

# **Problems and Solutions, Quality Management Systems in Startups Business**

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## **Abstract**

Startup business success stories, especially in the creative industry, currently dominate businesses in the world, including in Indonesia. Start-up businesses are expected to develop and master various lines of business, which change human civilization and habits, especially in the use of digital technology. This study aims to see how the implementation of quality management by startup businesses, the constraints, and solutions are carried out. The research was conducted on MSEs based on creative industries, especially food. The startup business studied is in the bootstrapping stage, where the business is still run by the nuclear family and there is no capital investment. The research method is a survey, on a startup business that is developing in West Java, Indonesia. The data shows that SMEs experience problems in the quality management system, especially looking for forms of quality planning and control, collaboration is still low both from upstream and downstream which results in low product and service quality. Start-up businesses will develop well if they use digital marketing as a marketing base and collaborate with suppliers and distributors who have reliability in product quality and distribution.

## **Keywords**

Startup Business, Quality Management, SQC, Supply Chain Management, Digital Business

## **1. Introduction**

The year 2019 was the year when pandemic COVID-19 attacked the world which had an impact on slowing economic growth, businesses suffered losses, unemployment increased and even many large companies finally laid off almost 80% of their employees. Indonesia in the second quarter of 2020 experienced very small economic growth, namely 2.97%, far from the 5% target, this condition was caused by COVID-19, and this is also experienced by many countries in the world. On the other hand, there are many positive impacts of the existence of COVID 19, namely the growth of business startups using internet technology as a business base. Internet technology ushers in cultural changes in the world community both in economic, development, political, social, etc. One of the significant impacts of the internet is the growth of artificial intelligence-based businesses. Banking, transportation, business delivery, food and beverage, oil and gas, etc. all involve themselves in the use of the internet. Gojek, Alibaba.com, Traveloka, Kopi Kenangan, Ovo, etc. are examples of internet technology-based businesses that have succeeded in achieving significant growth.

A startup business is a start-up business that is usually digital based in its business processes, starting as a personal business with a little help from the family and growing into a big business and even involving investors for the funding process. Digital involvement in startup businesses mainly occurs in the sales process by involving the marketplace, Fb ads, Tiktok Ads, and Google Ads.

Indonesia is ranked as the 5th largest in the world after Canada. Based on BPS data (bps.go.id) in 2020, it shows that 90.18% of digital-based business is carried out in the marketing process by utilizing social media, marketplace, and also digital applications. Most of the business sectors involved or 48.42% are in the food, beverage, groceries, fashion and cosmetic businesses, using the COD (Cash on Delivery) payment method and directly to non-industrial end consumers.

The business fields that are mostly engaged in by startups are transportation, delivery or courier services, food, fashion, e-commerce, health, household equipment, and even to large industrial products such as machinery, vehicles, building materials, etc.

Humans are blessed by Allah SWT, with advantages that they have compared to other God's creations such as animals and plants, namely high adaptability and high creativity and innovation. COVID-19 requires humans to get out of civilization and old habits, technology becomes a choice in all aspects of life, whether in business, organizations, or meetings. Several sources indicate that startup growth during COVID-19 is estimated to grow 20% to 30% with employment reaching 15 million, but this encouraging number is accompanied by a relatively high startup mortality rate of 18% to 25%, so it is estimated that startups are which still survive only about 2% to 5%. Many of the problems experienced by this startup business include access to low sources of raw materials, access to capital, access to technology, and also partners in the process of shipping goods. 90% of technology-based startups fail, due to services with a limited number of consumers and low flexibility, especially when there are changes in features desired by consumers (Blank, Steve, and Dorf, Bob, 2012). Watson, K., Hogarth-Scott, S., and Wilson, N. (1998), state that the success and failure of a startup business are influenced by the background or initial motivation for establishing the business, the problem-solving process, and also the expectations and goals of the owners for the startup they build.

Digital marketing is a marketing process by utilizes technology, through Facebook, Ig, and Google Ads. One of the fast-growing startup businesses in Bandung is Annvis Sukses Sejahtera (ASS), which was founded by a 19-year-old student, who engaged in culinary and fashion, and in 2020 received an award from Poxel in collaboration with the Ministry of Tourism and Creative Industries as an online business with the highest delivery turnover from Bandung.

