CHAPTER 4
ANALYSIS AND RESULT OF THE STUDY

4.1.Talent Challenges Faced by Startups that Affect the Startup Success

Talent challenges are also known as human resources related issues. It can vary from the easiness of startups in finding relevant talents, how much of the talent may cost, the talent quality. All participants agreed that talent has a significant effect on startup success. However, not all sectors see talent issues as the most concerning bottlenecks.

Logistic startups struggle to find local talents who work in the field, finding talent with in-depth knowledge of the sector and the overpriced tech and IT talent price. Startups in the logistics sector have a vital role in improving connectivity between thousands of islands in Indonesia. Their performance is highly seen on how they can reach the remote areas in Indonesia, regardless of the infrastructure setbacks and the diverse culture that is owned by each area. The first challenge a logistic startup in Indonesia needs to overcome is on finding local talents or talents who work in the field. In accomplishing their work, startups often need to hire a local team. Given that education levels and the culture on how they do things might differ in each area, startups must adjust their system to be sufficient for the local area. They are usually unfamiliar with the bureaucracy workflow, which often makes it harder when collaborating with SOE (State-owned Enterprise).

a. The CEO of logistic startup 3 mentions about quality disparity of talent:
    In some areas that they went, the local people they hire does not understands bureaucracy.

b. The CEO of logistic startup 3 mentions about local talents:
    The locals they hire do not care much with document reporting requirements of the company which often makes it more difficult for them.

Our participants mentioned that in some places they go, the education level and the literacy rate are low. Some of the local teams they hire still face difficulties in simple mathematics calculations, which often leads to miscount and some errors in

the reporting process. The local team usually has a different pace in adopting technology, so some parts of the business must be done manually.

a. The CEO of logistic startup 3 mentions about the local talents:

They have to send someone to the location to crosscheck the number of items themselves.

b. The CEO of logistic startup 3 mentions about the low literacy of the locals:

There are a lot of the locals they hire are not good at doing simple mathematics.

Logistic startups in Indonesia also face difficulties in finding talent with an in-depth understanding of the sector. The logistics sector requires in-depth technical knowledge and experience. They are dealing with many people with diverse backgrounds, having to fulfill a lot of technical requirements, and the workflow in logistics is complicated. Our participants mention how they face difficulties in finding a project engineer. A project engineer needs to have a deep understanding of the business and usually three to four years of education.

a. The CEO of logistic startup 3 mentions:

It is harder to find talents for the project engineer since they must have three to four years of experience since the job is pretty risky. Many details need attention. For light projects like deliveries are easier since they only need to educate the talents for one to two months.

b. The CEO of logistic startup 1 mentions:

They need someone who understands the end-to-end process. The startup needs someone with a strong engineering background that understands well about the required technology that is used along the process.

The last challenge by logistic startups in Indonesia, which is on the overpriced technology and IT talent as many companies are putting more effort into digitalization. As the e-commerce sector is at its rapid rise, and the tech startup industry in Indonesia started to emerge. The demand for tech talent in Indonesia is getting more competitive. The limited domestic talent pool makes a big startup willing to pay big money to acquire talents. The role of tech talent in logistic startups is vital for Indonesian logistics startups is prioritizing digitization. Our

participants mention that it is hard for them to acquire tech talent since they are still proving their traction and endlessly developing their system. They cannot afford to pay tech talent at such a high price. Our participants mention how they provide other benefits like work flexibility and remote working as a strategy to attract talent.

a. The CEO of logistic startup 2 mentions:

The price of today's tech talent is very unreasonable. Big startups have taken many good techs. The big startups are willing to pay talents at a high price since the pool of tech talent in Indonesia is still limited. The talent war between big startups causes the price of tech talent in Indonesia to soar exceedingly high.

b. The CEO of logistic startup 1 mentions:

Finding tech talent is challenging since they cannot afford to pay them as high as the unicorns and other big startups. They need to offer them other benefits like working flexibility and support if they wish to learn new things through courses.

The second sector, waste management startups are struggling to find a specific or deep-tech talent and a founder level talent. Aside from the rising number of waste collection startups in Indonesia, more waste processing startups begin to appear. Waste management startups innovate and try to find solutions for waste recycling waste or waste prevention by making zero waste products. Since waste comes in many forms with many processing methods, this innovation requires specific talent. Our participants mention how they are still struggling to find a talent to process liquid and fabric waste. Our other participants mention how they struggle to find HR talent and talent to be in the founding team.

a. The CEO of waste management startup 2 mentions:

They still cannot find talent that can process liquid and fabric waste.

b. The CEO of waste management startup 3 mentions:

Finding founder level talent is more challenging than finding talent as an employee.

The third sector, fintech startups, complain about their difficulties in finding C-level talent and the quality and price disparity for tech talent in Indonesia. Fintech

startups mention how they are affected by the tech talent war that is happening in Indonesia lately. Our participants mention that the available pool for tech talent is scattered and that there are a quality and price disparity for tech talent in Indonesia. The available talent is not as skillful as expected. However, the rising demand for tech talent and the limited number of tech talent in Indonesia leads to overconfident talents. Many current tech talents cannot meet the startup's expectations. Fintech startups have a high expectation of their tech talents and a different skill set like web development, mobile application, and data analysis (Fadila, 2020).

a. The CEO of fintech startup 1 mentions:

It was challenging to find competent talents that can pass the test. There are undoubtedly plenty of excellent talents in Indonesia; however, the pocket for tech talent itself is scattered.

b. The CEO of fintech startup 2 mentions:

It is challenging to find talents, especially in IT (tech). It is incredibly competitive. Nowadays, the new candidates from an IT background seem to be overconfident. They are not as good when they are being tested.

