Challenges faced by early-stage startups that want to create a new category in a highly regulated market. Devising a practical framework that can be replicated by early-stage startups.

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by

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CERTIFICATE

It is certified that the work contained in this thesis, titled “**Challenges faced by early-stage startups that want to create a new category in a highly regulated market. Devising a practical framework that can be replicated by early-stage startups.** ” by **Prasanth Garapati**, has been carried out under my supervision and is not submitted elsewhere for a degree.

Date   Adviser: Prof. Ramesh Loganathan

To my mother - who moved mountains to raise me and my sister

Acknowledgments

This thesis is an effort to capture and evaluate the learnings from the audacious journey of the start-up Commut. It aims to share these insights for the practical benefit of other early-stage start-up founders.

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Abstract

This thesis explores the complex journey of early-stage startups attempting to create new categories within highly regulated markets. It focuses on devising a replicable framework to aid similar ventures. Using Commut, a tech-based shuttle service in Hyderabad, as a case study, the research delves into multiple aspects: identifying market gaps, profiling ideal customers, market sizing, unit economics, pricing strategies, marketing, and navigating regulatory landscapes.

Commut's journey is detailed, highlighting innovative solutions to regulatory challenges and practical strategies for success. Initially, Commut identified a significant market gap in the transportation sector despite negligible search volume and press coverage. This gap was confirmed through extensive surveys and pilot runs. The research emphasizes the importance of creating data where none exists, demonstrating practical methods for validating market needs. The study also details Commut's five-step process for identifying its Ideal Customer Profile (ICP), highlighting the practical challenges and solutions in the absence of predictive data. Through trial runs and customer feedback, Commut fine-tuned its services to meet the specific needs of IT employees, focusing on safety and convenience, particularly for women.

Market sizing was meticulously performed using various data sources, ensuring that the business potential was substantial. Commut's innovative approach to unit economics and pricing involved developing a unique pricing algorithm based on distance traveled, ensuring operational profitability and fair pricing for customers. Marketing strategies were creatively designed to maximize impact with minimal budgets, utilizing unpaid media articles, strategic branding, and highly effective social media campaigns. This approach ensured wide-reaching brand awareness and customer acquisition at low costs.

Raising capital was particularly challenging due to regulatory hurdles. Commut successfully leveraged domain-specific impact funds and accelerator programs, notably receiving significant investment from the Shell Foundation. This funding strategy is presented as a viable alternative for startups facing similar challenges. Navigating regulatory frameworks required Commut to engage proactively with policymakers, industry bodies, and think tanks. The study outlines how Commut influenced policy changes by demonstrating its positive impact through clear metrics and collaborating on safety features with local police.

The findings suggest that category-creator startups in regulated sectors must develop an indigenous framework tailored to their unique challenges. The thesis concludes by validating two key hypotheses: the necessity of a bespoke framework for success and the critical need for practical examples of regulatory navigation. These insights provide valuable guidance for future entrepreneurs aiming to innovate within regulated industries.

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Chapter 1

Introduction

This thesis explores the significant challenges faced by early-stage startups attempting to create new categories within highly regulated markets. Using the startup Commut, a tech-enabled shuttle service in Hyderabad, as a case study, the research delves into the processes of identifying market gaps, profiling ideal customers, and conducting market sizing. It also examines devising unit economics and pricing strategies, implementing effective marketing campaigns, and navigating regulatory frameworks. By analyzing Commut's journey, this study aims to provide a practical framework that can be replicated by other startups facing similar challenges in regulated sectors.

Chapter 1 discusses how founders pick a problem to work on, the startup's lifecycle, category creation in startups, and the role of regulation in category creation.

1.1 How do founders pick a problem to work on?

Any founder would say that starting a business is like navigating a maze with an incomplete and ever-changing map. Market changes, new technological advancements, funding scenes, and sometimes even war determine a startup's future. Each turn in the maze brings its twists but demands quick decisions and adaptability.

Startups journey:

A startup idea can simply stem from a founder's interest and experiences or expertise in a field. And other times, it is from mere frustrations with existing products or services and ambition to change status-quo. However, the idea with which a founder enters this maze can heavily change the course of their journey and its difficulty. Once the founders are inspired by an idea, they conduct market research to find the pain points experienced by potential customers. Assuming the pain point exists, it establishes a coveted 'gap' in the market that all startup founders chase to validate their ideas. The founders and their team quickly set out to build and launch a Minimum Viable Product (MVP). At every point, they iterate on the product with regular feedback from the customers. Founders implement a build-measure-learn loop to continuously refine the problem and solution based on real-world feedback. Once the Product Market Fit (PMF) is established the next focus is to scale the company.

1.2 Category creation in tech startups: Value creation and challenges

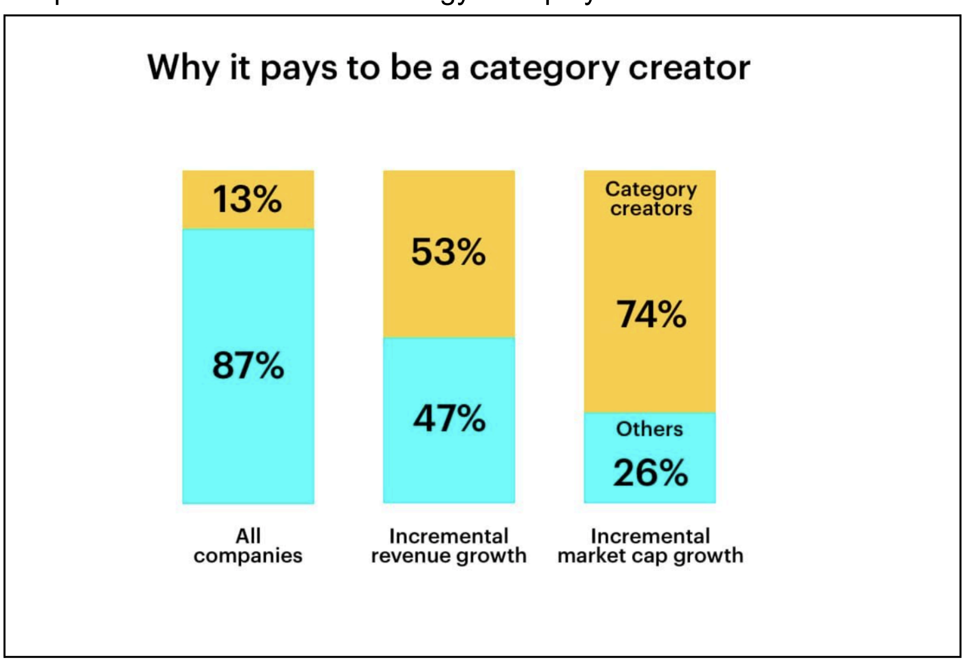
Startups creating a new category

By following a structured approach as above, startups can increase the likelihood of startup success. However, much like a top view of a maze, building a startup may look like a structured approach. But the harsh truth is that more than 90% of startups fail (Neil Patel, Forbes). In the 10% of the startups that succeed, a significantly small percentage constitutes category creators. Category creator startups are those that choose to take the road never traveled on, or much worse, where the road must be laid by them! AirBnB and Uber are classic examples of category creators.
Category creation can happen at the global, country, or city level depending on the type of the startup's product offering. It can happen in any sector like deep tech, marketplace models, and operation-intensive businesses.

Challenges of building a category

As the likes of Airbnb, Uber, and Apple have found, creating an entirely new category can be a lucrative business. A study by HBR (Linda Deeken, 2013) found that the 13 companies in the Fortune 100 that were instrumental in creating their categories accounted for 53% of incremental revenue growth and 74% of incremental market cap growth.

However, such a valuable reward doesn't come easily, otherwise everyone would be doing it. For every Airbnb, there's a Segway or Google Glass, a very fresh technology/service that never actually found a category to create. Prospective customers have to be educated. Investors might not get it and there can be a lot of regulatory hurdles. There aren't a lot of resources that can provide a tried-and-true strategy to deploy.



In a world where 47% of first-movers fail (CB Insights), creating a category is a risky business. The challenge for any category creator is that no pre-existing market exists. There is no existing playbook startups can turn to. When the startup is not trying to topple an established incumbent or enter a crowded and competitive market, a lot of what the startup has to do is based on assumptions founders made about the need for the product. Customers may not even know what they need – or at least they lack the language to describe the issues they're trying to overcome.'

1.3 Role of regulations in category creation

Regulations are an amplifying factor: In most scenarios of category creation, innovation precedes regulation. There might not be policies/laws to support the new business models of category creators. Regulators have the right to ban any startup if it operates in the grey area of the existing policies. Uber struggled globally for many years with regulatory hurdles. The category creator has to work diligently with regulators and other stakeholders to co-create a policy framework to accommodate the new category. Often the new policy formulation takes years, but it's all worth it if the company can become a leader in the newly created category.

1.4 Scope of this thesis

- Literature study
- Deriving Hypothesis
- Commut's experiences with respect to the Hypothesis
- Analysis of Commut experiences

Chapter 2

Literature survey

An initial literature study was taken up looking at globally how the tech startup space has addressed the challenges of category creation with focus on regulated sectors. The materials used for the study are research papers, reputed journals, and articles published by globally renowned thought leaders like Harvard Business School, Stanford University, Wharton Business School, Forbes, famed VCs, and successful entrepreneurs.

2.1 Topics of focus for the literature survey

The topics of focus for the literature survey are:

- Advantages and challenges of category creation in startups. Topics include how category creators identify the market gaps, ICP, devise pricing, educate customers about the market, and identify when to pivot.
- How do category creators navigate the regulatory framework? Topics include identifying and managing stakeholders in policy-making and lobbying effectively.
- How can early-stage startups increase their odds of success while creating a category?

2.2 Findings of the literature survey

2.2.1 Category creation

Category creation is the process of creating a new market segment or product category that did not exist before. It's an approach to product innovation aimed at delivering new and unique value propositions to your target customers. Startups have to innovate in every aspect of the company building to succeed while building a new category. As Samuel Thimothy, VP at OneIMS puts it,

“Category creation is not marketing. It's a whole different level of commitment and effort. When you create a new category, you’re creating a new place to put yourself in people’s minds and a new way for people to realize they have a problem.”

2.2.1.1 Identification of market gap

Yoon and Deeken 2013, wrote about how category creation may involve dreaming up new products that can be sold using traditional methods. However, they mention that category creation involves not only a breakthrough product but also a breakthrough business model to support it.

However, creating a category is not easy. It is tough to identify that a customer has a hidden desire or an untapped need for a product. Companies often invest in huge budgets to experiment with the creation of a new category. And many large companies restrain from it because of risk aversion. However, disruptions are what improve the world. While this advice is great for big companies, startups have to work with limited budgets and team strengths, especially pre-capital.

