

ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF SCIENCE
ENGINEERING AND TECHNOLOGY

**INVESTIGATING DESIGN FOR SOCIAL INNOVATION
THROUGH BUSINESS MODELS IN RURAL INDIA:
A MODEL PROPOSAL FOR DEVELOPING COUNTRIES**

Ph.D. THESIS

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Department of Industrial Product Design

Industrial Product Design Programme

DECEMBER 2014

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**KIRSAL HİNDİSTAN'DA İŞ MODELLERİ İLE
SOSYAL YENİLEŞİM İÇİN TASARIM İNCELEMESİ:
KALKINMAKTA OLAN ÜLKELER İÇİN BİR MODEL ÖNERİSİ**

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To artisans of the world fighting poverty

FOREWORD

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ABBREVIATION

ANM	: Actor Network Map
ASM	: Activity System Map
B2B	: Business to Business
BCDI	: Bamboo and Cane Development Institute
BENU	: Bamboo Manufacturers United
BEPA	: Bureau of European Policy Advisers BM : Business Model
BMC	: Business Model Canvas
BoP	: Base of Pyramid
CARE	: Cooperative for Assistance and Relief Everywhere
CEPT	: Center for Environmental Planning and Technology
CFBI	: Center for Bamboo Initiatives
CSR	: Corporate social responsibility
DESIS	: Design for Social Innovation and Sustainability Network
DFID	: Department for International Development
DICRC	: Design Innovation and Craft Resume Center
DIY	: Do It Yourself
DPFAL	: Directorate of Provincial Food Agriculture and Livestock
DOTT	: Design Of The Time
EC	: European Commission
EMUDE	: Emerging User Demand for Sustainable Solutions
EU	: European Union
GAP-GIDEM	: Southeastern Anatolia Project - Entrepreneurship Support Centers
HASM	: Hybrid Activity System Map
HCD	: Human Centered Design
ICSID	: International Council of Societies of Industrial Design
IDE	: International Development Enterprises
IFAD	: International Fund for Agricultural Development
IICD	: Indian Institute of Crafts and Design
IL& FS	: Infrastructure Leasing and Financial Services Limited
IMF	: International Monetary Fund
INBAR	: International Network for Bamboo and Rattan
IPARD	: Instrument for Pre-accession Assistance for Rural Development
KMVS	: Kutch Mahila Vikas Sangathan
KPI	: Key Performance Indicator
KRT	: Kala Raksha Trust
KRV	: Kala Raksha Vidhyalaya
MDG	: Millenium Development Goals
MIT	: Massachusetts Institute of Technology
NDBI	: National Design Business Incubator
NGO	: Non-Governmental Organization
NIC	: Newly Industrialized Countries
NID	: National Institute of Design

NIF	: National Inovation Foundation
NIFT	: National Institute of Fashion Technology
NIS	: National Innovation Systems
NPO	: Non Profit Organsaiton
OECD	: Organisation for Economic Co-operation and Development
PEBI	: Pro-poor Entrepreneurship Based Innovation
PSS	: Product Service Systems
R&D	: Research and Development
RISD	: Rodine Island School of Design
RNFE	: Rural Non-Farm Employment
SHG	: Self Help Groups
SRISTI	: Society for Research and Initiatives for Sustainable Technologies and Institutions
SWOT	: Strength Weakness Opportunities Threads
TBDC	: Tapini Bamboo Development Centre
TBM	: Tripura Bamboo Mission
TEPSIE	: Theoretical, Empirical and Policy Foundations for Social Innovation in Europe
TFDPC	: Tripura Forest Development Corporation Limited
UK	: United Kingdom
UN	: United Nations
UNDP	: United Nations Development Programme
UNESCO	: United Nations Educational, Scientific and Cultural Organization
UNIDO	: United Nations Industrial Development Organization
US	: United States
WBCSD	: World Business Council for Sustainable Development

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INVESTIGATING DESIGN FOR SOCIAL INNOVATION THROUGH BUSINESS MODELS IN RURAL INDIA: A MODEL PROPOSAL FOR DEVELOPING COUNTRIES

SUMMARY

This research explores the roles and approaches of design interventions aiming to create livelihoods for rural people in developing countries through identified best practices from India. Although there is an increased interest by design practitioners and researchers about the social role of design, so far, there has been little discussion about how design could be employed for creating business models in rural. Understanding the direct and indirect impact of design interventions would help design researchers and practitioners to improve their tools to foster creating micro business models in developing countries.

The research covers social innovation and development projects conducted in developing countries to identify design intervention patterns enabling business models in rural areas. Although rural Turkey shares socio-economic aspects with many developing countries such as India, in practice, it attracts far less attention from design oriented social innovation and development interventions. In Turkish context, design thinking is a tool widely used for competitive success of large corporations rather than approaching social and developmental problems of non-urban communities. In this perspective, India constitutes an important example to be explored with its decades old experience on employing design to create livelihoods for rural communities. Founded as a result of the Industrial Policy Resolution, National Institution of Design plays an important role with its mission to support development of the country.

A case study research was conducted to identify how design intervention occurs, how design enables business models in rural areas and how social innovation emerges through these business models. Semi-structured interviews with a number of project stakeholders were undertaken in order to form seven case studies from two distinct craft domain: textile and bamboo. Analysis and synthesis of collected data were done through business model analysis tools to identify changing roles of designers aiming to enable business and foster social innovation and development in rural. Beyond existing tools used for representing and analyzing commercial business models, a new hybrid business model analysis tool was created for the project in order to represent the emerged social value together with the economic value.

Additionally, to be able to gain a macro understanding of business models, institutions and relationships between actors, collected data was analyzed within a systems perspective. Actors, their roles and relationships were identified in social innovation and development ecosystems.

This investigation contributes practical knowledge and scientific knowledge to two domains. First; improvement of the understanding of development agencies in a way

that design could be employed with new roles; and second to identification of the linkages between design and social innovation in the context of business model generation. This research indicates that design can take various roles depending on the type of the intervention organization. Among all “project champion”, “BM developer”, “craft advocator”, “network builder”, “educator” and “transformer” roles were identified as prominent roles of designers. Moreover, interventions of designers in business models were classified in six levels; research level, product level (including tactical level and market level), innovative level, experience level, organizational level and strategic level.

This research points out the blueness of borders between public, private and non-profit sector in social innovation context and identifies partnerships as the most crucial part of a social business model. Based on this modification, a Social Business Model Template is proposed in the study with a hypothetical BM developed for Turkish case. Moreover, based on the concept of innovation ecosystems, the research illustrates how design can enable business models in rural through a descriptive model.

In conclusion, the research indicates that, by taking various roles designers can enable non-farm business models and consequently fosters social innovations.

KIRSAL HİNDİSTAN’DA İŞ MODELLERİ İLE SOSYAL YENİLEŞİM İÇİN TASARIM İNCELEMESİ: KALKINMAKTA OLAN ÜLKELER İÇİN BİR MODEL ÖNERİSİ

ÖZET

Gelecek nesillerin kendi ihtiyaçlarını karşılayabilme imkanlarını gözeterak bu günün ihtiyaçlarını karşılayabilmenin altını çizen sürdürülebilir kalkınma kavramı uygulamada çevre ve sosyoekonomik gelişmeler arasındaki ilişkilerin çok iyi kurgulanmasını zorunlu kılmaktadır. Büyümenin sınırları, kalkınmadaki dengesizliklerin giderilmesi ve ekonomik stratejilerin bu bakış açısıyla belirlenmesi yönünde ortak tavır almayı hedefleyen devletler, sürdürülebilir kalkınma hedefleri belirlenmesi hususunda uzlaşmış olsa da bunu gerçekleştirecek somut adımlar konusunda bağlayıcı bir karar üzerinde henüz anlaşmamıştır. Bu sebeple ülkeler kendi sosyoekonomik yapılarına uygun farklı ödümler vererek kalkınma faaliyetlerini olabildiğince sürdürülebilir bir şekilde gerçekleştirmeye gayret göstermektedir. Her ne kadar çevresel sorunlar, enerji ve hammadde kıtlığı sürdürülebilirlik denildiğinde ilk akla gelen kısıtlar olarak karşımıza çıksa da sürdürülebilirliğin daha az tartışılan sosyal ayağı tüm bu iyileştirmelerin gerçekleşmesini sağlayacak iradeyi, motivasyonu, bağlılığı ve davranış değişikliğini içerdiğinden aslında kilit roledir.

Kalkınmanın odaklandığı önemli alanlardan yoksullukla küresel mücadele bağlamındaki hedeflere ulaşmakta, gelişmekte olan diğer bir çok ülke gibi ülkemizde de kırsalın durumu önem kazanmaktadır. Ülkemizde, dünya ile paralel olarak kırsal kalkınma yaklaşımları başta modernleşme ile teknoloji transferi ve adaptasyon üzerinden ilerlemiş, 1950’lerden itibaren ise sürekli evrilmiştir. 2000’lerden itibaren bir yandan sosyal problemleri çözerken diğer yandan ekonomik girdi sağlayamaya odaklanan ‘sürdürülebilir geçim kaynakları yaklaşımı’ gibi yerelde kendine yetebilen dağıtılmış sosyoekonomik sistemler üzerine odaklanılmıştır. Bu sayede küreselleşmenin kırsal üzerindeki yıkıcı etkisinin azaltılması hedeflenmektedir. Tabandan doğacak bu tür çözümlerin tutunabilmesi ve gelişebilmesi için giderek daha fazla tartışılan yaklaşımlardan biri de sosyal yenileşimdir.

Her ne kadar literatürde sosyal yenileşim göreceli olarak yeni bir kavram olsa da sosyal yenileşimin kendisi uygulamada aslında tarih boyunca örneklerini gördüğümüz türden iyileştirmelere karşılık gelmektedir. Üretici kooperatifleri buna verilebilecek en eski örneklerden biridir. Literatüre araştırmasına göre sosyal yenileşim, sosyal problemlerin çözümünü sürdürülebilir kalkınma hedefleriyle eşgüdümleme rolünü üstlenebilmekte, yerel halkın sürdürülebilir kırsal kalkınma hedeflerine aktif katılımı ve bu yöndeki davranış değişikliğini sağlamakta kilit rol üstlenebilir. Çalışma bu bağlamda, kırsalda gerçekleşen sosyal yenileşimler ile sürdürülebilir kalkınma hedefleri arasındaki bağlantıyı örnek vakalar üzerinden işaret etmekte, bu iyileştirmelerin gerçekleşmesinde tasarımın oynadığı rolü iş modelleri üzerinden araştırmaktadır.

Endüstriyel tasarım bir disiplin olarak doğuşundan itibaren yarattığı katma değer ile hem şirketlerin rekabet gücünü hem de dolaylı olarak ülkelerin ekonomik refahını arttırarak kalkınmaya ekonomik anlamda olumlu etkide bulunmaktadır. Tasarımın kalkınmakta olan ülkelere itici rolü üzerine yapılan çalışmalar da benzer etkiyi işaret etmektedir. Her ne kadar tasarımın sürdürülebilirlik ile olan yakın ilişkisi, çok daha uzun süreden beri, tasarlanmış ürünlerin çevreye olan etkileri çerçevesinde araştırılrsa da, özellikle 2000'lerin başından itibaren, sosyal fayda konusunda çalışan organizasyonların sayısı arttıkça, tasarımın sosyal etkisi de popüler bir araştırma ve uygulama alanı haline gelmiştir.

Bununla birlikte, son yıllarda giderek daha fazla araştırmaya konu olan sosyal yenileşim için tasarım, özellikle kalkınmakta olan ülkelere ümit vaat edici, dönüştürücü bir dinamizmin tetikleyicisi olabilecek bir potansiyele sahiptir. Karmaşık sosyal meseleler karşısında, etkin ve bütüncül çözümler üretebilmek için, tasarımın sivil toplum örgütleri, kalkınma ajansları gibi farklı paydaşlarla birlikte çalışması, kendi alanındaki deneyimini yeni bilgi ve beceriler ile harmanlaması gerekmektedir.

Çalışmanın amacı; bu türden ortaklıkların gerçekleştiği, sosyal fayda sağlayan, sonuçlarının okunabileceği kadar olgunlaşmış projeler üzerinden sürdürülebilir kırsal kalkınma, sosyal yenileşim ve tasarım arasındaki ilişkiyi tespit etmek ve bu ilişki ağında tasarımcıların üstlenebileceği rolleri tanımlamaktır. Çalışma vaka analizi yöntemi ile gerçekleşmiş projeler üzerinden tasarımın kırsalda iş modellerini mümkün kılarak nasıl sosyal yenileşim ve kalkınmaya destek verdiğini araştırmaktadır.

Türkiye, Hindistan ve Brezilya gibi kalkınmakta olan ülkeler, büyüyen ekonomileri, gelir dağılımındaki eşitsizlikler ve kırsal kalkınma hedefleri açısından benzerlikler taşımaktadırlar. Bununla birlikte Türkiye, diğer iki ülkeye nazaran tasarım odaklı sosyal yenileşim ve kalkınma projelerine çok daha az sahne olmaktadır. Bu sebeple çalışma, bu türden projelerin gerçekleştiği coğrafyalardan seçilen vakaları inceleyerek kalkınmakta olan ülkeler için örnek bir model önermektedir.

Bu amaç doğrultusunda, Hindistan özelinde, tasarımcıların rol aldığı, bir iş modelinin doğduğu, sosyal yenileşim ve kalkınma içerikli vakalar incelenmiştir. Vakalar sosyal faydanın da tanımlanabileceği ve tez için üretilmiş hibrit iş modeli analiz aracı ile incelenmiş, bu sayede hem vakalar arasında karşılaştırma yapılabilmesi sağlanmış hem de tasarımın etki alanı ve sosyal faydanın nerede ortaya çıktığı gözlemlenebilmiştir. Çalışmanın sonuçları göstermektedir ki tasarımcılar farklı ama geçişken kimlikleri ile ve bu kimliklerinin onlara tanımladığı sınırlar dahilinde ekonomik ve sosyal değerler birlikte doğduğu sosyal yenileşimlerin gerçekleşmesini destekleyebilmektedirler. İş modelleri, karmaşık sistemler perspektifi ile aktörler, onların rolleri ve ilişkilerine göre analiz edilmiş; sosyal yenileşim ekosistemlerinin özellikleri tanımlanmıştır. Bu ekosistemler, Türkiye için de bir model önerisine ulaşılmasına izin vermektedir.