Fintech startups also face more difficulties in finding an experienced C-level talent. As the tech startup ecosystem starts to develop, there is a rising number of tech talent in Indonesia. However, the talent is still too new as they do not have a lot of experience and in-depth knowledge about the sector. Whereas in the fintech sector, it is essential to have a co-founding team who knows how to deal with them OJK and customers. Our participants share how they struggle to find a CTO level of talent because it is scarce and costly.

a. The CEO of fintech startup 1 mentions about talent cost:

Tech talent is very costly because the big startups are willing to pay them with a very high price.

b. The CEO of fintech startup 1 mentions about talent experience:

Many good new tech talents are coming up, but they are still very green (new). The tricky part is trying to find the CTO level engineers.

The fourth sector, healthcare startups, mentioned that the available talent for medical device engineering is limited. The scarcity of hardware tech talent is one of the leading causes of the lack of hardware innovation in the sector. In Indonesia, there is a rising number of healthcare startups. One of Indonesia's telemedicine healthcare startups is expected to be the next unicorn in the country. However, most healthcare startups are applications and software-based. There are rarely startups offering hardware products, which is caused by the scarcity of hardware talent for health products. The CEO of healthcare startup 1 mentions that the number of hardware engineers now is not much either. There is still a lack of software engineers, not to mention the hardware engineer.

Table 4.1. Summary of Most Significant Talent Challenges Faced by Startups

Sector	Challenges
Logistic	- Finding local talents and talents to work in the field - Finding talent with in-depth knowledge of the sector and business - Overprice tech and IT talents
Water management	*(no significant talent challenges in the sector)*
Waste management	- Finding a specific or deep-tech talent and managerial level talent.
Fintech	- Tech talent in Indonesia is very scattered. Quality and price disparity for tech talent in Indonesia. - Finding C-Level talent
Healthcare	- Lack of medical device engineering talent
Agriculture	*(no significant talent challenges in the sector)*

To summarize, sectors like fintech and logistics are focusing so much on digitalization, so they focus more on tech talent acquisition. It aligns with the research of Kollman et al. (2016) that mentions that staff acquisition is one of the challenges startups will face since startups usually start with a few co-founders only. As they grow, they need to find more experts and human resources to develop their business. The costly tech talents are also one bottleneck that many startups need to deal with, mainly if they are focusing on digitization. It aligns with the research of Hermann et al. (2015) that mentions talent cost or the average market salary of talent as one of the things that startups founder focuses on the hiring

process. Health and waste management sector is a deep-tech sector, so they usually have a more profound concern in finding specific and knowledge-intensive talents. The water management and agriculture sector do see talent as an essential factor in determining a startup's success. However, founders in water and agriculture startups usually have a strong background in the sector, so they do not see talent as an urgent issue. Among many of the concerning challenges our participants mention, these are the most influential and repetitive talent challenges found in the sectors are described in Table 4.1.

4.2. Market Challenges Faced by Startups that Affect Startup Success

Market challenges include end-to-end market dynamics, market acquisition-related issues, which includes the competition, including Porter's five forces that affect market behavior. All participants agreed that the market has a significant effect on startup success. It is one of the most common indicators used to determine how a startup is growing and progressing.

For logistic startups in Indonesia, market acquisition remains a challenge due to the traditional nature of logistics operation. Startups need to make a significant effort to educate their market and convince them to adopt the product or service they offer. Their customer might vary from corporates, governments to individual users. One respondent mentions how they spend a long time educating their customer. It includes a multinational company since they are not familiar with the business model they offer. Our participants also share how acquiring a market remains a challenge even though they do not have any startup competitors. They need to go against the traditional way. They find it challenging to convince their customers to adopt the platform as some may not see it as a necessity. The other end of the customer is not ready to adopt such technology.

a. The CTO of logistic startup 1 mentions:

Educating the customer is hard since they are not so aware of the digital information and on-demand concept for the warehouse. Big companies may be familiar with warehousing since they have one their own. However, they are not familiar with the on-demand business model of warehousing

b. The CTO of logistic startup 2 mentions:

It is hard to educate the users, who are mostly exporters. They had a hard time convincing them to use the platform and educate them so they could use the platform effectively. It was also difficult when they first collaborate with the government since they need to integrate our platform with the government's system.

Secondly, water management startups struggle to find their path to profitability, raising awareness of the importance of clean water, and finding a market that is ready to adopt the technology. Water management startups in Indonesia still struggle in finding their product-market-fit and their path to profitability. Most water management startups in Indonesia are focusing on tackling fundamental water management issues like improving water quality and access to water in remote areas and for low-income society. However, Indonesian sees the water facility as a necessity that should be granted by the local governments. Therefore, most water management startups in Indonesia are establishing a B2B or B2G business model on a project basis to attract customers more quickly. Our participants mention how their startup faces a harder time to monetize and put a high-profit margin because of their startup target less developed and remote areas.

a. The CTO of water management startup mentions about water facilities:

Access to clean water and adequate water facilities are seen as a facility that the government needs to provide.

b. The CTO of water management startup mentions about their target market:

Despite targeting individuals as their market, their startup is targeting government and companies CSR.

Acquiring customers also remains a challenge because there is still a lack of awareness of clean water, especially in remote areas. The startup we interviewed mention how they need to put on more effort to find areas that need their support and educate them about the importance of clean water. Besides raising people's awareness of the importance of clean water, customer acquisition remains time-

consuming. Startups need to ensure if the people are ready to adopt the technology they offer since not all customers are ready to use the product they are offering. The CTO of water management startup mentions:

a. The CTO of water management startup mentions about low awareness:

The awareness of the importance of clean water is still low, especially in drought areas where people do not mind using dirty water. People in the area are not aware of the risk, so they do not do much to avoid or tackle the issue. People depend more on government support.

b. The CTO of water management startup mentions about how they design the product:

It was quite challenging to teach the locals on how to operate and maintain the device. They have to make the device to be as user-friendly as possible so it can be used by everybody easily. They also form a community where they focused on teaching young people in the village.