Yoav Vilner et al., 2021 talk about identifying the sectors for category creation. They suggest that before going all in, the founders should:

1. Conduct good old-fashioned research
2. Ensure there are little to no competitors (especially direct competitors) in your space with your idea.
3. Look into the search volume and conduct searches. Competitor analysis using tools SEMrush and Ahrefs to identify keyword and content gaps among competitors. Monitoring patent and trademark databases helps stay updated on the latest innovations that competitors may be working on.
4. Get a sense of whether the category is already "out there" by checking whether reporters are already covering the space.

It is not clear in existing literature as to how to go about when search volume, tools, and methods don't indicate any pattern or press indicating that a category can be created.

2.2.1.2 Identification of Ideal Customer Profile

Most companies claim to be customer-driven, however, Simons states that the term 'customer' is very 'elastic'. He defines a customer as:

"A working definition might be that your customers are the people or entities that buy your products and services and supply your revenue."

Emphasizing the importance of one primary customer, Simons writes about the ill fate of Yahoo, which ventured into different avenues like finance, movies, and sports to attract users, but underinvested in the search itself. This persona of a 'primary customer', as per Simons as well as Deibert, is not necessarily who generates the most revenue, but who unlocks the most value in the business by reflecting the company's mission the most. And the startup must uncover this at multiple layers by understanding what the primary customer values. Deibert goes on to write that identifying the wrong ICP could lead to an ill-designed product, wrongly designed strategies and sales, and marketing investments at the wrong places. Tom Scearce, Gartner, is careful to differentiate ICP from Total Addressable Market (TAM) in their framework for ICP. He writes that the ICP must be developed by analyzing predictive data. Ting 2013, HBR, suggests that companies must cater to the customer profile by doing intelligent and personalized marketing and advertising online to attract the right customers.

However, startups may not even have predictive data until they take the MVP to the market. Early-stage startups do not have the bandwidth and resources to indulge in personalized marketing.

2.2.1.3 Market Sizing

Thimothy 2022, suggests against worrying about market size because when a category is created, a market for them has to be created too. Entrepreneurs are required to shape the market. While the ‘benefit of inexperience’ is often glorified in startups (Keating 2019) that run in uncharted territories, a lack of framework or effort in market sizing may lead to startup failure. Without strong attempts at strategy, it is easy for startups to lose focus on their product since they do not specifically know whom to target to ‘create a market’, make money, and how to make a big business.

Yoon and Deeken write about why it is so hard to predict the size of new markets. Startups either underestimate or overestimate their opportunity, and both can be detrimental to the success of the startup. Confirmation bias and omission errors must be avoided, and ‘consumer passion’ must be determined, they state. Business and consulting firms are often employed to determine the market sizes, but even the best ones may make wrong predictions.

Startups understand their customers the best while consulting firms work with predictive data. It is not mentioned how startups can go about with workable market size estimates at an early stage when the limited set of customers they have could inherently carry sampling bias.

2.2.1.4 Devising a Pricing Algorithm

There are two kinds of pricing models, namely cost-plus and value-based, that a startup must decide on based on their product.

Hart, 2021 (Hubspot) writes that cost-plus pricing is where the cost of the product/service provided is a percentage added over the unit cost of the product. But warns that cost-plus pricing doesn’t offer any incentive to operate efficiently since the percentage profit remains the same, even if production costs rise. This may lead to a situation wherein the price is too high, and a lower-priced efficient competitor may take over.

Dholakia 2018, HBR, writes about the popularity of cost-plus models because they’re so simple. He points out an interesting fallacy with cost-plus pricing’s guarantee to cover costs. Since sales volumes are guessed beforehand, the cost-plus price may be too high or too low leading to an erroneous calculation. And the reason, he states, is that it completely ignores the customer’s willingness to pay and competitors’ prices. Dholakia, 2016, HBR defines value-based pricing as follows: “Value-based pricing is the method of setting a price by which a company calculates and tries to earn the differentiated worth of its product for a particular customer segment when compared to its competitor."

However, for category-creators, with a lack of competitors, determining value-based pricing would not work. At the same time, cost-based pricing, if not done carefully, could lead to high or low pricing, thereby causing loss to the business. Category creators would need a unique approach to pricing.

2.2.1.5 Marketing and Press Strategies

Rory McDonald et al., 2017 talk in a detailed study about how Press releases and media are crucial to spreading awareness for prospective consumers in category creation. They suggest that the best way to create attention is to create tension in the story. Reporters don't like to write about things that don't have any tension. So employing a David versus Goliath' strategy will get the maximum press coverage for startups. The approach typically involves using rhetoric to demonize existing options.

However David vs Goliath approach will create unwarranted attention and irk regulators, A Patient, and long-term focussed press strategy is better for category creators.

2.2.1.6 Funding

Linda Deeken et al., 2013 talk about the lucrative outcome of category creation. Their company examined Fortune's list of the 100 fastest-growing U.S. companies from 2009 to 2011. They found that the 13 companies that were instrumental in creating their categories accounted for 53% of incremental revenue growth and 74% of incremental market capitalization growth over those three years. They state that the message is clear: Category creators experience much faster growth and **receive much higher valuations from investors than companies bringing only incremental innovations to market.**

However, being category-creators in the regulated sector also brings in tremendous amounts of risk, thereby making VCs averse to investing. As discussed in previous sections, a lack of capital could mean a delay in identifying ICP, less marketing, a delay in MVP release, and so on. Further, in the case of highly regulated sectors wherein the startup has to work in a grey area of policy, venture funding can be scarce. Category-creators may need alternate sources of funding to survive in case venture capital does not work out.

2.2.2 Navigating Regulatory Framework

2.2.2.1 Why should regulations be taken seriously by early-stage startups?

Startups should research regulations and laws that are related to their business. Often innovation precedes regulation and laws will be modified or amended to suit innovation. Founders, especially those who tread in highly regulated sectors, must identify and engage with regulators and policymakers from a very early stage. Globally, many startups were banned or fined for violating regulations or operating in grey areas of the law. From the startups' point of view, waiting to launch once the regulations are amended with new policies would mean missed opportunities. They cannot afford to lose time either. It's a very fine balance to launch any business in grey areas of the law and then work closely with regulators to amend policies.

On a global level, Uber was banned or fined in many markets because of regulatory issues. They were famously banned twice in one of their biggest markets, London for violating safety norms.

Quoting MacDuffie from Wharton,
"Not dealing more seriously with public concerns about safety appears to fall into the larger category of Uber's resistance to any conditions placed upon it by regulators in cities, regions, and countries. Uber's approach to regulators is also significantly different from those of others in its industry. Uber's competitors often differentiate by working more closely with cities, sharing more information, and negotiating rather than defying conditions. Uber, as the original move-fast-and-break-things provocateur, still has that reputation. Perhaps that tendency is embedded deep in its culture. It will have to work harder to win back the trust of its various constituencies."

In India in 2023, bike taxi services like Rapido, and Ola were banned by the Supreme Court in Delhi until the Delhi Government formulated a new policy on bike taxis. In the fintech space, some startups like LazyPay and Kishtt have been temporarily banned by the Indian government.

Therefore, it is of paramount importance that startups operating in regulated sectors, engage with regulators early on and work closely with them to amend required laws and policies.

2.2.2.2 Need for policy changes to support innovation

As discussed in the previous section, most of the time, innovation precedes regulation. Therefore, the onus is also on governments across the world to make necessary improvements to the policies time and again to foster innovation. However, governments must do so while ensuring the safety of their citizens from the ill effects of technological advancements.

William D. Eggers et al., Deloitte insights 2023 discuss regulation that supports innovation. Traditionally, regulators have focused on mitigating social, economic, safety, and environmental risks for consumers while ensuring fair markets. However, as rapid technological advancements transform the regulatory landscape, regulators are increasingly adopting a proactive approach. Instead of merely reacting to changes, they are now anticipating innovations and even fostering them. Regulatory agencies are not only tasked with protecting consumers from the adverse effects of technology and economic shifts but also with promoting innovation in critical areas such as climate sustainability and AI ethics. This dual role creates a strategic tension: regulators must balance the need to protect consumers and citizens with the imperative to avoid stifling innovation and growth through overregulation.

While regulators become proactive, startups as mainstream innovation carriers, must proactively engage with regulators to drive changes by iterating on their products and services with regulatory feedback to make them safe for citizens.

Taking an example of policy change needed in the transport sector, Padam and Singh in their Harvard research paper stress the importance of a need for an improved Urban Transport Policy in India. Urban areas are often seen as engines of growth, with urban transport serving as the essential wheel driving this engine. Given that transport significantly impacts the quality of life of citizens, the government must recognize the necessity of mobility and facilitate it through effective mechanisms. Unfortunately, Indian cities are hindered by the lack of a coherent urban transport policy.

2.2.2.3 How should startups engage with regulators to influence policy change?

Bryan Comis et al., BCG 2024 and Lawrence H. Summers et al., Harvard Business Review, 2014 recommend the following approach for startups to win over regulators.

Key Strategies for Navigating Regulatory Compliance:

1. Managing Regulator Relationships: Building and maintaining strong relationships with regulators is as crucial as managing customer relationships. Regulators expect companies to respond to their requests quickly, consistently, and accurately. Rather than waiting for regulators to approach with concerns, firms should proactively explain their business models and practices. This can help preempt misunderstandings and foster a more collaborative relationship.

2. Effective Lobbying: Successful lobbying involves educating regulators, aligning with them on the interpretation of laws and directives, and setting voluntary commitments. These strategies can help shape favorable regulatory environments. It is beneficial for firms to form coalitions and industry associations that represent a shared perspective. This collective approach is more effective than individual companies approaching regulators independently, especially during times of crisis.

3. Identifying and Assessing Relevant Regulations: Companies must systematically analyze new laws for their relevance and impact. This enables them to prioritize their responses effectively and ensure compliance with the most critical regulations.

4. Developing Internal Standards: Translating external regulations into clear, actionable internal standards is vital. Product and engineering teams need these standards to efficiently respond to regulatory requirements. This process should focus on de-duplicating, aggregating, and simplifying requirements to make them manageable.

5. Clarifying Acceptable Risk Levels: Clearly defining acceptable risk levels prevents ongoing debates about risk from delaying product development. Establishing these levels ensures that compliance does not hinder innovation. Although many sharing

economy businesses originate from tech hubs like Silicon Valley, the primary risk to their viability often comes from potential regulatory actions rather than technological issues or competition. Understanding and mitigating these risks is crucial for long-term success.

6. Avoiding Regulatory Blame: While it is easy to attribute business problems to regulatory challenges and often be correct, it is more difficult, but ultimately more rewarding to proactively avoid regulatory issues and achieve business success. A constructive approach to regulation can lead to better outcomes for both the firm and the community.