Hindistan özelinde incelenen projeler, ülkenin bütünündeki sosyal fayda içerikli çalışmaları özetlemeye yetemeyecek kadar sınırlıdır. Aynı zamanda projelerin araştırılmasında proje başına ayrılan zaman, dil ve iletişim sıkıntıları, tüm projelerin aynı derinlikte incelenmesini olanaksız kılmıştır. Bu sebeple de belirlenen örnekler arasında, kalkınma ve tasarım konusuna yaklaşımıyla diğer tasarım enstitülerinden ayrılan NID'nin yer aldığı projelere odaklanılmıştır.

İncelenen projelerde görülmüştür ki sosyal fayda içerikli projelerde tasarım; zanaat odaklı veya tarım dışı faaliyet gösteren çok küçük işletmelerin kapasitelerini

arttırmakta, dezavantajlı topluluklar için ürün, hizmet, altyapı geliştirme faaliyetleri göstermektedir. Hindistan özelinde, literatürün de varsaydığı gibi, sosyal fayda ve ekonomik fayda birlikte ortaya çıkmaktadır.

Bu birliktelik organizasyonların yaklaşımlarına ve çözümlerine doğrudan yansımaktadır. Bu sebeple çalışmada tasarımcıların, her ne kimlikle olursa olsun, kalkınmakta olan bir ülkede sosyal yenileşim içerikli bir proje gerçekleştirirken ekonomik ve sosyal değeri birlikte üretebilmeye odaklanmasının zaruri olduğunun altı çizilmektedir.

Ortaya çıkan bir diğer bulgu ise kimlikler arasındaki geçişin, sektörler arasındaki geçişkenliğin bir yansıması olarak sıklıkla gözlemlenebileceğidir. Tasarımcının kimliğindeki bu geçişkenlik, özünde yöntemlerini çok etkilemese de projedeki rolünü değiştirmekte, getirdiği çözüm önerilerinin sınırlarını çizmektedir.

1. INTRODUCTION

This chapter aims to reveal the framework, scope and objectives of the thesis. It begins with a brief explanation to constitute a background for the research and then continues with introduction of core themes and concepts, which will be examined throughout the thesis. The chapter ends with a summary of thesis structure, which reveals the contents, and aims of each chapter.

1.1 Background of the Research

It has been decades since the publication of the United Nations Report that defined sustainable development and raised global attention on the issue (WCED, 1987). So far, investment in support of sustainability goals in many fields has not been enough to resolve the conflict between humankind's instinct of expansion and the capacity of ecosystem to sustain such expansion. Not only climate change and energy crisis but also lack of basic needs and unequal distribution of wealth stand as major difficulties to be resolved. Increasingly complex nature of problems, combined with the growing market concern on the issue, fosters demand for more innovative and sustainable products, services and systems. Various approaches to reach sustainable development track and overcoming existing pitfalls, actually propose incremental or preferably radical changes on our lives. Within this perspective, researches on sustainability used to focus on industrialization and urbanization of the developed world, as they have appeared to be main facilitators of negative impact. Whereas, sustainability related problems of developing countries emerged as another hot topic since economic restructuring, socio-political transformation and changing relations of the actors influence on their position.

Sustainable development approaches can be classified into three major classes: individualistic, hierarchical and egalitarian (M. Thompson, 1984). Individualistic perspective depends on market dynamics for triggering change towards sustainability while hierarchical view relies on top-down transformation sustained by a strong central authority. Moreover, egalitarian approach employs bottom-up initiatives to

trigger transformation for sustainable development (H.P. Wallner, 1999). Although, impacts of industrial activities, urban life and consumerism have been addressed as the cause of over consumption and environmental degradation, non-urban and rural areas also constitute a critical role in many aspects.

Rural development plays an important role for sustainable development, especially in developing countries. In this perspective, preventing adverse effects of globalization while preserving the natural and human capital of rural areas, reducing poverty and creating employment are common goals of many developing countries including Turkey (Ellis & Biggs, 2001; Pender, Marre, Reeder, & Alexander, 2012; Yılmaz & Tolunay, 2007). Throughout the history, sustainable rural development practices evolved from top-down approaches to more egalitarian, bottom-up “Sustainable Livelihoods” (SL) approaches, which focus on creating income for rural population (Ellis & Biggs, 2001). Recent interpretations of SL approach which focus more on entrepreneurship also resonates with endogenous development theories and creative destruction concept explained by Schumpeter (Krantz, 2001; Reinert & Reinert, 2006; Schumpeter, 1934, 1943; Scoones, 2009). According to this concept, entrepreneurship in the form of creative destruction is seen as a process of industrial mutation where constant revolution in economic structure happens, the new destroys the old structure and the process continues virtuously (Reinert & Reinert, 2006). Today, fostering innovation and entrepreneurship in rural areas are essential for the most of sustainable rural development practices.

Furthermore, agriculture dependent rural employment policies of underdeveloped countries are also shifting towards diversification. The decrease of employment levels in agriculture sector brought out a new term: Rural Non-Farm Employment (RNFE), which includes any scale of manufacturing and service activities, production, self-employment or working as an employee (Reardon, Stamoulis, & Pingali, 2007). RNFE, which started to constitute important part of rural households since 2000s, includes food processing, small manufacturing, craft, repair services, employment at home or outside in a production company and so fort. In this manner, besides agriculture, RNFE has an important potential for supporting sustainable endogenous development of rural, in terms of economic, social and environmental qualities (Ashley & Maxwell, 2002).

Like sustainable development, social innovation is another attractive research topic and it is becoming mainstream day by day. The term embodies a multitude of concepts and takes its roots from the notion of innovation. While sustainable development is explained through three pillars, social innovation keeps its holistic meaning with a strong focus on solving social problems. However, it is still a vague thing to identify. In general, social innovation is defined as a new idea or a better alternative which is more sustainable or more efficient than existent (BEPA, 2010), that address unmet social needs (Howaldt & Schwarz, 2010; Murray, Caulier-grice, & Mulgan, 2010; White, 2008) and social problems (Phills, Deiglmeier, & Miller, 2008). Thus, social innovation may obtain any form and can emerge anywhere. The main differentiation of social innovation compared to any other type of innovation lies beneath its positive social purpose and outcomes addressed to meet unmet needs creating common good and behavioral change in the society (Cajaiba-Santana, 2014; Howaldt & Schwarz, 2010; Jegou & Manzini, 2008; Phills et al., 2008; Pol & Ville, 2009).

Generally, social innovation is developed and breed by society to have an impact on its own problems (Howaldt & Schwarz, 2010). In the literature, many times initiators of social innovation are mentioned as social innovators or social entrepreneurs, which indicates that an enterprise might be the medium of social value creation. Difference between a social enterprise and a commercial enterprise is explained with the concept of social value creation (Lynch, Elliott, & Brock, 2008; Phills et al., 2008; Weerawardena & Sullivan Mort, 2006). In addition to that, social enterprises are seen as efficient tools for poverty alleviation which would work well in rural development policies (Borzaga, Galera, & Nogales, 2008). In this manner, it is possible to associate social innovation with business innovation as integral engine of development.

Surveys such as the one conducted by Moulaert, Martinelli, Swyngedouw, & Gonza (2005) have shown that creative destruction and innovations emerging from grassroots are seen quite vivid most of the time but when they lost their touch with their original hunger for social innovation, they institutionalize and become more prone to bureaucratization. Thus, investment in diverse forms of capital in rural economies for development is very much dependent on the social networks in the utilization of these resources (Bosworth & Atterton, 2012). Rural development

approaches focusing solely on economic development through innovation and entrepreneurship, without developing social pillar of sustainability, would not increase the overall well-being of people and community. Stemming from this fact, it is possible to expect that social innovation, which focus on improving well-being and has close relationship with the goals of social sustainability, would be a key element that changes the paradigm of sustainable rural development approaches. However, in the literature there is a gap to link social innovations and sustainable rural development approaches, and connections between development efforts hence social innovations need to be clarified.

1.2 Design Thinking for Social Innovation and Sustainability in Rural Context

Since decades, design researchers and practitioners were interested in addressing sustainability and sustainable development issues. Development of ecologically advanced products and services are outcomes of continuous effort of minimizing environmental impact of products. Meanwhile, the focus of sustainability was also has shifted or in the other words expanded from a narrow environmental perspective towards a holistic view, which embrace social sustainability much more than it used to be. In this manner, design for social innovation is seen as a reflection of such a transformation while focusing positive social contribution of design.

Although different conventions such as design for social innovation, design for social well-being or design for social impact are used, they all share the common focus of employing design thinking for solving wicked social problems. Moreover, practical approaches guiding this new field of design include; Human Centered Design Toolkit developed by IDEO (IDEO, 2009), Rockefeller Foundation supported Design for Social Impact Workshop (Continuum, 2008), Collective Action Toolkit developed by Frog (Url-1) and Design with Intent Toolkit developed by Requisite Variety (Fabricant, 2010; Lockton, Harrison, & Stanton, 2013). Design for social innovation practitioners come from various organisational structures having different motivations. For instance, IDEO.org, Architecture for Humanity, Catapult Design, Design That Matters, Project H Design, Mayo Clinic and DOTT represent major non-profit design organisations. These organisations focus on wide variety of projects, from poverty alleviation to healthcare but mostly in Base of Pyramid (BoP) countries. On the other side, academic research centers and design labs stand, such as

MIT D-Lab and the DESIS. Additionally, for-profit design companies also work in this field including large design consultancy firms such as IDEO, Continuum, Frog and Requisite Variety. Among all, it is possible to summarize that non-profits work more solution oriented, while for-profit organisations develop strategic tools and guides for social innovation practitioners.

Although in practice design for social innovation is a popular theme between designers and non-designers, in the design literature there are only a few researches dealing with methodological foundations of this new practice area. Thus, it is possible to claim that the field is examined by practice led experiments done by various global organisations. One of the few researches trying to classify design for social innovation approaches is the article written by Emilson, Seravalli and Hillgren (2011), who draw three major categories following as:

- Service design, transformation design and design for public services approaches, which were emerged in UK by collaboration of British Design Council and public sector.
- Creative communities for sustainable lifestyles and sustainable design approaches, which were emerged in Politecnico Di Milano and evolved to a network of universities and research centers, which is called as the DESIS and focused on small, local and bottom-up creative collaborations for social innovation.
- Design thinking and design for development approaches, which are mainly used by large design oriented organisations such as IDEO, Project H Design and Mayo Clinic and focuses on social and economical problems of BOP and developing countries.

Besides the taxonomy of Emilson et al. (2011), there is a gap in the literature about how design can serve for socio-economical needs of developing world communities, who are economically or socially disadvantaged or underserved such as minorities, rural people or small farmers losing their advantage against large corporations. These communities face less infrastructural problems than BoP but are still disadvantaged compared to any developed urban ecosystem. General challenges in these geographies appear as mobilizing capabilities, elimination of poverty and lack of sustainable livelihoods to adopt social innovations (Akşit, 2006; Reardon et al.,

2007; Sonne, 2010b). Several researches conducted by Manzini (2009, 2010) point out that small, local, decentralized enterprises equipped with clean technologies can sustain local needs and provide them sustainable livelihoods.

Thus developing countries like Turkey, India and Brazil need customized design intervention approaches that address the destructive impact of their growing economy on rural while overcoming wicked social problems.

However, in compared to India and Brazil, Turkey receives far less attention of global design oriented social and developmental projects. Moreover, it is not possible to claim existence of a constant interest of national design scene to the development problems of non-urban areas of Turkey. Role of industrial design and design education have been debated by design researchers in the context of development, industrialization and competition of Turkey (H. A. Er, 1997; H. Er, Korkut, & Er, 2003; Erkarlan, 2013; Güneş, Cad, & Emek, 2012; Güneş, 2008, 2012; Orlandi, 2013). However, these efforts mostly focus on engaging design in a long deserved position within the Turkish industry creating awareness on innovation opportunities enabled by design. Integration of design in Turkish SME's, which constitute 99,8 % of whole enterprises and 75,8 % of whole employment (TUIK, 2014), is another center of the focus for design scholars. On of the most comprehensive model proposed by Güneş and Güneş (2013) offers inventory researches and regional design centers in order to enable SMEs with design and innovation. However, these models neither address rural enterprises nor aligned with rural development goals.

In the scope of micro scale enterprises, there are just a few, intermittent and experimental attempts addressing communities of practice. Designers in those cases either develop new, marketable and experimental products for/with artisans in order to increase their commercial potential (Kipöz & Himam, 2014; Şatır, Ertaş, & Ariburun, 2009) or enable practitioners to design and develop new and marketable products, themselves (Çiğdem Kaya, 2011). However, most of the time information about those projects is limited at the initiation phase.

Based on this fact, an implemented development project has visited and several interviews were conducted with stakeholders in order to gain a better understanding about the issue. The project was initiated to revitalize silver filigree craft tradition in

Mardin, which is a multicultural and historical city located in the Southeastern Anatolia Region.

In coordination with the GAP Regional Development Administration of Turkey, main objective of the project was improving trade capacities of the local artisans as a reflection of non-farm enterprise development goal defined by Turkish Rural Development Plan (Ensici, 2005). During the project, a series of workshops were conducted in between February 2004 and May 2005 in order to facilitate collaborative work of designers and local artisan to interpret rich historical and cultural identities of the region as filigree motifs. Such a project would be easily evaluated as a success story for a design intervention since skills of local artisans were improved by design and their trade capabilities were increased with new marketable products. However, a visit to the region eight years after the initiation of the project revealed that these products have never produced after the workshops and has never sold in the market. It is possible to understand disappearance of the designs since silver filigree is a type of fashion accessory, and ever-changing trends force the sector to come up with new designs. However the main objective of this intervention, revitalization of the sector was not achieved neither. Although, the filigree craft sector seems to be promoted after years and tens of new shops have opened, in fact artisanal skills and traditions were still in danger of disappearance since most of the products marketed as “handmade in Mardin” were actually mass manufactured and imported from East Asian countries. This brief case shows that design intervention in tactical level falls short in terms of creating a systemic change supporting developmental goals.

Design intervention is a notion that has been used widely in the design literature to explain contribution or influence of design activities to an on-going circumstance in order to understand, evaluate or transform it (Bhamra, Lilley, & Tang, 2011; Blyth, Kimbell, & Haig, 2011; Gong, Zhang, & Zhang, 2010; Jonas, Morelli, & Münch, 2009; Junginger & Sangiorgi, 2009; Mehta, 2012). Ranjan (1998) points out fire as a metaphor to explain design as a complex activity which is connected to a context and create outcomes that influence its environment. The author classifies spectrum of design interventions in four levels; tactical, elaborative, creative and strategic. Using systems thinking, similar to Ranjan (1998), Dewberry and Johnson (2010) classify influence of design in a system in three levels: micro scale, meso scale and macro

scale. In this classification, material interventions are seen as micro scale interventions while policy, planning and organisational level interventions are identified as micro scale.