Third, waste management startups find it hard to acquire market because wise waste management is not yet a lifestyle. It is also hard for them to find customers with pure intention and aligned in value. Waste management startups find it hard to acquire customers, even though environment-friendly and zero waste products trends are at their rise. Even though it is a rising trend, it is not yet a lifestyle that is quickly and easily adopted by all layers of society. Our participants share how they need more time to educate their customers when they launched their products. They need to explain to them since their eco-friendly products might cost more than the conventional products. Waste management products are used more by mid-class society and corporates.

a. The CEO of waste management startup 1 mentions about waste management as a trend:

Ethical products and environmental-friendly are still at the trend stage. Carrying tote bags and tumblers is a rising trend. However, it has not become a lifestyle.

b. The CEO of waste management startup 1 mentions about market education:

Educating the market was challenging when they first established their startup. They were recommended not to use the eco-friendly concept since they already

have a good design. The eco-friendly concept can be a setback since the material is more difficult to obtain.

The participants also find it challenging to find customers with the same value. One of the participants wants to ensure that the solution they implement is sustainable. The participants mention how it is challenging to ensure that the companies implement the waste management solution as a long-term solution. Not as a short-term commitment to developing a company image.

a. The CEO of waste management startup 2 mentions about filtering partners: They were picky about with whom they are collaborating since many just want to build an image.

b. The CEO of waste management startup 2 mentions about value alignment with customer: They mention that they will only collaborate if the company committed to doing it long term

In the fourth sector, fintech startups are struggling with market acquisition because financial literacy in the country is still low. Startups in the sector are also struggling in competition with more established players, and building a credible company image. Fintech startups find difficulties in introducing their product to the market. It is because Indonesia still pursues low financial literacy, security, and inclusion compared to other Asia-Pacific countries. There is a gap between the Indonesian's perception and the actual condition in terms of financial literacy. The most popular financial products they use are savings, insurance, and credit cards. Indonesian is less familiar with foreign products like investment and obligation. (Mariska, 2019). One of the interviewees mentioned how the literacy rate and people's knowledge about wealth management are still low in Indonesia. It was hard for startups to explain all the financial instruments and the funding structure to first-timers. Our participants also mention that even though the P2P trend is rising, the lending penetration in Indonesia is still low.

a. The CEO of fintech startup 2 mentions:

It is not easy to explain the entire story and educate people about a financial app since it is not as simple as e-commerce apps or dating apps.

b. The CEO of fintech startup 1 mentions:

> The financial literacy in Indonesia is still low. Many people are not aware yet to financial instruments alternative. Many of them do not understand the stock investment, let alone peer-to-peer lending.

Fintech is one of the fastest developing sectors with most a high number of investments after e-commerce. Many leading players in the sector have started to appear, mostly offering lending and e-wallet products. Competition and market acquisitions are getting tighter and more intense as new players in the sector need to compete with more established players. One of the participants mentioned that despite the benefit their startup has as a sharia startup, they still need to compete with non-sharia fintech startup. Since the fintech sector is getting crowded, they need to build a credible company image. Startups need to catch up with a more established startup on improving quality and building a good reputation.

a. The CEO of fintech startup 1 mentions about competition:

> They need to compete with established players directly.

b. The CEO of fintech startup 1 mentions about building company image:

> They need to show the market that their working standard and operation are as good as the more established players.

Fifth, healthcare startups are struggling with market acquisition because some healthcare ecosystem players cannot adopt new technology quickly. Indonesian market spending on preventive healthcare is still low. Last, the sector's market characteristic is also unique, for it shows higher demand for a more specific product. Healthcare startups customers might vary from hospitals, patients, direct users, doctors, and governments. Often, the business partners are not ready to adopt the new technology since they are used with the traditional system, which is often inefficient. One of our participants who is producing a hardware healthcare product mentions how private-owned and state-owned hospitals have different product needs. It requires them to adjust their products according to their customers. Our participants also mention that many hospitals are not ready to adopt the product. The hospital systems are complicated and might differ from another, and changing

into a new platform or system requires too much work to change the whole system. It makes it harder for them to changes from one to another.

a. The CEO of healthcare startup 1 mentions about market adaptation to technology:

Each healthcare ecosystem player may also need to improve their digital skills. So, they will not be surprised and not finding difficulties in catching up with technology development.

b. The CEO of healthcare startup 1 mentions about healthcare ecosystem readiness in adopting tech:

There are still many hospitals that are not ready to take part in the 4.0 revolution.

Even though market awareness of health is at rising, it is still considered low when compared to the massive number of untapped markets and unevenly distributed. There are still a lot of areas in Indonesia that is unreachable to the health startups in Indonesia. Our participants mention that despite the rapid growth of health awareness in Indonesia, the amount of healthcare product spending is still considerably low.

a. The CEO of healthcare startup 1 mentions about market:

Indonesian are willing to spend money just for treatment and when they are severely sick. They do not do health treatment from the beginning, let alone prevention.

b. The CEO of healthcare startup 1 mentions about lack of spending and awareness:

More education is needed in healthcare in Indonesia. That is one indicator of why the spending money rate on healthcare in Indonesia is still low.

The healthcare sector pursues a unique market characteristic. Startups in other sectors are competing to generalize their product, aiming their product to be used by a wide range of the market with a diverse background. Healthcare startups cannot make a general product. Higher demand in the healthcare sector is located beneath startups who manage to establish a more specific product, addressing specific market needs. The CEO of healthcare startup 1 mentions that healthtech in

Indonesia is unique as it gets more attractive to the market if the startup is offering a more specific service.