High sales turnover is accompanied by various problems in the process of providing quality services to consumers. The problem that occurs is the high rate of return of goods or returns from consumers, and this condition disrupts business continuity. This study wanted to examine how ASS carried out the quality management process at the beginning of the company's establishment, what the problems were and how the solutions were carried out.

## 2. Literature Review

### 2.1 Startup Business Concept

The concept of a start-up business is widely found in the business literature, with the same or sometimes different approaches and views, Van de Ven et al (1984) as the first scientist to introduce the concept of a start-up business with an entrepreneurial approach, organizational development, and ecology. Startup companies or business startups are used for business terms that are newly established and usually still in the product introduction and market search phase, with internet or digital technology as the basis of their business (Ries 2011). Start-ups start a business with the skills they have or use the skills of others in making products and services, market on a digital basis (e-commerce), and usually still use their own energy and capital in the initial phase. While Blank, (2014) stated that startup is a business activity to find a model that can be repeated and large-scale at one time. In the development of a startup, there are several stages including Seed and Development, Startup Stage, Growth and Establishment, Expansion, and Maturity and Possible Exit (Blank, 2014). Meanwhile (Salamzadeh 2015) states that startups have 3 life cycles as shown in Figure 1 below

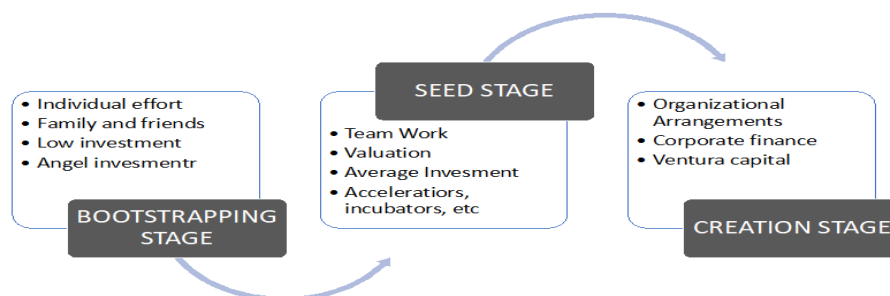


Fig 1: Lifecycle Start-up (Salamzadeh 2015)

The first stage is the bootstrapping stage, which is the stage where the business starts which is marked by the owner being the manager, sometimes assisted by family or friends, the initial capital is entirely from the owner. The purpose of this stage is to position the product, market search, cash management, team building, and management and analyze the risk or failure that occurs (Brush et. al. 2006). Harrison et al. (2004) mentioned that at this stage the values of entrepreneurship are being adopted and built. The seed stage is the stage where the startup is able to get out of the initial stage, the business begins to find its shape both in terms of products and services as well as from the risks it faces and has shown significant sales, this stage is marked by opening branches or market expansion so that it requires investors from both banks and non-bank institutions, teamwork has been formally standardized, at this stage the startup starts looking for partners to help grow the business either through incubators or another coaching. At the seed stage, many finally did not make it through.

The success of a startup business is largely determined by the entrepreneurial factor of the owner, especially in the ability to innovate and participate with customers. (Pri Agung Danarrahmanto, Yudi Azis 2019). There is a challenge for the development of a start-up business from the gender aspect, where female business actors believe that business knowledge and skills are not a factor in the success of starting a startup business, while for men, knowledge, and skills are not a driving factor for the success of a startup business. Weiblen (2015) states that startups have the advantage of being entrepreneurial, flexible, or easy in transferring business types and innovation, while large businesses have well-established resources and facilities, and this condition is not owned by startups. Both business entities need collaboration to strengthen advantages and weaken limitations.

