

Innovative Supply Chain Management Change And Productive Resistance In Interorganizational Projects

Anissa Lestari Kadiyono¹, Bayu Kurniawan², Zakky Zamrudi³, Hesti Respatiningsih⁴,
Damianus Manesi⁵

¹Universitas Padjadjaran, Bandung, Indonesia. E-mail: anissa.lestari@unpad.ac.id

²Sekolah Tinggi Ilmu Ekonomi AKA, Indonesia

³Islamic University of Kalimantan, Indonesia.

⁴Sekolah Tinggi Ilmu Ekonomi Rajawali, Indonesia.

⁵Akademi Pariwisata Kupang, Indonesia.

Abstract— *it is very necessary for the business to deliver the items to the users and customers according to their requirements in an efficient chain of supply. In between the complete life cycle of a product to maintain the cost and flow of product the managers of supply chain works more proactively and more innovatively because it is continuously evolving the global marketplace.*

Keywords- *business; innovative; supply chain; market.*

I. INTRODUCTION

Supply chain is the very significant area of business in any industry. The supply chain not only determines the quality of the product that buys through the user but also it defines the efficiency distribution. The innovative supply chain is the major part of productivity of any business. In large business organizations the in complete supply chain to increase the accountability and efficiency the system acquire the latest techniques and methods [7].

Global survey of manufacturers, retails and logistics companies

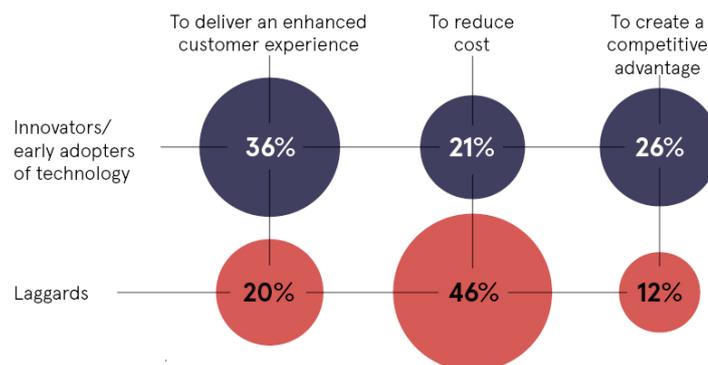


Figure 1: Supply chain innovation factors [4]

In interorganisational projects for good tracking and visibility the innovative supply chain has conceptualized latest business techniques. Invoice and shipping of complete chain is monitored using latest approaches. In a supply chain portability technique the product include tablets, smartphones, and GPS devices. These assets using wireless techniques for monitoring in supply chain [1].

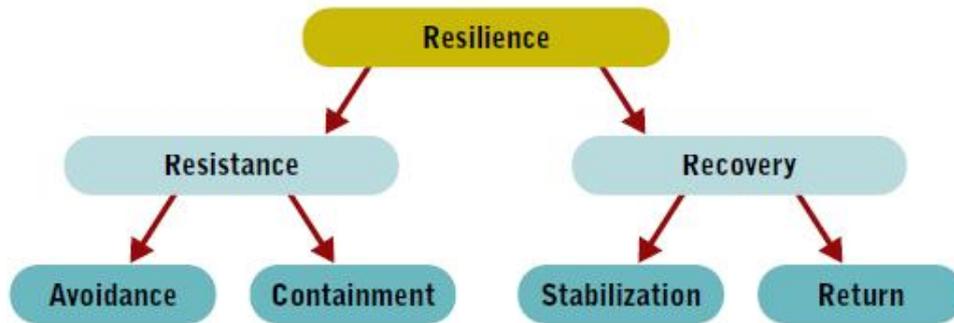


Figure 2: Supply chain resilience tree

In supply chain management to develop new products or to develop existing products having latest characteristics is a very complex task when it adopts the product innovation. The new product or new characteristics are developed for better responding the requirements of customers and for achieving the competitive advantage [5].

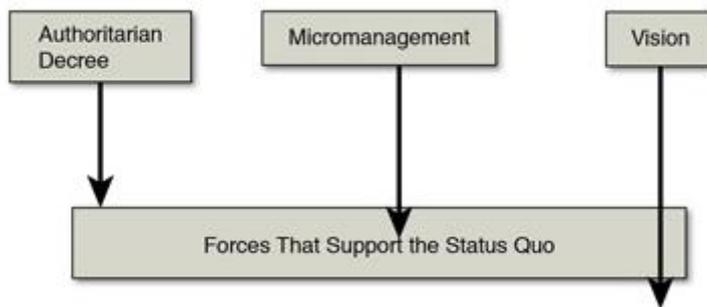


Figure 3: with vision breaking through resistance [20]

II. LITERATURE REVIEW

To get the competitive benefits and achieving an efficient chain of supply Ragu-Nathanb, Raob, Ragu-Nathanb and Lia introduced a quantitative research. In their research they used data that was collected from 196 companies. They introduced many methods and structural equation. It is defined that the cost become low if the supplier take part in the initial stage of design of a product because the product may design according to the requirement of market. The product may differ from the products of competitors and it is very easy to access the design.