While regulatory challenges are significant for startups operating in highly regulated sectors, adopting a proactive and cooperative approach with regulators can enhance growth and stability. By engaging with regulators, forming industry coalitions, avoiding a blame-centric mindset, and recognizing the primary risks, startups can navigate the regulatory landscape more effectively. This approach not only fosters business success but also ensures alignment with the broader goals of urban development and consumer protection.

However, the above approaches are largely catered towards larger companies with significant resources and affordability to engage with regulators. Further, category-creators face much larger challenges despite frameworks like the above as discussed in section 2.5.

2.3 Deriving Hypothesis Statements

2.3.1 Deriving Hypothesis 1 by analyzing challenges for category-creator startups in a highly regulated sector

Summarizing the points in the literature review in section 2.3.1, the challenges in multiple stages of a category-creator startup are clear.

1. Identification of market gap: When search volume, tools, and methods don’t indicate any pattern or press indicating that a category can be created. Prospective customers might not be able to imagine the new tech categories and search for them. So, the search volume about the prospective category creators might be negligible. That doesn’t mean customers don’t need such a service. Even reporters can’t imagine such a service and cover them, especially when it’s highly regulated.

2. Identification of Ideal Customer Profile: Category-creator startups may not have predictive data to identify their ICP until they take the MVP to the market. Further, early-stage startups do not have the bandwidth and resources to indulge in personalized marketing to identify the ICP.

3. Market sizing: It is unclear how startups, especially category-creators can go about with workable market size estimates at an early stage when the limited set of customers they have could inherently carry sampling bias.

4. Devising pricing strategies: Both cost-plus and value-based pricing models suggested may not work for category-creators in the regulated sector since they do not have competitors and do not know whether the baseline price they create is too high or too low.

5. Marketing and press strategies: Category creators are supposed to make headlines with ‘tension’ in the story in a ‘David versus Goliath’ strategy which involves demonizing existing competitors and regulators. This approach can backfire for category creators in the regulated sector. The press strategy in highly regulated sectors may require that the startup be patient and focus on long-term results rather than short-term clickbait articles. The key would be to explain and educate using the press/media and reiterate the value added by the startup to the city, people, businesses, and the environment.

6. Funding: The advice in the literature about category creators commanding higher valuations is misleading for category creators in the regulated sector. Many investors, especially traditional VC funds, are skeptical about startups with high regulatory risks. As discussed in previous sections, a lack of capital could mean a delay in identifying ICP, less marketing, a delay in MVP release, and so on. Further, in the case of highly regulated sectors wherein the startup has to work in a grey area of policy, VCs may not be keen due to regulatory hurdles. Category-creators may need alternate sources of fun

Given the above problems, it is clear that:
Hypothesis 1 - Category-creator startups in regulated sectors must devise an Indigenous framework to succeed

2.3.2 Deriving Hypothesis 2 by analyzing challenges for category creators to navigate regulations

While the framework described in section 2.2.2.3 provides some direction to companies with resources, it is far from sufficient for category-creator startups. The latter find themselves facing many challenges navigating regulations due to the double-edged sword of innovation, lack of power, lack of competitors to lobby together, and lack of resources.

1. Managing Regulator Relationships: It is very difficult for early-stage category creators in the regulated sector to get a seat at the table to discuss their points of view and establish good relationships with policymakers. Founders might not know how to find the right channels to reach out to policymakers and explain their business model.

2. Effective Lobbying: Early-stage category creators in regulated space can’t hire public policy experts who take care of lobbying at companies. If the startup is a category creator it’s a nascent market. There will not be any coalition or industry association. Though the collective approach of industry association is more effective when dealing with regulators, category creators have to deal with regulations alone.

3. Identifying and Assessing Relevant Regulations: Early-stage category creators in regulated markets will not have the monetary bandwidth to hire legal counsel to accurately interpret the laws and craft legally correct responses to the Government. Unless any of the founders have a legal background, which is quite rare, this aspect becomes very tricky for founders.

4. Developing internal Standards: In the initial stages of the startup, the tech bandwidth is the most costly and crucial resource. Founders struggle to balance tech requirements for business and compliance requirements. The struggle is even more category creators as they do not have any competition as reference points to seek inspiration and implement internal standards.

5. Clarifying Acceptable Risk Levels: Literature suggests being clear about what risk is acceptable and embracing transparency and adherence to compliance requirements. This is the hardest part for early-stage category creators in the regulated sector because when the startup is operating in a grey area of the law, the founders have to decide what risk is acceptable. Many policy makers interpret the law as black and white which is understandable. The policymakers generally suggest operating the business once the changes are made to law which might take years at times. To make changes to the law startups must operate and show data to the policy makers. How do founders deal with such situations?

6. Avoiding Regulatory Blame: Existing literature suggests proactively avoiding regulatory issues and achieving business success. This is not an option for the category creators in regulated sectors as most of the time the laws in those sectors are yet to catch up with the innovation. It’s equivalent to saying AirBnB shouldn’t have started as there was no legal framework for home rentals in the US. The home rental category didn’t exist before AirBnB.

Given the above problems, it's clear that:
Hypothesis 2 - Early-stage category creators in regulated sectors need a highly practical example of “How” to navigate the regulatory framework.

Based on the challenges discussed in section 2.2, the following hypotheses were established:
1. Category-creator startups in the regulated sector must devise an Indigenous framework to succeed
2. Early-stage category creators in regulated sectors need a highly practical example of “How” to navigate the regulatory framework.

The next chapter will discuss the approach of this thesis study based on the startup Commut.

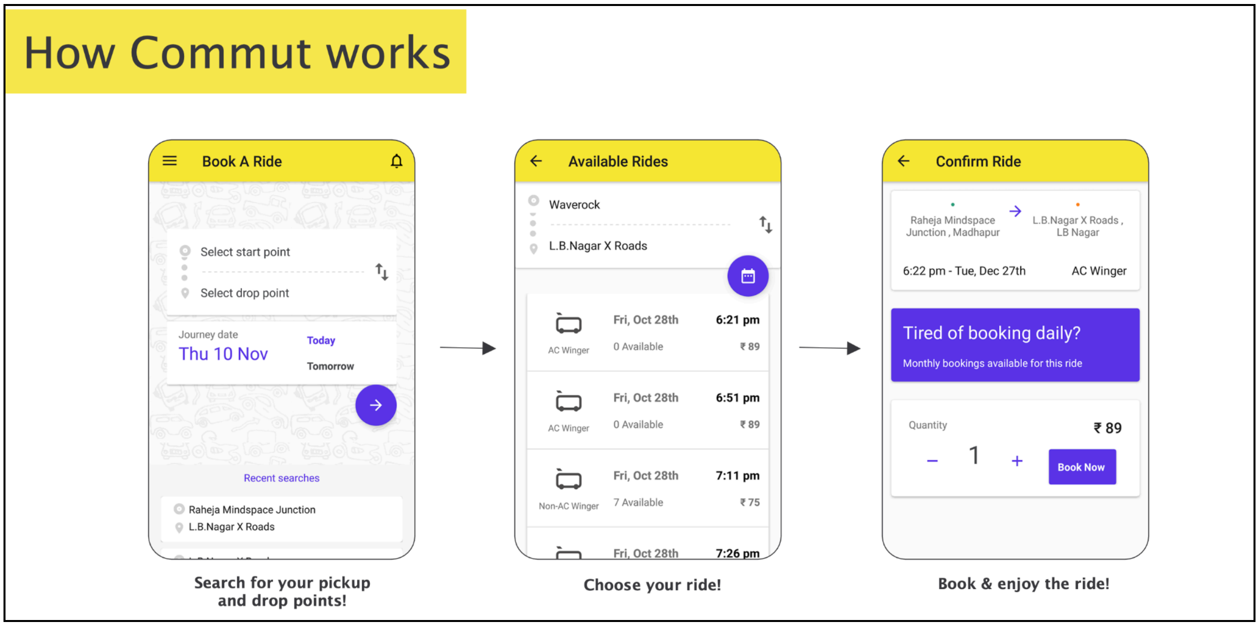
Chapter 3

Approach: A case study on Commut

The thesis study is based on the experiences through the life cycle of the startup - Commut. Commut was based out of CIE, IIIT Hyderabad. Commut operated in the shared public transport domain and predates Uber and Ola carpooling services. This startup had to specifically deal with both the main problems in scope here: Category creation in a highly regulated sector. Commut was a category creator in tech-based shuttle services and operated in the highly regulated transport sector. Analysis of Commut's journey establishes the practicality of the framework that will be proposed in the study. Commut is one of those rare startups that is a category creator in a regulatory-intensive market like transport that has a successful exit. This study is conducted via in-depth founder interviews, media articles, and other public and private information shared by the Commut team. The deep dive involves delving into each stage of Commut's journey as a category creator in a regulated sector to compare and contrast with existing literature.

3.1 Introduction to Commut

Commut was a tech-enabled shuttle service for daily office commuters in Hyderabad. It reimagined urban mass transit with comfortable, affordable, eco-friendly, and safe transport solutions. It operated mini-buses which can be availed through an App. It made daily office travel a comfortable & productive experience for thousands of customers. Commut was started in 2015 and operated for three years in India until it was acquired in 2018 by Dubai-based Careem. In three years, Commut clocked 750,000+ rides, had 70,000 registered users, and operated 150+ mini buses across 50+ routes. The startup's unique focus on women's safety translated to 65% of the users being women. Commut's excellent service was exemplified through our retention rate of >80%, the highest in the segment. It raised $600K of funding from 50K ventures and petroleum giant Shell.



Customers can book and reserve a seat in a Commut minibus through the Web App, Android, or iOS Apps. Once they book they receive all the details of the trip such as details of the driver partner, live tracking of the vehicle, Estimated Time of Arrival (ETA), and notifications about arrival.

Commut created a positive impact on the environment by reducing **582+** tonnes of CO2 emissions, saving 6 lakh liters of fuel, and creating 470+ jobs for driver-partners.

Applauded by the likes of Nobel Laureate Muhammad Yunus, Ben Van Beurden the CEO of Shell, BBC, Bloomberg, and National Geographic, Commut truly made an international mark. Commut received multiple awards from the Government such as “Top 10 Startups in 2016” from Ex IT Minister KTR and “Best Social Startup” from the Mayor of Hyderabad. In acquisition, Commut took a multi-pronged approach. Commut’s technology, brand, and core team were acquired by Careem, a tech giant in the Middle East. The Indian operations were acquired by Shuttl, which ensured continuity of business in India. After the acquisition, Commut business model was replicated in five countries in the Middle East region.

3.2 Commut: An Apt Case for this Study

Commut is an apt case study for the following reasons:

Founded in 2015, it is one of the earliest tech startups in India and further in Hyderabad.

