

# A Critical Study of Supply Chain Partnerships in Automobile Industry of China

<sup>1</sup>Shakeerah Mohd Shukri\*, <sup>1</sup>S.M. Ferdous Azam

<sup>1</sup>Management and Science University

\*Corresponding author: [shakeerah@msu.edu.my](mailto:shakeerah@msu.edu.my)

## ABSTRACT

This study goals to develop an empirical model to assess the factors that can affect the supply chain partnerships in the industry of automobile in China. The primary data was composed from both suppliers and automobile manufacturers by employing a specially developed questionnaire. The survey was examined using two statistical tools, which are Regression and T – tests. The results showed that the level related to the supply chain technologies usage is still very low. The further improvement of IT infrastructure of supply chain and interaction partnerships should be considered in order to keep the long – term relationship among partners.

**Keywords:** automobile industry, supply chain partnerships, supplier relationship.

## Correspondence:

Shakeerah Mohd Shukri  
Management and Science University  
Corresponding author: [shakeerah@msu.edu.my](mailto:shakeerah@msu.edu.my)

## INTRODUCTION

The Automobile industry is a major and critical industry in China (Gopal & Thakkar, 2016; De Silva et al., 2018a; De Silva et al., 2018b; Nikhashemi et al., 2013). Although supply chain partnerships are still in their infancy for most automakers and suppliers in China, they have realized that the lowering price is not the permanent way to expand the market. The best way is to make the supply chain more effective so that the cost of production and obtain competitive advantages can be obtained.

The specific objectives of the study are as follows:

1. To ascertain the level of supply chain practice in the automobile industry of China and to analyze the main problems that affect the supply chain partnerships.
2. To examine main factors that will influence a success of supply chain partnerships in Automobile industry in China.
3. To create a perceptual causal relationship model that relates the factors that can help managers ensure success in their partnerships efforts.

With the rise in globalization, partly driven by IT ironically, competition has increased at accelerated rates. Increased rivalry has driven companies to concentrate more on their core competencies, and less on vertical integration. This focus has resulted in increased specialization within the company, which drives companies' need to outsource more of their non-core functions. The result is that a firm needs to develop more collaborative business partnerships outside its formal borders with constituencies. These partnerships are also enabled by closely integrated knowledge sharing. As competition increases, the spectrum of integration expands, and the need for information management becomes increasingly critical. The growth of CRM (Customer Relationship Management), SCM, and ERP is evidence of the need for knowledge sharing, and the increasing importance of partnership relationships.

Today, China's supply chain and IT infrastructure remain a constraint for local and foreign companies. Compared

with other developed countries, China has a fractured and unstable distribution network, local protectionism, and lack of third-party resources, cash-flow issues, and receivable accounts. These constraints mean that currently there are few productive supply chains in China, and it will take time to develop in those areas. Next, previous research on adoption of supply chain partnerships were all conducted in the United States, Europe and Australia and the literature review indicated that little and perhaps no empirical investigations has been undertaken in China. To develop a model suitable for China, it was necessary to identify some factors which can be useful to understand the issue in the context of China market.

Finally, different industries adopt different kind of supply chains. Since this study only concentrates on the automobile industry, it is necessary to introduce and classify the supply chain which is suitable for the automobile industry and find out the factors and variables within this area (Zhang, Ma, & Qu, 2018; Dewi et al., 2019; Pambreni et al., 2019; Tarofder et al., 2017).

## LITERATURE REVIEW

The automotive industry emphasizes the importation of high-quality, fuel-efficient, and competitively priced vehicles. It forced manufacturers of automobiles to become more innovative, or to quit business. One vital success factor in the industry has subsequently proved to be successful supplier partnerships. The automotive industry, despite these elements, has served as an excellent source of research analysis.