More strategic interventions including goal setting activities and self-organisations are categorized as macro scale interventions. Those classifications use Meadows' (1999) theory on leverage points to intervene in a system which is ranked from lower impact ones to higher. The study uses design intervention as any kind of design activity that intervenes a system to transform its state. In this manner, design interventions not only include short and quick interruptions to alter the system but also long term and strategic engagement in the system.

Design literature on social innovation identifies several common challenges that designers are likely to be faced such as; designer's inabilities in driving the implementation process, high cost of design consultants, relatively short term engagement, superficiality of design proposals, lack of economic, organisational and policy skills, having mental barriers holding them back, lack of strategic thinking (Balaram, 2009; Emilson et al., 2011; Ö. Er & Kaya, 2008; Hillgren, Seravalli, & Emilson, 2011; Kolko, 2012; McCullagh, 2010; Merholtz, 2010). However, literature is generally limited with intervention projects evaluated during their development and implementation phase. Similarly, design for social innovation organisations tend to publish success stories which cover only development and implementation phase of their projects. Whereas, social changes usually occur in long-term. Thus, visiting a development or social innovation oriented design intervention project years after its implementation, would give a chance to relate initial efforts with long term impacts of these efforts.

Arising from the background statements mentioned above, following gaps in the knowledge and limitations in the literature constitutes entire reason for conducting this study:

- Reviewed design literature has a little or no research examining long-term outcomes of design interventions aiming social innovation or development.
- Design interventions addressing non-urban areas of developing countries are not examined in details in the literature reviewed for this study.

- Design for social innovation approaches generally do not have clear link with sustainable endogenous development goals.
- In the reviewed literature there are a few surveys dealing with how design enables business models fostering social innovations and sustainable development.
- In practice, generally development agencies have little understanding on how design thinking could be employed in social innovation and development projects in Turkey.

In this perspective, this research aims to fill some of these knowledge gaps. Thus, the research is conducted around the themes of; sustainable rural development, social innovation, design for social innovation and business models.

1.3 Research Aims and Objectives

This research broadly tries to contribute to social innovation and development efforts of developing countries by repositioning design closer to their social realities. The major aim of the study is to understand forms and approaches of design interventions aiming to create livelihood for rural communities of developing countries, identifying changing roles of designers. In this manner, the objectives of the research includes:

- Identifying the intersections of social innovation and rural development literature to create linkages in terms of goals and approaches
- Critically reviewing literature and identifying characteristics of design interventions, specifically in the context of developing countries
- Explaining how social innovation emerges through business models enabled by design in rural. By this means, developing a descriptive model for developing countries

Built around these objectives, the study focuses on the following main question:

- How design intervention enables rural non-farm business models in developing countries, to foster social innovations?

This main question is supported by following sub-questions to examine the details of intervention process and its long-term outcomes:

- What types of organisational models are acting in the ecosystems?
- What types of roles and motivations do designers have in these models?
- In which levels and dimensions can design intervention enable social BMs in rural areas?
- What types of social innovation can occur in rural, through BMs enabled by design?
- What are the major challenges to this area of design?

Exploring design intervention in a new context would support elaboration of new tools and approaches for fostering business models with a social and developmental purpose. This would increase the collaboration between design and development disciplines. This research contributes practical knowledge and scientific knowledge in two domains; first, to improve the understanding of development agencies in a way that design could be employed in a broader sense and more efficient way; and second to explore the linkages between design for social innovation in the context of business model generation. In this manner, expected key deliverables of the research are as follows:

- A list of identities that designers have in such projects
- A list of social innovations emerged in rural through business models enabled by design
- A descriptive model for developing countries identifying actors and their relationships in social innovation and rural development ecosystems

1.4 Research Design

Design intervention addressing social innovation and development is a complex process. The complexity is driven by the wickedness of the problem and the sophistication of possible solutions. Exploring the issue through a variety of lenses would allow revelation and comprehension of multiple dimensions of this complex phenomenon. To be able to identify how design intervention happens, this study

examines roles and approaches of designers on development projects conducted in rural areas of developing countries. Case study methodology is generally seen as an appropriate communication method to convey the complexity and specific nature of a phenomenon, and thus chosen as the research method for this inquiry (Stake 1998).

The actors and their relationships of this social phenomenon usually constitute characteristics of a complex system. Thus, qualitative and quantitative data collected during case study research could be well examined with a systems perspective. It was assumed that, exploring business models and identifying roles of designers would give clues to interpret the process of design intervention. Moreover, it is expected that social innovations will be traceable through the business models identified from chosen cases. In this manner, business model analysis and representation methods are employed to identify contributions of design in various levels and types of social innovations emerged in rural context together.

Defining the scope of the inquiry has various levels of reasoning. The research identifies rural areas in developing countries as the problem space to develop a descriptive model. Sharing many socio-economic aspects with Turkey, India is a developing country that has a rich history of design oriented intervention projects addressing development problems. In addition to that, unlike Turkey, India receives relatively more attention from international design thinking oriented social innovation organisations. Moreover, the pioneer design institution of the country, National Institute of Design (NID) builds regular collaborations with development organisations as mentioned in Ahmedabad Declaration (Balaram, 2009).

All these reasons put forward India as an appropriate laboratory to observe and identify changing roles of designers and emerging social innovations on business models developed with rural people. Langrish (1993) points out best practices as possible cases to be researched in an inquiry. In this manner, while India is selected as the geographical scope of the thesis, two best practice areas including seven distinct cases are involved in the research. Bamboo project constitutes the strategic intervention of NID and other actors at Northeast region of the country. This project represents the raw material or with a better term, natural capital oriented development intervention practice while on the other side, projects conducted by several organisations in Kutch; focus on the availability of skilled craftspeople rather

than raw material. Thus, four cases selected from Kutchi organisations employing rich textile craft skills, constitute a human capital oriented development intervention.

Data collection process used in this study involves face-to-face semi-structured interviews with key people of the projects, searching archives and personal observations and collected artefacts. The field visits to projects were conducted of four months between 10 October 2013 and 10 February 2014. Similar to other case studies, researcher biases and perceptual misrepresentations are potential limitations of the data collection process concerning with data collection. Other limitations are the amount of time dedicated for the field research and number of case studies, which were a challenge to deeply analyse each case deeply. Huge geographical distance between cases also made it difficult to conduct deep research for each case in a limited time. Additionally, India's rich local languages were a limitation to be able to explore personal experiences of actors and to make a survey to understand impacts of the interventions.

1.5 Thesis Structure

The thesis is divided into two main sections including a literature review and the main study, and presented in five chapters. Figure 1.1 shows the structure of the thesis as chapters addressing research objectives.

Chapter 1 presents an introduction to the research. A brief summary of the background and motivation of the thesis, summary of research question, aims and objectives were presented in this chapter. It also expresses the structure of the thesis. Chapter 2 presents a critical review of literature on sustainable rural development, social innovation, social business models, design thinking and design interventions.

In this chapter conceptual framework of the thesis is revealed and discussed and core theories were identified. Built on this conceptual and theoretical framework, to be able to set a ground for the research methodology, Chapter 3 explores research and design practice on design for social innovation. Further sections of the chapter reveal the research strategy designed for the study. Case study method, employed data collection approaches, the scope of the study and short introductions to the selected seven cases are presented in the third chapter.

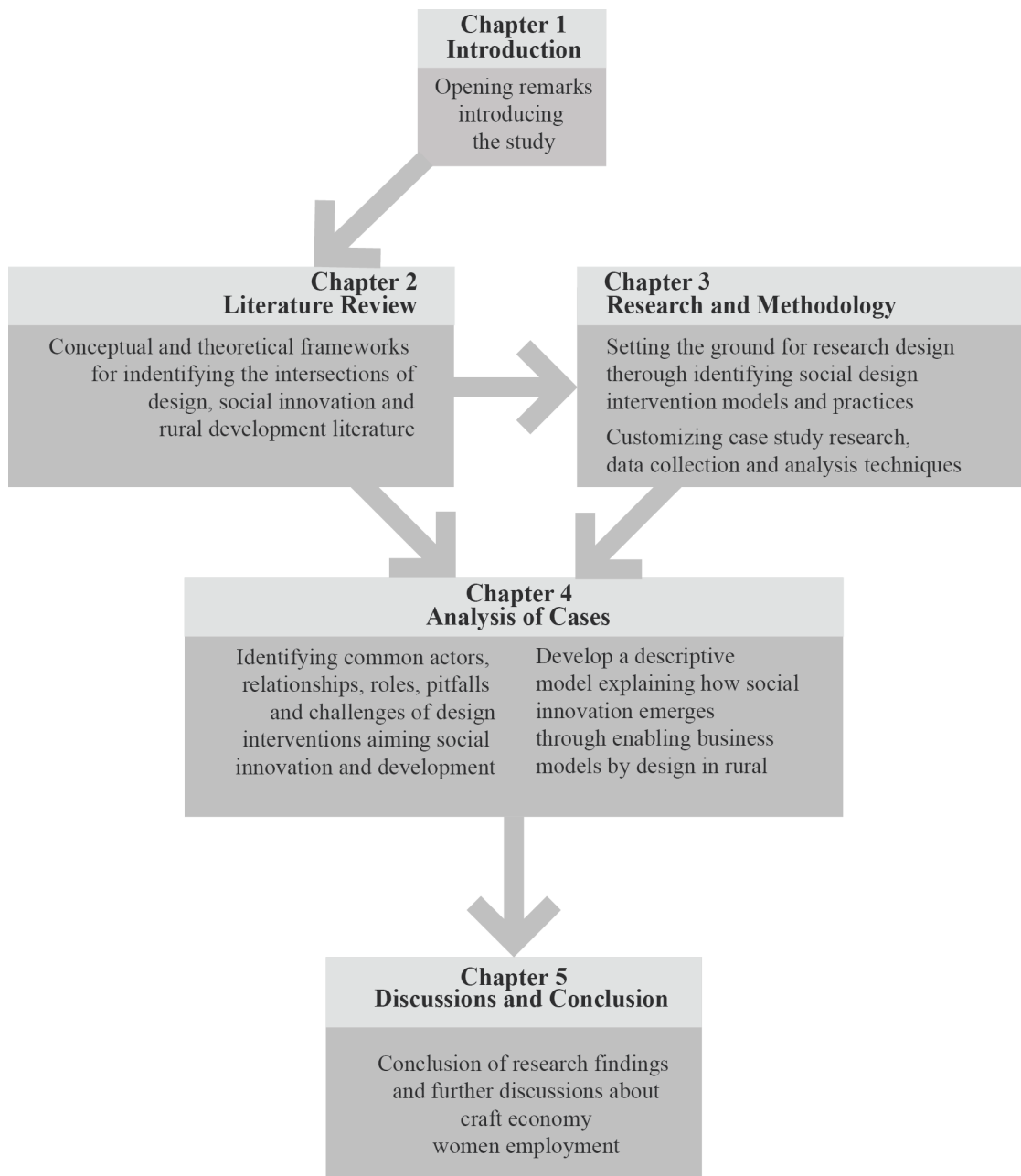


Figure 1.1 : Structure of the thesis.

Furthermore a comparison of various business model analysis and visualisation tools, chosen “Business Model Canvas” and “Activity System Map” are explained in this section as part of the case study analysis techniques. In addition to them, to be able to analyse the ecosystems, an Actor Network Map is explained as a tool for evaluating cases within a macro perspective. The fourth chapter presents findings of the research through analysis of business models, and identified design inputs and social innovations from each case.

In order to explain design interventions in social innovation ecosystems, the chapter also introduces a “Social Business Model Template” and a descriptive model. The final chapter delivers main conclusions of the research, limitations of the work and suggestions for further researches.

2. LITERATURE REVIEW

Second chapter of the thesis includes a critical review of relevant literature, theory, policy, and approaches to the topic to set up the questions, the methodology and the analysis. The chapter starts with a conceptual framework of the thesis followed with brief explanations of the concepts of sustainable development, social innovation, design thinking and business models.

Following sections of the second chapter include literature review and identified theories used in setting up the problem, research questions, analysis and the discussion. The aim of this chapter is to show the relationship of the thesis with the wider context of knowledge in which it belongs. The chapter finalizes with a brief summary of literature review.

2.1 Conceptual Framework

Conceptual framework represents the territory to be explored in this study. The main assumptions and theories underpinning the approach will be addressed through identification of the core concepts and positioning of the thesis in the field. The central question of this dissertation asks how design fosters social innovations in rural via enabling business models.

The scope of the question is limited to approaches and practices that fundamentally work for sustainable rural development in developing countries. Figure 2.1 represents the conceptual framework of the thesis.

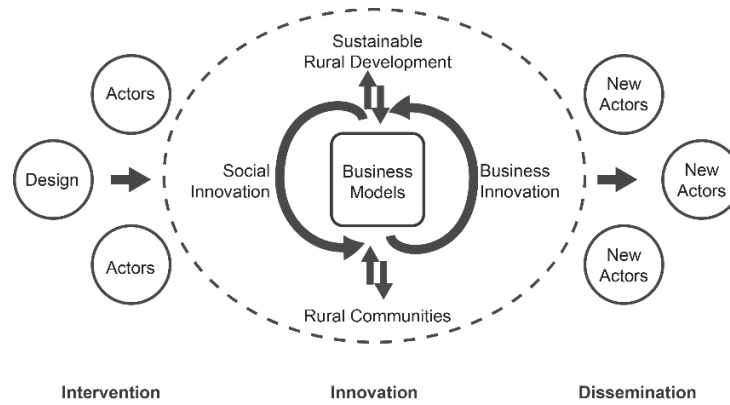


Figure 2.1 : Design intervention conceptual framework.

In this conceptual framework, design together with other actors intervenes in projects that aim rural development. It is expected that, these projects trigger or support development of business models which foster social innovations and/or business innovations with/for rural people. In addition to social and business innovations supporting sustainable development, through these projects, new actors emerge and help dissemination of the knowledge.

Territory of the research question touches intersections of four main domains shown in Figure 2.2, which are “Design Thinking”, “Business Models” and “Social Innovation” within a common overall goal “Sustainable Rural Development”.