1. A tech-based shuttle services **category creator** in the highly **regulated transport sector**
2. Engaged with regulators to ensure business continuity. Commut was a rare exception in mobility space which was not punished by regulators in India even once. All the other

players in this space like Uber, Ola, and Rapido were banned atleast once due to regulatory hurdles.
3. Overcame funding hurdles in regulated space. Raised from impact funds like Shell Foundation due to regulatory hurdles. Executed marketing and other functions with very little capital compared to VC-funded startups.
4. Identified the Market Gap, and created a 5-step process for ICP identification
5. Devised their in-house unit economics and pricing model.

Based on the above points, Commut is an apt case study to analyze the hypothesis statements practically from the journey of a real startup.

In the upcoming chapters, Commut's experiences are discussed by deep diving into various stages of the company's life cycle.

- Chapter 4 discusses Commut's experiences with building the Indigenous framework
- Chapter 5 discusses Commut's Approach for navigating regulatory frameworks in early-stage
- Chapter 6 discusses the analysis of Chapters 4 & 5.

Chapter 4

Commut's experiences with creating an Indigenous framework for category creation in regulated sectors

As stated in section 2.4, category-creator startups in regulated sectors must devise their Indigenous framework to succeed. This section is a deep-dive study of how Commut became a category creator in a highly regulated market like transport by developing an indigenous framework for identifying market gaps, ICP, market sizing, fundraising, press strategy, customer adoption, and supply-demand mapping.

4.1 Identification of market gap is harder for category creators in regulated sectors

As the literature suggested, before starting Commut, the team analyzed Google search volume to find intent about a service like Commut. The search volume for a service like Commut was negligible. The team also researched press articles about similar services and couldn't find any. This often happens with category creators in regulated sectors as it is difficult for people to imagine such services and search for them. Before Airbnb, the search volume for such a service would have been negligible. Customers couldn't imagine that extra space in their houses could be rented out for short stays.

However, the team's intuition and practical observation said otherwise. The team did the following to check if the market gap exists for IT employees. The team chose the IT employees sector because they are a sizable chunk of half a million in numbers and have greater spending capacity.

Thorough research was needed on shortcomings of existing transport options for IT employees to find the market gap

Shortcomings of the existing transport options for IT employees in Hyderabad.

a. Inefficient Public Transport bus networks:
Though public transport is affordable, the network is scarce and not well-connected. There is a need to add at least 4000 more buses in a city like Hyderabad to meet people's basic transport requirements. This usually leads to unsafe transport with overcrowding on the buses. It is also inconvenient and unsafe for women. As per a survey by WRI (section 5.2.5), 65% of the women express safety concerns about their daily commute in India.

b. App-based taxis:
Although app-based taxis have relieved everyone from the trouble of waiting on the roads looking for a taxi, they are highly expensive due to surge pricing and unreliable during peak office hours (as discussed in 4.4.3).

c. Own transport:
The lack of efficient public transport infrastructure is giving a significant rise in personal cars and motorbikes as well as private cabs. This is leading to severe congestion, pollution, and parking problems. Hyderabad has 10 million population and 4.9 million vehicles. And it's very tiring and unproductive to drive on congested Indian roads. Millions of hours of human potential are wasted every single day on roads due to traffic jams.

The Commut team tried all the existing modes during peak office hours to understand a commuter's problems. This preliminary analysis

4.2 Identifying ICP (Ideal Customer Profile) for Commut through a 5-Step process.

The challenge for identifying ICP for a category creator startup in a regulated sector:

For the category of startups in regulated sectors, there are no reference points or benchmarks to identify ICP. In a competitive market, it's easy to identify ICP from customers of competition. But for category creator startups in a regulated sector, there is no competition. So have identified ICP with their analysis. The Commut team found their ICP (Ideal Customer Profile) after following a five-step process. The process is explained below.

Identifying ICP for Commut

Step 1: Online survey with IT employees

The team leveraged its college network and other sources to reach out to around 500 IT employees (0.1% of Hyd IT employees) from 20 companies and collected detailed feedback from an online survey. It was made sure that the sampling set was very diverse in terms of age, income, and gender to make sure that the outcome was not biased and reflected reality.

Structure of the survey:

- Current mode of transport
- Travel time duration and distance & Time of travel
- Travel spending per month & Issues with the current mode of transport
- What can be improved & Willingness to pay for a service like Commut

After the Online survey, the team got a basic idea about the employee problems with daily office travel. However, the team wanted to understand the problems in depth by talking to people in person.

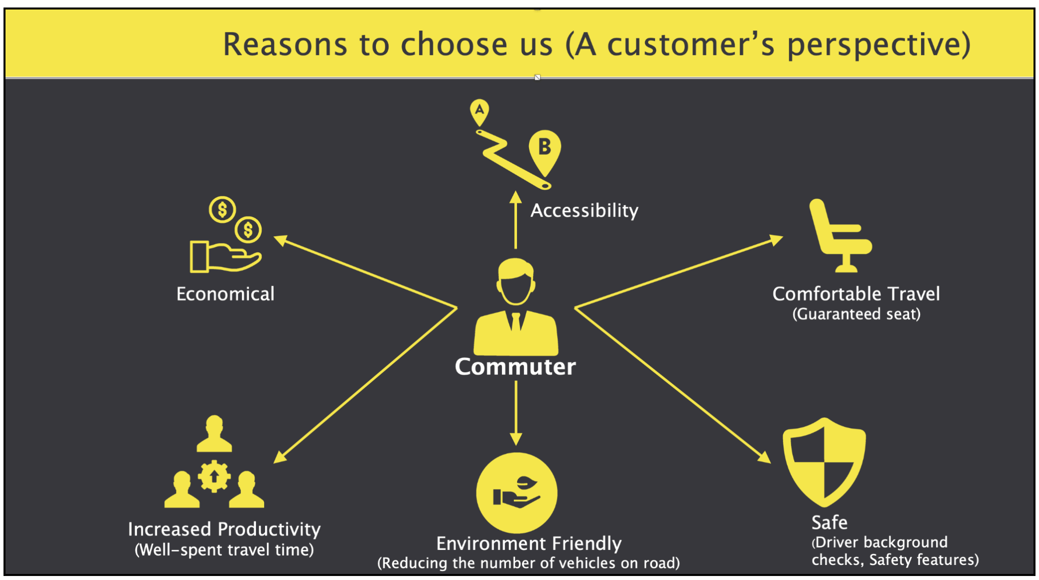
Step 2: In-Person surveys with IT employees

The team spoke to 100+ employees and received more nuanced and detailed feedback from them. Employees shared the issues they are facing with existing travel options and have inputs for devising a service like Commut. With this information, the team decided to take the next step in validating the idea.

Step 3: Pilot & Trial runs

After great difficulty, the team was able to secure two mini-buses and did trial runs for three weeks. Again during the trial run, the team made sure that the sample set was diverse with short routes, long routes, and different residential areas.

The team would go to different bus stops during office hours and would offer free rides to IT employees in exchange for feedback. The team received a lot of valuable feedback with 100+ hours of conversations with IT employees on the rides. The feedback and insights helped to validate the initial assumptions.



Commut - Customer's perspective

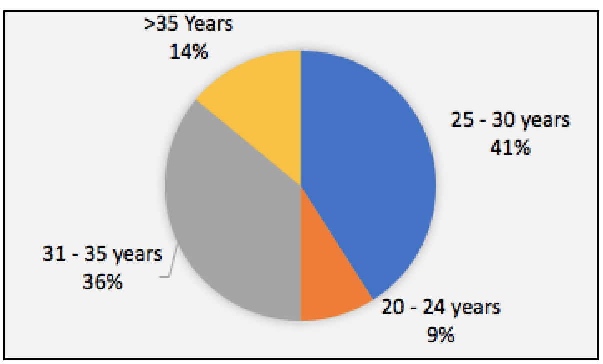
Armed with the insights from the trial run, the team decided to take the next crucial step; launch the buses and the customer App for IT employees to book a seat in the Commut bus service.

Step 4: First route and customer App launch

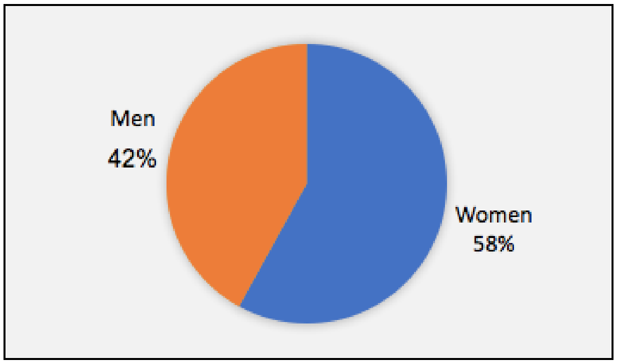
From the trial runs, the team identified that the LB Nagar (residential area) to Hitech city route has a lot of IT employees traveling daily. So the team chose that route to start the service. The team reached out to customers who took free rides during a trial run and shared the App and booking details. The team ran two buses for one hour and slowly 4-5 users from the trial run started booking. The Commut team was obsessed with customer experience from day one. Slowly word of mouth spread as existing customers started sharing their positive experience with Commut to their colleagues and friends. Below is a testimonial from a Commut customer.

Step 5 - Customer segmentation to refine Commut ICP

To further refine ICP, Commut team did a Customer Segmentation exercise every year by sharing a survey with all the customers. The following survey was conducted in 2016.



