Exploring the Role of Boundary Spanning towards Service Ecosystem Expansion: A Case of Careem in Pakistan

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Abstract: The sharing economy has the potential to innovate new markets by making the reuse of idle resources globally. The practices of sharing culture vary among developed and developing countries because of the un-stabilized economic situation and bad infrastructure. (1) This research is based on a case study of transportation network company (TNC) that has the capability to change the conventional transportation system because of its agile nature; (2) the study analyzes the data conducted from Careem (TNC) in Pakistan by using a qualitative approach; (3) the results show that to find a solution for scarcity of products/services in developing countries caused by limited and scattered resources, a learning climate is created by Careem which enables Careem to understand social issues in Pakistan and to use these insights to further develop its business model. Under learning climate, Careem promotes the culture of respect towards collaboration; (4) overall, Careem plays a facilitative leadership role and brings together different stakeholders on one platform for contributing to a common goal to achieve sustainability. Further, with the joint efforts of all stakeholders, an extended service ecosystem has been formed through boundary-spanning activities. Careem acts as a core boundary spanner and supports other organizations to become a second level boundary spanner. Finally, Careem has made a substantial contribution to resolve the problem of unsustainability in Pakistan.

Keywords: sharing economy; sustainability; transportation network companies (TNCs); service-dominant logic; service ecosystem; boundary spanning

1. Introduction

The role of sharing economy is significant worldwide because of its capability to innovate new markets by reusing idle resources that can reduce the ecological power of consumption [1]. Statistics show that there are numerous unutilized resources valued at 5.35 trillion dollars, which could be shared, consumed and bartered globally [2]. The term sharing economy can be applied in different contexts, such as economic, social and financial [3]. The real benefits of sharing economy relied on the physical nature and settings of a business based on its potential situation in the market. In developed countries, the concept of sharing economy is mainly seen as an opportunity to reuse idle assets that are shared among people to earn money. The structure and channel to utilize resources are well established in developed countries. Therefore, the practice of sharing economy is effective and sustainable. However, in developing countries, the practice of sharing economy is different, as these countries do not have proper regulations for sharing infrastructure and do not provide assistance for participation in the sharing culture [4].

The sharing economy has several features depends on the consumption of physical goods, resources, and services. The span of the sharing economy is versatile, and it has expanded to several

industries like hospitality, tourism, transportation, and crowd-based online services. Sharing economy has common features among all the sharing services that are internet connectivity and an online platform. It provides people with new opportunities to access goods, services, and unused/inactive resources through sharing, trading, and rental [5].

Among the aforementioned description of sharing services, the case of transportation in terms of transportation network companies (TNCs) is trending these days, because of the motivation of many people to protect the environment. Another motivation is sociability. For example, individuals seek to make new experiences by meeting other people [6]. An important factor that also needs to be considered is the socio-demographic differences. For example, people who are younger or who have a low income are more motivated from an economic perspective since their goal is to save money [7]. Hence, the motivation of individuals to participate in sharing economy can differ depending on the country and the environment where they live.

In developing countries, besides financial and economic issues there is one social issue regarding the bad transportation system. Many people who need to travel on a daily basis, have to use public transportation because they have no alternatives. The government is trying to fulfill the needs of the society by launching new transportation services (trains and buses). In this situation, TNCs play a crucial role since they can improve the transportation system and build a new pathway towards sustainability.

Problem Statement

Initially, the concept of transportation network companies (TNCs) was introduced in developed countries. After the success of TNCs in developed countries, this trend was carried over to developing countries. Due to the transformative and disruptive nature of the sharing economy, an issue of instability has emerged in the execution of TNCs in developing countries. Due to the unsustainable circumstances, (fluctuating environment and economic situation) transportation network companies (TNCs) cannot be implemented with the same power as of developed countries. There are multiple reasons behind this issue: (1) Availability of limited resources, (2) resources are available but scattered, and (3) there is a lack of awareness among people regarding the adoption of sharing culture. As shown in Figure 1, the consequence of above-mentioned reasons is the scarcity of product and services in developing countries that create a big hurdle towards sustainable consumption.
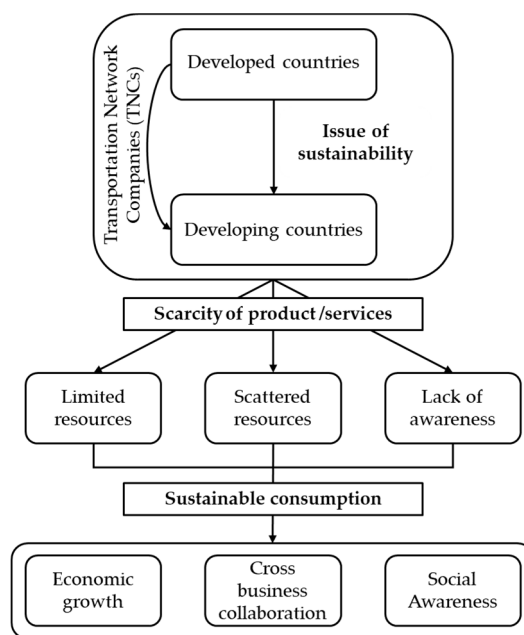
Figure 1. Problem incurred in developing countries.

As a response to the problem mentioned in Figure 1, the case of Careem among TNCs in Pakistan has been selected. This research is focused on Careem because it has not only the mission to make profit but also to facilitate and improve the individual's life. To evaluate the sustainability issues in terms of scarcity of products and services, this study evaluates the expansion of the service ecosystem of Careem. Hence, the aim of this research is to explore the success factors of Careem by investigating the involvement of multiple stakeholders to realize the adaptability and motivation of the society to participate in sharing economy. The objectives of this study are as follows:

- To analyze the role of actors, practices, and resources in Careem to understand the business model.
- To evaluate the role of Careem in the society through the expansion of service eco-system for a better understanding of resource distribution and to encourage small and medium investors to promote a sharing culture.
- To determine the ways of cross-business collaborations among multiple stakeholders by initializing the service ecosystem in developing countries for resource management.

The underlying framework to fulfill the objectives of this study is the service-dominant logic (SD-logic). It discusses service and its phenomenon on the basis of social and economic exchange rather than goods or products. Several concepts are borrowed from SD-logic to explain the research findings in this paper as service system, service ecosystem, and resource integration.

This study has adopted a case-based approach (case study). Data has been collected from Pakistan, where the selected case (Careem) is getting popular rapidly. Data collection is made through a qualitative approach in the following way: (1) Web survey to clarify the image of the services of Careem and how it differs from other TNCs, (2) semi-structured interviews to identify service management, cross-business collaborations, creation of products/services and to understand the mechanism of the resource integration.

This research contributes to the field of knowledge management as Careem has revealed the knowledge process of cross-business collaborations. As S-D logic focuses on service eco-systems and resource integration separately, the contribution of this research is 'how a sub ecosystem evolves through resource integration and boundary spanning in combination'. Finally, in the era of open innovation, the conceptual framework of two-level boundary spanning developed in this study is one way to construct a service ecosystem. It can be used as a hint to improve future sharing services.

The following sections describe the literature review, the proposed research questions, the research methodology and the generated results with discussion.

2. Literature Review

2.1. Framing Sharing Economy in the Context of Sustainability

Recently, the term sharing economy has become very popular. Sharing economy describes the economic phenomenon of collaborative consumption. As the name already implies, in sharing economy people rather share goods instead of buying goods. There are two types of sharing economy. On one hand, there are commercial business models which aim to make a profit. On the other hand, there are nonprofit initiatives where people share goods rather for the benefit of individuals and society instead of just focusing on profit [8]. It includes gift giving activities as well. The impression of sustainability is tightly connected with the sharing economy. It considers the effective placement of idle/inactive assets by forming collective experiences and declining of economic activities by empowering individuals and groups [9,10]. Liu and Yang [11] stated that sharing economy shows a direction to implement a sustainable lifestyle among the society. Nadler [12] and Brighenti [13] consider that by maximizing the usage of assets and resources in the sharing economy (on-demand access), it is possible to increase the convenience of the parties involved, and productivity to achieve sustainability.

There have been successful initiatives to protect the environment and to make it more sustainable, overall there is a lot of room for improvement. Many societies follow a path that could be much more

sustainable than it is nowadays. This applies especially for three key areas where the humankind needs to face critical challenges: environmental sustainability, production, and consumption of goods and social equality [14]. The concept of "collaborative consumption" or "sharing economy" has gained increased attention in the past 10 years. Sharing economy can be described as "the peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services" [8] (p. 2047). The goal is to exploit the potential of collaboration by providing new pathways to make the world more sustainable [14].

Sharing economy is an alternative perspective between people who aim to improve the prevailing capitalism and those who seek to develop radical alternatives to capitalism. Sharing economy is regarded as the third way how to approach prevailing economic challenges which cause unsustainable behavior [8]. Sharing economy is a technological phenomenon. Communication technologies are the drivers that enable the sharing of goods. Technologies simplify sharing of different kinds of goods and services through the internet. There are different technologies which can be used in this context. They include, for example, crowdfunding services, content sharing sites (e.g., YouTube or Instagram) or peer-to-peer platforms [8]. What these technologies have in common is that they bring different kinds of stakeholders together who don't know each other. Technologies support the stakeholders in the trust-building process which is necessary for a successful collaboration. Digital platforms are intermediaries that reduce risks by providing stakeholders with the possibility to give reviews and ratings [15].

