help reduce the cost of production. There are several researches on the development of new products in the automobile industry. Be Focused on Practices for Developing Business Capabilities Research on production will differ. Business Capabilities and Capabilities Of suppliers And to identify variables that are indicators of the ability of the raw material supplier. It will focus on analyzing and improving the supplier's ability to supply more raw materials by identifying its ability to deliver products. Quality parts The three components are important for the supplier to consider using suppliers. Add value to the company. Cost of production Nowadays, many companies are looking for ways to reduce costs. Reduce time to introduce products into the market. Improve product quality, reduce cost. The suppliers of raw materials must work under the requirements. Strict rules It is a challenge. To maintain competitiveness in the value chain system. The ability to deliver competitive in the supply chain value system. The ability to deliver in the automotive industry. More than 70 percent of the total value is attributable to the ability of raw material suppliers to deliver on time and as a metric. One of the suppliers' ability to work and also contributes to the process. Early engineering changes To increase the production capacity as planned. Quality of finished products of raw material suppliers. Capacity of quality suppliers will lead to success in reducing production costs.

## **METHODOLOGY**

This form of research Is an explanatory mixed method design which is used to apply both quantitative and qualitative methods to research To get strong research results By applying the strengths of both research forms together, the researcher collects data by using questionnaires with the executives of the textile industry. And clothing Is a quantitative research It provides a wide range of information that provides information that can be used. By making changes and confirming with qualitative methods Re-organizing the Focus Group by this research plan called Explanatory Mixed Methods Designs (Yurarach, 2016) The size of the research sample is the administrators and staff at the supervisor level. work in procurement of 400 automotive parts in Thailand. The tools used in the study were Questionnaire and small group meeting This research aims to analyze the data by using the information obtained from the collection to check the integrity. And correct before analyzing the data with the software package By using statistical techniques named Structural equation modeling (SEM) to analyze structural influences Component analysis Influence analysis (Angsuchoti et al., 2014).

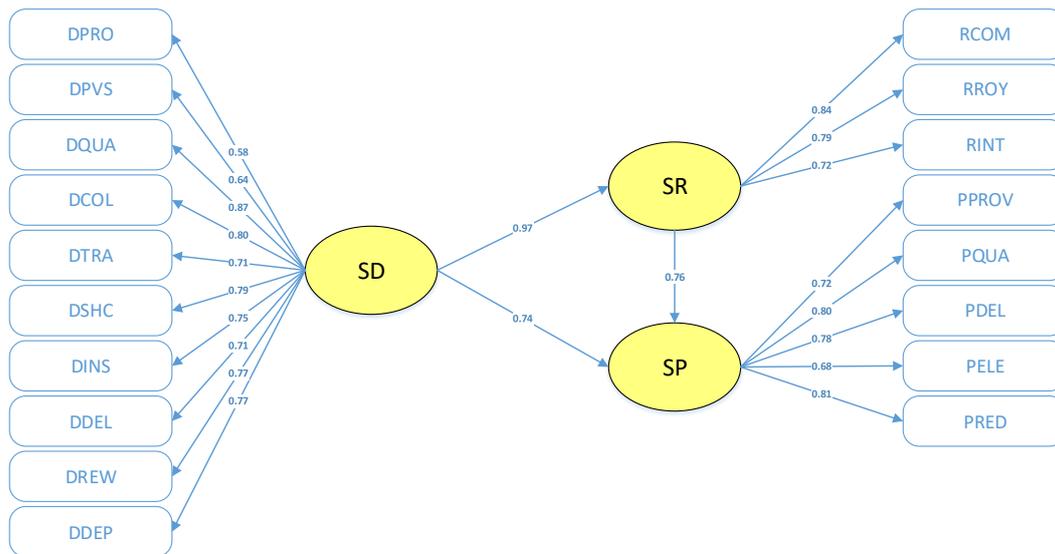


Figure 1 Model of relationship, development of raw material suppliers who have influence in the supply chain and affect the operational efficiency of raw material suppliers in the automotive parts industry in Thailand.

## RESULTS

The results of the data analysis showed that the model was consistent with the empirical data in a good manner. With the chi square 168 value (df = 85), P-value 0.051 and RMSEA 0.027. The development factor of the raw material supplier has both direct and indirect influence on the operational efficiency. By passing on the supplier relationship factor to the buyer Which is consistent with the results of qualitative analysis by group discussion The proposed strategy is divided into two parts: 1. Development. The supplier must establish raw materials cooperation. With strict quality control of raw materials And control raw material costs to be competitive 2. Building relationships between suppliers and buyers Must integrate cooperation to meet the needs of customers together.

## CONCLUSION AND FUTURE WORK

The theoretical framework of supplier devolvement show that supplier development is an important activity that has gotten a lot of attention from large firms and academia. It can also be noted that this review of supplier development research is quite narrow as it excludes a lot of the purchasing research that at least implicitly deals with these aspects, and that the number of studies focusing on supplier development are limited.

The importance of the purchasing function is growing. It is also so that the purchasing function has a crucial role in supplier development. Therefore purchasing research can help us when it comes to the cross functional nature of this activity.

Supply chain management provides a vision that focuses everyone in an organization on product, production and quality improvements. The pursuit of these improvements is not only requested by the market but also driven by the need to survive. The contributing effects of 'information sharing between SCM partners' and 'strategic supplier partnership' are highlighted by utilizing SEM. The associations and effects of these two SCM

practices are also evaluated . The results of the study assist in the understandings of how 'information sharing between SCM partners' and supplier buyer relationship dimensions influence supplier performance. The result indicates that manufacturing companies should emphasize greater attention to 'sharing of production information and plan with suppliers' in supplier development programs as well as involve in 'quality and continuous improvement programs with suppliers performance'.

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