Age



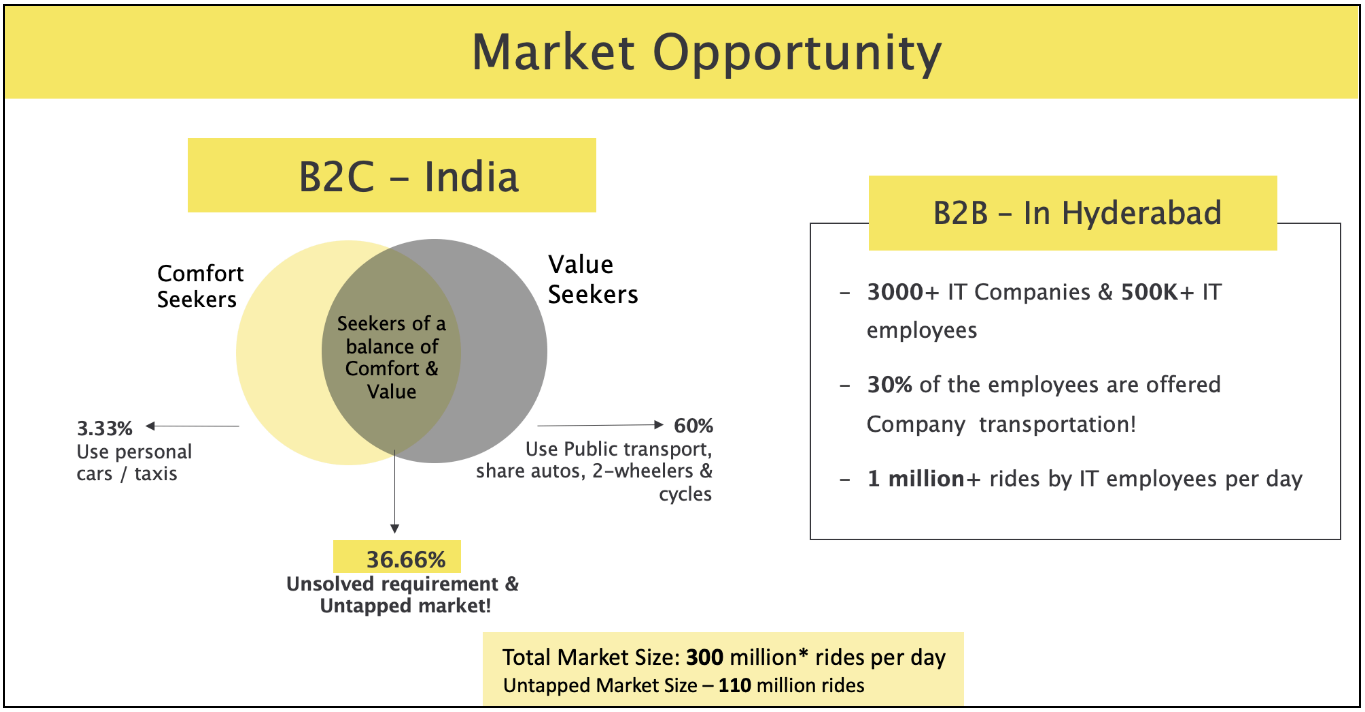
Gender

From the above five steps, the Commut team concluded the following as their ICP.
ICP for Commut:
- Working profile: IT employees
- Age: 25-40
- Income: INR 30,000 - 1,00,000
- The geographical regions they live and work in are identified

After identifying ICP, the Commut team did research to know how big is the market by conducting the market sizing exercise.

4.3 Market Sizing for Commut to identify the business potential

After the PMF (Product Market Fit) was achieved by identifying the right ICP (Ideal Customer Profile), the Commut team decided to understand the market opportunity. Based on the ICP, HYSEA data, WRI data, and other reputed data sources, the Commut team calculated their total market opportunity in 2015. The market opportunity is explained in detail in the image below.



The total available market (TAM) for Commut was 110 Million rides per year. After ensuring the business opportunity was big enough, the Commut team decided to devise unit economics and pricing to ensure operational profitability.

4.4 Devising Unit Economics and Pricing for Commut to Achieve Operational Profitability

Once the founders figured out market size, the next step they focussed on was to design the pricing model and unit economics to ensure business profitability.

Factors considered while devising the pricing:

- Positioning of the product and ICP & Brand value
- Input cost, Users' willingness to pay & Profitability
- Alternate options for users & Competitor’s pricing

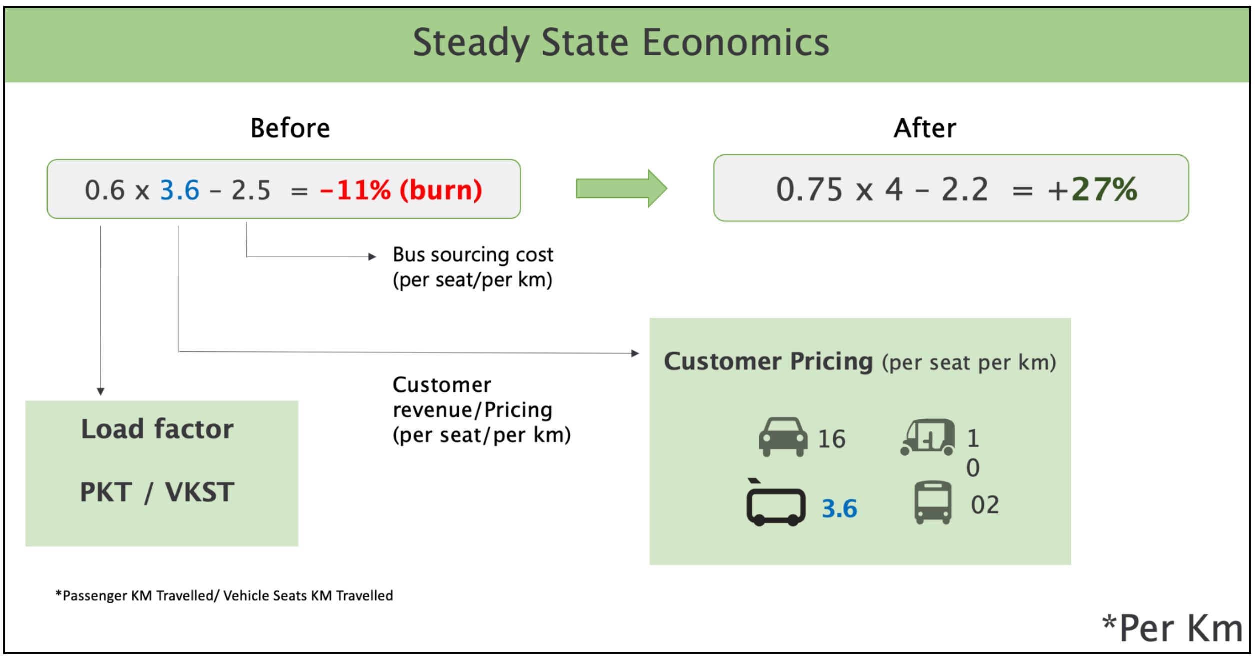
When Commut was launched the price was a flat price per seat per route, but soon founders realized it was a very bad idea for unit economics. So they devised their in-house pricing algorithm.

Commut Unit economics and pricing algorithm:

After launching a few shuttles and having customer traction, the Commut team started focussing on operational break-even metrics. The first focus is on occupancy. They needed to fill more seats in the bus to increase profitability. Initially, the team started with a fixed price of INR 100 per seat per route. The team has to pay the driver partner's standard amount irrespective of the occupancy rate (seats filled).

To solve this, the team further refined the pricing model by drilling down into unit economics and per seat/per km analytics.

1. Devised a metric called LOAD factor - PKT/VKT (Passenger KM traveled/Vehicle KM traveled). It's a more refined metric than just the occupancy rate. It takes into account not only the seats filled in the bus but also the distance each customer traveled on the bus.
2. Customer revenue or pricing evolved from per seat -> Revenue per seat/ per km
3. Bus sourcing cost evolved from cost/trip -> sourcing cost per seat/ per km



Commut - Unit economics equation

The above steady-state unit economics equation has been designed using the factors mentioned above. It clearly shows how changing each of the nobs like reducing the bus sourcing cost per seat KM impacts unit economics and in turn profitability. This equation helps all the teams with the business decisions and shows how the company can move from -11% to +27% operational profitability. Once they identified pricing and unit economics, the Commut team focussed on growth and marketing.

4.5 Press & Marketing strategy of Commut with less budget compared to other venture capital-funded startups

Commut struggled to raise from VCs due to the regulatory hurdles, and marketing budgets were very low. So the marketing team had to focus on acquiring customers at a very low cost. After many trials and small experiments, the team narrowed down to focus on four options.

- Press (unpaid media articles)
- Setting up stalls in IT companies (without renting the space)
- Branding the Commut mini buses.
- Extremely creative social media marketing

Commut - Press strategy to increase brand awareness with minimal cost

Since inception media and press have been one of the strongest brand awareness tactics adopted by the Commut team. The media coverage (unpaid/not sponsored) was extremely helpful in increasing awareness about Commut in Hyderabad and in expanding the user base with minimal cost.

Existing literature suggests that category-creation Startups should opt for the David vs Goliath approach for maximum coverage. For example, villainizing existing options like public buses and then projecting Commut as an alternative. Sure it would give a lot of coverage in the short term, but detrimental in the long term for category creators in regulated space. Commut took a completely different approach from existing literature in media and press strategy. The team opted for a patient and long-term-focused media strategy. They learned and honed the art of showcasing the impact being created by Commut effectively to the media houses and it worked in the long term.

Eventually, media coverage became a form of marketing sought after by the Commut team. As they expanded their horizons from local media to international media, the team learned to communicate the Commut impact story better with experience. In a span of two and half years, Commut was covered/featured on 25+ media houses including BBC - World, CNBC, Bloomberg Quint, Nat Geo, The Hindu, Deccan Chronicle, The Hans India, The Times of India, LBB, Chai-Bisket, Eenadu, Sakshi and Namasthe Telangana.

For a comfortable and safe journey

Commut, a Hyderabad-based start-up, is offering commuters a comfortable, safe and pocket-friendly travel to work in a greenway

V SATEESH REDDY

Commut is a Hyderabad-based start-up which runs mini-buses connecting major areas in Secunderabad and Hyderabad with Hi-Tec City to get rid of traffic woes for denizens and employees. Commut was founded in November 2015 by 6 alumni from IIIT-Hyderabad. The founders are Prasanth Garapati, Hemanth Jonalagadda, Charan Thota, Srujai Varikuti, Sandeep Kachavarapu and Akshay Chennupati.

Commut provides nearly 1,500 rides between 7am to 8pm, every day. More than 60 percent of their customers are women and they have special security services for women like Hawkeye tool for surveillance.

The idea of Commut was born from the daily travel experiences of Hemanth (one of the founders). He joined an MNC immediately after college and had to travel every day from LB Nagar to Gachibowli. During this period, he realised there was a huge gap between travel options available and the need. The only way to commute is either app-based taxis which demanded huge splurge of cash or public transportation - which were 200% full and uncomfortable to travel. He discussed this with his friends from IIIT and started Commut in Nov 2015.

"In Urban India, the population is growing at an alarming rate. By 2021 it is projected that 51 cities in India will have a population of above 1 million. The existing infrastructure is unable to cope up with this. There is no proper mode of transportation for almost 35% of the 115 million commuters every day in Urban India; ... demand requirements of the commuters and add-on routes accordingly – balancing the demand and supply proportionately. We also provide employee transportation services to the corporates which have proven to be extremely cost-effective, time-effective and resource-effective to the cor-

Media Coverage

Covered by more than

20

renowned media houses!

BBC

National Geographic

Bloomberg Quint

CNBC-TV18

Commut - Marketing (Offline & Digital) strategy with minimal budgets lead to the lowest customer acquisition costs in the sector.

Owing to a very small budget due to regulatory hurdles, the marketing team had to be creative and write their marketing playbook. The conventional wisdom says to focus on SEO, Google Adwords, Paid Social media marketing, and offline marketing like billboards. But the above were not viable options for Commut as the main marketing tools as they were expensive. The team had to reach prospective ICPs with a minimal marketing budget.