Technology acts as an enabler for a more sustainable distribution of resources through sharing. Peer-to-peer platforms enable stakeholders to access products and services instead of buying them. This results in cost reductions. At the same time, the demands of consumers for obtaining further resources are reduced as well [9].

2.1.1. Role of Sharing Economy in Developing Countries

A majority of the literature about sharing economy focuses on the opportunities of sharing economy in developed countries where consumers are saturated with assets. In developing countries, the sharing economy has the potential to shift the consumption behavior from a throwaway culture to a more sustainable consumption pattern. Instead of buying more and more things, people can rent goods or pay for services. However, in low-income countries, the sharing economy can help to solve social and economic problems. It has the potential to enable many people to access goods or services which are typically not available for them due to the low-income situation. The sharing economy can contribute from different perspectives to a more sustainable development of the country. For example, in developing countries, there are often limited public transportation possibilities. Ride-sharing services provide people with good transportation without the need to have their own vehicle. A low-income citizen can benefit from lower mobility costs and better access to work. Another effect of sharing economy platforms is the possibility to enable micro-entrepreneurship. This includes also the opportunity to achieve an income by working part-time [4].

Sharing economy business models can generate new jobs and give people employment opportunities. For example, competing car-sharing businesses in India have created 30,000 new jobs for people who are unemployed. At the same time, they offered training courses for 50,000 women [16]. Overall, from a society perspective sharing economy business models can provide low-income citizens with the chance to increase their job opportunities and a higher quality of life. In order to seize the aforementioned opportunities, sharing economy business models in low-income countries need to overcome specific barriers. There is inadequate technology, a lack of appropriate government regulations and a lack of proper electronic payment systems. From a society perspective, there is a lack of trust between people and a lack of skills and assets [17].

2.1.2. Growth of Transportation Network Companies (TNCs)

Many different terms were introduced to characterize app-based ride services, such as ride-booking, ride-sharing or ride-hailing. However, there was no clear terminology. One of the first organizations that introduced the term transportation network companies (TNC) was the California Public Utilities Commission (CPUC) [18]. The CPUC [19] is a regulatory agency which is responsible for protecting public safety. Car sharing service models emerged already in the late 1990s. In the beginning, customers had the opportunity to rent cars on a flexible short-term basis which is paid hourly. The second generation of car-sharing service models offered customers the opportunity to decide where they want to pick up the car and in which location to drop it. The third generation is represented by peer-to-peer sharing. Individuals share their car with other individuals. Through the adoption of new technologies business models emerged which are referred to as transportation network companies [20].

According to CPUC [19] transportation network companies "provide pre-arranged transportation services for compensation using an online-enabled application or platform (such as smart phone apps) to connect drivers using their personal vehicles with passengers". These types of services have evolved due to technological progress such as the introduction of smartphones and digital road maps for the mass market [20]. Popular examples of TNCs in the United States are Uber and Lyft. However, in other parts of the world TNCs were introduced, such as Careem in the Middle East or Didi in China. TNCs have grown quickly and disrupted the traditional taxi market. In comparison to taxis, TNCs connect drivers and travelers directly. Moreover, the barriers to becoming a driver are lower than in the traditional taxi market. In addition, there are more extensive legal regulations to which taxis must adhere. For example, in San Francisco, there is a limit on the number of taxis that are allowed to serve the city [21].

Ride-sourcing is a topic that raises some questions that are of public interest since it affects the whole society [22]. On one hand, there are advantages from an economic and environmental perspective. TNC enables people who live in urban areas with flexible, fast and convenient mobility. This is attractive for citizens with limited access to public transport networks. TNCs can contribute to the reduction of ownership and use of cars. This goes along with positive impacts on the environment [23,24]. But there is also criticism on TNCs. For example, one argument is that ride-sourcing contributes to environmental pollution since it increases congestion. For example, a recent study revealed that in San Francisco TNCs make the biggest contribution to traffic congestion [25].

2.1.3. Careem a Case of TNC in Pakistan

Mudassir Sheikha and Magnus Olsson are the founders of Careem. Initially, Careem started in 2012 with a website offering corporate car bookings. Over time, Careem further developed its business model and became a transportation network company (TNC) for the mass market (Middle East).

> *"Careem is a brand that aims to simplify people's lives by revolutionizing the transportation industry. A brand that strives to inspire everyone, it interacts with and supports every single person who dares to believe. A brand that exists to drive our region towards something better (Mudassir Sheikha)".* [26]

In 2016, Mudassir Sheikha came up with an idea to launch Careem in Pakistan. This was a big challenge for him because, at this stage, Uber had already announced its launch in different cities of Pakistan. To acquire the attention from Pakistani society, Careem started operating its service for the well-being of the society by providing opportunities for the whole society to earn and to get benefits.

> *"We are all about simplifying people's lives and moving our region towards better living".* [26]

Furthermore, in 2017, the company announced a program to empower women. In Pakistan, women are more comfortable to drive with women due to cultural and safety reasons.

> *Careem has succeeded to overcome its rival company Uber in the region (Middle East and Pakistan) and became the brand of people's choice. In 2018, Careem got 30 million (plus) registered users from*

120 (plus) cities, 15 (plus) countries and 1 million (plus) drivers. Overall, the estimated amount of Careem funding was 770 million dollars (2019). [26]

Careem not only launched a transportation network company (TNC) in many countries but also introduced a sharing culture in many societies where this trend was new, and where people had no awareness regarding its benefits. It was a big success for Careem to convince different societies in a short time to use the services of Careem. A difference between Careem and Uber is shown in Table 1.

Table 1. Difference between Uber and Careem [26].

No.	Category	Uber	Careem
1	Rides offered	4 ride services in Pakistan	5 ride services in Pakistan
2	Order a ride	Booking by app only	Booking by call, website, app
3	Ride options	Ride booking only "Now"	Ride booking "Now, later, repeat"
4	Payment method	Payment with only credit/debit card	Payment with cash, credit/debit card, and Careem wallet
5	Target group	Limited target group of customers (Middle class and rich)	Expanded target group of customers (Poor, middle class and rich)
6	Coverage area	Launched in 8+ big cities	Launched in 15+ small and big cities
7	Ride service	Profit based ride-hailing service	Social ride-hailing service (Profit + resolve social issues)
8	Market orientation	Focus on market needs	Focus on the market and social needs
9	Requirement(s) to be a driver	People who have a valid driving license and car ownership can become a driver	People who own a car or not can be a driver of Careem. But a valid driving license and supporting documentation is necessary
10	Work opportunity	Provide part-time work opportunity for the drivers	Provide part-time and full-time job opportunity for the drivers
11	Driver support	-	Careem supports its drivers to get easy loans and cars on leasing
12	Investors	Global investors	Global, local investors
13	Collaboration	-	Collaborate with 3rd parties to support drivers
14	Female driver	-	Promote female driver

2.2. Theoretical Foundation to Explain Sharing Economy

We live in an era in which most economies can be regarded as service economies. Delivering a service means that a party applies specific knowledge and skills which are beneficial for a third party. To explain the exchange of benefits, the theoretical foundation provides the underlying concepts, theories, and assumptions to discuss the sharing economy in this study. The concepts of service system, service ecosystem, and resource integration are discussed to support the findings.

2.2.1. Service Science and Service Systems

Service science is an interdisciplinary approach which addresses the design and implementation of service systems. The goal of service science is to explain how value is co-created in service systems and how interaction takes place. According to Vargo & Lush [27], a service "is the application of competencies for the benefit of another".

The philosophical foundation of service science is the framework of service-dominant logic [27]. An important distinction is made between the service-dominant and the goods-dominant logic. Goods-Dominant logic refers to traditional economic activities where enterprises produce and sell products. The service-dominant logic represents today's economies where customer value is delivered through services. The service-dominant logic consists of eleven foundational premises which build the core of the concept by providing theories, concepts, and assumption to underpin service science [27,28]. Maglio & Spohrer [29] define service systems as "value-co-creation configurations of people, technology,

value propositions connecting internal and external service systems, and shared information (e.g., language, laws, measures, and methods)".

A service is considered as a process where something valuable is created. Service science aims to define the concept of value co-creation and interaction in service systems. There are different definitions of a service system as depicted in Table 2.

Table 2. Definitions of service system.

| Author	Definition of Service System
Maglio and Spohrer [29]	Service systems are compositions of value co-creation which consist of technology, people and value propositions. Service systems connect both internal and external service systems and information that is shared (e.g., methods, language).
Vargo, Maglio, and Akaka [30]	A service system consists of various resources (e.g., technology, people). These resources are linked with other service systems by value propositions.
Polese, Russo, and Carrubbo [31]	Service systems are real networks where different entities use common strengths by being directly and indirectly connected. Service systems focus on competitiveness and interaction with other service systems that are external and independent.