Lastly, for agriculture startups in Indonesia, socializing and educating users, market, and farmers remain as the hardest challenge. Even though some farmers have started to adopt some technology innovation, most of the processes are still very conventional. Startups consider the socializing and educating farmers as a painful and pricey process; however, it is a process that must be faced by all agriculture startups for a market breakthrough. One of our participants mentions that despite how much efficiency and transparency a technology may bring to farmers in the sector, technology transfer is still low. Our participants mention that one of the causes of the low technology transfer to startups is the low education level of farmers. The CEO of agriculture startup mentions that the technology transfer to farmers is incredibly low and slow in Indonesia. The farmers are already comfortable with the traditional method of farming they use.

Startups find it challenging to gain trust from the farmers, convincing them to adopt a new innovative solution. Our participants mention how they need to lend products to farmers for free to try first before purchasing the product. They also need to give farmers many incentives and offers, so they are willing to try and use the product. The CEO of agriculture startup mentions about how most farmers want to try first and feel the impact of using the product. So, to get their trust and convince them, they let the farmers try the product first for free.

Table 4.2. Summary of Top Market Challenges Faced by Startups

Sector	Challenges
Logistic	- Acquiring market due to the traditional nature of logistics operation.
Water management	- Finding product-market-fit and path to profitability. - Raising awareness to clean water, especially in remote areas. - Finding a market who is ready to adopt the technology
Waste management	- Wise waste management is a rising trend but not yet a lifestyle - Finding customers with the same value and pure intention

Sector	Challenges
Fintech	- Indonesia's financial literacy, security, and inclusion is still low - Competing in the market acquisition with more established startups that have gained bigger tractions and investments - Building a credible company image
Healthcare	- Market's readiness in adopting new technology (hospitals, users, doctors, patients, governments) - Indonesian individual spending on healthcare products is still low - Unique market characteristic show higher demand for specific healthcare products
Agriculture	- Socializing and educating users, market, and farmers - Gaining trust from the farmers

To summarize, regardless of what stages and which sectors the startups belong, market acquisition and competition are always on the top priorities. It aligns with the research of (Tjokro et al., 2020) that mentions that startups must have a secure product/market fit regardless of what sector and what stage they are on. Lack of founders' focus in the area can cause startups to be outcompeted by other players. Most sectors still struggle to educate their customer due to the traditional nature of the sector. They might be bringing a whole new product to an industry or bringing modifications to the existing market (Helfat & Liberman, 2002). So they need to deal with market challenges around the cultural or social norms and domestic market burdens since it is key to establishing an innovation-driven business (Bosma et al., 2020; Daniels et al., 2016). More mature sectors like fintech are more concerned about the competition between players in the ecosystem. The fintech trend is already on the rise, and the market is ready. Among many of the concerning challenges our participants mention, these are the most critical and repetitive market-related challenges found in the sectors are described in Table 4.2.

4.3. Regulation and Government-related Environment Challenges Faced by Startups that Affect the Startup Success

Challenges in regulation and government-related environments may include but are not limited to all government-related business environments, political environment, bureaucracy, and tax incentives. All participants agreed that regulation and the

government-related environment have a significant effect on startup success as a startup regardless of what sector and which stage they are on. Startups are highly dependent on the current regulatory framework and government support in the sector.

First, logistic startup complains about the complicated and inefficient regulatory framework that is followed by many of the grey and unregulated areas in the sector. They also mention that startups in the sector are very dependent on the local authorities, and there is still a lack of government support in the sector. Logistic startups mention that establishing a startup in the sector is hard as the permit and administration process is complicated, time-consuming, and expensive. There are many documentations that they must meet, and the registration process of the business itself can take them years with no guarantee of success. Our respondent mentions how using an agent might help them shorten the time; however, despite the expensive fee they need to pay, the time is still long. There are also a lot of unclear requirements which confuse startups which leads to more complication and more extended time. The CEO of logistic startup 3 mentions that licensing in the field of transportation is difficult to obtain, especially in the field of water transportation. It takes time. It took them two years to finish the whole process.

The regulatory environment is not ready to welcome startups as there are still many grey and unregulated areas. The participants mention how they had a hard time taking care of operational license as there is no relevant classification for the business they are establishing. This misclassification may lead to further problems regarding taxation and other regulatory issues. Our respondent also mentions how they are faced with many layers of authorities. They need to adjust their business a lot as they go since there are many unregulated and grey areas in the regulation that leads to different interpretations and inconsistency between the governments.

a. The CTO of logistic startup 1 mentions about taxation:
    The taxation system for the warehouse is quite complicated. The warehouse is taxed twice as it falls on the owner and customer side.
b. The CTO of logistic startup 1 mentions about licensing process:

The licensing process itself is also quite complicated. Their clients who are creating a new warehouse shares that obtaining an operational permit that is time-consuming and costly. They need to take care of licensing for the next few years, while the client has not yet existed.

Logistic startups are still very dependent on the local and central authorities, which means it is almost impossible for them to do things outside the authorities' approval. Indonesia is a country known for its many layers of authority. In addition to the central government, local governments and local authorities also have a dominant role and a strong position in each area. Logistics startups often need to tap into many areas regardless if it is a city or remote area. They are involved with many government layers as they need to go cross borders. They need to get approvals from many parties since each area has its local authorities and policies since each area has a different culture and standard. Our participants mention that they still need to go to the local authorities to take care of another license to run the project. Even though they already hold an official letter from the central government for running a project in some area.

a. The CEO of logistic startup 3 mentions about dependency to local authorities:
   They have to look for the local authorities if the project is involving many people. In some projects, they must make several meetings with the regional head.

b. The CEO of logistic startup 3 mentions about making a local impression:
   Their team did not stay at the hotel. They stayed at the regional head's house during the project for about three weeks. It is one way of making a local impact and impression on the local people.