Especially China has recently been a new age for automakers and suppliers of parts, with unprecedented growth rates over the last 2-3 years. Almost every global carmaker either has or is in the process of setting up new production facilities there, which reflects significant sums of capital investment. Between the late 1970s and 2001, according to an article in the Energy far Sustainable Development issue of 3 December 2003, China's overall

fleet of motor vehicles other than two-wheelers expanded 10-fold. Many of such projects are joint ventures. In 2004, the auto export market was expanded by 1,114 companies, and it grew by 58 per cent compared to 2003. The companies that deal with auto export business are 1,954 in the first quarter of 2005 and are up 110 per cent compared to the same time in 2004. Many suppliers were encouraged by the vehicle manufacturers to locate in China. Once again, in enforcing China's WTO commitments, foreign companies are now allowed to set up franchise agreements with Chinese dealers, without any equity constraints, but this is, to date, an untested region. This is not covered by new rules on car trade, model sales and used car sales, leaving space for administrative interpretation and practice (Gunasekaran, Subramanian, & Rahman, 2017; Doa et al., 2019; Maghfuriyah et al., 2019; Nguyen et al., 2019).

China has agreed to slash tariffs and eliminate non-tariff barriers since being admitted to the WTO. Reduced tariffs have now made imports an option and forced price adjustment for domestically manufactured automobiles. As of 1 January 2005 China abolished special licenses and quotas required for the importation of cars in accordance with its WTO commitments.

In this concept of supply chain management, the executives defined collaboration as a process by which all supply chain companies are actively working together towards shared objectives, exchanging information, expertise, risk and income. Sharing includes understanding how other companies work and make decisions, and going much deeper than collaboration.

Collaboration is a shared objective environment that goes way beyond a formal contract (Han, Huang, & Macbeth, 2018; Pathiratne et al., 2018; Rachmawati et al., 2019; Seneviratne et al., 2019; Sudari). Supply chain management economist offers the following basic definition: "supply chain management helps a company to procure the correct products and services at the right time, in the right quantity and at a reasonable cost." Ayers. The supply chain relationship represents a strategic decision for each organization involved (Hong, Zhang, & Ding, 2018). A supply chain is the series of functional activities in which raw materials are turned into finished goods for sale to a consumer (Hussain, Mosa, & Omran, 2017; Nikhashemi et al., 2017; Tarofder et al., 2019; Tarofder et al., 2019; Udriyah et al., 2016). In order to enhance the long-term relationship and efficiency, particular industry and firm can use specific supply chain. According to literatures, there are some kinds of supply chain as follow:-

- ☐ Horizontal integration and vertical integration
- ☐ Traditional Customer-Supplier Relationship
- ☐ The 'traditional' relationship between customer and supplier is defined by supply and demand law. Suppliers are picked based on the low prices. Cost cuts are accomplished when manufacturers play each other off. This type of customer – supplier relationships show low intensity in terms of entrepreneurial collaboration.

- ☐ Corporation suppliers' relationship

Construction of inventory has become a standard way to deal with the challenges of price fluctuations, manufacturer unreliability and consumer unpredictability (Hussain, Mosa, & Omran, 2018). Depending on its capacity for short lead times (Zaid, Jaaron, & Bon, 2018), the choice of co-producer is made with primary importance.

### Selection and Development

We proposed two ways for manufacturers to relate to their suppliers, "the model of availability" and "the model of development." The selection model calls for suppliers to move to meet changing expectations for cost, innovation or quality and business opportunities (Hussain, Musa, & Omran, 2019). It depends on its manufacturers to handle the changes in their own efficiency and prices. The selection model harnesses the current market transaction's momentary advantages. Suppliers working with suppliers using the selection model face relentless pressure for cost savings and increases in efficiency, along with the possible specter of "de-sourcing."

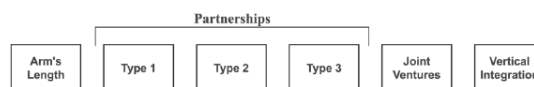
The production model requires evolutionary change by allowing suppliers to engage constantly in processes leading to both cost reduction and efficiency improvements. Manufacturers using the development model view the supplier relationship as one of shared cooperation where both work together towards the same goals. As in the selection model, the suppliers are evaluated by strict output measures in the production model. Nonetheless, manufacturers using the production model prefer to negotiate internally with underperforming suppliers in order to fix their shortcomings rather than de-sourcing them (Hussain, Musa, & Omran, 2018).

Short – term and long – term

Lambert et al. (1996) propose that there are three kinds, depending on their character (see Figure 1):

"Short – term" (type 1)  
 "Long – term" (type 2); and  
 "Long – term, with no end" (type 3).