2.2.2. Sphere of Service Ecosystem

A precondition for understanding the term service ecosystem is the definition of the term business ecosystem. Business ecosystem theories explain how enterprises interact with their environment to produce a product or deliver a service [32,33]. When the term business ecosystem was introduced and discussed, the technological status was not the same as it is today. For example, the Internet or smartphones were not accessible to the mass market [34,35]. Since the 1990s, various technologies have developed and are accessible to a wide range of people. Nowadays, non-technical consumers have access to the internet, computers, and smartphones which had a decisive impact on people's everyday lives. These technical developments had a great influence on the way how enterprises do business. A shift can be observed from the goods-dominant logic to the service-dominant logic. Nowadays most economies can be regarded as service economies with a focus on customer-centricity. Instead of focusing on producing products, enterprises focus on customer needs and how to deliver the best service. In this context, the customer is involved as a so-called co-creator of value. The customer is an integral part of the service experience. Hence, value is not created by a single actor but in a network of multiple actors who collaborate with each other [27].

This phenomenon is referred to as a service ecosystem [36]. Service ecosystems explain the exchange and interaction of services in a network of different stakeholders. What drives value creation is the knowledge of the involved actors of the service ecosystem [37]. According to Lusch & Vargo [36] (p. 24), a service ecosystem is "a relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange". The definition of service ecosystems emphasizes the importance of institutions [38]. Institutionalization is an innovation process that represents the change and disruption of institutions. The transformation of service ecosystems is driven by institutionalization [39].

In order to understand institutional change, the economic concept of micro, macro and meso level is used. It explains the economy as a complex system which consists of different rules. The micro, macro, and meso level can be used to study the behavior of and the relations on different levels. In the context of this study, it forms the basis to explain how transformation takes place in service ecosystems. The analysis of macro-level considers society as a whole. The focus is on political, economic, social and more factors that have an impact on both the society and individuals. The macro-level represents an overall perspective and does not cover, for example, social interactions which occur on a micro level. Between the macro and micro level, there is the meso level. This level needs to be considered in order

to study parts of society, such as specific groups, organizations, and communities. The micro-level is the smallest unit that can be analyzed. Figure 2, examines the interactions between individuals on a detailed level [40].
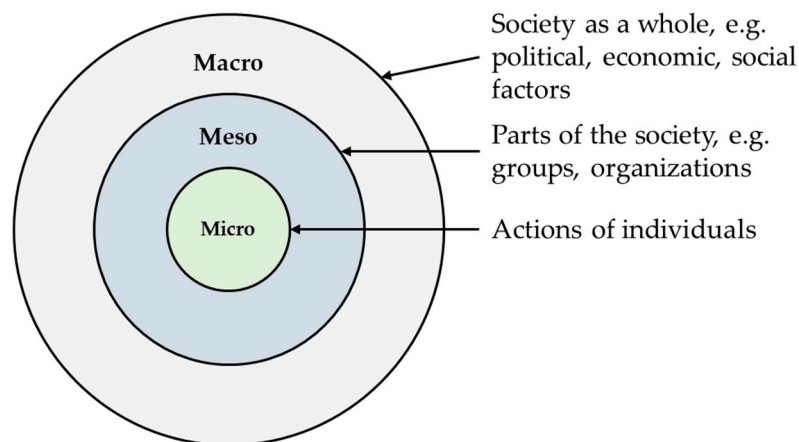
Figure 2. Overview macro, meso, and micro level.

2.2.3. Resource Integration

In order to co-create value, existing resources (e.g., people, technology) are integrated with resources from other service systems [27,41]. Resource integration enables actors to co-create value. In this context, the actors are referred to as resource integrators. Actors can be supplier, customer or other parties within the network. The outcome of successful resource integration is the co-creation of value [42]. In the context of the service-dominant logic, Vargo & Lusch [27] introduced the terms operant and operand resources. Operant resources stand for skills and knowledge. Operand resources are typically physical resources, such as machines or materials. The source of competitive advantage is operant resources. People who act as resource integrators use operant resources which go along with operand resources [43]. Resource integration requires processes and forms of collaborations [42]. Resources are integrated whenever people act. Therefore, it is an ongoing activity. Resource integration can be done by a single person, several people or by many people. There are different levels of activation with respect to resource integration. An actor can be very active. This occurs, for example, when somebody is assembling furniture. On the other hand, an actor can also be very passive. A passive activity is, for example, watching television [43].

2.3. Boundary Spanning for Expansion of Sharing Economy

This section introduces the topic of boundary-spanning knowledge processes for the expansion of the service ecosystem. To expand the sharing economy, the exchange and interaction of the different actors by knowledge integration is explained with the boundary-spanning mechanism.

2.3.1. Nature of Boundary Spanning

There are different knowledge processes that occur in a group context. An example is knowledge processes in communities of practice. These are homogenous groups of people. The group members share certain commonalities. However, there are also collaborations between groups with diverse backgrounds. There is little shared identity and knowledge between the group members. This context is explained as a boundary-spanning situation. Between these groups, the so-called spanning of boundaries is required because these people have different identities [44]. According to Hwang, Singht, and Argote [45], a boundary can be described as a border that separates a group from other groups. Hislop et al. [44] (p. 216) define boundary-spanning collaboration as "a form of heterogeneous group collaboration involving people who have distinct differences between them such as knowledge base, sense of identity, the native language is spoken, etc.".

2.3.2. The Significance of Boundaries

Boundaries are a diverse construct. For example, there can be geographic, physical or social boundaries, such as different professional backgrounds or social status. Boundary-Spanning collaboration represents reality in today's organizations. There is a variety of boundary spanning situations that include the creating and sharing of knowledge between people with divergent backgrounds [44]. For example, there are people who are involved in inter-organizational collaboration with the goal to develop or to produce complex products in the technology area [46,47]. Another example is the outsourcing of business services to third parties [48,49]. Situations, as described in these examples, become more and more popular. This shows the significance of boundary-spanning research. By bringing people from diverse backgrounds together for collaboration it is of interest how the potential for knowledge creation and innovation can be exploited.

The question arises how the difficulties in boundary-spanning knowledge processes can be addressed. There are two directions. One direction is to approach the issue from a social perspective by investing in the management of the relationship between people. A second perspective addresses the challenge with boundary objects [44].

2.3.3. Notion of Boundary Object

Boundary objects, which can be physical or linguistic/symbolic, should enable knowledge sharing [44]. Carlile [50,51] proposed a typology consisting of four boundary object types which can be used to cross boundaries: objects/models (e.g., sketches, drawings, mock-ups), standardized forms/methods, repository (e.g., database), and maps (e.g., process maps or gantt charts). Objects/models are used for representing and communicating simple and complex topics. They allow depicting different perspectives. Repositories serve as a common knowledge base by providing shared syntax, language, and values. This enables different stakeholders of the community to share knowledge. A shared understanding of a topic can be achieved by providing stakeholders with standardized forms/methods. Maps can be used to describe the dependencies between different problem-solving efforts.

2.3.4. Role of Boundary Spanner

In theory about boundary spanning processes a lot of attention is given to the organizational and institutional level. A boundary spanner is an actor in the organization who has the required capabilities to span intra- and inter-organizational boundaries. Boundary spanners have a specific set of characteristics, skills, and competencies. These people contribute to the effectiveness of inter-organizational behavior. Boundary spanners have relational and interpersonal competencies which enable them to engage in relationships with other people. These capabilities are motivated by the need to interact with different people and organizations which are outside their own organization [52].

Literature provides various descriptions of the personality and dispositions of boundary spanners. These people are, for example, diplomatic, committed, tolerant, respectful and reliable. The boundary spanner is an actor with entrepreneurial and innovative capabilities. Complex problems in organizations typically cannot be solved with conventional approaches. People are required who are "rule-breakers" and who have a creative and flexible mindset [52]. Boundary spanner facilitates boundary-spanning knowledge sharing.

2.4. Theoretical Framework

The theoretical framework developed from the literature review, which contributes to achieve the desired research results. The target of this research is the sharing economy that has become an important topic in today's economy. The basic principle of sharing economy draws upon the idea that people share goods instead of buying them. The concept has the potential to reduce consumption and to lead to more sustainable behavior. Technology is the enabler that makes sharing economy business

models possible. Technical platforms bring stakeholders together and support the establishment of trust. In developing countries, the sharing economy can contribute to solve problems that occur in the economy and society. For example, in developing countries, public transportation is often limited. Transportation network companies (TNCs) can provide people with flexible and convenient mobility. TNCs can also provide job opportunities and foster micro-entrepreneurship. The focus of this research is Careem that is getting popular day by day in the developing countries.