Logistic startups mention that the government incentives to support the sector is still lacking. Logistic startups hold a significant role in helping the governments to solve the everlasting issue of Indonesia, connectivity. Startups may give a significant number of supports they contribute to Indonesia's economy and the considerable impact they may bring to the country's remote and untapped areas. Logistic startups need a huge capital to start. They might also be progressing a little

bit slow as they need to deal with some issues as they grow. They need to deal with issues like inadequate infrastructure, local authorities, locals in remote areas. Incentives like tax incentives and other incentives to lighten their operational expenses will be helpful for startups. The CEO of logistic startup 2 mentions that there are no supporting incentives that the government gives, and they are hoping that there will be some incentives that the government gives in the future. It can help startups to grow and expand. If logistics is taxed, it is harder for them to gain profit since the profit margin is thin, and the market acquisition in the sector is laborious.

Second, water management startups find it hard to connect with the central government. They also mention that they are highly dependent on the village and local authorities. Water management startups are very dependent on the village and local authorities. Getting the local authorities' support is crucial as water management startups are more likely to target small villages and remote areas. Water management startups are often collaborating with the village authorities or with big corporations targeting remote areas. The respondent shares how they need they need to spend a long time convincing and approaching the village authorities to ask permission and support in implementing the project. Some also need to get the agreement of local landlords for the project they are executing. The CTO of water management startup mentions that it was complicated to take care of the permit of project implementation with the regional head (local authorities). They need to approach them slowly. It is not as simple as installing tools in a day or two and then left. Sometimes they need permission to drill springs. Besides asking permission to the landlord, they have to ask permission from the village head, which often takes a long time.

Water management startups find it hard to connect with the central government. Startups in the sector find it easier to connect with the local government. However, they still have not found an effective method and a suitable channel to connect with the central government. The CTO of water management startup mention that their startup wants to collaborate with the central government like the Ministry of

Environment or the Ministry of Social Affairs. However, there is no channel to connect with them because the startup community in the area is not as developed as Jakarta.

Third, startups in waste management are highly dependent on the village and local authorities. Startups in the sector also mention that they are often used as political instruments and still need to face waste mafias that are still holding a significant role. The waste management startup faces much confusion and misinterpretation in the sector because of the government inconsistencies caused by the grey areas in the regulatory environment. There are a lot of unregulated areas in the waste sector. The participants mention how a clear KPI does not accompany waste regulation, and there is no precise control method from the government. This inconsistent regulation environment may lead to misinterpretation and holes that often negatively used by certain parties. The respondent shares how they were receiving different instructions from each different layers of government. There is a case where a company that ends up having to pay such a big fine caused by some miscommunications in the sector.

a. The CEO of waste management startup 4 mentions:

There are the terms of "open process" and "closed process" in treating B3 waste. However, there are no clear information and explanations of how each process differs from one another. The person in charge often cannot answer, and each official can give a different answer.

b. The CEO of waste management startup 3 mentions:

Regulations in Indonesia have no clear benchmarks. There are many thugs because everything is unclear; many aspects are a gray area. This grey area often confuses businessman.

The waste issue is a rising concern at the national and global level as many media highlight the topic. Many countries, companies, and public figures are putting much effort into tackling the issue. The waste management startup is often used as a political instrument for campaigns and other political interests to build an image. Collaborating with waste management startups may give a company or a political

figure a good reputation. The CEO of waste management startup 2 mentions that waste management is prone to become a political tool. Some political parties approached them. There are many cases that after the political program is finished, they still do not invest in the startup.

Waste management startups in Indonesia need to deal with the waste mafia as they are still dominant. This mafia exists because of the lack of law enforcement in the sector. The waste mafias usually work as the price controller of waste in Indonesia as they buy it at low prices and sell it at a higher price. Some mafias are so dominant that they can shut small players and other competitors. The CEO of waste management startup 3 mentions that the recycling industry is well known as the mafia industry. These mafias dare to face even government officials.

Fourth, healthcare startups' struggles for the sector are still tightly regulated with the available regulatory framework that is not supportive of innovation. There is also a lot of overlapping and mismatch regulation between players in the industry. Startups in the sector also face difficulties because the available incentives in the sector are not supporting all players in the industry. Healthcare startups mention that healthcare in Indonesia is very tightly regulated, and the available framework is not supporting digital innovation. Our respondent shares how the government and regulatory framework in medical pharmacy are not catching up fast enough with the people's needs. The respondent mentions how the regulation for licensing a healthcare device is complicated, which makes people tend to prefer importing a product.

a. The CEO of healthcare startup 1 mentions:

Healthcare regulations in Indonesia are not catching up and matched with innovation. The regulation is too slow to capture the needs of the people.

b. The CEO of healthcare startup 2 mentions:

The regulations for building the health industry in Indonesia are not supportive. As we enter the industry, they realize that making their product is more complicated. Importing is better since it is easier and more profitable.

Healthcare startups often face bottlenecks, as there are mismatch regulations and policies between players in the industry. Private-owned and state-owned hospitals, doctors, and governments may have different policies. Healthcare startups often find difficulties in fulfilling each stakeholder's expectations and making a system that is adjusted according to all the regulatory framework. The participants mention how this regulatory mismatch caused an enormous amount of provisions and documentation. The CEO of healthcare startup 1 mentions that they need to ensure that their startups are following the ethical ethics that exist in the healthcare sector. Many things need to be matched because the government and various hospitals can have different ethics.

The government incentives and programs in the health sector are not supporting all stakeholders in the sector (patients, doctors, workers, and hospitals). The participants share that programs like BPJS do provide better coverage of health insurance for broader society. However, on the other side, it forces providers and pharmaceutical companies to lower their pricing. It is inhibiting innovation in the sector and pressures the health service provider as they need to maintain the level of quality and access. The CEO of healthcare startup 2 mentions that the existing government programs certainly help people to get health services. However, the government still needs to look at which program gives support since there are many stakeholders in the health industry. Besides users, there are also service providers, including doctors, midwives, equipment, hospitals, or pharmaceutical companies.