**Figure 1 short – term and long – term partnerships.**



Source: Lambert et al. (1996, p. 2)

Successfully maintaining long-term relationships requires considerable resources. While it is useful to use the time dimension to distinguish between types of relationships (as Lambert et al., 1996, did), in practice it cannot be assumed that a producer and a supplier would see themselves in collaboration in a long-term relationship.

Yu, Chavez, and Feng (2017) made an attempt to describe the dimensions and characteristics of the partnership in their conceptual structure for partnership. The dimensions considered within this structure are: confidence, win-win results where the parties share the benefits of waste reduction and market growth, long-term focus, teamwork, problem solving and flexibility. Partnering characteristics related to these dimensions are: intrinsic trust, risk sharing and incentives, improved joint productivity, standards of consistency, quality improvement orientation, supplier and growth.

Partnerships in the supply chain play a crucial role in the automotive industry. Effective SCM involves building trust and relationships with longtime suppliers who are closely involved in component development and production. Improving partnerships along the supply chain seems to have helped automakers grow significantly. Yu, Jacobs, Salisbury and Enns (2013) stated, "The major advantages of implementing supply chain management are inventory reduction and partnership improvement" In a regular

basis the supply chain network increases its complexity. Supply chain integration is the secret to relieving the challenges caused by network fluctuations and complexities. Yu et al. (2013) suggested that managers understand that the SCM provides their businesses with a competitive advantage. We also recognize that SCM will reduce internal costs of procurement, storage, labor and delivery — savings that can be passed on to the consumer afterwards.

According to Yu et al. (2017), having a well is one thing – designed supplier development program; it is another thing to ensure suppliers communicate and understand the program well. Proactive collaboration in setting the priorities, motives, and methods underlying supplier development program administration requires the highest levels of communication. In essence, this means increasing communication between the various nodes in the supply chain. This will enable companies in the automotive sector to better understand what is going on throughout the supply chain. It will improve the overall operations of the enterprise by increasing visibility (Kim & Chai, 2017).

The greater consistency that automotive suppliers find in terms of contract length and trust in their customers, the more they are able to minimize lots of production sizes and increase the pace of delivery that will eventually boost their market share (Kumar & Rahman, 2016). Many car manufacturers have developed programs so that suppliers can contribute to cost savings or quality enhancement with their ideas. The manufacturer may share the savings or benefits the automaker gets from the product, or else it may earn some comparable "points" that will boost its valuation and thereby give it a better chance of winning business in the future. Hence, automotive manufacturers will achieve economies thanks to their suppliers' innovation inputs (Liu, Blome, Sanderson, & Paulraj, 2018).

According to Yu et al. (2013), there is commitment when an exchange partner believes that "an ongoing relationship with another is so important that maximum efforts to maintain it are warranted; that is, the committed party believes that the relationship is worth working on to ensure that it endures indefinitely." Commitment in buyer-seller relationships involves "stability and sacrifice" and allows for the coordination advantages of vertical relationships and separate ownership entrepreneurial advantages (Luthra, Garg, & Haleem, 2016). There is asymmetry in involvement in partnerships where one partner displays greater interest than the other. Commitment is demonstrated by a willingness to devote specific assets to a particular partnership, thereby demonstrating the capacity to rely on buyer and seller for potential help. Assurances include guarantees, reliable assurances, idiosyncratic investments, and committed resource management that is unique to a partnership (Nawaz, Afzal, & Shehzadi, 2013). Commitment is expressed in three ways: idiosyncratic or customized commitment, disposition, and the parties' long-term intent to remain in the relationship (Nawaz, Azam, & Bhatti, 2019). Sustained contact between parties is useful in influencing positive-viewed engagement in terms of recruitment, disposition and long-term emphasis. In other words, dedication should promote interaction-based, two-way contact (Savic, Djordjevic, Milosevic, Mihajlovic & Zivkovic, 2017).

Hypothesis I:

: There is no relationship between the long – term relationship and the factors of influencing supply chain partnerships.

: There is a relationship between the long – term relationship and the factors of influencing supply chain partnerships.

Hypothesis II:

: There is no relationship between meeting clients' needs and the factors of influencing supply chain partnerships.

: There is relationship between meeting clients' needs and the factors of influencing supply chain partnerships.

Hypothesis III:

: There is no relationship between advance technology & software and the factors of influencing supply chain partnerships.

: There is relationship between advance technology & software and the factors of influencing supply chain partnerships.

