

# Conceptualization of Value Co-Creation for Shrimp Products in Bangladesh

Subarna Ferdous, Mitsuru Ikeda

**Abstract**—For the shrimp companies to remain relevant to its local and international consumers, they must offer new shrimp product and services. It must work actively not just to create value for the consumer, but to involve the consumer in co-creating value for shrimp product innovation in the market. In this theoretical work, we conceptualize the business concept of value co-creation in the context of shrimp products, and propose a framework of value co-creation for shrimp product innovation in shrimp industries. With guidance on value co-creation in shrimp industry, and shrimp value chain actors mapped to the co-creation cycle, companies can use the framework to offer new shrimp product to consumer communities. Although customer co-creation is known approach in the world, it is not commonly used by the companies in Bangladesh. This paper makes an original contribution by conceptualizing co-creation and set the examples of best co-creation practices in food sector. The results of the study provide management with guidelines for successful co-creation projects with an innovation- and market-oriented approach. The framework also provides a basis for further research in this area.

**Keywords**—Bangladesh, shrimp industry, shrimp product, value co-creation.

## I. INTRODUCTION AND BACKGROUND

IN recent year, aquaculture sector has become more and more important for Bangladesh like others country in Asia. It has become the 2<sup>nd</sup> largest export industry in Bangladesh after the garments products. The industry has the participation of 2.73% to total export income of the country during the year 2011. Besides, participation to GDP is 4.43% (2011) and on agriculture sector is 22.21% (2011) [1]. Despite these impressive contributions the industry suffers from serious production inefficiencies, lack of scientific and technical knowledge and is exposed to various social and environmental risks. Till today, Bangladesh has so far realized only a fraction of its production potential and did not utilize the modern business concept to improving this industry as the industry faces new challenges; ensuring safety and quality continue to be important elements in industry development [2]. One concern is the sustainability of shrimp production. In order to address the global consumer as well as local, this industry urgently needs to prepare and respond to those needs in respect of food safety, value added shrimp product, environmental sustainability and social issues. Inviting and involving consumer and other stakeholders in shrimp industry can lead to

improve the shrimp sector. For the shrimp product to remain relevant to their consumer, industry must add value to their products and come up with new modes of shrimp products.

Shrimp industry must redefine its role, leverage its strengths, focus on user involvement and close the gap between user expectations and the industry's ability to meet them. Knowing the consumers by market research and coming up with strategies for greater consumer involvement would help in the reshaping of shrimp product. But this is being difficult to achieve because the sector is so fragmented and is not adequately organized to meet the requirements as situations demand. All these issues of involving and collaborating with consumer communities (especially in the early phases of coming up with ideas for new products) are fuelling the coming of age of one research discipline: value co-creation. In the business world, industries are embracing consumers as co-creation partners in their innovative products. Yet, no work on value-creation thus far has focused on shrimp sector in Bangladesh. While there have been limited studies on shrimp export [2], chain in Bangladesh shrimp aquaculture [3] shrimp marketing [4] and value chain analysis (5), none have focused value co-creation in the context of shrimp sectors.

We, thus, investigate these research questions,

- “What are the components of value co-creation?”
- How can value co-creation be leveraged to innovate shrimp products?”

To answer these, we propose a theoretical framework of value co-creation for shrimp product innovation in shrimp industries. Both a detailed framework and a simplified version are presented. We provide recommendations on how to initiate the process of value co-creation.

## II. VALUE CO-CREATION

Value creation is a process in industry whereby products flow from the provider to the consumer in a unidirectional, one-way manner [6]. Industry have used the traditional good-dominant (G-D) logic (value-in-exchange) where value is created by the firm in the form of the products it manufactures [7]. However, consumers today have more choices of product than before. Therefore, in an alternate service-dominant (S-D) logic (value-in-use), value is created jointly by the service/product providers and consumers through the integration of resources and application of competencies [7]. Here, the customer is always the co-creator of value. This interaction between the service/product provider and the customer in S-D logic in a bidirectional process forms the root concept of value co-creation [7].

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### III. VALUE CO-CREATION FOR SHRIMP PRODUCT

Value co-creation helps the companies adding value to their products and helps them to reduce the risk. Interaction among all the stakeholders is the pre-requisition of value co-creation [8]. Orcik, Stojanova and Freund cite few examples of value co-creation in food industry [9]. These are A and B;

#### A. Milk and Yoghurt Packaging

A large food company in Serbia 'Imlek' specialized in processing milk and dairy products. For refreshing the best brand 'Moja kravica', Imlek had to gather customers' ideas to get some feedback from the market. The company has challenged its customers to design their own personalized cow and send their designs. Anyone could participate by submitting their own designs or by voting for them.