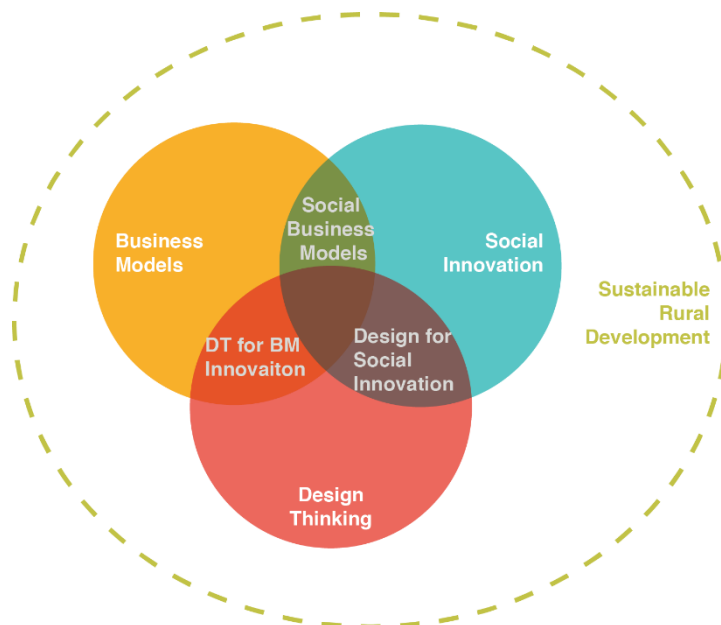


Figure 2.2 : Domains of the research.

In this intersection, according to the conceptual framework and the focus of the research question, “design” is an actor or tool that “intervenes” in collaboration with

other actors. The overall aim of the intervention is to support “social innovations” together with “business innovations” in certain “rural areas” while outcomes are expected to support “sustainable development”.

2.1.1 A definition for rural

Prior to the sustainable rural development concepts, it is worth to mention how the term “rural” is discussed in the literature. Generally, the term is associated with existing agricultural activities and population density of a region. Although, there have been several attempts by the EU and the OECD, a globally applicable definition has not been reached yet, and there is no agreement on a unified explanation that would serve for all purposes (Gülümser, 2009).

Although a well-tailored definitions of the term rural and its socioeconomic specifications has the potential to improve overall efficiency of economic development programs. Generally population size, density, proximity, degree of urbanization, adjacency and relationship to a metropolitan area, principal economic activity, economic and trade relationships, and work commutes are used as aspects of rural – urban taxonomies (Cromartie & Bucholtz, 2008; L. G. Hart, Larson, & Lishner, 2005). For instance, OECD and EU definition of rural-urban areas, which was also adopted by Turkish Rural Development Plan (Kalkınma Bakanlığı, 2011) follows as:

- Predominantly Rural region; if more than 50 % of the population of the region is living in rural communes (with less than 150 inhabitants / km²)
- Intermediate Region; if 15 % to 50 % of the population of the region is living in rural local units
- Predominantly Urban region; if less than 15 % of the population of the region is living in rural local units

A comprehensive research about the definition of rural done by Gülümser (2009) summaries various definitions of rural using four distinct indicators namely; population, economic structure, environmental structure, social structure. Although, it is defined according to population indicator in Turkish rural development plans,

since this study is focused on social innovation and business innovation, economic and social indicators will be used.

2.1.2 Exploring sustainability and sustainable rural development concepts

Sustainability might be one of the most widely used buzzword recently which is emerged as sustainable development discourse because of interlinked economic, social and ecological crises and contradictions of capitalism (Redclift & Woodgate, 2013; Tanuro, 2011). Although as a principle it has been acknowledged in many fields, especially after the Bruntland Report (WCED, 1987) it was coined a lot earlier in the field of forestry where it meant not harvesting more than what the forest yields in new growth (Wiersum, 1995). Major concern of the concept underpins the balance between resource capacity and the amount of consumption, and acting to preserve this balance. Within a systems perspective, sustainability was rapidly grasped and adopted in global policies. However, the interpretations of the concept vary according to the perspective of interpreter while the ultimate question remains; what are we supposed to sustain? (Redclift, 2005). If one answers this question with an economical point of view, the concept of sustainability might mean sustaining the growth while using limited natural resources. One of the earliest serious discussion on sustainability in global policy emerged in 1972 with the report of the Club of Rome which predicted that many natural resources crucial to our survival would be exhausted within one or two generations (D. H. Meadows, Meadows, Randers, & Behrens, 1972).

Defining the concept, as a development that meets the needs of the present without compromising the ability of future generations to meet their own needs has been criticized because of its given importance to human welfare over environment. Such a definition clearly indicate that we should be careful exploiting natural resources in order to preserve manufacturing and consumption capability of future generations (Costanza & Daly, 1992; Daly, 1990; Goel et al., 2011; Patterson, 1995; Smith, Willetts, & Mitchell, 2007; Xiv-, 2009; Young, Hwang, McDonald, & Oates, 2010). Redclift (2005) argues that without thinking the capacity of ecosystem, development as a term already conflicts with the concept of sustainability. Opposing ideas point out the lack of given importance to harmony in the definition.

Much of the current literature on sustainability describes two approaches; “weak sustainability” and “strong sustainability”. Weak sustainability comprehends natural and human-made capital as interchangeable while it is criticized by supporters of strong sustainability as being uncertain and risky process since in reality human-made capital cannot replace interlinked processes vital to human existence such as the ozone layer, photosynthesis or the water cycle (Hopwood, Mellor, & O’Brien, 2005; Redclift & Woodgate, 2013). However, the main debate between different sustainability views is still guided around only the ecological consequences, instead of socio-economical part of the issues.

Widely used term “Triple Bottom Line” first mentioned by Elkington (1994) and took place in the Agenda for Development Report by United Nations (UN) in 1997. The report underlined the importance of the multidimensionality of the concept of development, which aims to bring higher quality of life for all people and many global policy makers have adopted it as a common understanding for sustainability.

Although the term is described as mutual satisfaction of three pillars economic, social and environmental, today, it is associated with more socio-economic implications. It encompasses not only environmental issues, but also questions of social equity and economic viability (Kuhlman & Farrington, 2010).

Economical dimension of sustainable development tries to re-link the bridge between economic growth and environmental degradation. In terms of environmental impact, sustainability focuses on environmental degradation, which is generally measured via carbon footprints¹ and amount of energy consumption to compare products and processes for their environmental friendliness. Social sustainability, compared to the other pillars, is the least defined and least understood one and it takes relatively less attention in public than economic and environmental sustainability. Social sustainability generally encompasses topics such as; quality of life, democracy, diversity, social cohesion, social equity, liveability, health equity, community development, social capital, social support, human rights, labor rights, social

¹ “The term carbon footprint is often used as shorthand for the amount of carbon (usually in tonnes) being emitted by an activity or organisation. The carbon component of the Ecological Footprint takes a slightly differing approach, translating the amount of carbon dioxide into the amount of productive land and sea area required to sequester carbon dioxide emissions.”

See: http://www.footprintnetwork.org/en/index.php/GFN/page/carbon_footprint/

responsibility, social justice, cultural competence, community resilience, and human adaptation (Littig & Griessler, 2005).

Additionally, usually countries have different priorities in their development policies and different combination of indicators to measure development levels. For instance, World Bank identifies over 800 indicators covering more than 150 economies, while European Commission lists 20 Sustainable Development Indicator. These indicators broadly cover characteristics of all three pillars. However, socio-economical goals and plans need more complex measurement tools. Thus, global policy developers create new concepts made of composite indicators, such as Human Development Index (UNDP, 2014b). Usually composite indexes engage new notions such as “resilience” which is widely used in environmental studies referring to a key parameter to stress against the shocks experienced by social and ecological systems, and later adapted to social sciences and development studies (Adger, 2006; Krantz, 2001; Yamin, Rahman, & Huq, 2005). UNDP (2014b) stresses the impact of harmful economical and social conditions on society as making people more vulnerable, and defines human resilience as; enabling people to deal with adverse events and ensuring that people’s choices are robust, now and in the future.

In socio-economic context of rural areas that are facing poverty, resilience can be explored as ability to create institutions that foster individual welfare, sustainable livelihoods and sustainable societal robustness (King, 2008; Rutter, 2006). Castle (1998) conceptualizes “rural capital” which is a combination of natural capital, man-made capital, human capital and social capital. In this combination, natural capital refers to natural environment; man-made capital includes the physical environment and its capabilities. Additionally, human capital is usually associated with size of the working age population, their education and training. Social capital, similar to the approach of social sustainability, refers to networking, trust and relationships within communities. Embedded and autonomous relationships that constitute social capital, eventually foster local economic development (Woolcock, 1998). In this thesis, sustainable rural development will be explored in a holistic perspective with a special emphasis on social and economical aspects contributing the concept of well-being. In this manner, rural capital increasing investments and activities are accepted as creating positive impact upon sustainable rural development.

2.1.3 Innovation and entrepreneurship

The term ‘innovation’ has its roots from Latin, “innovationem” which is noun of action from past participle stem of ‘innovare’. Innovare which means ‘to make new’ has its roots derived from another Latin word ‘novus’, which means ‘new’ (Innovation, n.d.a; n.d.b). Stemming from its cross-disciplinary nature, since 1960s the concept of innovation takes attention of many scholars from different fields. Usually, definitions start with a differentiation between innovation and invention, which innovation is defined as the first commercialization of an invention, a creative act, which could be an idea for a new product or process (Fagerberg, 2005). Thus, the emphasis on commercialisation involves the key difference between innovation and invention. As a matter of fact, while inventions mostly carried out in research centers, innovations emerge within the commercial domain (Fagerberg, 2005) but not restricted to the business organisations (Baregheh, Rowley, & Sambrook, 2009). In this manner, social innovations have to reach the target group to be classified as innovation. Another dimension of innovation debate is on given importance to introduction of a new technology based product or process into the market (Carayannis & Gonzalez, 2003). In their comprehensive literature review covering definitions of innovation from 1960 to 2009, Baregheh et al. (2009) explain the term as “the multi-stage process whereby organisations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace” (p. 1334).

Probably one of the mostly referred concepts about diffusion of innovation belongs to the well-known authority of the innovation, Rogers (1995). He explained how new ideas and technologies are spread through cultures, communication channels, time and social systems. However, it was Schumpeter (1934) who adopted this breakthrough concept greatly into entrepreneurship and explained the process of innovation as “creative destruction” which drives economic and social change (Reinert & Reinert, 2006). Creative destruction is a concept widely used in development studies together with the endogenous growth concept.

According to widely cited scholars, entrepreneurship is the act of creating new organisations (Gartner, 1985), creating value (Mort, Weerawardena, Carnegie, & Sullivan Mort, 2003), a way to disturb existent conditions of the system for

generating new outcomes such as new combinations of firm organisation, new products, new services, new sources of raw material, new methods of production, new markets, new forms of organisation (Schumpeter, 1934), a purposeful activity in order to gain profit through bearing uncertainty, introduction of innovations and the provision of capital (Hoselitz, 1952).

Besides the size or novelty of a business, entrepreneurship is an activity that keeps innovation in its core (Drucker, 1998). It's accepted as a medium of transformation both in organisational level and society level. Great body of literature links entrepreneurship with development, social innovation, business innovation and design. Thus, it stays at the intersection of overlapping concepts of this study's framework and will be explored under each section according to the domain it overlaps with.

2.1.3.1 Business model innovation

The business model (BM) is a relatively new and potentially powerful concept. Since the dot.com era especially management literature as well as others have visited the concept increasingly (Burkhart, Werth, Krumeich, & Loos, 2011). Although the interest in discussing BM in different contexts is a popular trend, there is no generally accepted definition of the term. Broad range of informal and formal descriptions are discussed in theories and practices while numerous studies covering broad range of literature to come with a comprehensive meaning of BM (Boons & Lüdeke-Freund, 2013; George & Bock, 2011; Leitão, Cunha, Valente, & Marques, 2013; McGrath, 2010; Michelini, 2012; Osterwalder & Pigneur, 2010; Sabir, Hameed, Kashif ur, & Ijaz ur, 2012; C. Zott, Amit, & Massa, 2011; Christoph Zott, Amit, & Massa, 2010).

A very recent and broad coverage research by Coombes and Nicholson (2013) defines BM as an outcome of creating new organisational structures or a change in existing structures to pursue a new opportunity; a kind of framework, which represents a firm's underlying core logic and strategies by showing the way it creates and captures value for all exchange partners; a representation of the gaps between a firm's strategies and activities, and the ways to replicate or innovate.

Before further examination of BM concept, it is appropriate to describe “strategy” which is another crucial term that BM often associated with. The term strategy is a commonly used as “the relationship between means and ends”, while the origin of the word roots ancient Greek word “strategos” which stands for an elected general in Athens (Cohen, 2014). Nowadays, strategy is one of the most commonly used words of business vocabulary as well as design. According to Ackoff (1990) the term can be characterized as relatively long-range objectives made by an organisation’s highest level management, which subsequently affect the organisation as a whole. In general, decisions in an organisation are classified into three levels: strategic, tactical and operational. Strategic decisions refer to long-range objectives and a flow from top-down while tactical decisions flow bottom-up and involve shorter-run goals and plans (Ackoff, 1990). And operational decisions generally mean short-term and most of the time immediate actions and performances. Casadesus-Masanell and Ricart (2010) describe strategy as the choice of business model while tactics mean remaining choices open to organisation and for benefit of BM.

Mintzberg and Lempel’s (1999) classification “ten schools of strategy” sheds a light on main perspectives on discovering strategy process. Three of them will be discussed briefly in this section: positioning school, entrepreneurial school and design school. Positioning school explores strategy as an analytical process of evaluating the external environment and exploring the proper strategic position for organisation such as cost leadership, differentiation, or focus (Porter, 1996, 1998). This analytical positioning approach is widely used in researches and practices exploring innovation and entrepreneurship within a systems perspective. Entrepreneurial school, departing from Schumpeter’s (1934) creative destruction concept, comprehends strategy in a quite individualistic way, as a vision in entrepreneur’s mind. Additionally, design school employs architecture as a metaphor and defines strategy as a conscious thought which is neither formally analytical nor informally intuitive and a process that could be done by everybody through finding the fit between internal strengths and weaknesses and external opportunities and treats (Selznick, 1984).