## **2.1 Quality Management Concept**

Understanding what is called quality, is not too easy to define, but in reality, we can feel the concept of quality. The following are some general definitions, Goetsch & David (2014): quality is a dynamic state associated with products, services, people, processes, and the environment that achieves or exceeds customer expectations. Fred Smith, CEO of Federal Express (in Goetsch & David, 2014)., defines quality as performed according to the standards expected by customers. GSA defines quality as meeting customer needs the first time and every time. The concept of quality according to ISO 9000:2000 is the degree or level of characteristics attached to a product that meets the requirements/wants. The meaning of degrees or levels is that there is always an increase all the time. While characteristics mean the things that the product has, namely: physical characteristics (electrical, mechanical, biological), behavioral characteristics (honesty, politeness), sensory characteristics (smell, taste) etc. Quality is also defined as a preventive process, not only fulfilling consumer desires, but the prevention in question is also the prevention of process failures because it will have an impact on increasing costs. Hansen and Mowen (2015) quality is defined as a relative measure of consumer perception and is also interpreted as an effort to achieve the level of perfection of products and services, where perfection can be interpreted as zero errors. Garvin (1988) mentions that there are eight dimensions of quality, which can be used as a framework for strategic planning and analysis, performance, features, reliability, conformance to specifications, durability, serviceability, esthetics, and perceived quality. The implementation of a quality management system will not work well even though large companies, joint ventures, and private companies have a high score in the implementation of a quality management system, while a low score for state-owned companies, (Strömsten, T. & Waluszewski, 2012). This condition cannot be separated from the bureaucracy attached to state companies (Li, J., Anderson, A.R. and Harrison, R.T.2003). Quality products are not only the responsibility of the company itself but are also influenced by the process of raw or upstream materials, also in the delivery or downstream process, so the role of the supply chain is very important (Tejaningrum 2016)

There are three stages in the implementation of quality management (Irianto 2005), namely stage (1) initiation regarding the introduction of quality management and its principles by the owner and business leader, raising awareness of the importance of quality, this condition usually occurs due to quality problems in the company or also learn from various sources, both reading materials in the form of books, writings, journals, etc. or also get input from fellow business people, (2) Adoption, at this stage the company leadership adopts one of the quality management systems, namely TQM, Six Sigma, ISO 9000, MBNQA, etc. and the third stage (3) is an adaptation, namely adjusting all systems towards quality improvement by making adjustments, and improvements, standardization, and even certification. The scheme is described as follows: (Figure 2)

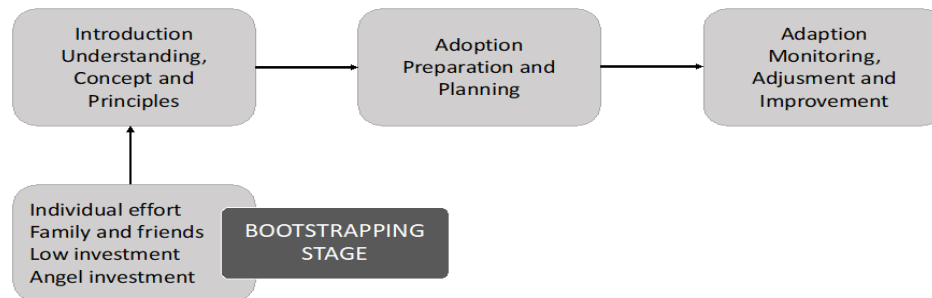


Fig 2: Stages of Implementing a Quality Management System ( Irianto, 2015)

In this study, we adopted the quality management system of Irianto (20150), which was modified by including elements of the start-up business stage. In accordance with field conditions, the object of research, namely ASS, is still in the bootstrapping stage, where the business is still managed by itself, the owner and manager, investing using their own capital and also a little help from parents, in business development using friends and family to help manage. The 2015 version of ISO 9000 sets out nine principles of a quality management system, namely: Customer focus, Leadership, People involvement, Process approach, Systematic approach to management, Continual improvement, Factual approach to decision making, mutually beneficial, and supplier relations. The principle of the quality management system was also conveyed by Dale., et., al (2012)

### 3. Methods

A qualitative approach is used as a research methodology, with a case study design on a start-up business that is developing in the city of Bandung, West Java. This method can be used to reveal phenomena by collecting data and information in the field and is sufficient to solve problems (Yin 2013). The main advantage of research with this approach will produce in-depth and comprehensive information because we involve examining directly the individuals involved in the object of the research. (Petty, Thomson & Stew, 2012). Interviews, observations, and also secondary and primary data collection were used as data collection tools. Data analysis uses a p control chart to analyze whether the process is under control or not, also assisted by Pareto analysis to see 20% of problems to solve 80% of problems. The next analysis is to see how the perception of the company's leadership on the concepts and principles of quality management.