The theoretical basis to study interactions in sharing economy business models is provided by service science research and the underlying mechanisms of TNCs are explained with the framework of service-dominant logic (SD-logic). Since the framework has the capability to describe the service phenomenon by using various concepts in sharing economy. The network of actors in collaborative consumption is considered as a service system where value is co-created through the interaction of different parties. The micro, macro, and meso level are used to analyze and demonstrate how actors are interconnected within the service ecosystem and value is the glue that "holds" service ecosystems together for service expansion. To activate a service in TNCs, value is co-created by single or multiple actors actively or passively through resource integration as shown in Figure 3.
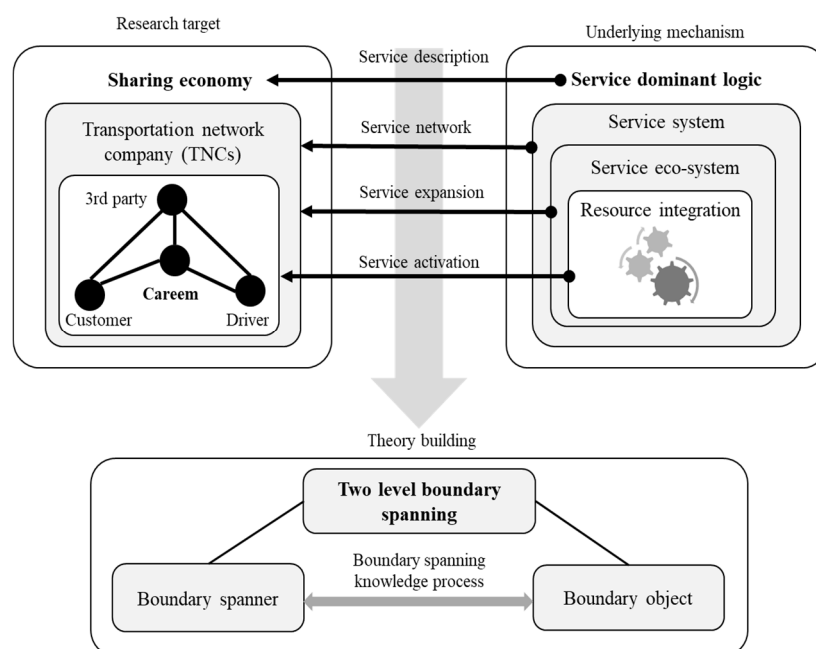

Figure 3. Framework of research target, underlying mechanism, and theory building.

The theory-building approach (boundary spanning) for this study focuses on the connection between the organization, its individuals and the environment. In order to analyze the relations and the interaction between the actors in detail, the theory of boundary-spanning knowledge process is used. It explains how knowledge is created and shared among people who have different backgrounds.

3. Research Questions

An examination of the literature reveals that developing countries face the problem of sustainability in terms of lack of awareness, education, transportation, environmental pollution and lack of resources. The sharing economy has the power to mitigate the prevailing issues because it has the potential to promote the shift of mind towards collaborative consumption. To transfer the concept of sharing economy from developed to developing countries a governance framework is required which explains how to enable change in the society. This research aims to bridge the sustainability gap and to explain how the sharing economy can make developing countries more sustainable. For this purpose, the case

of TNC (Careem) is analyzed and following major (MRQ) and subsidiary research questions (SRQ) are raised:

MRQ: What are the practices of Careem to promote sustainable consumption in Pakistan?
SRQ1: What is the Business model of Careem?
SRQ2: How has Careem evolved its business model?
SRQ3: What is the internal mechanism of product/service development in Careem?

4. Research Methodology

The methodology describes the research methods, techniques and ways for collecting and analyzing data [53]. In order to answer the research questions following strategy has been used.

4.1. Research Design

This study has adopted a *case-based research approach* (case study). Data has been collected in Pakistan from 15 August 2018, to 9 September 2018, where Careem an emerging transportation network company (TNC) is selected as a case. Careem has become a successful service in many developing countries because of its adaptive nature to the environment. Another reason for choosing Careem is Careem's vision to resolve local issues and to offer job opportunities. Careem also fosters the idea of micro-entrepreneurship by enabling different classes of the society to run their own business.

The *purpose of this research is to explore* the selected case and its working mechanism to build a sustainable environment by promoting a sharing culture. The *research type is qualitative approach* and the *type of investigation is to build and revise theory* by considering *individuals as a unit of analysis*. Qualitative type of research has the potential to collect maximum in-depth data in business studies and also allows constructing questions/hypothesis from established theory to be tested [54].

4.2. Method of Data Collection

The data is collected from *primary and secondary sources* in the following two ways.

4.2.1. Interviews

In this research, *semi-structured interviews* were conducted with the goal to encourage people to start talking freely and to provide us with extra information. The target interviewees were people from the Careem management, Careem drivers, investors, companies and regulatory authorities. The *sample size* for this study is *14 face-to-face interviews* with the *criterion-based technique*. The interviewees were categorized based on the objectives of the study.

The *objectives of the interviews* were (1) to identify service management, cross-business collaborations, creation of products/services and to understand the mechanism of the resource integration (Careem management), (2) to observe and identify the motivation to participate in the Careem network (drivers), (3) to provide important information regarding their involvement with Careem. The goal was to understand their opinion about the business model of Careem and to analyze the strengths of the ecosystem created by Careem (external investors), (4) to find out what values are being originated by involving individual companies in the context of the business model of Careem (3rd parties), and (5) to understand the situation from law and order perspective with respect to transportation network companies (TNCs) in Pakistan (regulatory authorities). The duration of the interviews was a minimum of 30 min and a maximum of 90 min. The detail information of interviewees is shown in Table 3.

Table 3. Interview data collection.

No.	Interviewees	Number of Interviews	Designation of Interviewees	Interview Duration (Minutes)	Expected Results
1	Careem management	3	Operation manager Public relation officer Strategy planning officer	90 60 45	Expanded business model than other TNCs
2	External investors	3	Local investors Bank Rent-a-car	45 60 50	Careem provides better and sustainable investment target
3	3rd party	3	Rozee.pk Pakwheels.com Jubilee Insurance	60 60 45	Sustainable cross-business collaborations
4	Regulatory authority	2	Local police Traffic police	30 45	Safety measures and cross-verification of documents in Careem
5	Careem drivers	3	Part-time Full-time Full-time	40 45 35	A supportive platform for driver's growth

Role of Interviewees

- *The operation manager* is responsible to initiate any strategy or suggestions regarding collaborations or new services for the betterment of the company.
- *The public relation officer* is the backbone of Careem and responsible for collecting and understanding the needs/ demands from all stakeholders.
- *The strategy planning officer* is responsible for observing market trends, finding feasible and appropriate solutions against any prevailing issues.
- *Local Investors* are the people who provide loans or cars to potential drivers of Careem and who run a business in partnerships.
- *The JS Bank* collaborates with Careem and provides loans with easy installments to the drivers that enable them to buy a car.
- *Rent-A-Car* is a small size business where two or more people collaborate and make a joint company. They gather money, buy a few cars and then hire drivers as employees in order to offer on-demand car services with Careem.
- *Rozee.pk* is Pakistan's first online platform for e-recruitment. In 2017, Rozee.pk started its collaboration with Careem. It supports Careem to find good team members and staff (drivers). Rozee.pk plays the role of a mediator between potential drivers and investors.
- *Pakwheels.com* is an online portal for buying and selling second-hand cars. Moreover, the portal offers extra services like car inspections for buyers and sellers. In 2017, Careem started a collaboration with Pakwheels to ensure the safety of customers by hiring drivers whose cars have an inspection report.
- *Jubilee Insurance* collaborates with Careem to provide cheap and easy insurance policies to Careem drivers and also arranges awareness seminars for their safety.
- *Regulatory authorities* ensure the safety on the road by enforcing the rules and regulations and cross-verification of personal documents of a driver to be hired by Careem.

The *limitation of the interview method* was to get appointments from the interviewees through email and by phone calls. Due to their busy schedule, some interviews were canceled and re-arranged on the spot.

4.2.2. Web Survey

The web survey and literature reviews were conducted to clarify the image of the services of Careem in Pakistan. To observe the popularity of Careem among other TNCs, the *websites of Careem,*

Uber and local taxis were explored in detail and the data was extracted [26,55,56]. The analyzed data is discussed in Section 2.

The *limitation of the web survey* was the unavailability of appropriate literature. Since Careem is an emerging TNC, there is not enough literature available which describes the service model of Careem. Therefore, only official websites and press releases were considered in the case of Careem. This study incorporates only the basic information of Uber and local taxi services, to establish a benchmark of the working model of transportation network companies (TNCs) in Pakistan.

4.3. Method of Data Analysis

Applying the directions based on *grounded theory methodology*, data collection and data analysis were conducted in an *iterative scheme* to describe the unique characteristics of Careem services in Pakistan. The interview data were analyzed using the *thematic analysis approach* based on *grounded evidence and theoretical reasoning* (Eisenhardt, 1989) [57]. The technique followed for thematic analysis in this study is as follows:

- Firstly, the *audio data were transcribed*, and the interview *transcripts were translated* from the native language (Urdu) into English;
- Secondly, the transcripts were read several times in order to *highlight the notable words, lines, sentence, paragraph, actions, and processes* of the interviewees. It helped to develop a clear image of the points of discussion.;
- Thirdly, *labeling and categorization* were done for the most relevant words, actions, and processes.
- Fourthly, to find *associated concepts and relationships*, the labels and categories were connected to make a *reference*;
- Lastly, this study resulted in *developing a theory* based on the connections and the categorization that has been made;
- In order to keep the privacy, the names of the interviewees have been anonymized.