In 1987, 1988 von Hippel and in 1987 Hakansson defined supply chain context that are taken from only buyer. But in current scenario many researchers invent the supply chain innovations. For settings, multiplicity of organizations and circumstances the innovation in supply chain is increases rapidly as a multidisciplinary activity. Many multidisciplinary activities are describe by Mahajan and Wind in 1997, Leonard-Barton in 1995, von Hippel in 1995, Takeuchi and Nonaka in 1995 and Hakansson in 1987.

III. INNOVATION OF SUPPLY CHAIN

The performance of supply chain is affected through innovations. To reduce the cost and fulfill the requirement of the customers the innovated supply chain aspects are given below [8]:

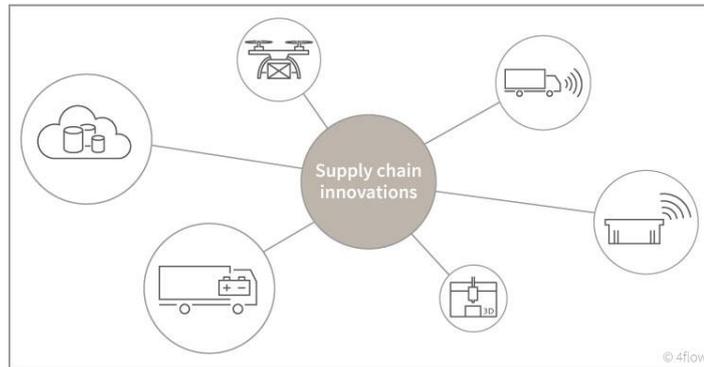


Figure 4: Innovation of supply chain

1. Manufacturer design: the product should design in a way that can produce easily and it decreases the manufacturing cost.
2. Assembly design: for making the assembly process easy the quantity of the components should be reduce. Generally this design produces subsystems that are easily combined.
3. Product Serviceability Design: the product should design for reuse of components, assembly and disassembly of elements. The products that are assembled with large parts are difficult to repair as compare with these products that are made from small components. In large components it is complex to access separate part.
4. Six sigma design: to reduce the cost, consistency improvement and for failures elimination the product is design. For instance a manufacturer of an appliance decided to use same kind of electric cord in complete appliance instead of using several different electric cords. Throughout the supply chain the Six Sigma design example is the Standardizing of parts.
5. Environment design: within lifecycle to decrease the impact of environment it design a product. It can done by using more effective chain of supply, by recycling waste or by less packaging [2].

IV. KEY INNOVATIONS

There are many innovations take place in study of various researches some key innovations in supply chain management change and Productive Resistance in Interorganizational Projects are given below [9]:

1. Big Data, Internet of things (IoT) and artificial intelligence (AI)

Without requirement of human the internet of things uses networking, sensors and technology. The internet of things allows sharing the information of supply chain with additional 'things', devices, buildings and infrastructures. In a supply network for all participants it makes the data richer and provides deeper intelligence.

From the decision-making process involvement of human removal can exploit through Big Data potential. And the Artificial Intelligence (AI) becomes critical at that point.

2. 3D Printing

Between transportation costs, low-cost labour forces and inventory holding by rebalancing the trade-off 3D Printing uses for transform supply chains [10].

3. Automation and robotics

In many warehouse the automation and robotics are adopted at wide level because of the trend of demand and supply. In e-commerce logistics importance is rising and labor forces are reducing so it required the automation. There is also a threat of losing the many logistics jobs take place by increasing in automation and robotic industry.

4. Blockchain

On a computer across a decentralized network the transactions digital record are permanent stored in Blockchain. It has many advantages in several sectors like asset tracking, accountability and compliance, cost-saving and data verification.

5. Marketplaces of Digital Logistics

To find the mismatch between demand and supply many new techniques are used by market of warehouse. It improves the shipper rate and provides better use of assets.

6. Crowd-Shipping and On-Demand shipping

During an existing journey involvement of ordinary individuals delivering parcels is known as Crowd-shipping. In the market it can create a new source of capacity [11]. On demand technique developed a way for availability of home delivery services through small retailers and food outlets.

7. Autonomous driving

For revolutionize the global industry of logistics the autonomous driving is the major phenomenon. As it can seen the technology taken place in manufacturing of vehicle like Mercedes Benz and Google vehicles.