## 4. Data Collection

### 4.1 Start-Up Profile Sample

The research was conducted in the fashion and food trade industry in the form of frozen meatballs named ASS, which is located in East Bandung, West Java. This company was founded by young people aged 19 and 22 years, with the status of students. The history of the establishment of this company is when the Coved 19 entered Indonesia, precisely in February 2020. The business began by selling food at that time, almost all households needed food, but it was difficult to access the market because it was limited, and also a condition where the Indonesian people, there are around 155 million Facebook and Instagram users.

Starting the first business using What up as a marketing channel, continuing to develop with the Reseller system, and to be precise in August 2020 using Facebook Ads and Instagram ads, as well as Goggle Ads. This business is growing rapidly, which was initially only done by two people, it took a long time to recruit a workforce of 8 people. The business continues to grow, by opening new products, namely various types of food, not only based on chicken but

also beef, as well as women's sandals. Both types of products are marketed with digital marketing to the Jakarta, Bekasi, Bogor, Tangerang, Depok, Bandung, and Cimahi areas.

ASS, is included in the bootstrapping stage classification, which is a start-up business that still uses personal funds for initial capital and business development, uses family or close friends as employees who help the business and owners engage directly in all business activities, and has not used external funds, such as banks for capital. business.

#### 4.2 Problem of Quality Product and Service

ASS management sets the vision and mission, as a company that can provide happiness for consumers and welfare for employees. Providing services to consumers requires accurate and error-free collaboration with the stakeholders involved, namely suppliers as sources of raw materials and distributors as product introductions to consumers. Schematically, the supply chain of this company is as follows (Figure 3):

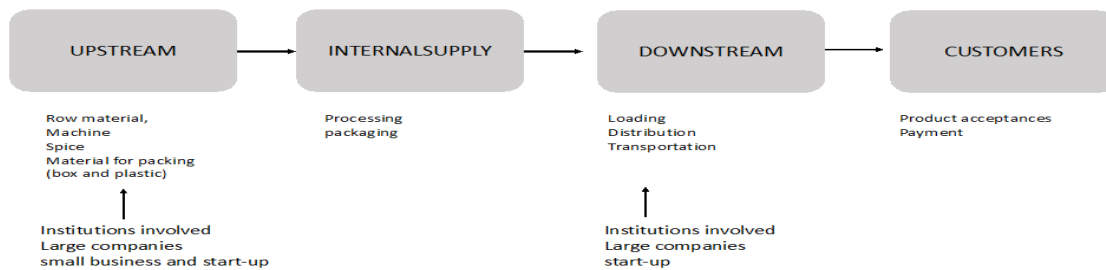


Fig 3. Supply chain ASS

The following is data on the number of product shipments and product rejections/returns during the period from February 2020 to August 2021

Table 1. Number of shipments and rejections, period February 2020-Augustus 2021

2020/2021	Number of Shipment (pcs)	Number of rejections (pcs)
February	1052	15
March	1321	45
April	1322	32
May	1320	29
June	900	32
July	260	12
August	1432	16
Sept	1563	17
October	1570	12
November	1600	9
December	984	12
January	1732	21
February	1756	13
March	1476	21
April	1872	37

May	2300	56
June	2500	57
July	2740	46
August	2780	36
Total	30480	518

Based on Table 1, there are data on 518 (1.7%) shipments that were returned or rejected by consumers and returned to ASS as a seller. Based on interviews, the number of rejections is worth approximately IDR 37 million, or the equivalent of IDR 2.4 million per month. Of course, this number is very high for a start-up business, so it will interfere with business sustainability. By using a control chart, we can analyze the process and see if the process is constrained or not. the following is the p control chart, to control and control the process.