5. Research Findings

This section explains the findings extracted from the case analysis of Careem in Pakistan. Firstly, the findings are mainly about the association of actor-networks, and a working mechanism to fulfill the needs of the community by involving multiple stakeholders. Secondly, the chronological development of a service ecosystem is discussed and defined as cross-business collaborations that are characterized as an expanded network. Thirdly, the product and service development processes are explained in this section. That explains multiple services introduced by Careem having some unique features. These features explain the extension of resources from resource holder to resource seekers through boundary-spanning activities. Lastly, the findings explain the prototype of resource integration with a distinctive role of Careem as a core boundary spanner.

5.1. Service System

A service system can be defined as an actor-network in an organization with the aim to connect internal and external service systems and information that can be shared easily. Service systems help any organization to meet the desires and expectations of the actors involved in the network to expand the service values embedded in the business model. These are mainly the compositions of co-creating values that are comprised of technology, people and proposed values [29]. This research implies the structure of the actor-network in Careem. The definition of service system adopted in this study is as follows:

> *A service network that connects institution, people, organizations and community directly or indirectly with the focus on competitiveness with other service systems that are external and independent.*

Business Model of Careem in the Context of Service System

This sub-section answers the SRQ1 mentioned in Section 3. The results in this section are developed based on the interviews that have been conducted with the Careem management in Pakistan. The results show that the service system is a network of actors/stakeholders who are involved in the business model of Careem. The arrangement of the network is explained with the connection building among the actors to show the interaction and communication among them. In Careem, the service network involves the following actors: Careem itself, drivers, customers, investors, and 3rd parties under the supervision of regulatory authorities.

Careem plays the role of intermediary in all service transactions and is responsible for connecting the resource seekers to the resource holders. Careem performs all functions independently. However, Careem cannot neglect the power of interference of regulatory authorities (local police and traffic police). The dashed line in Figure 4 represents the service transaction in Careem.
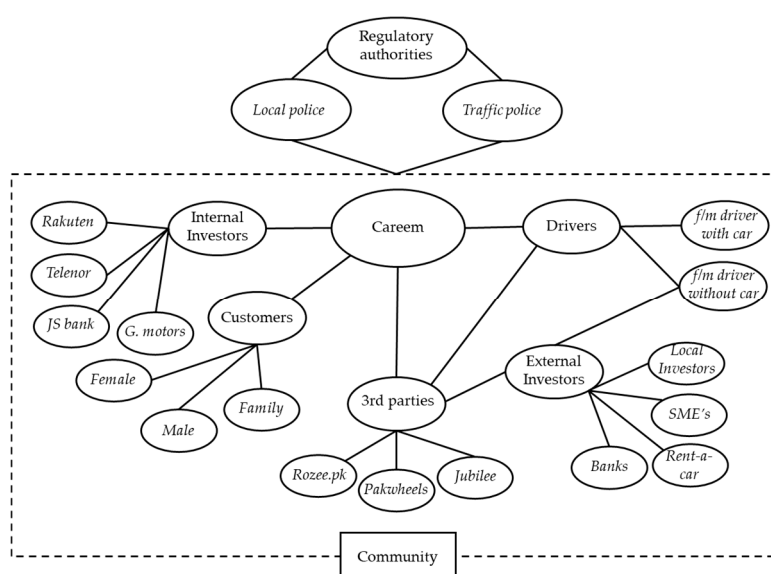
Figure 4. Service network of Careem.

The essential fact of Careem is that the entire service transaction is observed and fostered by the regulatory authority. It includes the local police and the traffic police. The local police check the criminal record of a person and provides a certification of his or her clean status [. . .] However, the traffic police ensures the validity of a driving license. Then the potential person can be hired by Careem. Without certification, it is impossible to be employed by Careem. (Careem Management)

Careem is always in the middle to build favorable connections among stakeholders. It has introduced the concept of sharing culture in Pakistan. To promote the sharing culture, it is necessary to involve the whole society. All actors are connected in a systematic way. Like all the other service organizations, Careem also has a partnership with internal investors that provide initial funding and support with their own resources.

Careem has many internal investors and global partners, who support the managerial body to grow and expand the Careem business [. . .] currently, we have a partnership with Rakuten, Telenor, JS Bank, and General Motors. (Careem Management)

The purpose of Careem is not only to make a profit but also the social growth of the economy by providing more employment opportunities, safe and easy rides. Overall, Careem makes a big contribution to the development of society.

Our main focus is to provide job opportunities to unemployed people, [. . .] and also to expand the coverage of passengers as much as possible by observing the local needs. (Careem Management)

All parties involved in a service transaction are working for a common goal either internal or external stakeholders. There is a big contribution of 3rd parties in Careem. They act as a supporting hand to promote the service network and facilities provided by Careem.

We are collaborating with some of the independent companies (i.e., insurance, e-recruitment, and car inspection companies) to enhance the ride service [. . .] we establish contacts among different stakeholders to work together. (Careem Management)

The dotted area in Figure 4 is characterized as a community because it is comprised of all actors working for a common platform.

5.2. Service Ecosystem

A service ecosystem is a large network of different actors which interact with each other to develop an overall competitive and sustainable system. It can be defined as an autonomous and self-reliant system of actors that are responsible to exchange resources associated with shared institutional measures [36]. This research explains the extended function of Careem in terms of the ecosystem. This is the most important reason for the success of Careem as transportation network company (TNC). The focus of this study is to observe the service ecosystem of Careem in the following context:

A service ecosystem is a dynamic system of resource integration that explains service exchange and interaction between different stakeholders.

Development of Service Ecosystem in Careem

This sub-section answers the SRQ2 mentioned in Section 3. Careem is a Dubai based company and the working model of Careem was the same as the Uber business model. When the CEO of Careem launched its services in Pakistan for the first time, the core business model was similar to Uber. However, Careem had the vision to become a social enterprise in Pakistan.

Careem is providing not only affordable and quality transportation services but also playing a leadership role for the country's development. (Careem Management)

By conducting an aftermarket analysis and feasibility checks, Careem observed a big need amongst potential customers. There was a large number of people who cannot afford a car since they live under the poverty line. Careem extended its business model to cover and to facilitate this part of the society moreover, to grow its driver's network.

Careem is just an App with a great vision for the society. But to implement the vision, Careem does not have enough resources [. . .] therefore, to expand their business, the role of investors and companies cannot be ignored. The real target of Careem is to explore the possibility of mutual cooperation for creating employment opportunities for youth. (Careem Management)

To support the drivers without a car, it is necessary to organize arrangements with the banks, SME's and local investors. After the first big success of involving small and medium investors, the goal of Careem is to make an autonomous ecosystem by involving 3rd parties.

Figure 5 shows the chronological development of Careem. These parties are responsible for multiple functions compatible with their business nature. These functions are like safety and security check of cars, vehicle insurance, and recruitment system. This chronological order of expansion in ecosystem realized by the Careem, because of its capability to fulfill the agility. Here Careem has proven itself as a social transportation network company by giving the chance to the multiple stakeholders to meet and to collaborate. That results in the evolutional development of the ecosystem. In this whole

process, Careem acts as an intermediary to expand the network by outsourcing multiple resources to develop a sustainable economy.
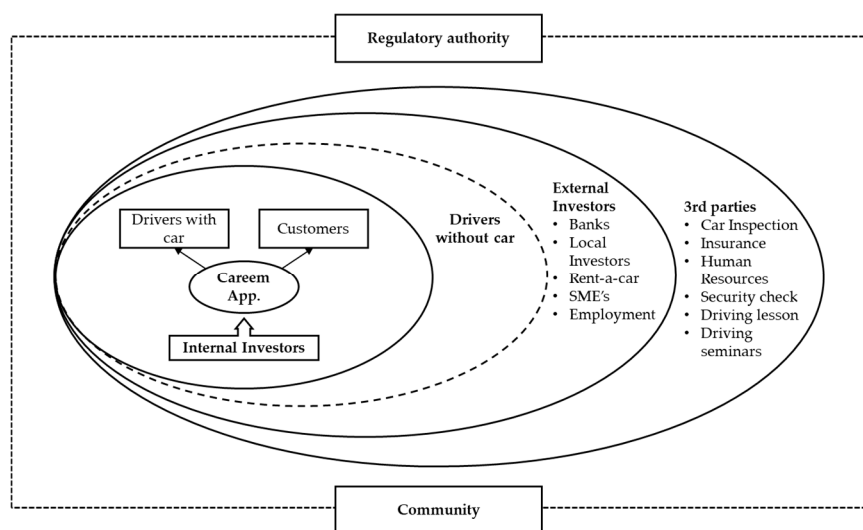
Figure 5. Chronological development of the service ecosystem in Careem.

The role of the regulatory authorities is similar to the institution. These authorities give directions and foster rules and regulations to ensure fair transportation in Pakistan. Additionally, the growth of Careem business is under the control of these authorities. This is important because transportation network companies (TNCs) are directly connected with customer safety.

> *Our job is to enforce safety in the region, by checking the criminal record of drivers and local parties registered with Careem.* (Local Police)

Figure 5 demonstrates the expansion of Careem under the control of regulatory authorities. By involving multiple stakeholders, the target of Careem is to build a healthy society.