Hypothesis IV:

: There is no relationship between accessories design and the factors of influencing supply chain partnerships.

: There is a relationship between accessories design and the factors of influencing supply chain partnerships.

Hypothesis V:

: There is no relationship between performance targets and the factors of influencing supply chain partnerships.

: There is a relationship between performance targets and the factors of influencing supply chain partnerships.

## METHODS

The primary data for this study is gathered from four types of automotive firms, Automotive Manufacture, Original Equipment Manufacturer, Automotive Distributor, and Automotive Component Wholesaler. Secondary data is used to support the analysis and provide the research context information. There are two major types of sampling designs: probability and non-sampling probability. The probability sampling was selected for this analysis, since each item in the population has a known and equal chance of being chosen as a topic and given the most generalizability. The return rate is 9.67 percent. The sample size of 128 was collected from 12 provinces and 46 cities which are considered to be a fairly good representation of firm in terms of their geographical location.

## ANALYSIS

The findings includes the hypotheses testing that was developed in the preceding chapter of the study.

**Table 1. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.957	.915	.902	.30465

Table 2 depicts that the R square value is 0.915, which indicates that 91.5 percent of the variability of technology and software can be explained by this research model. This R square indicates a strong positive linear relationship between the factor of advance technology & software and independent variables and only less than 4 percent of the

variability in dependent variable can be explained by other factors.

**Table 2. ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110.533	17	6.502	70.055	.000
	Residual	10.209	110	.093		
	Total	120.742	127			

Based on the analysis in Table 3 analysis, the regression row shows that the sum of squares is 110.53, which implies that the variation of advanced technology and software can be explained by this research model. If the significance of 0.05 is chosen, it is found that the critical value of the F distribution is 1.72. As F statistic is 70.06, which is greater than 1.72, it can be concluded that there is a significant quadratic relationship between the dependent and independent variables. The P – value of the F statistic is less than 0.05. It also proves that the 17 factors have significant relationship with advance technology and software.

**Table 3. Coefficients**

	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta		
(Constant)	4.133	.027		153.479	.000
Trust	3.467E-02	.120	.036	.288	.774
Effective communication	-.245	.137	-.251	-1.791	.076
Same expectation	-8.510E-02	.116	-.087	-.737	.463
Commitment	-3.533E-02	.129	-.036	-.275	.784
Guan Xi	-.406	.079	-.417	-5.141	.000
Product design	-.142	.145	-.146	-.985	.327
Culture	.509	.116	.522	4.379	.000
Reward and motivation system	-.108	.123	-.111	-.880	.381

Human involvement	.269	.093	.276	2.898	.005
Training and education	.319	.129	.327	2.467	.015
Stability of demand	.223	.087	.229	2.573	.011
Problem specific capability	.104	.120	.107	.867	.388
Information system integration	-.161	.115	-.165	-1.398	.165
Adopt software	.202	.109	.207	1.850	.067
IT infrastructure	-8.547E-02	.120	-.088	-.710	.479
IT investment and sourcing decision	.121	.166	.124	.729	.468
Measurement	.405	.151	.415	2.671	.009

Based on Table 4, the multiple regression equation of the dependent variable and independent variables can be presented as follow:

Referring to the T – test column, the highest T value is culture which is 4.379. It is greater than the 0.05 level of significance of 1.979. Therefore, is rejected. This supported the findings of McIvor and McHugh (2000) who maintained that organizational will have considerable difficulties in partnering with external entities if they cannot develop a partnering culture internally. Next, the T value of human involvement is 2.898. Since this number is greater than the critical T value of 1.979, is rejected. It indicates that human involvement has a linear relationship with the dependent variable of advance technology & software. The analysis determined that the T value of training and education is 2.467, which is above the critical T value. This shows that most respondents agreed that to achieve successful supply chain partnerships, proper training and education of the partners are necessary. The T value of the other two factors which are stability of demand and measurement are also greater than the critical T value. Therefore, is rejected. Except these five factors, the T value of other independent variables is less than 1.979. Therefore, is accepted. It indicates that these factors do not have a significant relationship with the dependent variable. From this analysis, it can be concluded that the five factors (culture, human involvement, training and education, stability of demand and measurement) have a significant relationship with the dependent variable of advance technology and software.