#### B. New Ice-Cream Taste

Ledo, a Croatian ice-cream and frozen food producer made a platform for co-creation of the new ice-cream called "Ledonardo". Customers made different combinations of more than fifty tastes and aromas, and had the possibility to choose from four different ice-cream shapes. Ice-creams were evaluated by customers and the jury. At the end of the contest the most popular ice-cream, named 'dream-come-true' was chosen as the best tasted ice-cream. The winning ice-cream is planned to be produced and integrated "voices of the customers" this co-creation contest will represent the inspiration for future products. In this way, company Ledo engaged the crowd of people in the co-creation of new ice-cream, while increasing their devotion to this brand, strengthening customers' loyalty, as well as, attracting potential customers to its products.

#### C. Variety of Shrimp Products

However in shrimp food sector, value co-creation can satisfy the consumers and improve the shrimp industry as well. Considering consumer demand and interests, value co-creation in shrimp food can be performed by offering organic shrimp, ready to cook shrimp or ready to eat/fry/grill, or free from harmful antibiotics, appearance or size limits. The value added shrimp also varied with the different types of cuts which are applied to the product according to buyers wish such as peeled /deveined/butter fly shape. In restaurants, customer's favorite shrimp products are peeled and deveined shrimp with tails or skewered shrimp. Pre-battered or coated or ready to eat microwaveable shrimp products are very popular in restaurant chains. Shrimp industries have to consider these issues when they processed their products. Inviting customers to what kind of food they want, consider customer opinion, create ideas and solutions by themselves for shrimp product development can help for the co-creation of shrimp product [10].

### IV. TOWARDS A FRAMEWORK OF VALUE CO-CREATION FOR SHRIMP PRODUCTS IN BANGLADESH

To establish value co-creation, interactions among all the stakeholders are primary requisition. Shrimp industries in Bangladesh where value chain process starts from the shrimp farming. In this chain, actors are shrimp firming (farm/saline

water/marine water), harvesting/collecting shrimp, short time preservation in the firm with ice, middle man (broker), deport, fish processing industry and finally consume locally or export [11]. In Bangladesh, industries usually use co-creation as a marketing strategy. They start with their co-creation initiatives when their products are in the maturity stage and need high level of promotion activities to remain attractive for customers. In Bangladesh, shrimp value chain process starts with shrimp firming and ends with international and partially for local consumers. For this study, we put focus our concentration only between fish processing industry and consumers.

In the traditional value creation process, shrimp industry and consumers had concrete roles. The processing industry provided the product and buyer (consumer) received it. This type of value is often called value-in-exchange [7] However, the recent turn from G-D logic to S-D logic in marketing can be applied to shrimp products. S-D logic minimizes the provider-consumer distinction. By utilizing this lane, shrimp industry and consumers (importers, shopping mall, restaurant, home and others) are no longer separate entities but perform various activities mutually, thus creating new form of value – value-in-use. For example:

#### A. Breaded, Burger, Coated and Ready Meals Shrimp

In shrimp industry, many forms of consumer involvement for the new shrimp product can be done. To launch a new shrimp product or collect new ideas of shrimp foods, inviting consumers can lead to new opportunities for the shrimp industry. Shrimp industry may invite consumers for ideas like shrimp burgers, shrimp meals and other categories of processed shrimp and get some feedback from the market. The company can arrange competition for its customers to design their own personalized shrimp products and send their ideas. Survey, interviewing, ICT tools and different social networking tools can be used as a platform for this contest. Anyone can participate by submitting their own products or by voting for them. Industry may put focus on need-driven customers participate in co-creation because they are not satisfied with the current products/services on the market. They are highly demanding and very interested to adapt existing offer to their own needs.

#### B. Food Safety Standards

To ensure shrimp food for sale on the EU market is safe and does not contain contaminants that could threaten human health, food imports into the EU must comply with EU food safety standards. For fishery products, there are, for instance, limits on the maximum amount of heavy metals (lead, cadmium, mercury), dioxins and dioxin-like polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs) [12]. Shrimp industry could involve EU consultants, local experts, and representatives from concerned authority to check certain health and safety requirements before entering into the EU/USA/Japan and others international market. By addressing safety standards properly for the international consumers, shrimp industries in Bangladesh can excel the shrimp products export.

### C. Social Media

Shrimp Industry can invite users to blog for the shrimp products, and feature consumers active in social media or physically in the market as star users. They can also have competitions inviting video and animation entries to be used in marketing campaigns. Consumers could be involved in creation of logos, photos of shrimp products and other projects.

By utilizing such approaches, the consumer-industry relationship can be defined through a dialogical, personalized interaction, enabling a joint creation of value [13]. For the present study, we adopt the DART and joint encounter process frameworks from the business literature to serve as a theoretical lane [13], [14]. We extend these past frameworks, and propose a value co-creation framework for shrimp products in Bangladesh (see Fig. 1).