A strategy can broadly be understood as a description, plan or process for how to move from the current situation to a desired future state, by contrast, BM is description of a state (Dahan, Doh, Oetzel, & Yaziji, 2010). In this manner, from a

conceptual perspective, BM describes the way a company creates and commercializes value while business process models represent how this can be realized on an operational level (Burkhart et al., 2011). It is possible to categorise strategy orientation of a BM into efficiency centered and novelty centered (Porter, 1998; C. Zott et al., 2011). Empirical data shows that the design of BM, especially for a novelty oriented BM, plays an important role on the performance of firm (C. Zott et al., 2011) while another performance indicator is the fit between market strategy and BM (Christoph Zott & Amit, 2008). In any case, BM is not a static statement, indeed a dynamic concept, and its purpose is actually quite context dependent. Sabir et al. (2012) define four variables that influences on the purpose of a BM, following as:

- the actual phase of company, whether it is in starting or growth phase
- variety of innovation and technology that company has
- being profit or not-for-profit
- importance of technology for the organisation

Although, all BMs have similar elements in their core, it is possible to claim that purpose and components of a BM for a profit-oriented company might be different than it is for a non-profit or social enterprise. In the literature, many scholars focus on identification of the components of a BM and many of them reach different number of elements in different level of details. BMs are practical concepts and they have dynamic aspects. They are like recipes, but also functions in a scientific sense and can be investigated as model organisms such as biological organisms (Baden-Fuller & Morgan, 2010). A BM could be used for representing current situation of a company, classifying type of a business and comparing it with others, illustrating different possible orientations of businesses, checking fitness between activities and strategies and fostering articulation of business strategies (Burkhart et al., 2011; McGrath, 2010).

Several studies investigating components of BMs show that a BM generally includes four main elements; value proposition, customer relationships, business infrastructure and financial aspects (Schaltegger, Lüdeke-freund, & Hansen, 2011). Osterwalder and Pigneur (2010) published the mostly referred study which brings an

ontological lens on elements of BM and introduced the Business Model Canvas (BMC) as a tool. The BMC points out nine core components of a business which are; value propositions, key activities, key resources, key partners, customer segments, customer relationships, channels, cost structure and revenue structure. Chesbrough (2010) agrees that decomposition of BMs into its elements and created visuals can play an important role for business innovation however; author claims that it cannot solely promote the innovation unless there is enough authority to undertake the experiments, while experimentation is the crucial part of BM innovation.

Technical innovation usually stands for the core meaning of innovation and refers tangible improvements, while often it is used interchangeable with product innovation. However, business innovation stands for expression of newness in a higher level of system. According to Girotra and Netessine (2013) BM innovations are universally applicable and deeply rooted in the laws of economics and operations management. For this research, BM concept is used as a bridge between design intervention and social innovations in rural development context. Thus, BM will be used to explain the logic of the business. In this way, it will be possible to compare common strategies, actors and possible innovation areas in different BMs from different cases studied. In addition to that, BM will be an interface for assessing dimensions and levels of design intervention targeting to enable businesses.

2.1.3.2 Social innovation

In recent years, there has been an increasing amount of literature on Social innovation and it is becoming more and more mainstream. Gradually global policy is becoming very sensitive to the issue, too. For instance, in 2009 USA president announced the Office of Social Innovation and earmarked \$50 million from the budget to create fund (Url-1) Similarly in 2010, Bureau of European Policy Advisors (BEPA) published a report, which recommends policy options for fostering social innovation at EU. The term social innovation embodies a multitude of concepts, which takes its roots from the notion of innovation (BEPA, 2010).

Although as a term it is relatively new, the social innovation itself is not. For instance, cooperatives still constitute an old and efficient example for the concept. One of an early study trying to classify meanings of social innovation is Dedijer's

(1984) work which uses three questions; what is social innovation, who can make social innovations and how to make it. Answers of those questions are discussed in various research domains including; urban and regional development, public policy, management, social psychology, social entrepreneurship and design. In general, social innovation is defined as a new idea or a better alternative which is more sustainable, more efficient than existing (BEPA, 2010), that addresses unmet social needs (Howaldt & Schwarz, 2010; Murray et al., 2010; White, 2008) and social problems (Phills et al., 2008).

Social innovation can be a principle, an idea, a piece of legislation, a social movement, an intervention, or some combination of them (Jegou & Manzini, 2008; Murray et al., 2010; Phills et al., 2008) and establishes changes in attitudes, behavior or perceptions which results in new social practices (Cajaiba-Santana, 2014), entrepreneurship, BMs, new institutions, social movements, public policy or different structures of collaborative work (Howaldt & Schwarz, 2010). A recent comprehensive literature review by Rüede and Lurtz (2012) lists various meanings of social innovation which follows as:

- to do something good in/for society
- to change social practices and/or structure
- to contribute to urban and community development
- to reorganize work processes: Social work, social policy
- imbue technological innovations with cultural meaning and relevance
- make changes in the area of social work
- to innovate by means of digital connectivity

Social innovation is developed and breed by society to have an impact on its own problems, thus, society is the initiator of the innovation, while societal actors from diverse paths of life, which are not only science and business, do create social innovations (Howaldt & Schwarz, 2010). In this manner, society is the innovator and the customer of the innovation who makes the innovation relevant and receives the positive impacts as social changes. Eventually emerging social changes evolve the society into a new dimension of being in this specific problem area. According to

Borzaga et al. (2012) social innovations stem from the difficulties facing traditional welfare system and development model which is based on two actors: the market and the state. These challenges are similar to the root causes of emerging need for sustainable development (Tanuro, 2011). In this manner, social innovation is connected to the concept of development and also has an impact on development by means of human well-being (Seelos & Mair, 2005).

Some authors argue that social innovations are not material in most of the cases and material outcomes are supplementary results where the main focus is not the needs but building assets (Cajaiba-Santana, 2014; Neumeier, 2012) and driven by; more in behavioral change than by changes in technology (Jegou & Manzini, 2008; Murray et al., 2010; Phills et al., 2008). For instance, in the famous micro finance approach developed by Muhammed Yunnus together with Grameen Bank, social innovation is not the credit but the method or idea of micro finance itself (Phills et al., 2008) which has transformed the relationship between lenders and borrowers and changed the societal system (Cajaiba-Santana, 2014). Thus, social innovation in this example is not a product but an approach, a way of doing something that allows many people from poverty line to receive the service from bank.

2.1.4 Design thinking and design intervention

In broadest context, design is usually associated with a thought process containing the creation of an entity. However definition of this entity is all encompassing. Depending on the identification of this entity, design can deal with products, processes, services, systems and policies. According to Brown (2008) design process can be explained as a system of spaces rather than a series of steps. In this metaphorical explanation, spaces establish various types of related activities that altogether create a continuum of innovation. Author lists process of design thinking in three phases; inspiration, ideation and implementation, which are common steps for all problem-solving discourses. Additionally, the entity can be physical as an object, a temporal such as an event, conceptual such as an idea or relational such as a relationship that describes the interactions between entities. In this process, identity of the designer, one who realizes the act of design, depends on the entity that is being designed. Although everybody does design as a thinking process, the term designer can also reflect a profession, like people who had some type of art and design

education such as product design, graphic design, apparel design, textile design, architecture etc. In this thesis design and design thinking refers to an act that could be done by anybody not necessarily with a formal education. However, designer indicates someone who had some type of design education. Designer usually takes various roles in any project and changes his/her identity or affiliation during his/her career.

The term “design thinking” has been used a lot earlier in a book about architectural design by Peter Rowe (1987), but popularized especially by IDEO and Institute of Design at Stanford University. The term generally understood as a critique to linear and analytical thinking in terms of solving ill-defined or tricky wicked problems (Richard Buchanan, 1992). According to Tim Brown, IDEO’s chief executive, design thinking is a collaborative act and a process which stakeholders from different competencies participate. Moreover ideas should have human-centeredness, empathy and optimism (Brown & Katz, 2011). Wylant (2008) claims that design thinking is a process that raises good questions rather than seeking the right answers. Lockwood (2009) describes design thinking as a human centered innovation process, which involves various types of observation, collaboration, visualization of ideas, rapid prototyping of concepts, and business analysis.

According to Bjögvínsson et al. (2012), design thinking is a contemporary definition of participatory design but better articulated rhetoric. Participatory design and co-design are those types of design activities, which involve clients and other stakeholders in the design process. Similarly, human centered design coined by IDEO as part of design thinking in social spectrum, focuses on empathy and offers several tools for understanding people (Brown & Wyatt, 2010). Actually, abduction, empathy, interdisciplinary teams, co-creation, iteration through prototyping, preservation of complexity and an evolving brief are common themes borrowed from product design process and are applied into other extends of design such as service design, business design, transformation design, human centered design or user centered design. According to Owen (2007) creativity is a common feature but design thinking has nine characteristics that are differentiated from scientific thinking and operational thinking as following:

- Conditioned inventiveness: Invention within the frameworks of human-centered and environment-centered measures
- Human-centered focus: continuous consideration for the clients' needs
- Environment-centered concern: The ultimate value of human and environment centeredness.
- Ability to visualize: Designers can visualize ideas to see and show the big picture.
- Tempered optimism: Designers are taught to establish optimistic and proactive ways of working.
- Bias for adaptivity: Possible solutions should be adaptive in production.
- Predisposition toward multifunctionality: Design thinking keeps the big picture in mind while focusing on details.
- Systemic Vision: Design thinking creates holistic solutions.
- View of the Generalist: Design thinking is highly generalist by means of preparation and execution.

These characteristics cover more than a simple focus on products and tangible goods. The rise of service economy in developed world, contributed to the expansion of the scope of design from tangible products to intangible. Buchanan (2001a) explains the orders of design in an evolution process as symbols, things, action and thought. Stefan Moritz (2005, p. 33) presents a model, which illustrates design in four steps, which are design of features, design of client experience, design of processes and systems, design of strategy, philosophy, policy or ideology. The classification is fundamentally from simple to complex and tangible to intangible. According to Ranjan (1998), who employs a similar approach, design can intervene in four levels, which are tactical level, elaborative level, creative level and strategic level. In this classification, tactical level stands for skill and sense led design, which is sensory and experiential, usually focuses on form, color, detail and finishes. Elaborative level is more market led design, which focuses on variety, style, differentiation and fashion. The third is creative level, which is patent led design and focuses much

more on innovativeness. The last one is strategic level, which is vision led design, and is about systems thinking, opportunity mapping and strategic initiatives.

Ranjan (1998) claims that every design project addresses all levels in varying degrees. Another model is proposed by Dewberry and Johnson (2010) who point out three levels for design intervention, micro-level which includes material innovations; meso-level which contains organisational innovations and macro-level which defines goal settings and self-organisations. Probably one of the mostly referred study about intervention in systems, “Leverage Points: Places to Intervene in a System”, is from one of the most influential environmental thinkers of the twentieth century, Donella Meadows. Meadows (1999) classified leverage points in nine categories. Later, she revisits the concept and increases the number into twelve; listing from tangible elements such as parameters to intangible influences such as mindset (D. Meadows, 2008).

Design, intervenes in and fosters innovation in a system in various levels from features to ideologies. Building upon Meadows’ (2008) leverage points as a framework to intervene in a system, using innovation classifications (Keeley, Pikkell, Quinn, & Walters, 2013; Schumpeter, 1943) and levels of design (R Buchanan, 2001a; Moritz, 2005) and design intervention (Dewberry & Johnson, 2010; Ranjan, 1998) it is possible to come up with a list of intervention levels that designers can approach: (i) product level interventions (including tactical level and elaborative level interventions), (ii) innovative level interventions, (iii) experience level interventions and (iv) strategic level interventions. Next sections of the literature review, will present design intervention as two different but overlapping concepts; design for business innovation and design for social innovation.

2.2 Exploring Social Innovation and Business Innovation

In the literature, both social and business innovation are studied within the framework of innovation theory. In this manner, next sections focus on identifying notions of social and business innovation using theory of innovation, and discusses them in rural context.

2.2.1 A theory for innovation

The literature on innovation, particularly regarded to technological innovation, is occupied with various taxonomies which attempt to categorize innovations by various aspects. As the vocabulary used to describe innovation has enlarged, multiple taxonomies have also emerged. A recent literature review reveals that in just 21 empirical studies about new product development, 15 different aspects of innovation have generated (Garcia & Calantone, 2002). Although in the beginning innovation has been associated only with technical improvements, soon after it has enlarged its span to other areas. Classifications were generally done according to (i) outcome; process and product innovation, (ii) impact and scope; incremental and radical innovation, (iii) continuity; continuous and discontinuous and (iv) impact characteristics; evolutionary and revolutionary innovation (H. W. Chesbrough & Teece, 1996; Henderson & Clark, 1990; Morris, 2013; Sternberg, Pretz, & Kaufman, 2003; Utterback & Abernathy, 1975). Schumpeter (1943) defines four distinct types of innovation as follows: new products, new methods of production, new sources of supply, exploitation of new markets and new ways to organize business.

Similar to Schumpeter's taxonomy, a recent book called "Ten Types of Innovation" authored by Keeley et al. (2013) from a design oriented innovation firm located in USA, define ten types of innovation under three categories.

- Configuration: Profit model, network, structure, and process
- Offering: Product performance and product systems
- Experience: Service channel and brand customer engagement

This classification is quite design oriented and resonates with taxonomies of Ranjan (1998) and Moritz (2005), which were discussed in the previous sections of this chapter. The way that innovation is understood and theorized is very much dependent on the economic growth models and generally summarized as models of innovation by researchers. One of the often-referred studies is Rothwell's (1994) classification which covers five generation evolution of innovation from 1950 to 1990. These five models of innovation not only reflect the new scientific discoveries and fundamental research in applied research and technical applications but also change in economic growth perspectives and production characteristics. Marinova and Phillimore (2003)

revisited the topic in a research and presented in a chapter edited in the book called “The International Handbook of Innovation”. Authors use the same chronology as Rothwell but increase the number of models from five to six, which can be summarised as:

- First generation: The black box model, a phenomenon where only inputs and outputs are important or meaningful while the process is kept non-understandable.
- Second generation: Linear model, which identifies triggers of innovation in two categories; technology push and market pull.
- Third generation: Interactive model, which couples technology push and market pull in parallel and more complex relationships. Moreover integrates all the actors to the process.
- Fourth generation: Systems model, which is an improved version of interactive model that includes many more actors, feedback loops and functional integration of activities.
- Fifth generation: Evolutionary models. In this model, networks of innovations are set. These networks include partners, clients and suppliers but also universities, other companies, and organisations. Reason for these large networks is the high-level risk and uncertainty of innovation. Thus, these networks include simulation tools and systems, expert design and rapid prototyping.
- Sixth generation: Innovative milieu, which is a model that embraces the importance of location on innovation. In this perspective innovation turns into a localized phenomenon with a territorial point of view. Thus, it is explored depending on the specific location of resources linked to certain places and thus impossible to replicate elsewhere.