**Table 4. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.976	.952	.945	.28758

Table 5 presents that the coefficient of determination, namely, R square value as 0.952, which indicated that 95.2 percent of the variability in the accessories design can be explained by this research model. It implies a strong positive linear relationship between the factor of accessories design and the independent variables and only 5 percent of the sample variability in the dependent variable can be explained by other factors other than what is accounted for by the linear regression model that uses only square footage.

**Table 5. ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	181.778	17	10.693	129.292	.000
	Residual	9.097	110	.083		
	Total	190.875	127			

Table 6 it emphasized that the square regression sum is equal to 181.778. This amount is broken down into the sum of squares explained by the regression. The residual number of squares is 9.097, which is the sum of squares that the regression does not describe. If the definition of 0.05 is selected, the critical value of the distribution F is found to be 1.72. Since F statistics are 129.292, which is well above 1.72, it can be inferred that the dependent and independent variables have a strong quadratic relationship. The P – value of the F statistic is less than 0.05. It also proves that the 17 factors have significant relationship with accessories design.

**Table 6. Coefficients**

	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	3.906		153.676	.000
Trust	.754	.615	6.631	.000
Effective communication	9.042E-02	.074	.701	.485
Same expectation	-6.527E-02	-.053	-.599	.551
commitment	-.182	-.148	-1.498	.137
Guan xi	5.916E-02	.048	.793	.430

Product design	-.492	.137	-.402	-3.605	.000
Culture	-7.774E-02	.110	-.063	-.709	.480
Reward and motivation system	.114	.116	.093	.979	.330
Human involvement	5.251E-02	.088	.043	.599	.550
Training and education	-.146	.122	-.119	-1.195	.235
Stability of demand	.374	.082	.305	4.567	.000
Problem specific capability	.311	.114	.254	2.739	.007
Information system integration	-.189	.109	-.154	-1.732	.086
Adopt software	1.819E-02	.103	.015	.177	.860
IT infrastructure	.171	.114	.139	1.501	.136
IT investment and sourcing decision	9.336E-02	.157	.076	.594	.553
Measurement	.344	.143	.281	2.406	.018

As Table 7 shows, the multiple regression equation of the dependent variable and independent variables can be presented as follow:

Based on the analysis of the T – test column, the T value of trust is 6.631 at the 5 percent level. Since the critical T - value is 1.979. Therefore, is rejected. The result of the other factor having high T value is stability of demand. As 4.567 is greater than 1.979, is rejected as well. It supports the literature review discussed in the earlier chapter that all of these product developments have been associated with drastic changes in consumer demand (Savic et al., 2017). Additionally, the T - values of problem specific capability and measurement are also greater than the critical T - value. Hence, is rejected. It proves the discussion in the literature review that the measurement of IT infrastructure is an ongoing process because IT infrastructure “must be continually exploited, otherwise the investment (in the infrastructure) will have failed. However, the T - value of the other 13 factors are less than the critical T - value, therefore was rejected, which means these factors have no significant relationship with accessories design. Based on the analysis above, it can be concluded that there are four factors (trust, stability of demand, problem specific capability and measurement)

that have significant relationship with the dependent variable of accessories design.

**Table 7. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.971	.943	.934	.22279

According to Table 8, the value of R square is 0.943. Therefore, 94.3 percent of the variability in the performance targets can be explained by this research model. The other 6 percent of the sample variability in the dependent variable can be explained by other factors. It indicates that the dependent variable of performance targets has a strong positive linear relationship with the independent variables.

**Table 8. ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.509	17	5.265	106.081	.000
	Residual	5.460	110	.050		
	Total	94.969	127			

As displayed in Table 9 the regression sum of squares is 89.509 and the residual sum of square is 5.460. It means that the regression will clarify 89.509 of the number of squares and 5.460 of the sum of squares is unexplained by the regression. Use the significance level of 0.05, the F distribution critical value is 1.72, which is less than the 106.081 F value. Therefore, it can be established that an important quadratic relationship exists between performance goals and the 17 independent variables factors. The p – F statistic value is 0.000, which also shows a linear relationship between dependent and independent variables.