Lastly, Agricultural startups complained of difficulties in obtaining licenses in producing hardware products. Participants talked about how they needed to receive help from researchers and experts who understood the regulatory frameworks to make it easier for them to get permission. The CEO of agriculture startup mentions that they work with researchers to know how to get patents because they understand the framework and requirements.

To summarize, for most startups in most sectors in Indonesia, regulation and the government-related environment is an all-time struggle. It aligns with the research

of Salamzadeh & Kesim (2015) that mentions the lack of attention in the area often causes failure for startups. There is still a lot of greys and unregulated area in Indonesia's regulatory framework. Anderson (2017;) and Kollman et al. (2016) mentions that government policies (taxes and bureaucracy) are one of the challenges that have a significant influence on startup success. The government policies they mention include the reduction of regulatory and administrative burden, the bureaucracy of government authorities, tax reduction or relief, and support for venture capital. Not to mention the overlapping regulation and bureaucracy, which is often tiring, complicated, and time-consuming for startups. In 2019, the government focused on regulating the fintech sector, making it harder for new players to tap into the competition. It is known as the internal market entry or entry regulations (Bosma et al., 2020). The participants in this research are all officially licensed fintech startup, which runs under the authorities' supervision. They see the tighter regulatory framework as a benefit as it elevates the barrier to entry for new players. Among many of the concerning challenges our participants mention, the most influential and repetitive regulation and government-related challenges found in the sectors are described in Table 4.3.

Table 4.3. Summary of Top Regulation and Government-related Environment Challenges Faced by Startups

Sector	Challenges
Logistic	Regulation - Complicated and inefficient regulatory framework - There are still many grey and unregulated areas. Government-related environment - Startup in the sector is very dependent on the local and central authorities - Lack of government incentives to support the sector
Water management	Regulation *(no significant regulatory challenges in the sector)* Government-related environment - Hard to connect with the central government (no access) - Highly depending on the village and local authorities
Waste management	Regulation - Highly depending on the village and local authorities Government-related environment - They are often used as a political instrument for campaigns and other political interests to build an image.

Sector	Challenges
	- They need to deal with the waste mafia as they are still holding a dominant role.
Fintech	*(no significant regulation and government-related environment challenges in the sector)*
Healthcare	Regulation - A tightly regulated sector and the available framework is not supporting digital innovation. - Overlapping and mismatch regulations policies between players in the industry Government-related environment - The government incentives and programs in the health sector are not supporting all stakeholders in the sector (patients, doctors, workers, and hospitals).
Agriculture	Regulation - Difficulties in obtaining licenses in producing hardware products Government-related environment *(no significant regulatory challenges in the sector)*

4.4.   Startup Facility (Infrastructure and SAO) Challenges Faced by Startups that Affect the Startup Success

Startup facility or startup supporting mechanism challenges includes startup ecosystem or SAO and infrastructure. Challenges around SAO may include the availability of startup communities, events, access to capital providers, and supporting institutions like accelerator and incubator. Challenges around infrastructure may include the availability of essential infrastructures like road access, internet, electricity, or a sector-specific infrastructure like highway and seaport. All participants agreed that a startup facility has a significant effect on startup success as it holds a big role in accommodating startups, startup quality, and its growth pace. However, not all sectors see startup facility issues as the most concerning issue.

First, logistic startups are affected by the infrastructure quality disparity between areas in Indonesia, and the lack of basic infrastructure (internet, road access, and electricity) in some areas. They also mention the quality gap between SAO in the country from SAO in other countries. Logistic startups must overcome the infrastructure quality disparity in some areas in Indonesia. This infrastructure

facility gap affects the cost, time, and logistic startups' easiness of tapping into some areas. East Indonesia is widely known as the less developed region. The participants mention that access to the eastern part of Indonesia is hard and costly. In some regions, Indonesia's domestic shipping cost is approximately three times higher than the international shipping cost (Sukaesih, 2016). The port in the eastern area is smaller than the ones in other regions. Big ships need to transit and change into smaller ships before reaching their destination in the eastern area of Indonesia. Our participants mention how the seaport quality determines the economic growth of each region as it affects the easiness flow of goods into the area. There is also a considerable gap between the availability of road access in remote regions of Indonesia.

a. The CEO of logistic startup 3 mentions:

The port infrastructure in Indonesia is not as good as the ones in other countries like Singapore. The port in Indonesia lacks digitization as everything is still done manually in the Eastern part of Indonesia. Most seaports in Indonesia do not have adequate depth and width to accommodate large vessels.

b. The CEO of logistic startup 2 mentions:

The economy in Indonesia is still very Java-centric or even Jakarta centric. One of the reasons the central government is planning to the central region is to balance economic development in all countries. The seaport quality is one of the crucial factors in determining the economic development of a region. The biggest ports in Indonesia are Tanjung Perak and Tanjung Priok. That is why Surabaya's economy can compete with Jakarta. In other regions where the seaports are not qualified, goods are difficult to get in and out, and the price for goods is higher compared to the ones from other regions.

Logistic startups also mention how necessary infrastructure is still lacking in some areas in Indonesia. Our respondent shares how some areas do not have proper road access. They need to build a road and access to reach a village. Our participants also mention that they cannot expand to some regions in Indonesia because they lack necessary infrastructures like the internet, electricity, and highway. The CEO of logistic startup 3 mentions that there is this one project when they have to send

big goods to one remote area in Indonesia. Besides sending the product, they also need to build a road since the existing one is too small and inadequate. The area is also lacking electricity as it can only be used from 6 am to 6 pm.

Logistic startups find the available SAO helps give strategic connections. However, logistic startups have a higher expectation of the SAOs as they mention that there is a quality gap between SAO in Indonesia compared to the ones overseas. They also mention that joining an accelerator or some intense startup programs might not be doable for them. Our participants share how they cannot join a program because the program requires all the founders to attend the Bootcamp. It was a time when they have some projects that require some of the founders to standby. The CEO of logistic startup 2 mentions that the accelerator abroad is much more advanced than the one in Indonesia, more corporate partners. They have this building like an office where all their corporate partners have a room so that startups can go upstairs for discussion and collaboration. The network and program facility of SAO is still so far from those abroad.