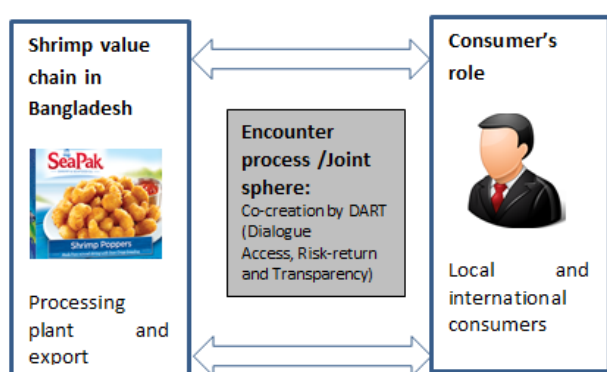


Fig. 1 Value co-creation for improved shrimp product

The framework consists of 2 parts – 1) the industry part with shrimp value chain at the left part, and 2) the consumer sphere (with local and international consumers at the right). Co-creation happens in the middle joint sphere, where interaction and encounter processes take place between the company and consumer communities.

The industry part consists of farmers, middlemen, commission agents, processing plants for exporting. With tangible and intangible resources, shrimp industry in Bangladesh creates value for the consumers (for providing shrimp product and working to meet consumer needs). To prepare for co-creation along with the consumer, the industry needs to plan and design co-creation opportunities and experiences (e.g. preparing organic and variety of processed food, utilizing social media, or other ways of working with the user). For this, the industry would need to understand the needs and wants of the consumers, the tasks they need to get done, and the barriers they face. The industry would then need to implement its design, and measure the degree of success. The industry needs to regularly learn from the implementation and revise/improve the co-creation design/experience for the user.

The consumer contributes to the co-creation process through engagement, demand and creating interest. The consumer also learns from the co-creation experience and decides on the degree of future engagement based on his/her learning and experience from it. The more the consumer feels wanted and valued, and the more consumer needs (both shrimp products

and other services) are met, the more s/he would want to remain engaged.

The focus of the framework is in the middle joint sphere where the industry people and the consumer interact to jointly co-create value. These three main elements (product provider, receiver and the encounter) form the basis of the framework for co-creation. The interaction or the encounter is only the platform for co-creation. Here, co-creation includes elements from the DART model (dialogue, access, risk-return, transparency). There should be deep and meaningful dialogue between the industry and the consumer. In order to foster such a dialogue, the industry must be willing to listen and provide consumer access through its resources, employees, workshops, website/portal/social networking tools, and other dedicated ways. The advent of social media has broadened the horizons of marketing online. Marketing experts emphasize businesses' digital marketing presence on emerging social media platforms and develop strategies around the various implications of social media on the web. Companies can find out consumer's need and can inspire the consumer to create ideas by using social networks, forums, blogs, idea competitions, workshops, consumer opinion platforms, innovation toolkits or communities for social product development [10]. For shrimp industry, the international seafood trade fairs are a great platform to identify the buyer's requirements and needs.

### V. CONCLUSION AND FUTURE WORK

This paper proposed a co-creation framework for the Bangladeshi shrimp products to improve its product which leads to offer new products to the consumer communities. The proposed framework incorporates several streams of work and applies them in shrimp industry settings. It combines the roles and responsibilities of three spheres – the industry, the consumer and their coming together to co-create value. This is the first framework of value co-creation developed for a shrimp industry context. It can serve as the base for future shrimp food studies in this area. Co-creation with carefully selected contributors, such as field experts and coalition partners, should be the focus of these companies for breakthrough innovations, while customers are usually not visionary and cannot realize their need unless they had the first-hand experience.

Several times, international consumers like EU, USA and Japan banned to import shrimp products from Bangladesh. One way to recompense this lag is the adopting co-creation practice and involving customers earlier in the product and service development process. Co-creation as a powerful engine for innovation, through cumulating consumers' knowledge, creativity and experience, increases value for consumers. Companies should have in mind the power of specialized co-creation platforms with toolkits that enable people to innovate and work together on solution development. This kind of platforms gathers people with similar interests and expertise that is crucial for building a co-creation community in a specific field of product or service development. The emergence of social media, Web 2.0 and living labs has empowered consumers to communicate their ideas and become equal partners in product and service development. On the

other hand, there are companies that are now able to reach to creative individuals and co-create innovative products and service with them. However, the present paper has limitation as the model is based on conceptualization. The model needs to be tested against actual adoption and use by shrimp industry. Future work will involve designing interviews and surveys to gather the perceptions of industry people and consumers in adopting the framework.

are knowledge engineering, ontology engineering, educational technology, e-learning, knowledge management systems and service science. Ikeda has held various leadership positions at JAIST. He is the Institutional Research unit leader of Centre for Graduate Education Initiative, Head of JAIST (Thailand) and the Director of Research Centre for Service Science

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