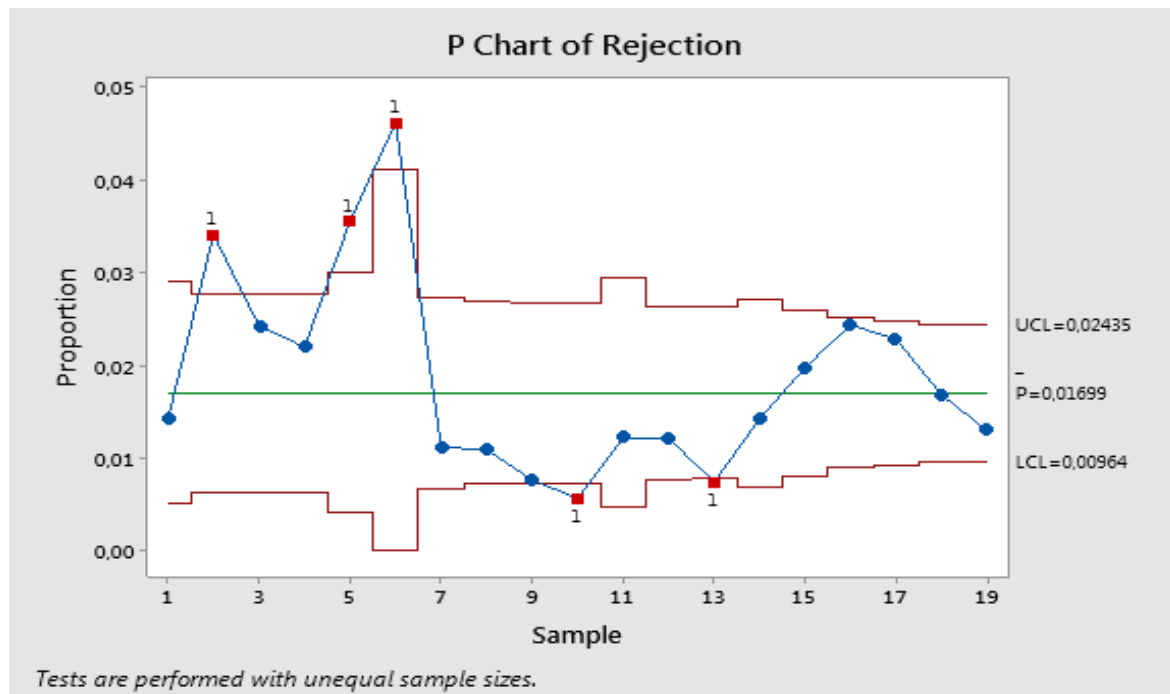


Fig 4. Control chart for the number of shipments and rejections.

Based on Figure 4 above, the process is in bad condition because there are five points that are outside the control limits, this condition shows the system has different causes, which are not controlled by the ASS management. This condition also shows that the system is not standardized, variability is still high or there is a different system of causes in the process. The following are types of problems from the reasons for product processing by consumers or products not reaching consumers, resulting in returns.

Table 2. Cause of Rejection the Shipment

Cause of Rejections	symbol	Number	%
Food Products are not fresh and stale	A	234	48.5
The delivery time limit exceeds the provisions (max 24 hours)	B	71	13.9
Broken of packing	C	70	13.7

Swapped Shipping between consumers	D	50	9.8
mismatch of quantity and type of delivery	E	49	9.6
Shipping address error	F	37	7.2

Based on the Table 2, we can make a Pareto diagram as shown in Figure 5 below:

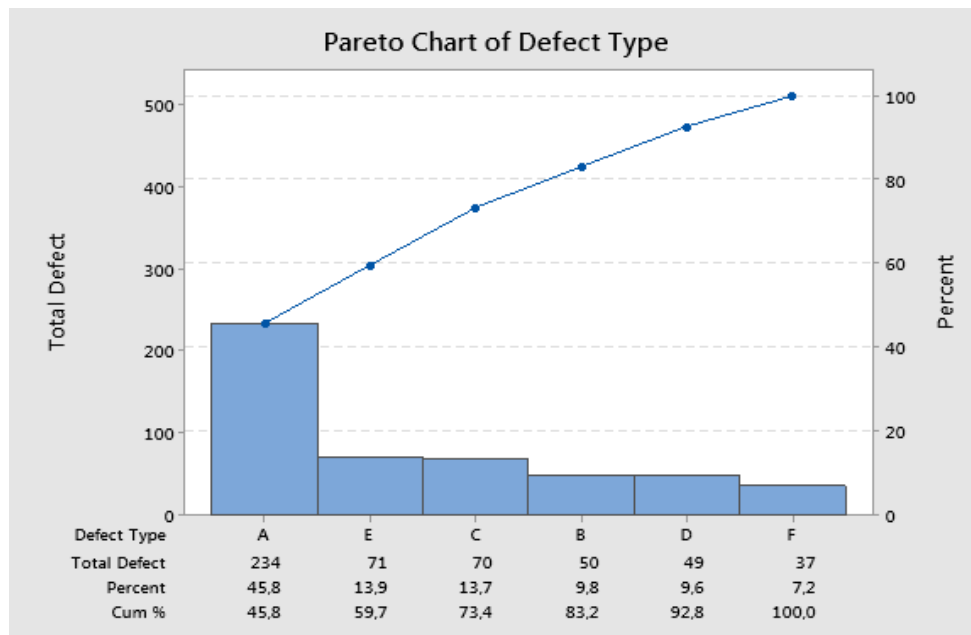


Fig 5: Pareto analysis for the number of cause rejections in the shipment

## 5. Results and Discussion

### 5.1 ASS management's Understanding of Quality

To see how ASS managers understand the concepts and principles of quality management, the researchers conducted interviews directly, by asking several questions. The following are the conclusions of the results of the interview: (1) ASS management understands and believes that quality must be number one in business management, they are very understanding when consumer disappointment occurs both from the service aspect (late delivery of the product) and from the product aspect (stale product) causing losses from the financial aspect directly and also Consumers don't make purchases anymore. (2) ASS management is very aware that promotions must be accurate and more careful, because based on the records of many consumers, they compare the products received with the images provided in online media. ASS management's understanding of the principles of quality management, based on the results of interviews and observations, is as follows:

- (1) The principles of the first quality management system related to focus on consumers have been well implemented by ASS, some of the activities that lead to this are, always replacing goods when consumers give complaints, goods until more than 24 hours, ASS will replace with new goods the next day.
- (2) Partial continuous improvement was carried out, especially in the use of raw materials, but in the distribution process, there were still obstacles due to cooperation with third parties.
- (3) Leaders from ASS have not maximally concentrated on the quality management process, because they are still focusing on sales targets, promotions, and branding. ASS management apart from being a leader also acts as a sales force that is in continuous contact with consumers every day.



- (4) The system approach has not been fulfilled to the fullest where the problem solving about quality is still partial, when the problem exists at that time it is solved without further analysis to keep the problem from coming out again.

## **5.2 Solution for rejection of shipments**

According to ASS management, problems related to quality can be identified in the supply chain, namely upstream as raw material suppliers, manufacturing as processors, and downstream as distributors. The following are the causes and solutions.

### **Upstream**

Upstream is the source of raw materials, seasonings, materials for gaskets and the machines used by ASS in business processes. As stated above, the first rank is food that is not fresh or category A and is the dominant problem. Based on the results of the analysis, this incident is caused by raw material suppliers, 90% are SMEs whose processes and products are less standardized. ASS management tries to find various sources of materials to obtain standardized quality. In some raw materials cannot be obtained from large industries because the required quantities have not reached the minimum purchase requirements. Partnering with suppliers who have high standardization of materials, has an impact on reducing product variability.

### **Internal supply**

Conformities that often arise due to activities in internal supply or within the company itself are (a) the inventory system, especially food freezing, which is still perfect so that it gives a different taste on several occasions, (b) the vacuum machine used often provides a high vacuum density. different (c) the production process is still traditional with cooking utensils that have not been standardized for temperature and cooking time (d) HR is still in the process of being standardized. For this condition, the management acted by purchasing a high-tech vacuum machine, with a fairly large investment, and was proven to be able to make food vacuums more accurate so that food freshness could be maintained. The next step is investing in a freezer with adequate capacity to support a good inventory system and the last is the standardization of processing in cooking time, use of spices, and cooking stages. This condition makes the food sold relatively has the same taste and also lasts longer.