Second, water management startups' struggles for some areas in Indonesia still lack basic infrastructure (internet, road, and road access). They also mention that they find it hard to be in the startup ecosystem since SAO is to Jakarta centric. Water management startups in Indonesia face harder times implementing their product. Since some areas because many less developed regions are lacking necessary infrastructures like internet and road access infrastructure. Water management startups in Indonesia are targeting areas with poor water infrastructure. However, those areas usually have a poor road infrastructure, making it harder for them to reach the area. On the other side, internet infrastructure also holds a significant role in water management startups in Indonesia. Our participants mention that in most remote areas, the infrastructure is still underdeveloped. It makes it harder for them to monitor their products in remote areas from far away.

The CTO of water management startup mentions:

a. The quality of the road in some areas is still inferior. They have been to a village located in a drought are, and the road facility is inadequate. It gets worse when it is raining.

b. They cannot tap into all villages because we also consider the connection or network availability and quality in each area. They need to consider if the internet network or server in the village is suitable for the product.

Water management startups find that SAO is too Jakarta centric. Most water management startups are not developing in big cities like Jakarta. They are more likely to develop in smaller areas where water quality is not as good. These startups mention how it was tough for them to find startup communities, events, and access to funding in the area. The lack of SAO in the area is believed to take part in causing a quality disparity between startups in the areas. The CTO of water management startup mentions that the startup programs and community is very centralized in big cities. There are very few programs in smaller regions. They need to go to the nearest big city (Jogja) if they want to join a startup event because the startup ecosystem there is more established.

Third, the waste management startups mention that the available waste processing facility from the government is inadequate. Startups in the sector also find difficulties since there is still no relevant matrix to measure social and impact startups from the SAO. Waste management startups find that the waste processing infrastructure from the government is inadequate. The waste processing facility provided by the government is not well maintained and functioning. Some areas do not have enough waste collecting trucks. Our respondent shares how Indonesia's landfill is extremely limited, especially in big cities where the population density is remarkably high. As one of the examples, the landfill in Bekasi almost reaches its maximum capacity with around 6500 to 7000 tons of additional waste piling up daily. The CEO of waste management startup 3 mentions that the facility to accommodate and process waste in Indonesia is inadequate. Waste landfill in Indonesia is critical. In Jakarta, there is a place, but it is too narrow. Landfills in

Bekasi, Depok, and Bali cannot accommodate more trash anymore as it is almost full.

Waste management is a very social and impact-oriented sector. Waste management startups share how they see SAO in Indonesia does not have a relevant matrix to measure social and impact enterprises. The growth, traction, and valuation of impact and social startup are different from a commercial startup. The participants mention that such a matric will be helpful for startups to describe their business more accurately and helps SAOs for better screening. The CEO of waste management startup 3 mentions that there are many different startup submissions structures, but none are suitable for impact startup.

Fourth, healthcare startups face harder times providing equal health service across areas in Indonesia, as many areas remain untouchable because they lack the necessary access infrastructure. Our participants share that patients need to spend days of trips to reach the nearby doctor in some cases. In some other cases, startups cannot tap into certain areas because the product they offer requires a good internet connection. The CEO of healthcare startup 2 mentions that the first challenge in infrastructure they encounter is the internet network. They are using technology since they are a health tech startup. They can only tap into areas where the internet is available.

Fifth, agriculture startups find that SAO is too Jakarta centric. Most agriculture startups are not developing in big cities like Jakarta. Agriculture in Indonesia is located far away from the city where the water and air quality is still good. These startups mention how it was tough for them to find startup communities, events, and access to funding in the area. The lack of SAO in areas outside the Jakarta area is believed to cause a quality disparity between startups in the areas. The CEO of agriculture startup mentions that the development of Indonesian startups is still very centralized in the Greater Jakarta area. Most of the events are still centralized in that area, even though some events can be accessible via podcasts and streaming from other regions.

To summarize, Startups from sectors like water and healthcare are usually targeting remote areas. They are concerned with the availability and the uneven distribution of basic infrastructures like electricity, internet, and road access. Sectors like logistics and waste management are more concerned with a specific infrastructure that supports their sector. They are more concerned about infrastructure facilities like the seaport facility in some less developed areas and the landfill facility in big cities. It aligns with the research of Audretsch et al. (2014) that mentions that the availability of physical infrastructure and communication infrastructure is critical to startup success. The physical infrastructure mentioned in the research includes the availability of railway, highway, ports, and other traditional supports. The communication infrastructure includes the availability of broadband in some areas. Most startups in Indonesia areOn the other hand, agriculture and fintech startup do mention some startup facility improvements they see is necessary. However, it is not seen as a concerning challenge as they do not have any issue in reaching their market. Among many of the concerning challenges our participants mention, these are the most influential and repetitive startup facility challenges found in the sectors are described in Table 4.4.

Table 4.4. Summary of Top Startup Facility Challenges Faced by Startups

Sector	Challenges
Logistic	Infrastructure - Infrastructure quality disparity in some areas in Indonesia (a seaport in East and West areas of Indonesia) - Some areas in Indonesia still lacks basic infrastructure (internet, road, and electricity) SAO - There is still a quality gap between SAO in Indonesia and SAO in other countries
Water management	Infrastructure - Some areas in Indonesia still lacks basic infrastructure (internet, road, and electricity) SAO - SAO is too Jakarta centric
Waste management	Infrastructure - The waste processing infrastructure from the government is inadequate SAO

Sector	Challenges
	- SAO in Indonesia does not have a relevant matrix to measure social and impact enterprises
Fintech	*(no significant startup facility challenges in the sector)*
Healthcare	Infrastructure - Lack of basic infrastructure in some areas makes it harder for a startup to provide equal health service across areas in Indonesia SAO *(no significant SAO challenges in the sector)*
Agriculture	Infrastructure *(no significant infrastructure challenges in the sector)* SAO - SAO is too Jakarta centric

4.5. Funding Challenges Faced by Startups that Affect the Startup Success

Funding challenges include all financial and fundraising-related challenges. It holds a significant effect on a startup's success as it holds a determine the lifeline of a startup and is one of the keys for a startup to be sustainable. As this research is studying how external challenges affect a startup's success, the funding in the research is emphasizing on the startup access to external capital or investment. All participants agreed that talent has a significant effect on startup success. However, not all sectors see funding issues as the most concerning bottlenecks.