Similar to industrial districts and regional innovation systems (Moulaert & Sekia, 2003), innovation milieu introduces location based evolutionary innovation process which is a combination of general creative know-how and competence, together with territorial organisations and regional clusters (Marinova & Phillimore, 2003). The major aspects of innovative milieu environments are the ease of contact and trust

between partners, which reduce uncertainty in the development of new technologies and prove to be a source of exchange of tacit knowledge. Another important feature of innovation milieu is knowledge spillovers which is seen as main innovation fostering power of the firms in clusters and/or regions in advanced economies as well as developing countries (Kesidou & Szirmai, 2008). Besides location based exploration of innovation, knowledge flow is also discussed under the national innovation systems by many authors, and pointed out as a notion that is associated with institutional interaction between several actors such as firms, universities, research institutes and governments (Balzat & Pyka, 2006; Fagerberg & Srholec, 2008; Galanakis, 2006; Godin, 2009).

Actor based and competition oriented concept to foster nationwide innovation has been discussed by OECD (1997) with a special focus on innovation clusters and took place in many EU policies as National Innovation Systems (NIS). Similar to NIS but in a smaller scale, the term “ecosystem” is another concept associated with business and innovation. Moor (1993) in his article, which is a praise for competition, explores quality of relationships in a business ecosystem and claims that “in a business ecosystem, companies coevolve capabilities around a new innovation: they work cooperatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations.” (p. 76)

Sitra report authored by Hautamaki (2010) for Finnish Innovation Fund, offers a new sustainable innovation model for Finland, which proposes innovation ecosystems instead of NIS. In this approach regional level, decentralized and open innovation, social innovation, well-being and sustainable development are the basic values, where economic growth has only an instrumental value.

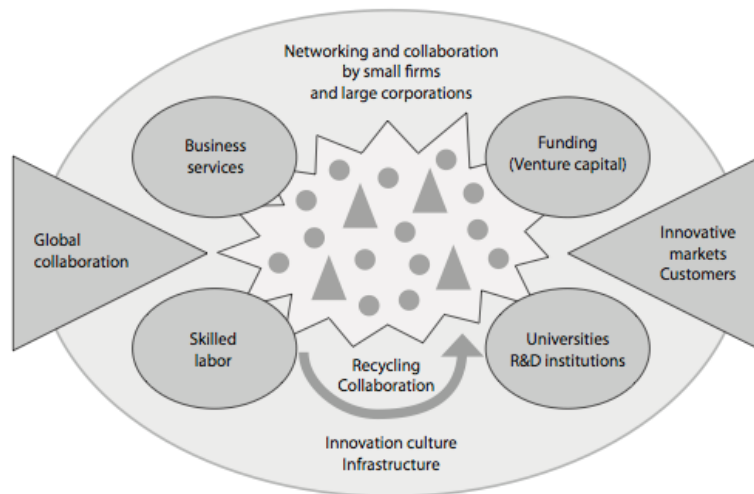


Figure 2.3 : Elements and dynamics of the ecosystem of innovations. (Hautmaki, 2010 p.72).

In this intersection, according to the conceptual framework and the focus of the research question, “design” is an actor or tool that “intervenes” in collaboration with other actors. The overall aim of the intervention is to support. In this comprehensive report, innovation ecosystem is defined as local systems of actors with various types of skill sets and expertise, who develop new ideas and realize them through organisations.

2.2.2 Social innovation in the context of rural development

In order to have a better understanding how social innovation influences on well-being and rural development within an innovation ecosystem, it is necessary to clarify the position of social innovation. A general way of distinguishing is drawing a contrast between social innovation and profit seeking nature of business innovation (Pol & Ville, 2009). Descriptive studies of Borzaga et al. (2012) and Pol and Ville (2009) identify three types of innovations which are pure business innovations, bifocal innovations and pure social innovations.

Pure business innovations usually have a neutral or negative effect on quality and quantity of life. Additionally, bifocal innovations can be considered both business and social innovation. These innovations are profitable and have a positive effect on quality of life. Whereas, pure social innovations are not business innovations and do not focus on needs that can be satisfied by market structure. Instead, usually such

innovations focus on type of needs that will be under-investment in free market society.

Borzaga et al. (2012) give examples of cigarettes for harmful pure business innovation and a new flavor of toothpaste for neutral business innovation. Authors mention that generation of biofuel provided some benefits to lower the carbon emission however also caused a significant increase in water consumption. This discussion leads to the point that, in order to evaluate the harmfulness of an innovation different time spans are employed, which reflects one of the main debate of sustainability. Additionally, there might be different levels of success for a social innovation depending on its positive or negative impact. While discussing social innovation, debates are mostly going on four dimensions; common good, behavioral change, purpose, meeting unmet needs.

- Common good: Howaldt and Schwarz (2012) bring normative definitions to the social innovation by stressing the importance of common good, which may have very subjective meanings. Phills et al., (2008) and Pol and Ville (2009) point out that most of the business innovations create benefits for society, and so there can be a significant overlap between social innovation and business innovation.
- Behavioral change: Jegou and Manzini (2008) in their book point out the importance of behavioral change rather than technological innovation.
- Purpose: According to Cajaiba-Santana (2014) every process of social change is not necessarily a social innovation. The author underlines two features to distinguish social innovation, novelty and inherent purposeful actions. In this perspective, social innovations are intended to be social.
- Meeting unmet needs: Cajaiba-Santana (2014) points out that social innovations drive social change in social context, in addition to the way social agents act and interact with each other. Another criteria is the quality of the need according to Phills et al., (2008) and Pol and Ville (2009). Authors claim that social innovation should fill the needs and creating value that would not be met or created by business or technical innovations in the market.

It is necessary to underline again that; all these dimensions are influenced by another factor, “time”. Common good and behavioral change could only be evaluated after a certain time after innovation is adopted and diffused. Additionally, purpose is not a measurable notion, unless it is stated initial to a project. And it is always possible to claim that profit seeking and social benefit creating might be involved in the purpose together. At this point it is necessary to recall well-being which is widely mentioned as a purpose, in both social sustainability (Murphy, 2012) and social innovation literature. White (2008) in her article exploring the concept of well-being in social and development policy and practice, explains 17 dimensions of well-being following as:

- The material concerns, practical welfare and standards of living
- Income, wealth and assets
- Employment and livelihood activities
- Education and skills
- Physical health and (dis) ability
- Access to services and amenities o environmental quality
- The relational concerns, personal and social relations
- Networks of support and obligation
- Relations with the state: law, politics, welfare
- Social, political and cultural identities and inequalities of violence, conflict and (in) security
- Scope for personal and collective action and influence
- The subjective concerns values, perceptions and experience.
- Understandings of the sacred and the moral order
- Self-concept and personality
- Hopes, fears and aspirations
- Sense of meaning/meaninglessness o levels of (dis) satisfaction
- Trust and confidence

As it will be further discussed in the next sections, in this research, the concept of well-being is seen as a mediator between sustainable development goals and social innovation efforts in order to align them in rural context.

2.2.3 Positioning social innovation in rural development

Although social innovation is explored in various domains, its reflections in rural context are not really addressed. Challenges faced by people living in urban and rural might be different in many aspects. Employment, intergenerational population stability, economic development and sustainability are some of the challenges that should be discussed in rural development extend (Caulier-Grice, Patrick, & Norman, 2012). Social innovation is seen as a bridge between solutions for social problems and sustainable development strategies via well-being, which is seen as the main goal of sustainable development (Åhman, 2013). Hence, well-being is an overlapping goal of both social innovation and sustainable development in rural areas.

Social innovation could be defined as a structuring concept for neighborhood development against poverty by European Community (Moulaert et al., 2005) and a bonding element for engaging people in rural development strategies (Bock & Fieldsend, 2012; Dargan & Shucksmith, 2008) through supporting people's ability to develop sustainable structures, mobilization of endogenous potentials to outweigh different interests and strengthening regional identity (Neumeier, 2012). Butkeviciene (2009) in the research investigating social innovation in rural context identifies nine possible social innovation themes, which are:

- New services; like rural tourism
- New education courses for rural people;
- New ways of farming such as ecological farming
- Formation of local action groups
- Electronic social innovations; public internet access points, digital promotion and advertisement
- The change in attitudes;
- Consolidation, community development, making things together

- New knowledge for making profit
- Environmental protection, new organisational forms and improvement of life quality

The list of social innovation themes mentioned above includes both tangible and intangible solutions that might emerge through pure social and bifocal innovations. In addition to knowledge, social network and social capital Butkeviciene (2009) also stresses the role of individual entrepreneurship for the success of social innovations in rural. Exploring the process of social innovation within a systems perspective, Butkeviciene (2009) points out three main approaches as follows:

- Top-down: External actors facilitate social innovation
- Bottom-up: Local actors develop social innovation
- Top-down to facilitate bottom up: External actors facilitate local institutional capacity to foster emergence of social innovation

Although there is no proved correlation between the path taken and success of social innovations, it is possible to claim that effective social innovations are created from collective, intentional and goal oriented actions (Cajaiba-Santana, 2014) and would emerge and diffuse from bottom up so that creative attempts born in local with collaboration creates big differences in the system (Jegou & Manzini, 2008). Neumeier (2012) defines three steps for social innovation process which are; problematisation, expression of interest, delineation and co-ordination. These steps show how innovation is adopted and accepted within a community, from a local perspective.

Whereas, TEPSIE Report (Caulier-Grice et al., 2012) uses a general problem solving perspective and explains the process of social innovation in six steps: prompts, proposals, prototyping, sustaining, scaling and diffusion, systematic change. Throughout the process, numerous actors join the ecosystem with various relationships. Butkeviciene (2009) identifies three levels of actors, which are:

- governmental-administrative level actors sustain information and financial support
- customer level actors show interest and financial support

- local community level actors help generation, coordination, maintenance and promotion of social innovations. External constancy firms also involve in the process in this level

Entrepreneurship is a key element between these actors to disturb the system through creative destruction. An article published at Rural 21 in 2010, represents examples of several social innovations in rural development context, from India, Brazil and Mexico. In this article, types of entrepreneurship and nature of innovations are categorized into three sections (Babu, 2010). According to the taxonomy shown in Table 2.1, there are three types of entrepreneurship programme, business and policy. Additionally, innovations are classified into three: technological, institutional and policy innovation.

Table 2.1 : Mapping of rural innovation in social entrepreneurship, adapted from (Babu, 2010).

		Type of Entrepreneurship		
		Programme entrepreneurship	Business entrepreneurship	Policy entrepreneurship
Nature of Innovation	Technological innovation	Making farming profitable for poor farmers:	Energy through enterprise: E+Co	Free antiretroviral drugs: HIV/AIDS policy in Uganda
	Institutional innovation	Political representation and property rights. Progress for Rwandan Women	Banking for the Poor: Grameen Bank	Kuthambakkam Village: Building good governance from the local level up
	Policy innovation	Village volunteers as agents of change: Tanzania's Iringa region	Entrepreneurship in rural development: Waldviertel management	Social safety nets

In consistent with the role defined in endogenous development theories and innovation ecosystems, fostering entrepreneurship together with a special emphasis on social innovation would be a crucial motivation for sustainable development in rural areas. Therefore, in the next section, entrepreneurship based social innovations in the context of rural development will be examined through different types of businesses and their impact on reducing poverty.

2.2.4 Social entrepreneurship and innovation in rural development

Although entrepreneurship is seen as a driver for economic growth, due to the external factors, creative destruction does not occur in the same way in a developed country and developing country. Because of resource unavailability, and lack of local consumers willing to pay higher prices for innovative products and services, necessity-based entrepreneurs have a tendency to come up with simplified solutions for existent problems with existing knowledge rather than investing in the creation of new knowledge (Sonne, 2010a, 2010b).

Even though developing countries have all sort of unsteady conditions, corruptions and lack of resources, they show enormous potential for new innovation models (Woolridge, 2010). Frugal innovation, jugaad innovation, Gandhian engineering (Basu, Banerjee, & Sweeny, 2013; Zeschky, Widenmayer, & Gassmann, 2011) brikolage innovations and pro-poor innovations (Berdegue, 2005; Paterson, Mara, & Curtis, 2007; Sonne, 2010b) are some of the taxonomies given to the bottom-up innovations from BoP and developing countries.

Frugal innovation means economically efficient, appropriate, adaptable, affordable and accessible products and services developed to solve sustainability challenges in BoP markets (Basu et al., 2013; Zeschky et al., 2011). Additionally, Gandhian engineering follows the philosophy of “more from less for many” while jugaad innovation means makeshifts of extremely limited materials (Basu et al., 2013).

Another term on rural entrepreneurship is actually identified according to economic status of entrepreneur who is expected to make innovation. Pro-poor entrepreneurship based innovation (PEBI) is an approach to rural development which recognizes the fact that many poor are not farmers and not even necessarily wish to be a micro-entrepreneur (Berdegue, 2005; Sonne, 2010b).

Thus, Sonne (2010b) argues that not the poor but the slightly wealthier entrepreneurs and firms need to be supported for endogenous development. In this perspective, it is expected that, eventually, knowledge spillover will emerge and new employment opportunities will reach to people facing extreme poverty.

Butkeviciene (2009) underlines that; both explicit and tacit knowledge facilitates social innovations thus, increase in the shared knowledge, social networks and social capital fosters creation and development of social innovation. In this manner entrepreneurs act as change agents for social innovations while business facilitates this process.

Beside the academic researches, international organisations from the development arena also published numerous reports to discuss and promote the role of business and specifically inclusive business to reduce poverty in developing countries and BoP countries (Borzaga et al., 2008; Nelson & Prescott, 2003; UNDP, 2004, 2008, 2014a; WBCSD, 2005; World Bank, 2008). A very recent report by UNDP (2014a) analyses several approaches for the engagement of private sector in poverty reduction efforts as seen in Figure 2.4.

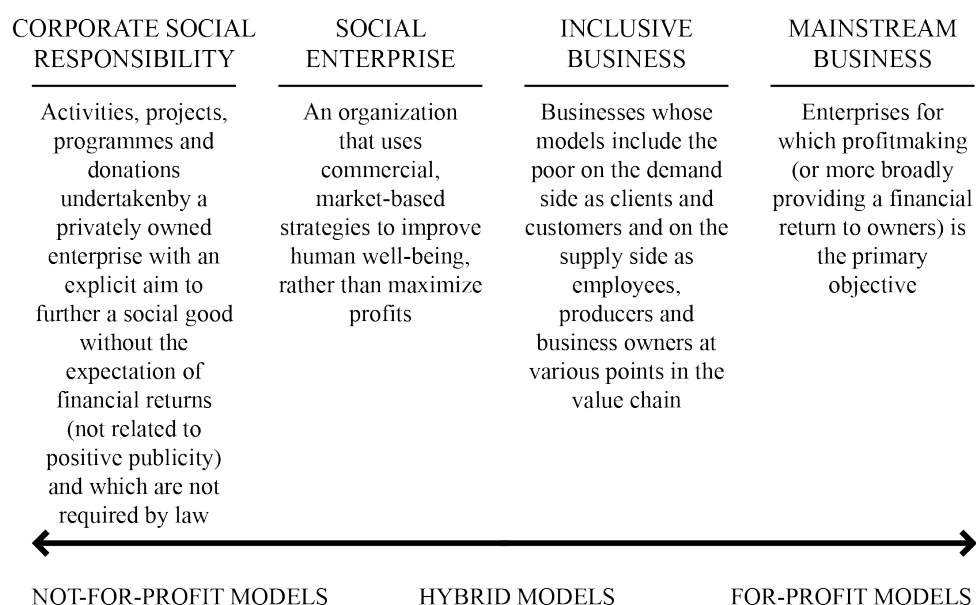


Figure 2.4 : Approaches analysed for private sector engagement in poverty reduction efforts, adapted from (UNDP, 2014a).