### **Downstream**

The most common suitability occurs downstream, namely in the category Shipment returns occur for various reasons including: (1) Delivery errors occur due to the similarity of the consumer's name so that the goods are exchanged, in the process of exchanging goods it takes a longer time, for example, it should be from South Jakarta to East Jakarta or vice versa. (2) Address tag error, when creating a delivery address for consumers, the IT team experienced an address tag error. In both conditions, the settlement that is carried out is re-checking for compatibility between the name, address, and also type of goods sent.

## **6. Conclusion**

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## **References**

- Brush, C. G., Carter, N. M., Gatewood, E. J., Greene, P. G., & Hart, M. M. The use of bootstrapping by women entrepreneurs in positioning for growth. *Venture Capital*, (8), 15-31. 2006. (2006).
- Blank, Steve, and Dorf, Bob. *The Startup Owner's Manual<sup>TM</sup>, The Step-by-Step Guide for Building a Great Company*. California: K and S Ranch Inc., K&S Ranch Publishing Division. (2012).
- Blank, S. what's a startup? First Principles. *Nature Reviews Drug Discovery*, 13 (8), 570-570 (2014). <http://doi.org/10.5121/ijcsit.2015.7213>
- Dale H. Besterfield, Carol Besterfield-Michna, Glen H. Besterfield, Mary Besterfield-Sacre, Hemant Urdhwarshie, Rashmi Urdhwarshie. *Total Quality Management Revised Edition*. For Anna University, /e By Pearson.2012.
- Garvin, D. A. *Managing Quality*. New York: The Free Press 1998.
- Goetsch Davis Quality Management for Organizational Excellence: Introduction to Total Quality., Pearson Educational Limited.36-5. (2014).
- Harrison, RT., Mason, C.M.,&Girling, P. Financial bootstrapping and venture development in the software industry. *Entrepreneurship & Regional Development*, 16(4), 307-333. 2014.
- Hansen, D. R. & Mowen, M. M. *Cornerstones of Cost Management*. Canada: Cengage Learning. 2015.



- Irianto, D. Quality Management Implementation: A Multiple Case Study in Indonesian Manufacturing Firm, Ph.D. Dissertation, University of Twente, Enschede. 2005.
- Li, J., Anderson, A.R. and Harrison, R.T. "Total quality management principles and practices in China", *International Journal of Quality & Reliability Management*, Vol. 20 No. 9, pp. 1026-1050. (2003). <https://doi.org/10.1108/02656710310500833>.
- Petty, N.J., Thomson, O.P., & Stew, G. (2012). The author's personal copy is ready for a Paradigm shift. Part 2: Introduction Qualitative research methodologies and method Author's personal copy.
- Pri Agung Danarahmanto, Yudi Azis., A Business Model to Support Sustainable Performance of Digital Startup CSID *Journal of infrastructure Development.*, Vol 2, No 2., 2019.
- Ries, E. *The Lean Startup*. New York: Crown Business. (2011).
- Strömsten, T. & Waluszewski, A., Governance and resource interaction in networks . The role of venture capital in a biotech start-up. *Journal of Business Research*, 65(2), pp.232– 244. 2012.
- Salamzadeh, Aidin and Kawamorita Kesim, Hiroko, Startup Companies: Life Cycle and Challenges. Proceedings of the 4<sup>th</sup> *International Conference on Employment, Education and Entrepreneurship*, Belgrade, Serbia. Vol 2, No 2., 2019 (2015).
- Tejaningrum., A., Mapping the Supply Chain Issues SMEs and Impact for Quality Products. *Management Studies Journal*, January 2016, Vol. 4, No. 1. 2016.
- Watson, K., Hogarth-Scott, S. and Wilson, N. Small business start-ups: success factors and support implications", *International Journal of Entrepreneurial Behavior & Research*, Vol. 4 No. 3, pp. 217-238. <https://doi.org/10.1108/13552559810235510>. 1998
- Weiblen, T. & Chesbrough., Engaging with startups to enhance corporate innovation, *California Management Review*, 57 (2), pp.66-90. 2015.
- Van de Ven, A. H., Hudson, R., & Schroeder, D. M. Designing new business startups: Entrepreneurial, organizational, and ecological considerations. *Journal of Management*, 10(1), 87-108. 1984.
- Yin, R.K. Case Study Research: Design and Method. SAGE. (2013).

## **Biographies**

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