8. Other Fuels

It is studied that in the coming years large portion of vans and vehicles powered by using hydrogen cells, natural gas and electricity instead of diesel. So some alternative fuels are discovered to fulfill the demand of fuels [3].

V. IN SUPPLY CHAIN RELATIONSHIPS A MODEL OF INNOVATION GENERATION

The innovation generation and interactions link can be affected through many factors. These factors are divided in 2 categories:

1. The factors that can manage by managerial action on either side or that are internal with seller and buyer relationship. Trust, IT adoption and commitment are this kind of factor.
2. The factors that are not control by system and they are outside the relationship. network connections, tacitness of technology and stability of demand are come in these type of factors [6].

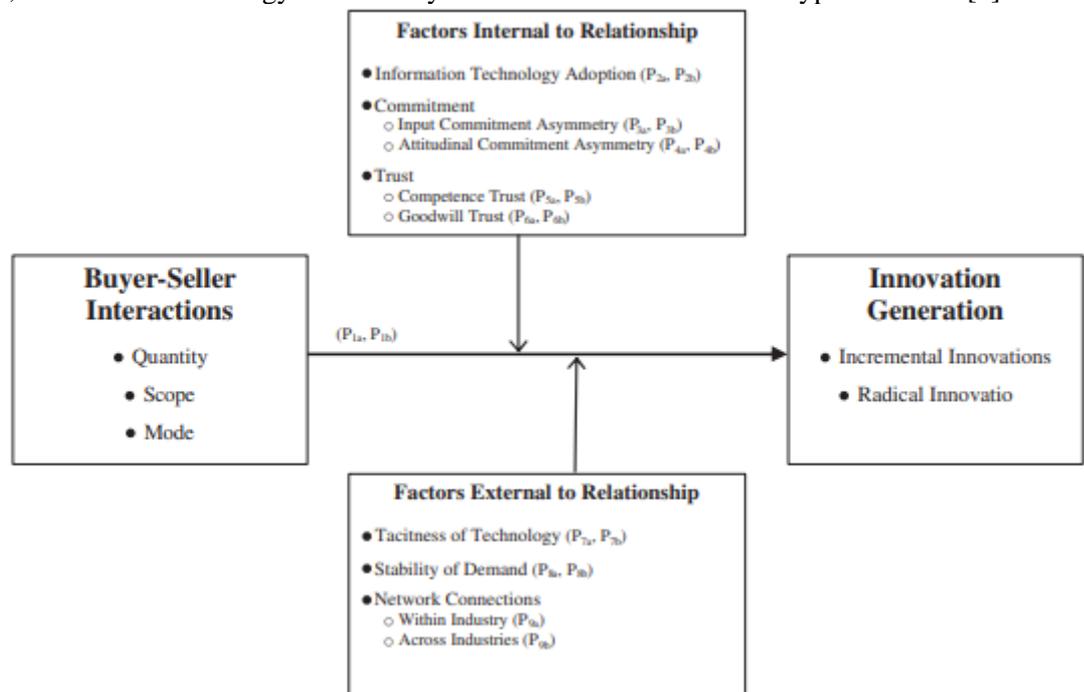


Figure 5: In Supply Chain Relationship a model of Innovation Generation [6]

VI. LIFE CYCLE OF PRODUCT IN SUPPLY CAHIN INNOVATION[2]

There are 4 phases in each product life cycle. It is defined below:

1. Phase of launching: product is introduced in the launching phase. In warehousing and manufacturing the demand is less and for capacity company has a lessen need [12].
2. Phase of growth: in this phase the product is learned by the customers, the customer purchases it and about the experience it gives the feedback. For refining the product this feedback is very necessary [13].
3. Phase of maturity: for stabilizes the demand in this phase sales begin to flatten.
4. Phase of market decline: the sales will off and demands are declined at the end of the life cycle of product [14].

VII. CONCEPTUAL FRAMEWORK

For prepare an initial taxonomy of supply chain innovation, compare, and catalogue a conceptual framework is developed. To contrast and compare several innovations this conceptual framework is useful. They study about several barriers, elements, drivers in supply chain innovation of supply chain [16, 17,18].