5.3. Product/Service Development of Careem through Resource Integration

This sub-section answers the SRQ3 mentioned in Section 3. Careem is a transportation network company (TNC) and promotes the sharing culture in the society. After carefully analyzing the Pakistani society, Careem figured out some patterns for resources which are scattered in the society and can be reused. In our findings, we use the term *resource seeker* for those who have the ability to participate in Careem but who do not have resources to utilize this ability. *Resource holder* is the term used for those people (individuals or companies) who have the resources and can be a part of Careem, but they need a utilizer. Hence, Careem took the responsibility to act as a facilitative leader/core boundary spanner between resource seekers and resource holders.

> *We are trying to combine the scale of multiple resources to facilitate the lives of more people in the region in additional ways than just mobility [...] Our mission is to help and realize the regional potential by joining hands with local allies.* (Careem Management)

In the following section, we will explain the cases in detail. How has Careem created opportunities for the society? And how has Careem acted as a core boundary spanner in the resource integration mechanism? Moreover, it is explained how secondary boundary spanner is created because of the core boundary spanner.

5.3.1. A Case of Women Driver

Woman safety and woman empowerment is the biggest issue in Pakistan. In Pakistani society, the main workforce is dominated by males in all fields of life. Recently, a new trend is coming where women are willing to be an active participant in the mainstream besides men.

Careem has realized that there are some cases, where women are forced to earn income for their family. As these women are not well educated, the only option is to work as labor to earn daily wages. Later, it has grasped the attention of Careem that some female customers have issues regarding safety and comfort while traveling with male drivers. Careem showed the intention to solve two main problems in society. Firstly, to empower the women and secondly, to ensure the safety of female customers while traveling.

Our mission is to give women equal rights as men to generate a healthy income from the utilization of service opportunities and chances provided by Careem. (Careem Management)

The public relation department is the backbone of Careem since they are the one who listen and facilitate the customers. After getting the information about female safety issues, they inform the security and safety department to find a solution. Further, this department contacts the digital marketing department to advertise the need for women drivers. The goal was to raise the awareness that women can also become Careem captain. To show respect as a responsible part of Careem, the term *captain* is assigned to the drivers. Besides the advertisement on different channels, Careem contacts the NGO who are responsible for providing skills and jobs to women. The NGO raises awareness among women and provides all necessary information regarding driving rules and regulations on the road. Figure 6 shows the whole process to introduce a new service provided by the female driver.
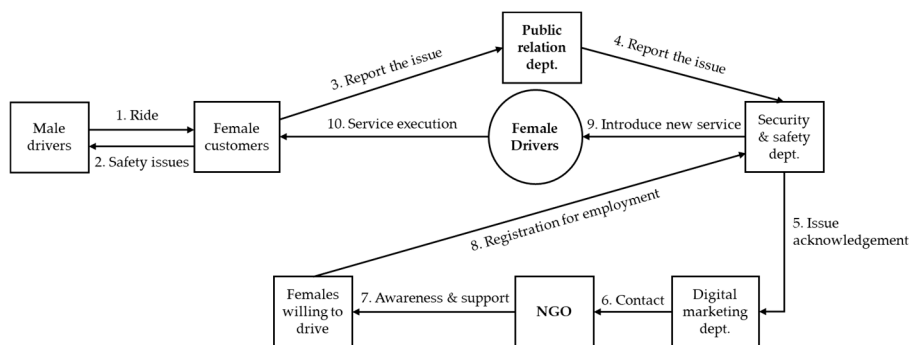
Figure 6. Process to involve female as a driver.

I am not that much educated to work in a good company and to earn a healthy income [. . .] But after joining Careem, I earn far better than before, and I can raise my family with good financial support. (Woman Driver)

When these women receive all necessary documents, they register as Careem captains. In this whole process, the public relation department of Careem acts as a core boundary spanner and because of this, the NGO is created as another boundary spanner which connects Careem and women drivers. This two-stage boundary spanning is the innovation in the service design of Careem. It empowers the society and ultimately makes Careem successful in the region.

5.3.2. A Case of Drivers without Car

Careem connects the society with opportunities and with resources. This applies especially in the case when a driver does not own a car. There are two cases of drivers without a car. Firstly, drivers who belong to the middle class. They have basic education and a valid driving license. Secondly, drivers who belong to the lower class. They are uneducated and do not know how to use a computer and smartphone.

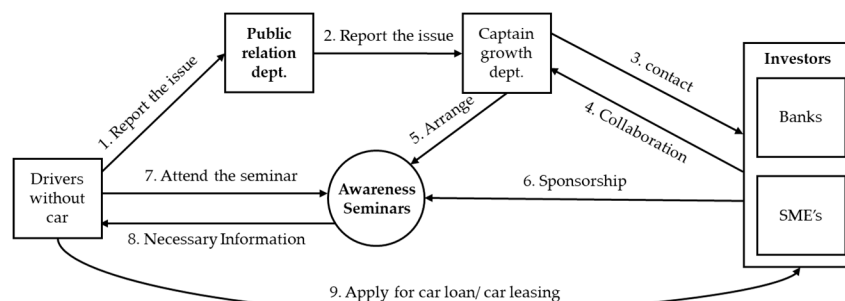Facilitation of Drivers without Car (Middle Class)

In the Pakistani society, the young generation faces the problem of unemployment or if there are jobs available then that does not match with their qualification. Careem realized the fact that there are several resource seekers who can be a part of Careem as captains. This is a good chance for Careem to penetrate into the society by arranging and collaborating with local banks and SME's. The whole process starts when a driver without a car reports the issue to the public relation department of Careem. The captain growth department further contacts the bank for a collaboration. The proposal is to arrange loans and cars on leasing with easy registration and a low rate of interest.

> *We are trying to expand our driver's network. And to achieve this goal, we offer awareness seminars to develop an entrepreneurial mindset among individuals [. . .] it will help them to earn a good income as well as social status.* (Careem Management)

Further, the captain growth department arranges an awareness seminar for the potential drivers with the sponsorship of the investors. In the seminar, Careem introduces the resource seekers (potential driver) to the resource holders (investor). The banks provide necessary information to get easy loans on installments. Moreover, potential drivers can get in touch with investors.

> *Recently, we have initiated a collaboration with Careem to attract trustworthy customers [. . .] Our main role is to sponsor awareness seminars organized by Careem and to provide car loans and leasing on the bases of strong reference offered by Careem.* (Bank)

In this case, Careem (public relation department) acts as a core boundary spanner and because of this boundary spanning, drivers can meet with the investors. In the next stage, investors act as a second stage boundary spanner. Due to the investors, potential drivers can become a part of Careem. Figure 7 shows the step by step process of the whole transaction.
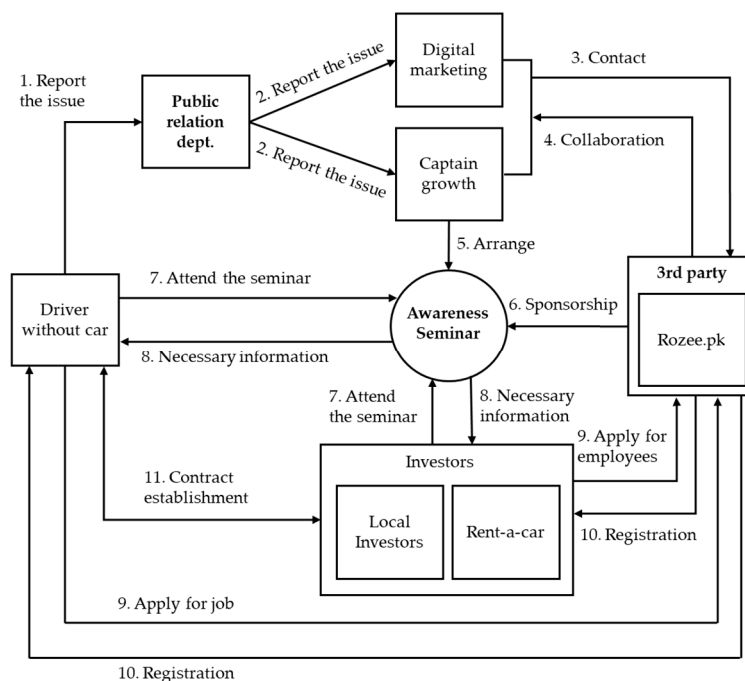

Figure 7. Collaboration mechanism with investors.

Facilitation of Drivers without Car (Lower Class)

This case affects most of the population in Pakistan. The main target is to nourish people who belong to a lower class of the society. Since these people are not well educated, it is difficult for them to find proper jobs. One of the motives of Careem is to establish the society on the bases of equality. The process starts when a potential driver gains access to the public relation department to become a driver but has not enough money to buy a car. After pre-examination, the report is transferred in parallel to the digital marketing department and the captain growth department. The digital marketing department is responsible for the advertisement. The captain growth department is in charge of managing the inquiries and the growth of drivers.

> *We have found a group of people who are interested to be a captain. But they do not own a car and they have no information regarding investors and banks [. . .] for those people, we organize awareness seminars with the help of sponsors and investors to come-up and work together for Careem.* (Careem Management)

Later on, Careem establishes a contact with a 3rd party (Rozee.pk- an online portal of Pakistan's first e-recruitment) to find a job opportunity in the country. In collaboration, Careem and Rozee.pk arrange an awareness seminar to make the connection between drivers and investors. Potential drivers and local investors attend the seminar. Figure 8 explains the case of lower-class drivers to get involved with Careem through the assistance provided by the 3rd party.