Offline marketing with minimal cost

Stalls in IT companies: The target customers for Commut are IT employees. So the team decided to have stalls in the IT companies during lunch hours. But permissions for such stalls are very difficult. And on top of that, the daily rent for such stalls is very high and Commut can't afford the rent. So the team wrote to HYSEA about the hassle-free travel experience Commut is providing for IT employees, especially women. HYSEA responded positively and ensured free stalls for Commut in different IT companies. This was a turning point in Commut's marketing journey. The Commut team installed stalls every week covering 100+ companies in total and reached out to thousands of employees. Essentially, the Commut team has reached out to thousands of prospective ICPs with almost zero cost.

Bus branding: Each Commut minibus travels around 60-100 km per day. And the network of Commut buses crisscross across the city. Moving branding is very powerful and would be seen by thousands of eyeballs every day. The team decided to brand the buses by paying a minimal additional monthly income to driver-partners who were interested. At the peak, Commut had 50+ yellow branded buses and it created quite a buzz in Hyderabad.

Creative social media marketing:

The social media team of Commut was very creative and they were able to reach a lot of audience by creating posts that went viral. They blended brand messages and humor seamlessly to create viral posts and reach thousands of audiences. A couple of examples that went viral on social media.

4.6 Raising capital from impact funds instead of VCs due to regulatory hurdles

Commut struggled to raise from Venture Capitalists due to regulatory hurdles. Founders had to go the extra mile and raise alternate capital. Commut's team attended a mobility-specific accelerator program by the renowned think tank World Resource Institute. After the program, the WRI team was impressed with Commut’s work and referred Commut to the Shell Foundation for a grant. Shell Foundation (SF) is the social arm of Shell Petroleum. SF was very impressed by the way Commut is disrupting mass transit in India. After thorough due diligence, SF invested $400K in Commut to scale the positive impact being created by Commut.

Commut through its multitude of experiences as a category creator in the regulated sector was not just not able to survive but thrive because of its Indigenous framework across identifying Market gaps, ICP, Pricing, Market sizing, Marketing, and funding.
The next chapter will discuss Commut’s approach to navigating the regulatory framework.

Chapter 5

Commut's approach for navigating regulatory frameworks in early-stage

As discussed in Section 2.5, early-stage category creators need a highly practical example of "how" to navigate the regulatory framework.

This section demonstrates how Commut navigated the regulations by following a multi-thronged approach that includes associating with industry bodies and think tanks, facilitating impact studies, and engaging with policymakers.

5.1 Background on the Motor Vehicles Act

On the regulatory front private bus players like Commut are not allowed to run as stage carriers according to the 1957 Motor Vehicles Act. A stage carrier is a vehicle which picks up people at multiple pick points and drops at multiple pickup points. This law was drafted to protect public transport buses from private competition. Now the cities have exploded and public transport infrastructure is not sufficient for the growing public needs. And the word 'aggregator' is not mentioned in the act. Commut, Uber, and similar services are referred to as aggregators by the policymakers. Commut raised only $600K over three years and didn't have any public policy team or Legal counsel to deal with policymakers. However, the team managed to engage with policymakers at the highest level to ensure business continuity. The team had to deal with a lot of grey areas in the law.

5.2 Commut team engaged effectively with the policymakers to influence the Motor Vehicles Act to allow private bus players

The Commut team realized very early on that in a highly regulated sector like transport, it is very important to have close ties and cordial relations with the Government. The Motor Vehicles Act (MVA) was last amended in 1987 and the law needs to catch up a lot with innovation and technology. So the team decided to set an ambitious goal of co-creating a new policy for allowing stage carriage and aggregators like Commut by following stipulated guidelines. They explored all the avenues to engage with the Government.

5.2.1 Identifying the Policymakers Who Can Influence the Motor Vehicles Act

Commut team listed the departments, industry bodies, and think tanks involved and can influence the policy change for the Motor Vehicles Act.

1. State Transport department
    a. State Transport Minister
    b. State Transport Secretary (IAS)
    c. RTC MD (IPS) (RTC runs the public buses)
    d. WRI (They advise many governments on improving cities)
2. Additional DGP Traffic (In terms of traffic-related issues)
3. IT Department
    a. IT Minister
    b. IT secretary (IAS)
    c. HYSEA (Hyderabad Software Association)

5.2.2 Engaging with Policymakers & Industry bodies to influence the Motor Vehicles Act

The Commut team first focussed on networking to engage with policymakers. The team needed a seat at the table first to showcase the positive impact they were creating. The Commut team researched and found that the HYSEA (Hyderabad Software Enterprises Association) team is very progressive and open to new initiatives. HYSEA is a private organization that works closely with the State Government to drive policy changes that are beneficial for IT employees. So they started engaging with the then HYSEA president Ramesh Loganathan.

Car Free Thursday: The Commut team actively participated in events like Car Free Thursday organized by the HYSEA and the Government. Car Free Thursday aimed to encourage people to travel without a car every Thursday and promote other eco-friendly transport options like Carpooling and group travel like Commut. Car Free Thursday aligns with the Commut team's goal of decongesting the cities and reducing pollution. Commut was also listed as one of the alternatives to cars by the HYSEA team in the circular sent to all the IT companies.

Above pic - Commut team campaigning about the Car Free Thursday initiative

Above pic: Car Free Thursday event - Team Commut with Jayesh Ranjan, IAS, IT secretary: Prashanth Bachu from WRI and Vishala, Organiser of Car Free Thursday.

The Commut team got a chance to meet the IT secretary Jayesh Ranjan in one of the Car Free Thursday events. The team explained the impact creation and how the service was helpful to a lot of IT employees. The team also met Prasanth Bachu, a transport Engineer who worked for WRI at the same event. He recommended the team apply for the WRI accelerator program which eventually led to the Shell Foundation's investment

Through the Car, Free Thursday organizing team, the Commut team also contacted the then Additional DGP of traffic (head of traffic in the state). It sought his opinion on navigating the Motor Vehicles Act. He turned out to be a very progressive officer and was very helpful. The team met him many times subsequently and he introduced the team to the State Transport Secretary and other officials with positive feedback.

5.2.3 Metrics used to demonstrate the impact created by Commut

The Commut team utilized every avenue and opportunity to showcase the positive impact they created in Hyderabad. The team demonstrated the impact created at the ground level with clear metrics to policymakers. The following are the metrics used by the Commut team to showcase the demand.

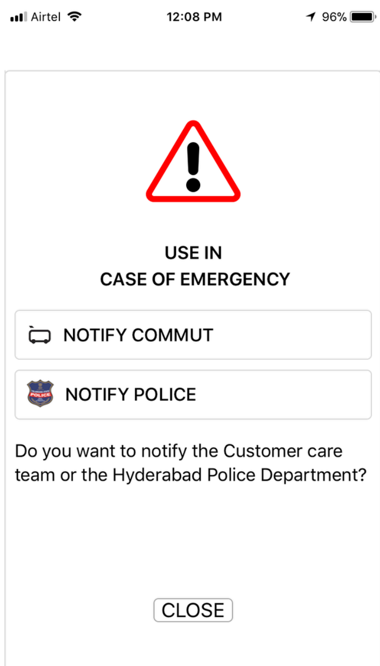
Metrics used to demonstrate impact:

- 70% of customers are women
- Only 30% of the IT employees are provided transport by the employer
- Carbon emissions reduced due to the reduction of cars: 582+ tonnes of CO_2 emissions were reduced [Calculated using WRI Greenhouse Gas Protocol Standards]
- Fuel Efficiency: 571,123+ Ltrs of fuel saved since inception.
- Jobs created: 470+ driver partners were on-boarded
- Trees saved: 79,770+ [As per GHG protocol]

5.2.4 Collaboration with the Police Department for implementing safety features for women customers of Commut

In sharing economy startups, one of the major concerns for regulators is safety. The Commut team took a lot of steps to ensure the safety of the users. Working closely with policymakers to enhance the safety of stakeholders improved the trust between startups and policymakers.

Commut has collaborated with the Telangana state police to make commuting safer for everyone. As a part of the collaboration, HawkEye (the official safety app of Telangana State Police) has been integrated into the Commut app. Commut users can reach out to the police in case of distress and the police usually respond within 4 minutes on a priority basis.



Above pic - Hawk eye integrated into Commut App.
Customers can immediately reach out to the Police through the Commut App

Above pic - Commut team with Cyberabad Police Commissioner and HYSEA Team during Hawk Eye integration event.

5.2.5 Gender Impact study on Commut by World Resource Institute (WRI), a globally renowed think tank in impact space.

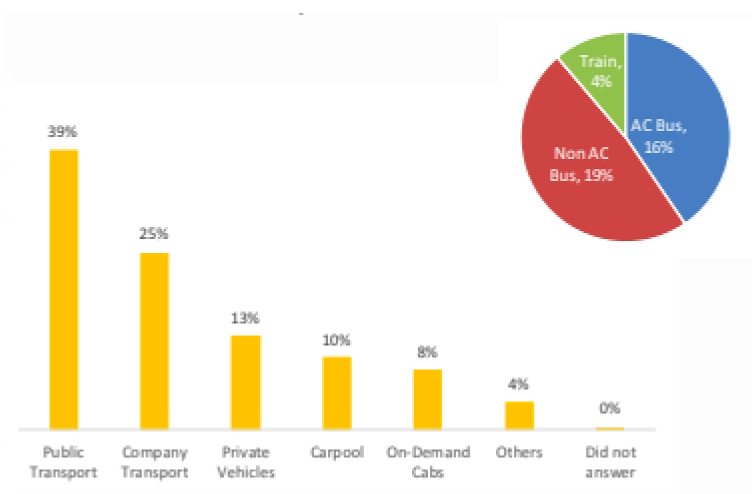
An impact study done by the reputed think tank WRI was very effective in enhancing the credibility of Commut with Governments. WRI, a renowned think tank, had done a gender impact study on Commut users.

WRI Gender Impact Study on Commut:
WRI India conducted a Gender impact study on the safety of women traveling in Commut. The results of the study helped understand the reasons behind women choosing Commut as a mode to travel to work. Here are a few findings from the study.