**Table 9. Coefficients**

	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Beta		
(Constant)	4.266		216.620	.000
Trust	.578	.668	6.558	.000
Effective communication	3.748E-02	.100	.375	.709
Same expectation	-9.620E-02	.084	-1.139	.257
commitment	-4.700E-02	.094	-.500	.618
Guan Xi	-.242	.058	-4.186	.000

Product design	2.631E-02	.106	.030	.249	.804
Culture	-1.539E-02	.085	-.018	-.181	.857
Reward and motivation system	-.229	.090	-.265	-2.544	.012
Human involvement	.131	.068	.152	1.935	.056
Training and education	-7.865E-02	.095	-.091	-.832	.407
Stability of demand	.252	.063	.292	3.980	.000
Problem specific capability	.133	.088	.154	1.514	.133
Information system integration	-.157	.084	-.182	-1.865	.065
Adopt software	.132	.080	.153	1.659	.100
IT infrastructure	-.124	.088	-.143	-1.405	.163
IT investment and sourcing decision	5.007E-02	.122	.058	.412	.681
Measurement	.486	.111	.562	4.390	.000

Based on the analysis in Table 5.21, the multiple regression equation can be presented as follow:

The highest T value of this analysis is trust which is 6.558. Using the critical T value of 1.979, it can be determined that the T value of trust is greater than the critical T value. Therefore, is rejected. This supports the findings that some supply chain partnerships fail due to a lack of the trust among the trading partners (Nawaz & Hassan, 2016). The T - value of measurement is also higher than the value of other independent variables, which is achieved: 4.390. It implies that, besides trust, adequate measurement of IT infrastructure is an important factor that affects auto companies target performances. The T - value of stability of demand is equal to 3.980, which is greater than the critical T - value of 1.979. Hence, is rejected. Apart from these three independent variables, the T - value of other factors were less than the critical T value of 1.979. Therefore, H1 is rejected. To concluded, there are three independent variables (trust, stability and measurement) that affect the performance targets of supply chain companies. Other independent variables do not have a linear relationship with performance targets.

**DISCUSSION**

Automobiles will be exported or sold locally, and car firms will need a reliable infrastructure for local sourcing. The need is driven by the rapid growth of the industry, rising marginal pressures, global pressure on low-cost sourcing nation, and the Chinese government itself. Different components will be required for production in China by government regulations. The new regulations are expected to require the production in China of 40 per cent of cars sold in China. The new crop of 9,000 local suppliers in China consists of a fragmented market — not all of them have the right expertise and not all of them are in a strong financial position. It is important to find and cultivate the right combination of reliable partners to support local production and fuel the global business of the company in order to maintain high performance which creates a challenge. Only when they find and cultivate cost-competitive, qualified suppliers can the OEMs be prepared to fully exploit their investment in China, serve a rising demand and create a base for exporting cars and parts as well.

While several programs are in place, China has seen little or no introduction of electronic customs reporting systems, e-Payment or third-party control, or supplier risk management. Reliable due diligence documents are often not as readily accessible as they are in the US and Europe. The consequence of these shortcomings is that there is a need for more partners in handling these predominantly manual supply chain operations. In addition, low IT engagement has made it harder to monitor inventory, connect with participants in the supply chain and collect and exploit data on consumer needs and preferences (Robert 2003).

### CONCLUSIONS

Cultural protectionism, unfair competition and various government regulations at the national and regional level have long restricted the growth of China's supply chains. By regulation, international exchange companies are forced to sell products through a distributor, and are forbidden from owning networks of distribution and logistics infrastructure. State distributors are not required to be creative or commercially minded; they are simply needed to transport products from manufacturers to local distribution points.

China's multiple structure often contributes to a lack of control over both the degree of logistics operation and the point-of - sale operations, as distributors use a variety of subcontractors. In practice, many manufacturers cannot monitor delivery times or condition, and point-of - sale monitor poses major sales and marketing challenges.

### Limitations and Future Directions

Researchers could develop frameworks and methodologies that link the role of supply chain partnerships to the ultimate performance of a firm. Clearly, collaborative success is often not the final destination for a company. The effect of this cooperation on the enterprise's overall performance is the next logical issue to consider. We believe researchers will be interested in a comprehensive understanding of the factors associated with the overall performance of organizations.