Figure 8. Collaboration mechanism with a 3rd party.

My business is mainly to provide cars on an hourly/daily basis. After knowing about the Careem business, I am delighted to provide my cars on a quarterly/half-yearly basis […] Now, I am able to get a proper amount of money every month. (Rent-A-Car)

In the awareness seminar, Rozee.pk provides information about the way to approach local investors by using the company's online platform. Due to the participation in the seminar, local investors apply for acquiring employees and drivers apply to get employment.

I invest mostly in the real estate business and the stock market. In the real estate business, I have to make big investments. I make a profit after four to six months on an occasional basis. As the economy is unstable in Pakistan, the stock market either turns into profit or loss […] after attending awareness seminars conducted by Careem, I am eager to work for Careem to make a stable source of income per month. (Local Investor)

Often the potential drivers do not know how to use the online platform due to a lack of education. In this case, the staff of Rozee.pk helps the drivers to create an online CV.

We provide an online platform for job seekers and job providers […] recently, we made a collaboration with Careem to give our professional expertise for uneducated people to create a good CV and find a suitable employer for them. (Rozee.pk)

Ultimately, a contract establishes between drivers and investors. In this case, Careem acts as a core boundary spanner and in the next stage, the 3rd party acts as a secondary boundary spanner because it helps to expand the further expansion.

5.3.3. A Case of Authenticity of Drivers with Car

This case is very typical and applies to all drivers of Careem. As this particular case is for the consultancy and for acquiring the information related to driving. In Pakistan many people are unaware of (1) how to obtain a driving license and who the responsible authorities are, (2) how to get car insurance and who provides affordable and good car insurance policies, and (3) how to check the detailed features for car safety.

We are responsible for regulating the traffic by enforcing the traffic/road laws and issuance of driving license […] we are liable to conduct road safety seminars for the drivers. (Traffic Police)

For reporting these issues, the general public, potential drivers and already existing drivers approach the Careem office. The public relation officer assists them to resolve their issues. Careem provides very basic consultancy services. However, if the demand for one issue is high, then public relation officer contacts and reports the issue to the captain growth department, who is responsible for all the dealings related to drivers. The captain growth department contacts the 3rd parties to collaborate with Careem for the specific issues to provide necessary information to the Careem drivers. If the 3rd parties are interested to collaborate then they accept the proposal from Careem as shown in Figure 9.
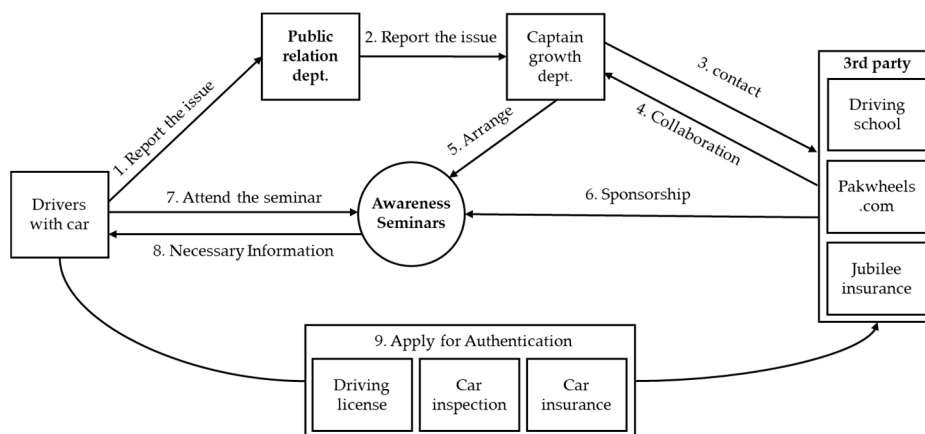

Figure 9. Collaboration mechanism with a 3rd party for authentication.

Pak wheels is the no.1 online automobile portal in Pakistan. We are known because of our in-detail car inspection and authentic car certification […] in 2017, we started working with Careem. And it is an exciting experience to collaborate with Careem to extend Pakistan's first and only car inspection service. We are responsible to ensure the good condition of cars registered with Careem. Without our certification, no car can be registered with Careem. (Pakwheels.com)

Later on, the captain growth department arranges seminars that are sponsored by 3rd parties. People have the opportunity to join the seminars and to ask related questions. The concerned company provides a solution to their issues. By the end, drivers are able to find an appropriate solution to utilize maximum benefits.

Our vision of assisting people is to overcome uncertainty. We strive to be the best by providing values to the customers in terms of introducing road safety seminars and the importance of car insurance policies […] Being the private sector market leader, we have developed a special policy for Careem drivers to secure their own lives as well as the passengers under an affordable circumstance. (Jubilee Insurance)

5.3.4. Prototype of Resource Integration in Careem

The service mechanism of all resource integration cases is summarized as a prototype in Figure 10. Sometimes there is a social problem that is reported to Careem but due to resource limitations, Careem cannot solve the problem at once but still acts as a core boundary spanner. Careem interacts with external stakeholders and supports them to initiate their activities as a secondary boundary spanner. This interaction is necessary to achieve system sustainability to get a proper solution for the problem incurred. As a result of this interaction and collaboration, Careem is able to expand its network and its resources to implement the best solution for the problem.
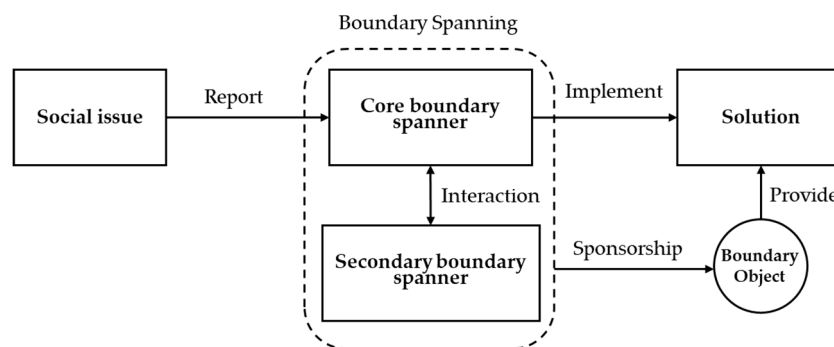
Figure 10. Mechanism of resource integration extracted from Careem.

By acting as a core boundary spanner, Careem has incorporated the concept of sharing culture among the society. Careem provides an opportunity to small, medium and large enterprises to join hands for collaboration and to share the benefits together. As well, awareness seminars in all the service development cases can be considered as a boundary object because it helps to join boundary spanners for collaborative activities.

6. Conceptual Framework and Its Implications

Based on all the findings extracted in this paper, a conceptual framework is developed to foster sustainable consumption. To answer the MRQ mentioned in Section 3, this section contains the points of discussion raised during the research to realize the practical implication in the field of service science and knowledge management. Initially, Careem started its business in the UAE, where people have enough resources to collaborate with each other by themselves. However, to penetrate in the economy of a developing country it was necessary to reshape the services. Therefore, Careem entered the Pakistani society with a vision of learning climate as an input.

A learning climate is comprised of several factors, like a culture of respect, positive interactions, focused learning, freedom of expressions, positive expectations, and motivation. The purpose of this learning climate is to realize the local needs, to find compatible solutions and to raise social awareness. Under a learning climate, people feel free to express their needs and expectations. In Careem, this learning climate helps to realize the social issues prevailing in the society through positive interactions. This learning climate is an input that initiates the process of resource integration in Careem.

The process of boundary spanning explains the construction or creation of a subsystem of the service ecosystem that begins from the requests reported by the (prospective) drivers or passengers. The requests are gathered by Careem. Then Careem implements the request as a new matching option in their application. This is the first step considered by Careem. If the implementation is not successful, because of limited resources, then they transmit or co-create the request with a third actor, which implements it as a new business transaction or contract. Here Careem has introduced the concept of match making to join hands with many stakeholders for the benefit of the society. Figure 11 shows that, in total, there are three implementation paths of request reported.
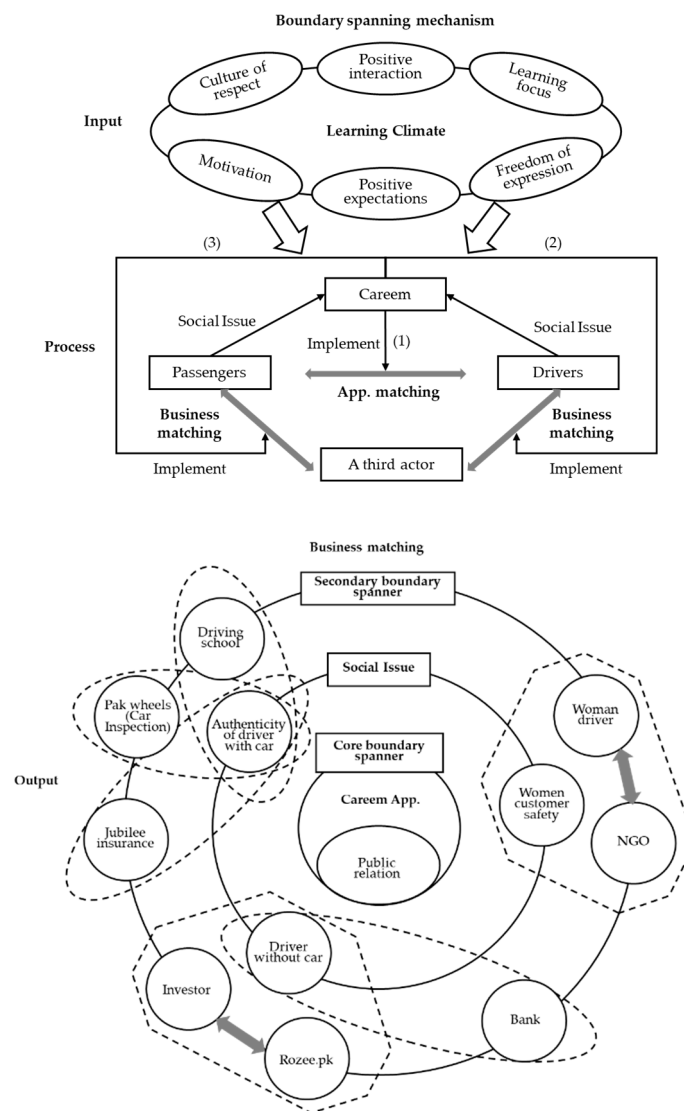
Figure 11. Two-level boundary spanning mechanism in Careem.