First, a logistic startup often faces difficulties in getting the investors to understand the business as logistics is a very technical and knowledge-intensive sector. There is rarely an investor who has an in-depth understanding of the business. Startups in the sector often face difficulties when building a pitch deck, explaining to the investors, and addressing the message. Getting investors to understand the business is crucial as one of the participants share how investor saw their market is unattractive. It is because the number of transactions and growth pace their startup has is not as fast as startups in other sectors, even if the transaction value is big. On the other side, the participants also mention how they often face difficulties in summarizing their complicated and technical business. They need to make it to be concise and understandable to people (including investors) with no relevant background. The CEO of logistic startup 3 mentions that summarizing and visualizing their startup into the paper is challenging, as they need to pack it into

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less than 20 pages. They need to translate the knowledge of years and a lot of technical details into everyday language. They know that their business is hard to understand for people with no relevant background.

Secondly, water management startups in Indonesia face a harder time fundraising because of their social label and often seen as a non-profit oriented startup. Water management startups in Indonesia are still in the pre-revenue stage or the early growing stage. They are still focusing on market validation and finding their path to profitability. Unlike other startups that are focusing on generating profit, water management startups are more social and impact-oriented. The participants share how investors prefer the startup to go commercial and focusing on gaining profits. Hence, startups in the sector usually rely more on grants and competition awards. The CTO of water management startup mentions that not all investors like startups like them because they are more like a socio-startups. There was a time when they went to pitching, and the investors tell them to focus more on doing business (generate revenue and profits).

Third, Waste management startups struggle in finding an investor with the same value and finding an investor who is not number oriented. Waste management startups struggle to find investors with the same value. Some waste management startups manage to find their path to profitability, show promising traction and growth as waste management has started to be a broad concern. However, due to the impact and social-oriented nature of the sector, finding an investor with the same value is crucial. Startups need to find an investor with a matched investment appetite. The CEO of waste management startup 1 mentions that they need an investor with the same vision. They need an investor who invests more than money. They need strategic investors with the same vision and mission with relevant experience in the industry.

Startups find it hard to find an investor who is not number oriented. They want investors who are willing to work together to tackle environmental issues as the startup are focusing on building traction and showing more significant growth. Startups in the waste management sector complain about the unrealistic expectation

that the investor has to the impact-oriented startups. Many investors, including the early-stage investors, are demanding significant traction, and fast growth. Many of investor's expectation makes it more difficult for waste management startup because aside from gaining profit, startups in the sector need to make a sustainable impact. The CEO of waste management startup 3 mentions that some investor expectations are too high and unrealistic. They often aim for short-term profits, which makes it harder for startups that are focusing on impact and social.

Fourth, fintech startups find it challenging to find an investor who is familiar with the business. Fintech is seen as one of the most promising sectors in Indonesia, aside from e-commerce. As the lending, crowdfunding, and payment ecosystem is getting crowded. Startup starts to capture the other side of the fintech market. Many of the startups are establishing an investment and risk management fintech startup, and some are also bringing in more variation into the fintech market like sharia. Our participants share how it took them a long time to explain to the investors the essential wealth management before being able to tell about their business. On the other hand, our participants also share how they are often asked on how sharia business model differs from the conventional model. The CEO of fintech startup 2 mentions that they find it hard to explain their business to investors. They have to walk them through since it is quite complicated, especially if the investors are not having a local insight about the landscape.

Lastly, Healthcare startups are aiming for more than financial support from their investors. Healthcare startup finds it crucial to find an investor who can also give them strategic support. As mentioned earlier, the healthcare startups ecosystem is very exclusive. The leading players must have strong founders background and strategic support in the sector, so startups are putting higher expectations to their investors. They need to find an investor with in-depth knowledge about healthcare in Indonesia due to the complicated nature of the sector. The CEO of healthcare startup 3 mentions that they are looking for investors who can work together and give them strategic support. Startups need an investor who does not just put their money and pursue short term gain.

Table 4.5. Summary of Top Funding Challenges Faced by Startups

Sector	Challenges
Logistic	- Explaining their business to investors because logistics is a very technical and knowledge-intensive sector.
Water management	- Being too attached with the social label and often seen as a non-profit oriented startup
Waste management	- Finding investors with the same value - Finding an investor that is not number oriented
Fintech	- Finding an investor who is familiar and understands their business
Healthcare	- Finding an investor who can give strategic support.
Agriculture	*(no significant funding challenges in the sector)*

To summarize, sectors like waste and water management that is often an impact and social-oriented startup. They are emphasizing to finding an investor with the same value, and not number oriented is a priority. Technical business models like logistics and fintech usually struggle more to explain their business to investors who are usually do not have in-depth knowledge about the sector. On the other hand, healthcare startups try to find investors that can give them more than just additional capital. Startup in the sector also aims for an investor who can give them strategic support. It aligns with the research of Google & A.T. Kerney (2017) that points out that choosing an investor is vital for startups since each type of investors has their own expertise and focus. Among many of the concerning challenges our participants mention, these are the most important and repetitive funding challenges found in the sectors are described in Table 4.5.