### REFERENCES

1. Gopal, P., & Thakkar, J. (2016). Sustainable supply chain practices: an empirical investigation on Indian automobile industry. *Production Planning & Control*, 27(1), 49-64.
2. Gunasekaran, A., Subramanian, N., & Rahman, S. (2017). Improving supply chain performance through management capabilities: Taylor & Francis.
3. Han, W., Huang, Y., & Macbeth, D. (2018). Performance measurement of cross-culture supply chain partnership: a case study in the Chinese automotive industry. *International Journal of Production Research*, 56(7), 2437-2451.
4. Hong, J., Zhang, Y., & Ding, M. (2018). Sustainable supply chain management practices, supply chain dynamic capabilities, and enterprise performance. *Journal of cleaner production*, 172, 3508-3519.
5. Hussain, M. S., Mosa, M. M., & Omran, A. (2017). The Mediating Impact of Profitability on Capital Requirement and Risk Taking by Pakistani Banks. *Journal of Academic Research in Economics*, 9(3), 433-443.
6. Hussain, M. S., Mosa, M. M., & Omran, A. (2018). The impact of owners behaviour towards risk taking by Pakistani Banks: Mediating role of profitability *Journal of Academic Research in Economics*, 10(3), 455-465.
7. Hussain, M. S., Musa, M. M., & Omran, A. (2019). The Impact of Regulatory Capital on Risk Taking By Pakistani Banks. *SEISENSE Journal of Management*, 2(2), 94-103.
8. Hussain, M. S., Musa, M. M. B., & Omran, A. A. (2018). The Impact of Private Ownership Structure on Risk Taking by Pakistani Banks: An Empirical Study. *Pakistan Journal of Humanities and Social Sciences*, 6(3), 325-337.
9. Khan, S. A. R., & Qianli, D. (2017). Impact of green supply chain management practices on firms' performance: an empirical study from the perspective of Pakistan. *Environmental Science and Pollution Research*, 24(20), 16829-16844.
10. Kim, M., & Chai, S. (2017). The impact of supplier innovativeness, information sharing and strategic sourcing on improving supply chain agility: Global supply chain perspective. *International Journal of Production Economics*, 187, 42-52.
11. Kumar, D., & Rahman, Z. (2016). Buyer supplier relationship and supply chain sustainability: empirical study of Indian automobile industry. *Journal of cleaner production*, 131, 836-848.
12. Liu, Y., Blome, C., Sanderson, J., & Paulraj, A. (2018). Supply chain integration capabilities, green design strategy and performance: a comparative study in the auto industry. *Supply chain management: an international journal*, 10(1), 25-45.
13. Luthra, S., Garg, D., & Haleem, A. (2016). The impacts of critical success factors for implementing green supply chain management towards sustainability: an empirical investigation of Indian automobile industry. *Journal of cleaner production*, 121, 142-158.