Corporate social responsibility (CSR) is an evolving theme with the rise of global conciseness on sustainability. Wilson and Post (2011) discuss evolution of CSR from a philanthropic side engagement for brand image to a position where social innovation is seen as an opportunity for for-profit business development.

It is possible to witness large multinational companies providing huge CSR activities such as; The Coca Cola Company Replenish Africa Initiative's \$17 billion

investment from 2010 to 2020 to bring safe water access to 6 Million people across the continent (Url-3).

On the other side of the spectrum, there are mainstream businesses, which are associated with for-profit activities creating some positive outcomes such as jobs, products meeting unmet needs and technologies; together with negative outcomes such as environmental pollution, exploitation of resources and increase in consumerism (UNDP, 2014a). It is possible to claim that, mainstream business generally contributes poverty alleviation through creating value, enabling job opportunities, supporting skill development and prosperity.

Inclusive BMs include the poor as clients, customers or employees in the business value chain. The concept proposes several roles for poor as actors in market research, co-creation process, local logistics networks or as trainers and local service providers (UNDP, 2008). Inclusive markets concept is a socially improved and more structured version of “Fortune at the bottom of the pyramid” approach proposed by C.K. Prahalad (Prahalad, 2004; Walsh, Kress, & Beyerchen, 2005).

In this top-down working model, fostering rural entrepreneurship is not necessarily an expected outcome. Social enterprises are also market-based organisations in forms of commercial firms, not-for-profit organisations, cooperatives and mutual aid societies, but they focus on human well-being rather than merely profit maximization. Güler (2009) states that social enterprises are catalyzers fighting with poverty. According to the recent report of UNDP a social enterprise is:

a private and autonomous organisation, providing goods or services, with an explicit aim of benefiting the community, that is owned or managed by a group of citizens, and in which the material interest of investors is subject to limits. More specifically, a social enterprise is conceived of as meeting both an economic and social goal within the third sector (Borzaga et al., 2008, p. 5).

Social entrepreneurship is always a mixture of commercial and social value creation (UNDP, 2014a) and social entrepreneurs often exploit a range of organisational forms and shift his position in between (Nicholls, 2006). Peredo and McLean (2006) classify four shades of social entrepreneurship according to dominance of social goals as shown at Table 2.2.

Table 2.2 : Range of social entrepreneurs, adapted from (Peredo and McLean, 2006).

Place of Social Goals	Role of Commercial Exchange
Enterprise goals are exclusively social	No commercial exchange
Enterprise goals are exclusively social	Some commercial exchange, any profits directly to social benefit ('integrated') or in support of enterprise ('complementary')
Enterprise goals are chiefly social, but not exclusively	Commercial exchange; profits in part to benefit entrepreneur and/or supporters
Social goals are prominent among other goals of the enterprise	Commercial exchange; profit-making to entrepreneur & others is strong objective
Social goals are among the goals of the enterprise, but subordinate to others	Commercial exchange; profit-making to entrepreneur & others is prominent or prime objective

Drawing on an extensive range of sources, the authors set out the different ways social entrepreneurial activities and social innovations contribute to development in various aspects, which are:

- Improving infrastructure in the locality, public and social services such as hospitals, use of local sources and their involvement in processes of economic and social development, particularly in less developed regions. Preserving, recreating and reopening public facilities and building (Gabriela, 2012; L. J. Thompson, 2002)
- Turning unsatisfied demands into jobs, through support of social inclusion and solutions to social problems (Gabriela, 2012; L. J. Thompson, 2002)
- Increasing cooperation between social actors; social partnerships, social networks, social capital (Gabriela, 2012) building support and advice agencies for better living of community, community 'feel good' activities (L. J. Thompson, 2002)
- Creating the social character of generated benefits, which is locally oriented and has a synergic effect on local social development (Gabriela, 2012)
- Building self-efficacy and increasing empowerment (UNDP, 2014a) members credit union, fund raising for a cause, organized occasional help

activities for the disadvantaged, self-help groups, local volunteer groups, community based support activities (L. J. Thompson, 2002)

- Development of job-specific and critical-thinking skills and capabilities; education and training seasons (Alvord, Brown, & Letts, 2004; L. J. Thompson, 2002; UNDP, 2014a)

In terms of social entrepreneurship, borders between different types of organisations become blurry, and indeed for the success of social enterprises, building collaboration between private, public and third sector is seen as necessity (Borzaga et al., 2008; Caulier-Grice et al., 2012). Defourny and Nyssens (2012) identify the position of social enterprises in the whole economic structure based on a model first discussed by Pestoff (1998). According to this model, which is shown as Figure 2.5, in general social enterprises belong to third sector or at least take roots in there.

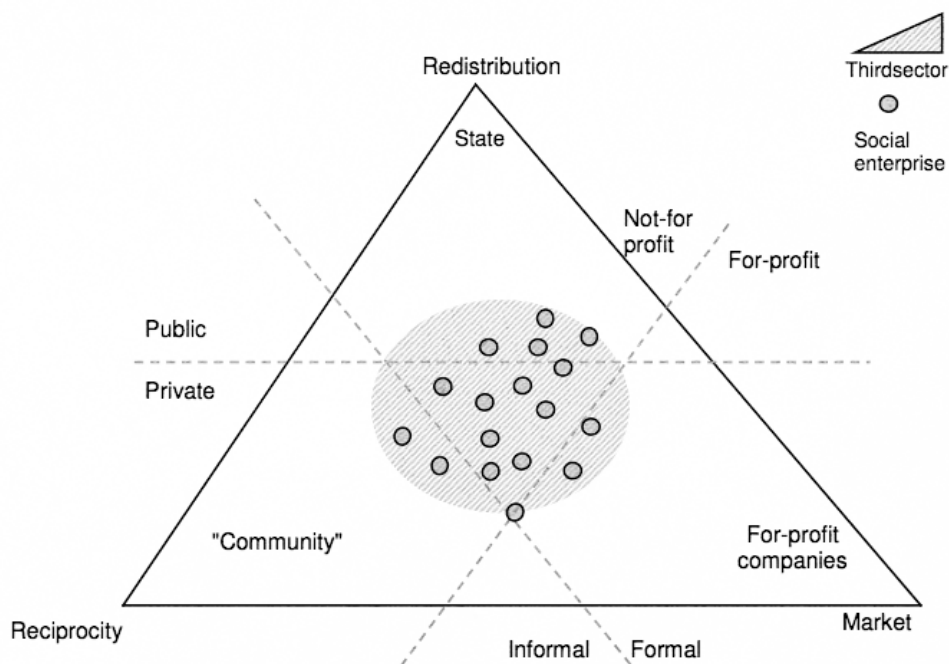


Figure 2.5 : Social enterprise as a combination of various actors (Defourny and Nyssens (2012, p11) based on Pestoff (1998 & 2005)).

Therefore, they experience the tension of being located in those overlapping areas (Defourny & Nyssens, 2012) while these overlapping areas are seen as enriching environment for various types of innovation including business innovations (Caulier-Grice et al., 2012). Supporting this proposition, in recent years, non-profit and governmental organisations have looked to business to learn about management, entrepreneurship, revenue sharing while roles and relationships are being shifted

between them through partnerships (Phills et al., 2008). Likewise, growing interest of private sector on social innovation driven activities, public sector and non-profits also interested in tools and methods of commercial business because of unavailability of finding funds, low efficiency and difficulty in articulating their objectives in measurable ways (Bull & Crompton, 2006).

The way social entrepreneurship emerges is also dependent on the socio-economic and political climate. For instance, EU policies support establishment of social enterprises, while in Eastern Europe main motivations are usually the push of civil society and support of market. Additionally Asia most of the time is disconnected from market dynamics and is only run by civil society and support of government (Nicholls, 2006). Literature indicates that in developing markets, NGO's are important partners for commercial firms and they also have some type of BM which is subject to the same forces and reasoning as for-profits when designing their BMs (Dahan et al., 2010).

2.3 From Theories to Practice Sustainable Rural Development

Development studies have witnessed many researches on sustainable development trying to formulate theories and practices of simultaneous pursuit of economic prosperity, environmental quality and social equity. A research from mid 1980's actually summaries several views in three possible standpoints for reaching sustainability track as individualistic, hierarchical and egalitarian (M. Thompson, 1984).

- Individualistic perspective assumes reaching sustainability through the market dynamics
- Hierarchical perspective offers a top down approach
- Egalitarian perspective has equity in its core nuclei. This view connects the concepts of distributed economy, creative communities and small clusters. In contrast to hierarchical, a bottom up development approach is expected in this perspective (Sachs, 2002; H P Wallner, Narodoslawsky, & Moser, 1996).

Although, this study is relatively old, the taxonomy is still valid. Hopwood et al. (2005) in a recent study presents comprehensive review on sustainable development

literature and comes with a similar categorization like Thompson (1984). Local development is seen crucial in many bottom-up development concepts for reaching an overall sustainability strategy. For instance, similar to the egalitarian perspective, Wallner et al. (1996) suggest approaching sustainability on a local level via small clusters of industrial operations, which is called small nuclei islands of sustainability in a landscape of unsustainability. According to this concept, the entire region is proposed to be sustainable eventually by the impact of these units.

Even though there are several approaches, there is no universally accepted theory of rural development, which is a debated notion both in theory and practice (Marsden, Banks, Renting, & Van Der Ploeg, 2001; van der Ploeg et al., 2000; Ward & Hite, 1998). One of the recent study, focusing on sustainability, rural development and entrepreneurship is Gülümser's (2009) dissertation titled "Rural Areas as Promising Hot Sports: Sustainable Rural Development Scenarios" which is a comprehensive summary of contemporary rural development concepts. The author presents three theoretical frameworks for sustainable rural development: counter urbanization and intervening opportunities, theory of social capital and embeddedness, endogenous growth theory, creative destruction and entrepreneurship.

According to counter urbanization and intervening opportunities theory, demographic changes in rural area will trigger the development. Migration from urban to rural and intervention of new actors improves entrepreneurial activity, new job creation opportunities, diverse economic activities in rural and environmental protection behavior. In the theory of social capital and embeddedness, the desired outcomes of socio-economic development rely on the contribution of social capital. In terms of entrepreneurship, that needs a network of many agents and resources, embeddedness is seen as a crucial part of rural entrepreneurship activities to emerge and scale up. Social capital usually explained as ties between local and external agents, common values, explicit and tacit norms, and the density and the intensity of social interaction. Therefore, investment in social capital increases group capabilities and enhances socio-economic mechanisms.

Additionally, stemming from the decrease in the agricultural employment levels and necessity of new job opportunities in rural, endogenous growth theory proposes having sustainable competitive advantage with local resources. In this manner,

endogenous inputs are defined as natural resources, human resources, entrepreneurial experiences, industrial structures, and technical education. Thus, entrepreneurship and creative destruction are seen as drivers of change in rural areas. Resonating with the bottom up development perspective, endogenous development is often employed in rural development policies since decades.

As an answer to neo-classical growth theories, Paul Romer and Robert Lucas developed endogenous growth theory in the mid 1980s (Verspagen, 1992). They criticise that neo-classical model is not capable of explaining the root of technological changes in economies. Moreover focusing only on external forces would not generate growth. Nevertheless, endogenous growth theory accepts that long-run growth is determined by economic incentives (Gould & Ruffin, 1993). It points out technological change as a separate factor in the production, focuses on the key role of internal forces triggering growth and argues that technological change is a response to economic motivations of the market that can be influenced by the government or private sector (Grossman & Helpman, 1994).

Endogenous growth theory identifies three key factors to invest for economic growth, namely; human capital, innovation and knowledge (Grossman & Helpman, 1994; Margarian, 2011; Verspagen, 1992).

Theory also indicates that poor nations, with little human capital cannot obtain economical growth only by adding more physical capital. In contrary, investment in human capital through education is usually seen as a necessity. Another concept coined by endogenous growth theory is the spillover effect. This effect is described as; contribution of capital accumulating in productivity of capital, which occurs in the course of investment in physical capital or human capital (Grossman & Helpman, 1994). In this research, principles of endogenous development theory were used to identify contributions of social and business innovations in rural development.

2.3.1 Sustainable rural development in practice

Nations apply different development plans in practice. For instance in USA, rural development is more about improvement of agricultural system, while in Europe increase in employment rates is an issue besides agricultural improvements.

Additionally, in South American countries usually financial tools are used for triggering rural development while in Sub-Saharan Africa finance, the efficiency of agricultural production and also communication are important because of the distributed lands (Gürlük, 2001). According to Gürlük (2001) Turkey has already defined the rural areas as sparks of development since 1930s, and supported rural areas with finance and education to increase the agricultural efficiency during the early years of young republic. Empowerment of rural areas worked well with promising concepts such as village institutions, until the beginning of planned development period starting back in 1963. Since 1970's, in Turkey, many planned rural development projects were supported by international funds such as IFAD, UNP, IMF and EU (Gülümser, 2009) and were not really successful to prevent rural-urban migration and rural poverty (Gürlük, 2001). In rural areas, employment and immigration are still some of the interrelated problems of Turkey like many other developing countries (Gülümser, 2009).

Agricultural job creation has slowed down stemming from the development of farming technologies and agricultural activities which are less dependent on human labor, thus creative destruction and emergence of new BMs customized for rural networks and resources can be a promising approach (Cooperrider, 2008; North & Smallbone, 2000; Pender et al., 2012; Reardon et al., 2007).