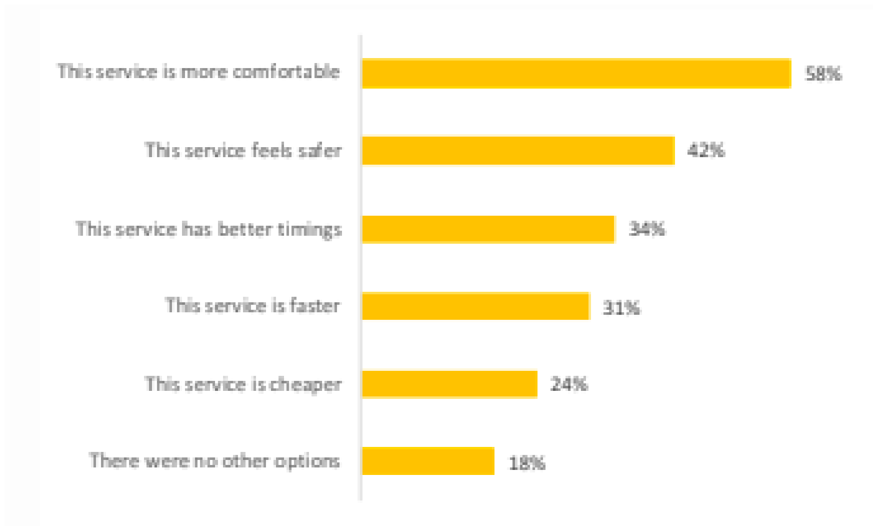
- Compared to Public transportation and on-demand taxis, Commut was ranked better on parameters like safety, distance to the pickup point, travel time, reliability, presence of verified co-travelers at night, and route familiarity.

- 42% of the women felt safer and 58% of them felt more comfortable while traveling on Commut. Another interesting observation was that 31% of them felt Commut is faster than their previous mode of transportation.

- Based on the responses in the survey, WRI India had given a few recommendations to Commut to further improve women's safety, which were promptly implemented to ensure utmost importance is given to the safety of Women Commuters.



Modes of Transport used by women before moving to Commut.



Reasons for their shift to Commut

- **Recommendation 1:** Safety at pickup/drop points (Choosing landmarks that are more populous)
  Action Taken: All pickup and drop points were reviewed and changes were made based on the recommendations. By building a **safety mapper** for the Commut platform, in collaboration with Safetipin, Commut aims to improve safety at pickup and drop points further.

- **Recommendation 2:** Minimal waiting time at pickup and drop points (Lot of unfortunate incidents on women while waiting at the pickup and drop points)
  Action Taken: Live tracking and ETA were implemented into the app to reduce waiting time at pickup and drop points. This has reduced the amount of time women stay on the road.

- **Recommendation 3:** Increased focus on Driver Behaviour and training
  Action Taken: Driver behavior and training have been a major focus to ensure customer safety and satisfaction. Based on Shell HSSE recommendations and WRI suggestions, Commut has implemented training sessions for all the existing driver partners.

The Commut team has showcased the WRI impact study report during the discussions with policymakers on multiple occasions and it helped to enhance credibility for Commut.

Chapter 6

Findings and Analysis of Commut's Experiences

This section analyses different stages of Commut's Life Cycle from Section 4 & Section 5.

6.1 Analysis of Commut's Experiences

The following is a detailed analysis and observations of Commut's experiences from Chapters 4 & 5.

6.1.1 The Commut team ditched the existing literature when it comes to identifying the market gap for category creators and took a practical approach to test the market gap

Even though the search volume is negligible and other aspects in existing literature indicated a lack of market gap, Commut took a practical approach to identify the market gap. Initial research, as discussed in section 4.1, showed that there is a clear need for a better alternative for daily office travel compared to existing options, especially for the 500,000 IT employees in Hyderabad city. All the existing modes of transport are mapped across four factors accessibility, Safety, Comfort, and affordability with a detailed analysis in the below table to understand the market gap.

Alternatives: Who else is out there?

Assumptions: Trip distance - 25 KM

Organisation	Accessibility	Safety	Comfort	Affordability
Commut	**Very accessible. Routes designed to be available in areas where there is no other alternative.**	**Driver background verification and training. SOS and vehicle tracking apps.**	**Clean and well maintained vehicle; bus ETA; reserved seat.**	**Cheaper than most other options in the market.**
Govt AC Bus	Not accessible in many areas; Low frequency. Only 150 buses (40 seaters) are being run on 20 routes in the city.	Perceived as unsafe for women, more than **200%** occupancy in peak hours.	No guaranteed seat. People stand dangerously in the buses and travel..	**5%** cheaper than Commut
Ola/Uber	Accessible in many areas in the city. Availability is dependent on a vehicle being active in the region.	Perceived generally safe. Safety features in app give a sense of security to commuters.	Very comfortable. Travel at your own will.	**250%** more expensive compared to Commut. Very hard on the pocket.
Ola Share/ Uber Pool	Accessible in many areas in the city. Availability is dependent on a vehicle being active in the region.	Perceived generally safe. Safety features in app give a sense of security to commuters.	Multiple pickups and drops increase time travelled by 2 - 3 times on avg.	**100%** more expensive compared to Commut.
Auto	Not accessible in many areas.	Haggling and refusal to take rides is usual; Not safe for women.	Exposure to pollution is high.	**49%** more expensive than Commut. Drivers generally charge more than govt fare.
Own Car	Very Accessible.	Very Safe though driving in traffic will spoil health.	Driving in traffic is very uncomfortable.	**50%** more expensive than Commut as fuel and maintenance costs add up.
Own Motor bike	Very Accessible	Not at all safe for traffic conditions in Indian metros. Exposed to lot of pollution.	Driving is a big hassle in traffic.	**20%** more expensive than Commut Non AC (Maintenance cost, interest on loan included)

Therefore, lack of search volume and other conventional indicators of a ‘market gap’ could have easily dissuaded the team from not going ahead. However, the team persisted by trusting their initial hypothesis, discovered hands-on and unconventional ways to find the gap, and tallied it with urban transport data.

6.1.2 The Commut team identified ICP by following a 5-step process and the learnings from this stage have become the foundation of the business

In identifying ICP for Commut, as discussed in section 4.2, the following analysis of customers and businesses could be made from the trial runs and customer segmentation.

- Founders lacked predictive data through search volume etc. about the need for such a service in the market. Before starting the service or jumping onto creating an MVP, they created the data themselves by taking in-person surveys across IT employees even though it is not a scalable thing to do. It meant waiting to talk to customers at bus stops during peak office travel hours. It also meant convincing customers busy in their hustle-bustle to talk to young founders. By doing so, not only did they confirm the need for such a service, but they were able to formulate the kind of service that must be built to cater to such customers.

- Since the team had to validate the idea on extremely limited capital, they performed trial runs with just two minibusses. They did so by trying different kinds of routes and being open to suggestions to decide the right ICP.
- Many experts warned the Commut team that women won't opt for group travel on minibusses by a private player like Commut, due to safety concerns. However, the team proved the experts wrong by designing a safe service focused on women. This decision is based on the enthusiasm women showed during feedback and trial runs.
- Founders assumed that short routes would be more profitable due to more effective asset utilization but realized that was not the case. Buses can do more trips per day by plying on the short routes as the assumption. Short routes in work areas are choked and take a lot more time to finish the trips than expected.
- Contrary to our belief or existing literature, women are more enthusiastic to use the service if the safety aspects are taken care of. This is a pivotal insight from the trial runs which helped shape many aspects of Commut.

The trial runs led to numerous business model refinements and pivots: Initially, founders assumed that they could run frequent shuttles in short routes as 70% of the IT population live in less than a 15km radius of Hitech city. And the vehicle utilization would be very high as they can run shuttles with high frequency (back-to-back trips) on short routes. That seemed like a perfect blueprint on paper. However, after the trial run, the founders realized that it was not practically possible due to heavy traffic and the low average speed of the vehicles in the Hitech city area. A trip from Kukatpally to Waverock (15 KM) would take the same as LB Nagar to Waverock (via ORR 40 km). So the time taken for the journey is very unpredictable and not directly proportional to the distance traveled. The traffic is very high in Hitech city and nearby areas due to high population density, spending capacity to buy own vehicles and use cabs, and less painful to drive to work.

6.1.3 The Commut team made sure that they targeted a sector with huge business potential by carefully doing the market sizing

As discussed in 4.3, Commut made sure that they are targeting a sector that is huge in terms of revenue potential. The Venture Capitalist's way of looking at the market sizing is if the business has the potential to make $100 Million ARR (Annual recurring revenue). Details of the B2C and B2B market in India are as below:
B2C India:

- Total Market Size - 300 Million rides
    - 60% use public transport, share autos, 2-wheelers and cycles
    - 3.33% use personal cars and taxis.
    - The sweet spot for Commut is the 36.66% overlap of value seekers and comfort seekers which is around 110 Million rides, which is the TAM for Commut.

B2B in Hyderabad:

- 3000 IT companies & 500,000 employees
- 70% of the employees are not offered company transport
- 1 million+ rides by IT employees per day.

6.1.4 The Commut team focussed on operation profitability and fair pricing for customers from a very early stage by devising a thorough unit economics and pricing model.

Based on section 4.4, the following is the analysis of Commut's steady-state economics and pricing:

- In the initial pricing model of Commut, they charged a fixed cost per seat. However, it's not fair pricing for customers because of the varying distance traveled by customers.
- Early-stage companies usually neglect pricing with in-depth analysis. However, the Commut team focused on building a profitable business from an early stage (10 years ago) which has become a buzzword these days by Venture-backed startups.

Actions taken by the team to increase profitability after devising a steady-state economics algorithm

- For customers pricing has been revised to a more fair model. They have to pay based on the distance traveled. From seat-based standard pricing to distance-based pricing. The first 10KM is the standard price of INR 50 and after 10 KM it's INR 3.6 per KM.
- Helped to benchmark against other travel options. Commut is less than 40% of the cost of the taxis. And in peak hours the difference is even more because taxis have surge pricing. But Commut has standard and predictable pricing.
- The teams improved demand generation, routing, pick points, and drop points to improve the PKT/VKT (Passenger KM Travelled/ Vehicle KM traveled) ratio in many routes.
- Team Analysed route suggestions given by customers on the App to improve the PKT/VKT ratio and made necessary changes in the routes.
- The Commut team started the service with 12-seater buses. After devising the pricing equation, the operations team started adding bigger buses of 18 seaters on busy routes that had more than 70% occupancy. They slowly moved the 12-seaters to the new routes. With the economies of scale, the sourcing cost per seat per km will reduce as the bus size increases. The aim was to bring down the bus sourcing cost per seat/km from 2.5 to 2.2 on average to improve operational profitability.

6.1.5 The Commut team created very unique marketing campaigns and impact amplification-based press strategy to reach the maximum audience with minimal cost

Analysis based on section 4.5:

- The team had to be very creative owing to the very low marketing budget, the team initially explored all forms of marketing possible within the available budget. The team managed to reach out to thousands of prospective ICPs with almost zero cost, which is a rare event in marketing.

- For any organization irrespective of the sector & size, media relations form an important part of brand management. Regular media coverage is immensely helpful in making the brand a household name and in building positive trust among the major stakeholders like prospective customers, and policymakers. The Commut team also learned that at times, it might take up to six months for a media house to recognize the impact being created by a startup - yet it is important to stay relentless and patient while dealing with media houses.