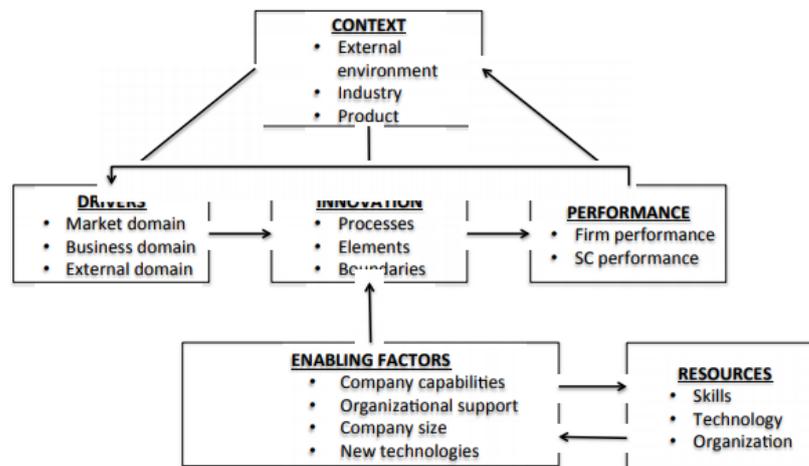


Figure 6: The Conceptual Framework

VIII. CONCEPTUAL FRAMEWORK KEY ELEMENTS [18]

The framework of conceptual context includes key elements are given below:

It motivates the innovation of supply chain by drivers and in some chases in the supply chain they force the companies to adopt the innovations. There are three main drivers are:

1. Domain of market: Market domain includes the market globalization. It indicates that competition not limited to area specific or local environment rather then it takes place on the basis of global market.
2. Domain of Business: business domain refers as company's product variety. For the complexity level it provides the proxy. Instead of external factors the crisis is relevant to policies of business. In the market place the organization should handle the competition
3. Domain of outside: the external factor impact is considered as external domain. Stakeholder pressures and governmental support included in external domain.

Three main contextual factors are given below that are based on traditional study:

1. Outside Environment: where the system operates it shows the characteristics of the country.
2. Industry: sometime particular industries innovate specific product.
3. Product: the product considers the product lifecycle position and the core business of the company.

4 main factors of enabling are:

1. Using the new techniques

2. Support of organization
3. Size of company
4. Capabilities of organization

There are four main enabling factors:

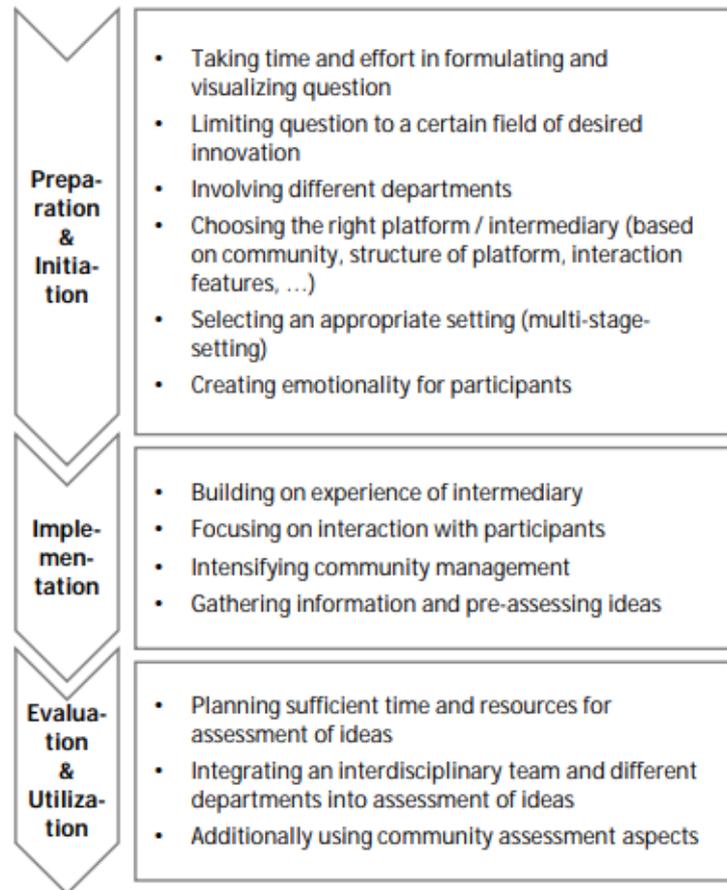


Figure 7: in Innovation Contests the Success Factors [19]

IX. CONCLUSION

it is exceptionally fundamental for the business to convey the things to the clients and clients as per their necessities in an effective chain of supply. In the middle of the total life cycle of an item to keep up the expense and stream of item the directors of production network works all the more proactively and all the more creatively on the grounds that it is persistently developing the worldwide marketplace. Supply chain is the extremely critical territory of business in any industry. The store network not just decides the nature of the item that purchases through the client yet in addition it characterizes the productivity dispersion. The creative supply chain is the real piece of efficiency of any business. In huge business associations the in complete inventory network to build the responsibility and proficiency the framework get the most recent procedures and strategies.

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