14. Nawaz, M. A., Afzal, N., & Shehzadi, K. (2013). Problems of formally employed women: A case study of Bahawalnagar, Pakistan. *Asian Journal of Empirical Research*, 3(10), 1291-1299.
15. Nawaz, M. A., Azam, M. A., & Bhatti, M. A. (2019). Are Natural Resources, Mineral and Energy Depletions Damaging Economic Growth? Evidence from ASEAN Countries. *Pakistan Journal of Economic Studies*, 2(2), 15-28.
16. Nawaz, M. A., & Hassan, S. (2016). Investment and Tourism: Insights from the Literature. *International Journal of Economics Perspectives*, 10(4), 581-590.
17. Savic, M., Djordjevic, P., Milosevic, I., Mihajlovic, I., & Zivkovic, Z. (2017). Assessment of the ISO 9001 functioning on an example of relations with suppliers development: empirical study for transitional economy conditions. *Total Quality Management & Business Excellence*, 28(11-12), 1285-1306.
18. Yu, W., Chavez, R., & Feng, M. (2017). Green supply management and performance: a resource-based view. *Production Planning & Control*, 28(6-8), 659-670.
19. Yu, W., Jacobs, M. A., Salisbury, W. D., & Enns, H. (2013). The effects of supply chain integration on customer satisfaction and financial performance: An organizational learning perspective. *International Journal of Production Economics*, 146(1), 346-358.
20. Zaid, A. A., Jaaron, A. A., & Bon, A. T. (2018). The impact of green human resource management and green supply chain management practices on sustainable performance: An empirical study. *Journal of cleaner production*, 204, 965-979.
21. Zhang, Y., Ma, E., & Qu, H. (2018). Transaction cost and resources based views on hotels' outsourcing mechanism: an empirical study in China. *Journal of Hospitality Marketing & Management*, 27(5), 583-600.
22. De Silva A.D.A., Khatibi A., Azam S.M.F. (2018a). Can parental involvement mitigate swing away from science? Sri Lankan perspectives, *Cogent Education*
23. De Silva A.D.A., Khatibi A., Azam, S. M. F. (2018b). Do the Demographic Differences Manifest in Motivation to Learn Science and Impact on Science Performance? Evidence from Sri Lanka, *International Journal of Science and Mathematics Education*
24. Delafrooz N., Paim L.H., Khatibi A. (2009). Developing an instrument for measurement of attitude toward online shopping, *European Journal of Social Sciences*
25. Dewi N.F., Azam, S. M. F., Yusoff S.K.M. (2019). Factors influencing the information quality of local government financial statement and financial accountability, *Management Science Letters*
26. Doa N.H., Tham J., Khatibi A.A., Azam S.M.F. (2019). An empirical analysis of Cambodian behavior intention towards mobile payment. *Management Science Letters*
27. Maghfuriyah A., Azam, S. M. F., Shukri S. (2019). Market structure and Islamic banking performance in Indonesia: An error correction model, *Management Science Letters*
28. Nguyen H.N., Tham J., Khatibi A., Azam S.M.F. (2019). Enhancing the capacity of tax authorities and its impact on transfer pricing activities of FDI enterprises in Ha Noi, Ho Chi Minh, Dong Nai, and Binh Duong province of Vietnam, *Management Science Letters*
29. Nikhashemi S.R., Paim L., Haque A., Khatibi A., Tarofder A. K. (2013). Internet technology, Crm and customer loyalty: Customer retention and satisfaction perspective, *Middle East Journal of Scientific Research*
30. Nikhashemi S.R., Valaei N., Tarofder A. K. (2017). Does Brand Personality and Perceived Product Quality Play a Major Role in Mobile Phone Consumers' Switching Behaviour? *Global Business Review*
31. Pambreni Y., Khatibi A., Azam, S. M. F., Tham J. (2019). The influence of total quality management toward organization performance, *Management Science Letters*
32. Pathiratne S.U., Khatibi A., Md Johar M.G. (2018). CSFs for Six Sigma in service and manufacturing companies: an insight on literature, *International Journal of Lean Six Sigma*
33. Rachmawati D., Shukri S., Azam, S. M. F., Khatibi A. (2019). Factors influencing customers' purchase decision of residential property in Selangor, Malaysia, *Management Science Letters*
34. Seneviratne K., Hamid J.A., Khatibi A., Azam F., Sudasinghe S. (2019). Multi-faceted professional development designs for science teachers' self-efficacy for inquiry-based teaching: A critical review, *Universal Journal of Educational Research*
35. Sudari S.A., Tarofder A.K., Khatibi A., Tham J. (2019). Measuring the critical effect of marketing mix on customer loyalty through customer satisfaction in food and beverage products, *Management Science Letters*
36. Tarofder A.K., Azam S.M.F., Jalal A. N. (2017). Operational or strategic benefits: Empirical investigation of internet adoption in supply chain management, *Management Research Review*
37. Tarofder A.K., Haque A., Hashim N., Azam, S. M. F., Sherief S. R. (2019). Impact of ecological factors on nationwide supply chain performance, *Ekoloji*
38. Tarofder A.K., Jawabri A., Haque A., Azam S.M.F., Sherief S.R. (2019). Competitive advantages through it-enabled supply chain management (SCM) context, *Polish Journal of Management Studies*
39. Tarofder A.K., Nikhashemi S.R., Azam S. M. F., Selvantharan P., Haque A. (2016). The mediating influence of service failure explanation on customer repurchase intention through customers' satisfaction, *International Journal of Quality and Service Sciences*
40. Udriyah, Tham J., Azam, S. M. F. (2019). The effects of market orientation and innovation on competitive advantage and business performance of textile SMEs, *Management Science Letters*
41. Ulfah R., Amril Jaharadak A., Khatibi A.A. (2019). Motivational factors influencing MSU accounting



students to become a certified public accountant  
(CPA), Management Science Letters