- They used impact creation as a way to market and catch positive headlines.
    - Topics of focus on impact creation:
    - Safe journey for women
        - Safety features such as live tracking, verified driver-partners
        - Official integration with police assistance App.
        - Registered and verified users & Sharing customer testimonials
    - Positive impact on the environment
        - Reduction of the number of vehicles on the road with group travel
        - Reduced CO_2 emissions & Fuel savings

6.1.6 Commut team leveraged domain-specific impact funds and accelerator program to overcome VC funding hurdles due to regulatory issues

Based on section 4.6:
Raising from the Shell Foundation helped Commut to stay afloat and scale the business when VCs weren't interested in funding due to regulatory hurdles. Apart from monetary support, the Shell Foundation has immense experience as an organization in the Mobility space. They have invested in mobility companies across the world. It took more than six months to get the Shell Foundation to invest in Commut. They interviewed the entire founding team, audited the financials, and took feedback from our customers and driver partners by actually traveling in our fleet. The Commut team was determined during the entire process and it paid off. There is a lot of peer-to-peer learning from other SF partners like safe boda from Uganda (which runs bike taxis). Also attending domain-specific accelerator programs can lead to great outcomes. The Commut team attended the WRI mobility accelerator program which led to funding from the Shell Foundation.

6.1.7 Commut team engaged with regulators proactively by following a multi-thronged approach - reached out and showcased impact to regulators, and think tanks, sought support from industry bodies and commissioned impact studies by renowed think tanks.

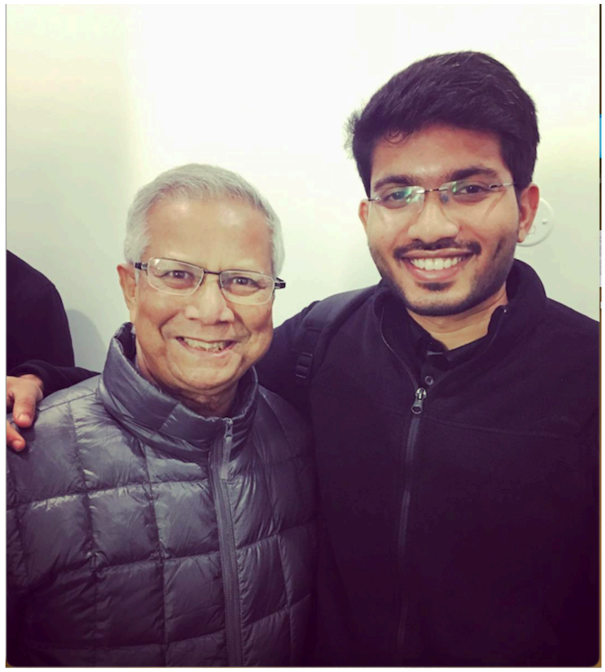
Based on section 5.2 following is the analysis:
- Many times multiple Government departments have to be involved to drive policy change. The first step the team did was to research the Government departments involved related to the relevant policy

- The team demonstrated the impact created at the ground level with clear metrics in customer impact, carbon emissions, fuel efficiency, job creation, and environmental protection to policymakers. They honed the pitch with the support from the WRI team in the accelerator program.
- Showcasing the work to many officials, the team demonstrated the impact that's being created at the ground level and how bus-based aggregators can improve the gruesome traffic conditions in the city. In the initial stages, it was particularly tough for the officials to accept the new concept but with consistent efforts, things have improved. Civic authorities have started to respond optimistically and were proactively thinking about making the policies more accessible to bus-based aggregators.
- The team's efforts have paid off and Commut has been recognized by various Government authorities. Various high-level authorities including the Mayor of Hyderabad have invited the Commut team for one-on-one discussions to seek the Commut team's input on policy changes. This recognition from officials involved in the decision-making has helped Commut garner credibility and importance among other Government officials and citizens of Hyderabad. Below are some of the awards received by Commut from policymakers.

Was awarded the **Best impact startup in Hyderabad**
Presented by: Hon ***Mayor of Hyderabad****, Mr. Rammohan*

Was chosen among **Hyd's top 10 startups**
Presented by: Hon Minister for IT, UD, Mr. KTR

Pic 1: Receiving the "best impact startup" award on behalf of Commut from the Mayor of Hyderabad
Pic 2: Receiving Commut receiving the "Top 10 Startups in Hyderabad" award on behalf of Commut from IT Minister Mr KTR



Team with Nobel Laureate Muhammad Yunus
after presenting Commut to him

6.2 Discussion & Conclusions

Based on Commut's experiences and the corresponding analysis done in the previous section, it is clear that the team took unconventional approaches in contrast with the suggestions in the existing literature.

Going by existing literature identification of a market gap in 2.2.1.1, lack of search volume and other conventional indicators of a 'market gap' like articles by reporters about the sector meant that the private bus business was not viable. However the team generated their own data by conducting in-depth research on the shortcomings of existing options, in-person surveys and trial runs among IT employees. This involved waiting at bus stops during peak office travel hours persuading busy commuters to take rides in the buses and seeking feedback. Despite being an unscalable approach, it allowed them to gather valuable insights directly from potential customers. Conducting research on existing transport options, and choosing IT employees based on their population and transport patterns in Hyderabad led the team to discover the market gap.

In identifying an ICP, as discussed in 2.3.1, category-creator startups in the regulated sector may not have predictive data to identify their ICP until they take the MVP to the market. Commut did not have competitors to compare and identify ICP. Neither did they have the financial resources to launch a product and draw conclusions for ICP based on it. They instead relied on a 5-step process such as online, in-person surveys and trial runs with IT employees and extrapolated requirements from them based on strong customer conviction and sentiments. Further, they reduced their MVP-MVP version to two minibusses with heavy discretion on the experiments they ran and were able to conclude the viability of the business. While doing so, they still ensured that they chased a large market, thereby winning it all.

Regarding Market sizing as discussed in section 2.2.1.3, For category-creators in the regulated sectors, market sizing can be inaccurate and often volatile based on regulation changes. They continuously went against any confirmation bias in sizing their market by chasing the right ICP from which they could confidently validate a large market.

For designing pricing based on 2.2.1.4, Using an existing pricing methodology like cost-plus or value-based would not work for category creators in the regulated sector. A deep understanding of basic units or building blocks of the business is necessary. In Commut's case, they realized that it is per seat/per km. Commut experimented with different prices amidst customers, sought reception, rectified mistakes early, doubled down on improving the product for their loyal customer base, and eventually defined their own pricing algorithm to derive sustained profits. Commut's pricing also helped in positioning the brand amongst other options for customers.

For Press strategy, Section 2.2.1.5 suggests that category-creation startups should opt for the David vs Goliath approach for maximum coverage in the press. For example, villainizing existing options like public buses and then projecting Commut as an alternative. Sure it would give a lot of coverage in the short term, but detrimental in the long term for category creators in regulated space. Commut took a completely different approach from existing literature in media and press strategy. The team opted for a patient and long-term-focused media strategy. They learned and honed the art of showcasing the impact being created by Commut effectively to the media houses and it worked in the long term.

Regarding valuations and funding Section 2.2.1.6 suggests that category-creators receive high valuations from investors despite only bringing slightly improved innovations over the incumbent products. However, the risk involved makes VCs averse to investing in many, especially with regulatory hurdles. Commut proved that this need not be a give-up situation over the business. By finding sources of funding that align with the company's impact and mission, Commut paved its success path. Suitable funding from alternate sources further helped Commut in its marketing as well as in engaging with regulators by showing a net-positive impact on society.

From the above points, it's clear that Hypothesis 1 is validated
Hypothesis 1: Category-creator startups in the regulated sector must devise an Indigenous framework to succeed.

According to 2.2.2.3, Existing frameworks for navigating regulations suggest that strong relationships with regulators are needed, but finding a seat at the table is very difficult for early-stage category creators in the regulated sector. Commut tried various avenues by identifying and reaching out to industry bodies like HYSEA, and progressive policymakers, demonstrating impact via impressive metrics and positive press strategy to further their appeal with regulations.

Based on 2.2.2.3, While existing literature suggests lobbying is needed to influence public policy and legal counsel is needed to accurately interpret laws and draft effective yet safe responses to the Government. However early-stage startups like Commut do not have the resources to hire public policy experts to take care of lobbying and legal counsel to draft safe responses. At the same time, no coalition is possible with other startups in similar space to represent the collective point of view, since the market itself is nascent. Instead, they identified think tanks like WRI and Shell Foundation to substantiate and strengthen their case with policy.

Commut successfully dealt with the chicken-and-egg conundrum of policy and innovation while operating in the grey area of policy.

From the above points, it's clear that Hypothesis 2 is validated
Hypothesis 2: Early-stage category creators in regulated sectors need a highly practical example of "How" to navigate the regulatory framework.

The next chapter discusses conclusions and further work.

Chapter 7

Conclusions and further work

Category-creator startups in regulated sectors face grave challenges for which traditional literature advice does not pan out well. They must devise their own framework to succeed and walk through the regulatory framework unscathed. Commut's journey as a category-creator startup in the regulated transportation sector exemplifies the necessity of an indigenous framework for success.

The team identified a significant need for better daily office travel options for Hyderabad's 500,000 IT employees, despite the absence of traditional market indicators. Through hands-on research, direct customer engagement, and trial runs, they validated their hypothesis and tailored their service to address safety concerns, optimize routes, and ensure fair pricing.

The founders' persistence in refining their business model based on real-world feedback was crucial. They transitioned from an initial focus on short routes to accommodating long-distance commuters and shifted from a fixed-seat to a distance-based pricing model. By targeting a substantial market and emphasizing steady-state economics from the outset, Commut ensured profitability and operational efficiency.

With a limited marketing budget, Commut creatively reached prospective customers, emphasizing safety for women, environmental benefits, and customer testimonials. Their relentless media engagement built brand recognition and trust. Securing funding from the Shell Foundation involved a rigorous process, demonstrating their determination and strategic approach. Engaging with government stakeholders, they showcased clear impact metrics, influenced policy changes, and gained recognition from various authorities.

Commut's experience proves that category-creator startups in regulated sectors must devise an indigenous framework to navigate the regulatory landscape successfully. Their journey offers a practical example of how to persevere, innovate, and engage with regulators, setting a blueprint for other early-stage category creators. Overall, Commut's journey underscores the importance of innovative, data-driven strategies, patient media engagement, strategic funding alignment, and proactive regulatory engagement for category-creator startups in regulated sectors.

Further work:

- Commut team got a soft commitment from policymakers about amending the Motor Vehicle Act to accommodate players like Commut. While the discussions are going on, Commut was acquired by Careem in 2018. So the team couldn’t see the completion of the policy change. Hopefully, other mobility players in similar places would take the lead and see through policy change.

- The commut business model was replicated in five countries in the Middle East region after the acquisition.
- The government introduced mini-buses to the IT employees taking inspiration from Commut.

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