1. Dealing between Careem and drivers or passengers (app matching).
2. The path between drivers and third parties (business matching).
3. Interaction between the third parties and passengers (business matching).

The output is generated in terms of business matching, where Careem acts as a core boundary spanner because it provides a platform to all the stakeholders to meet. The public relation officer collects all requests and issues from the public. Then as per the nature of the issue, further collaborations are developed. The public relation officer acts as a match-maker to resolve the problem as early as possible. Here Careem has adopted a *volume business strategy* (this term is used mostly in bulk trading case, but in the case of Careem, this term has the meaning towards increasing the number of drivers to meet the demand and supply ratio in the society) to increase economic growth of individuals, which explains the vision of Careem to expand its business network to facilitate drivers by offering them job vacancies. Under the learning climate, Careem initiates the services as a first-level boundary spanner. However, for joining resource seekers with resource holders, it is necessary to expand the boundary. So, for resource integration Careem has succeeded to create a second level boundary spanner through collaboration. In the age of *open innovation* (inter-organizational knowledge), Careem is not only considering internal knowledge sources, and resources of the employees but also gathers feedback and suggestions from external sources to be innovative in the market. This shows that two-level

boundary spanning is the most effective way to reach sustainability. Figure 11 demonstrates the output of the boundary-spanning mechanism in terms of business matching. Three cases of social issues are considered to explain the concept of business matching as explained in Section 5.3.

6.1. Initiative for Women Empowerment

Section 5.3.1 demonstrates that Careem has realized the issue of safety with female customers. As well, the best possible solution they found is to introduce a service provided by female drivers. To implement the solution, Careem required human resources (females who are willing to drive). Here Careem played the role of a boundary spanner and made collaborations with NGOs to resolve the issue. NGOs provided social awareness to the females to earn for themselves and played the role of second-level boundary spanner.

6.2. Initiative for Drivers without Car

Section 5.3.2 explains that in conventional TNCs, drivers are hired who have their own cars. However, in Pakistan, there are many people who have a low income and cannot afford to buy cars. Careem realized the issue and to expand its network, Careem acts as a core boundary spanner to collaborate with the banks. The latter granted car loans or cars on leasing to the drivers to make their earnings. Moreover, Careem organized recruitment seminars by collaborating with Rozze.pk (second level boundary spanner) to raise the awareness of the drivers with respect to new market trends.

6.3. Initiative for the Authenticity of a Driver

Section 5.3.3 illustrates that to maintain safety on the road it is necessary to have a certification in terms of car insurance, regular car inspection, and valid driving licenses. Careem (core boundary spanner) grasped the issue and to resolve the issue, collaborations were made with Jubilee insurance company, Pakwheels for car inspection, and driving schools to give awareness to the drivers regarding the road rules and regulations. These companies are the second level boundary spanners that help Careem to create learning instances for the drivers and customers. The role of Careem in business matching is very important because matching the same nature of resource seekers and resource providers is a challenging task for Careem towards sustainable consumption. As well, this factor makes Careem a social transportation network company (Figure 11).

7. Discussion & Conclusions

Careem has succeeded to transform from a conventional to social TNC by creating a new business model that promotes sustainable consumption. This model is developed on the bases of multiple practices adopted by Careem. The practices that make Careem a social ride service are as follows.

7.1. Learning Climate

To promote sustainability, the first initiative taken by Careem is to listen to the voices from the society as an intermediary. Careem has created a learning climate that aided Careem to understand the issues deeper and to grow efficiently as discussed in Section 6. In this created learning climate, Careem promotes the culture of respect in the sense of listening to everyone and showing a positive attitude regarding other's opinions. This climate enables and motivates the actors (employees, drivers, customers, and all other stakeholders) to be focused on a common goal and to have a positive expectation from others. Ultimately, this climate pledgees the feeling with each other to have a positive interaction and to share a common vision of Careem to grow and to get benefits together. Through this learning climate, the motive of Careem is to provide a platform to support collaborative culture.

7.2. Cross Business Collaboration

Towards sustainability, Careem has promoted the culture of collaboration through cross-business activities. Careem has expanded its business model by involving multiple (internal and external) stakeholders that strengthen the service system of Careem as mentioned in Section 5.1.

After the successful involvement of actors in its network, Careem has expanded its network to involve the society without any discrimination of the social status of the actors. It appeared when Careem required to involve some independent stakeholders to its service network who helped Careem to increase its resources for accommodating the low-income people. In this case, Careem plays a facilitative leadership role and brings together the individual stakeholders on one platform to contribute to a shared vision. Careem realized the chronological order of the service ecosystem because of its capability to fulfill the agility. Careem focused on step by step learning instead of just copying other's pattern as explained in Section 5.2.

The expansion in the business model of Careem becomes possible through resource integration. As in developing countries, the management of resources is difficult but Careem provides a platform to accumulate resources and makes a bridge between resource seekers and resource holders as shown in Section 5.3.

Finally, to support cross-business collaboration, Careem acts as a facilitative leader to provide a guideline to the stakeholders to span the boundary as described in Section 6. In the context of match making, Careem acts as a core boundary spanner and created a secondary level spanner through collaboration. Due to the second level boundary spanning, Careem reached the root level resources. In addition, by utilizing those resources a new innovative sub ecosystem has been created. In Pakistan, many stakeholders have resources that are unutilized; Careem has created a big matching mechanism to establish more values. It has formed a bridge in society being a source of awareness, work opportunity, and an investment target. This boundary spanning has become the success factor of Careem.

7.3. Social Awareness

In developing countries, a big social issue arises because of a lack of awareness. People do not have enough knowledge to utilize the resources available. In this situation, the role of sharing economy plays an important role to attain sustainability. To facilitate many cross-business collaborations, Careem arranges seminars to generate awareness among the stakeholders. The goal is to increase the effective usage of the available resources as shown in Section 5.3. Due to spreading awareness in the society, Careem has expanded its business model in two folds: one is for the profit generation through business activities and the other one is to build the society.

7.4. Concluding Remarks

Through cross-business collaboration, Careem has succeeded to contribute to the growth of the economy in Pakistan to make progress by attaining sustainability in several ways as:

- Careem arranges awareness seminars to give awareness to the stakeholders to mitigate the problem they incurred;
- Careem has expanded its service network and provides many job opportunities to resolve the issue of unemployment;
- Careem succeeded to introduce the match making of resource seeker with the resource holder. And it leads to alleviate the poverty issues in Pakistan;
- Careem supports people in finding investors. Recognizing cultural barriers and finding solutions for local markets are two of the biggest strengths of Careem.

Careem came into the market with the motivation to solve local issues. In a short time span, Careem has proven itself a social actor in the economy and a successful market leader by introducing a social orientation perspective to its business model.

7.5. Research Significance

With the evolution of the service economy, this research signifies that Careem as a social ride service has revealed a great focus on the development of an entrepreneurial mindset, establishing social collaborations by investing in cross-boundary businesses, and finally the growth of the service ecosystem. It is considered that the sharing economy has the capability to shape our future, and it is expected that all the reshaped sharing services will exist in the background. Careem has taken the initiative towards reshaping of sharing economy business models in developing countries like Pakistan.

7.6. Future Research

Currently, this study examines the provider's point of view concerning Careem business model. In the future, the customer or driver perspective can be investigated. As future research, the same concept can be explored with a more advanced mechanism by developing a framework that can be tested in other sharing services. Recently, Careem has been acquired by Uber. The deal consolidates that Careem will keep operating its services independently under the leadership of its CEO. As per news headlines, both companies will integrate parts of its network soon. As future research, it would be of interest to observe the impact of Careem as a sustainability developer in the society and as a learning 'core boundary spanner' to Uber.

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