Ellis and Biggs (2001) present evolving themes on rural development scene from 1950 to 2000. In this study, it is possible to observe a transition from agriculture oriented and centralized rural development approaches to innovation oriented, decentralized perspectives, which employ sustainability not only in economic and environmental manner but also in social manner. Rural development is a holistic process to transform rural community to a socially and economically developed community; and it cannot be downgraded to economic growth and agricultural progress (Tolunay & Akyol, 2006). Sustainable livelihoods has seen as a promising bottom up, decentralized development approach in late 1990s and early 2000s, against early perspectives employing technology transfer, financial and structural adjustments, which consequently carry the destructive impact of globalization (Ellis & Biggs, 2001). It was found to be a useful approach for understanding both the problem and the scope for promoting sustainable development at the local level by

linking people's livelihood strategies, their asset status and their way of using natural resources.

The sustainable livelihoods idea was actually first introduced by the Brundtland Report (Krantz, 2001). As a broad goal for poverty eradication, the concept was also advocated by the 1992 Earth Summit. Scoones (2009) claims that, practical experimentation and innovative thinking should reshape livelihoods perspectives to evolve the concept in a way that it can deal with these challenges in radically new ways. Various international organisations including UNDP, CARE and DFID, create programs based on sustainable livelihood approach to address poverty (Krantz, 2001). For instance, UNDP's Millennium Development Goals (UNDP, 2014c) which is expected to be executed until 2015 by 198 countries worldwide, underlines the poverty between the eight objectives.

Polak (2009) in his influential book 'Out of Poverty: What Works When Traditional Approaches Fail' clearly states that it is necessary to support livelihoods instead of charity to overcome poverty. It is expected that through livelihoods, the poor population will be enabled to invest in areas to solve their own problems. Additionally, Ellis and Biggs (2001) underline the contradiction between farming focused development policies and bottom up sustainable rural development scenarios and point out that "the cross-sectoral and multi-occupational diversity of rural livelihoods may need to become the cornerstone of rural development policy if efforts to reduce rural poverty are to be effective in the future" (p. 445).

By the decrease of employment levels in agriculture sector, a new term is coined in the literature: Rural Non-Farm Employment (RNFE). RNFE includes any scale of manufacturing and service activities, production, self-employment or working as employee (Reardon et al., 2007). According to the authors, especially after the green revolution, arrival of rural urbanization in 1990s, and lately by globalization intervening via both trade and modernization of the national economy including the rise of modern retail and processing, RNFE started to constitute important part of rural households since 2000s which includes food processing, small manufacturing, craft, repair services, employment at home or outside in a production company and so forth. RNFE has the potential for supporting sustainable endogenous rural development, by means of social, environmental and economic concerns (Ashley &

Maxwell, 2002). Reardon et al. (2007) defines micro enterprises engaged in manufacturing for local rural market as one of four themes on growth of RNFE. In this concept, goods manufactured with traditional knowledge to satisfy needs and desires of local people were the main concentration of micro enterprises. Using local resources and producing craft is always a concern of this practice and the main goal is to lift them from poverty.

Similarly, the latest Rural Development Plan of Turkey underlines the increased rural unemployment stemming from the decreasing job opportunities in rural, and points out the importance of non-farm entrepreneurship (Kalkınma Bakanlığı, 2011). According to the report, young people who doesn't have capital to invest, either passively contributes to agriculture or work for low wages in cities. The report highlights three main themes to be supported for rural development: rural tourism, agricultural economic activities and non-farm livelihoods. In this development plan, support or non-farm livelihoods include improving local craftsmanship, arrangement of small shops, branding of local products, activities and fairs for promoting local products, supporting non-farm small manufacturing industry.

Creative destruction and innovations emerging from grassroots are usually vivid attempts fostering change but when they lost their touch with their original hunger for social innovation, they institutionalize and become more prone to bureaucratization (Moulaert et al., 2005). Thus, employing diverse forms of capital in rural economies for development is very much dependent on the social networks in the utilization of these resources (Bosworth & Atterton, 2012) Rural development approaches focusing solely on economic development through innovation and entrepreneurship, without investing in social pillar of sustainability, would not increase the overall well-being.

Besides of this fact, social innovation, with its focus on well-being and close relationship with the goals of social sustainability, would be a key element that changes the paradigm of sustainable rural development approaches. Thus, this research deals with sustainable rural development approaches proposing usage of endogenous resources, fostering entrepreneurship and micro-enterprises, creating non-farm employment opportunities while sustaining and increasing social capital.

From this perspective, social innovation is seen as a bonding element for realizing these sustainable rural development strategies and a way to increase social well-being. In the following section, nature of innovation and social innovation will be discussed to come up with a theory for social innovation in the context of sustainable endogenous rural development creating livelihoods to eradicate poverty.

2.4 Summary

This chapter presented a perspective of endogenous rural development, social innovation and design. Rural areas have an important role to reach overall sustainability in developing countries. Thus it was highlighted that, contribution of design in social innovation should resonate with over all sustainable development goals in developing countries. Recent studies suggest that, endogenous development of rural areas through investment in rural capital is a valid strategy and stemming from decreasing employment in agriculture sector, manifestation of these strategies support micro businesses and rural non-farm sector.

Social roles and responsibilities of design is not a new debate in design literature. Furthermore, in practice it is becoming more and more mainstream for many for-profit and non-profit design organisations with different motivations. However, it is possible to observe that these efforts mostly focus on either BoP countries or urban area of developing and developed countries. Although they have an important role on sustainability goals, rural areas of developing countries seem to be neglected in researches. Especially for the design literature, it is crucial to identify challenges and models of successful contribution of design in social innovation and rural development.

This research identifies contribution of design to social innovation through BMs, in order to understand it through the different roles of the designer in practice. The next chapter outlines the research data and methodology used to investigate the research questions; a brief discussion about using BM as a tool to construct design contributions and social innovations; and short introduction to case studies.

“

3. RESEARCH AND METHODOLOGY

This chapter highlights the undertaken research methodologies and techniques customized for this research investigation. The purpose of the chapter is to show how all of the major parts of research work together to address the main questions of the study. The chapter is organized in three sections:

- The first section sets the ground for the research on design for social innovation
- The second section outlines objectives for the research; the epistemological and ontological positions that underpin this investigation and demonstrate how knowledge is generated. Details of the research design and methodology addressing the research questions, and the logic behind the selection of the cases, are explained here
- The third section presents a brief introduction to case studies and methods chosen for analysis of collected data

3.1 Research and Practice on Design for Social Innovation

“Designers, like everyone else on the planet, have good reason to be concerned about the future” (Margolin, 2007, p. 5). Social role of design is not a new discussion but nowadays, especially with the popularization of design thinking, there is much more attention to the issue. Debates on socially beneficial design have started in late 1960s around Europe and USA. As a benchmark in the history, “Design for need: The social contribution of design” symposium witnessed discussions about social purpose of design combined with aesthetic expression and symbolic value. The meeting hosted speeches from visionary scholars like Victor Papanek and Gui Bonsiepe, who were the pioneers of design scene from bringing economic, political and environmental impact of design into the discussion (Bicknell & McQuiston, 1977).

The iconic book titled “Design for the Real World: Human Ecology and Social Change” authored by Victor Papanek advocates a more sustainable, inclusive, anti-consumerist and idealistic approach to design for the third world (Papanek, 1971). In accord with Papanek, economist E.F. Schumacher influenced the Appropriate Technology movement with his work called “Small is Beautiful” (Schumacher, 1973). According to this approach, due to low capacities of energy supply, materials, skilled labour, finance, organization and transport, the adoption of modern production methods is in conflict with the development of rural areas in the third world. Instead, the proposed intermediate technology has proven to be more efficient, less capital intensive and more productive than primitive tools, however less complicated and costly than advanced machinery.

It is crucial to mention that appropriate technology had been part of India’s development practices in village industries even before the 1930s (Akubue, 2000). Mahatma Gandhi, moral leader and perhaps one of the most influential figures of the country, was the pioneer of appropriate technology with its symbolic spinning wheel, the Charkha, representing not only the ideal appropriate technological device but also freedom and self-reliance or “Sawadeshi.” Gandhi was very clear about the notion that “the poor of the world cannot be helped by mass production, but only production by the masses” (Schumacher, 1973, p. 173) and modern industrial production should reinforce the development of agricultural sector and local, small-scale industries (Akubue, 2000). Gandhi’s alternative development approach proposed a bottom-up independence which asserts every village as an autonomous republic (Ishii, 2001). Since the independence movement, Gandhi’s emphasis on small scale village industries has continued to be the central aspect of development paradigm in India (Gandhi, Kumar, & Marsh, 1999). Gandhi’s self-reliant systems mission was adopted by National Institute of Design (NID), which was established in 1961, a few kilometres away from Gandhi’s Ashram. Gandhi’s development approach encouraged Indian designers to design modern products using local materials, manufacturing techniques and labour force (Vyas, 1991).

However, distinguishing production methods and tools of industrialized countries from local production methods of developing countries did not secure a position for to become a critical element of development policies (Morelli, 2007).

Departing from the Neo-Marxist dependency theory, Bonsiepe (1973) brought a rather ideological explanation for underdevelopment, and pointed out peripheral countries as linked to the development of central and wealthy countries. His study was one of the first to clearly declare design as a tool for development (H. A. Er, 1997). Another influential voice rose with “Ahmedabad Declaration on Industrial Design for Development” in 1979. Realised with a close cooperation of UNIDO, ICSID and NID, the declaration was the very first UN conference on design and a milestone to address design in terms of developmental goals (A. Chatterjee, 2005). In this declaration, several recommendations were raised about design policies, government actions and industrial policies followed by educational extensions of industrial design. There was a special emphasis on the generation of endogenous capacity of design that deals with local needs, traditions, and production - consumption patterns. In this manner, craft and craft oriented rural manufacturing activities were also pointed out as possible collaborations.

The ‘developmentalist’ role of design drawn by Papanek (1971) and Bonsiepe (1973) addresses the satisfaction of basic needs, reducing technological and financial dependency on developed countries, transforming craft industries, creating a cultural identity and improving quality of life for the poor in the Third World (H. A. Er, 1997). In response to the limitations of dependency theory to explain dynamics and development of industrial design, Er (1997) suggests a critique based on modification of Bonsiepe’s model for Newly Industrialized Countries (NIC) and strongly emphasizes the role of design in development as a profit-oriented engine of competition. In his study, Er (1997) portrays the background of development of design in Turkey under U.S. technical assistance and government development strategies, and claims that both Papanek and Bonsiepe misguided the role of design. Although Er’s (1997) description of the stages of industrial design in NICs remains valid for fostering industrialization by profit-motivated nature of the discipline, it still falls short to convey the potential role of industrial design for underserved populations in developing countries.

India constitutes an important example of design as an agent for development since the Charles and Ray Eames’s 1958 dated “The India Report” and 1979 dated Ahmedabad Declaration, which NID had pointed out to have a strategic role in the implementation of design toward development across the country (Balaram, 2009; A.

Chatterjee, 2005). India's recent national policies rejecting the socialist paradigm and turning towards global and domestic competitiveness has actually triggered transformation of the discipline from a carefully protected, local production-centric view towards a more globalized manner that contributes to the creation of internationally successful brands ranging from automobiles to craft objects redesigned to meet contemporary needs. India is an example of how design can play an important political role in development at a strategic level. According to 1989 dated "Design as a Strategy for Developing Economy" report, which is prepared by International Design Center Bombay (and updated in 2009 with minor modifications to accommodate recent facts and figures) in addition to fostering innovation in industry, the recognition of craft based industry is vital for India also because the sector employs several hundred workers (IDC, 1989).

Although it visions creation of original Indian designs rooted in India's rich craft tradition and cultural heritage, India's National Design Policy was heavily criticized by Balaram (2009) for reflecting design as a developed world practice rather than an Indian reality, and not addressing the enormous craft community. Balaram (2009), in his chronological paper examining importance of Ahmedabad Declaration, underlines "the rapid political changes at the government level, and the Indian business community's perception of design as a peripheral activity" as two main reasons preventing design from yielding expected results in India.

In this manner, Er's (1997) statement is valid to define competition and profit motivation as factors for development of industrial design discipline, nevertheless it doesn't make the responsibilities of design in sustainable development obsolete. Decades after the initial dissemination of Papanek and Bonsiepe's ideas, Third World societies are struggling still with socio-economic problems such as poverty, lack of health facilities, lack of education, energy, malnutrition and so forth. According to Amir (2004), the reason holding back the design paradigm from solving problems of Third World is lack of political dimension in implementation of the ideas advocated by Papanek and Bonsiepe.

A good example for appropriate technology movement is the International Development Enterprises (IDE), which is a non-profit organization founded by Paul Polak (2005) for developing low-cost appropriate technology solutions such as

treadle pumps for farmers to eradicate poverty in rural areas. IDE represents how design can trigger economic development. Basically, IDE develops and markets products in order to help farmers increase their yields in developing countries like India. With an increase in income, farmers find opportunities to invest in their social needs such as health and education. Another critical landmark in terms of fighting poverty in rural areas is the KickStart which was founded under the name “ApproTEC” in 1991 (Url-4). Since 2005, KickStart’s systematic approach to fight poverty in Africa involves identifying profitable BMs, designing new products to bring these BMs into life, establishing the supply chain, developing the market and measuring outcomes. Unlike IDE, KickStart deals with all sectors in addition to farming and emphasis on developing BMs for sustainability of the proposed solution.

As the in practice of design is employed in wide-ranging problem areas, design theory has also been exposed to change. Buchanan’s (1992) article “Wicked Problems in Design Thinking” helped shift the design theory towards a more generalized understanding of design thinking that could be applied to almost anything.

A detailed examination by Kimbell (2011) reports that, design thinking first evolved from a cognitive process that occurs in individual designers’ mind, to a general theory for taming wicked problems (Buchanan, 1992), and later it became an organizational resource using some type of co-creation and open innovation approaches for fostering innovation in a wide variety of contexts (Brown, 2008; Buchanan, 2008; Dunne, Martin, & Rotman, 2006). This transition has not only expanded the interest area of the discipline but also extended the potential social and developmental impact of design. Earlier, social contribution of design used to be understood as generation of economic growth through industrialization, enhancing technological innovation, supporting competitiveness and fostering consumption. In this scenario, social impact results in a fundamental increase in comfort by relieving people from everyday tasks (Morelli, 2007). However, growing concerns of consumers and corporations about sustainability and social problems push design to gain new perspectives beyond traditional market-oriented models. In the context of development, design has enlarged its focus from appropriate technology products to services, systems and BMs for fostering social and economic well-being.

Following this transition, in 1990s, service design was born as a consequence of growing service economy in developed countries. Although now it is discussed as a separate discipline of design, its methods and theories are borrowed from product design, which stresses the form and functionality of service provided with a perspective of service client (Moritz, 2005). Emerged in 2000s through the works of British Design Council RED, “Transformation Design” was an early example of a theorized design-led innovation aiming at tackling social and economic problems. Similar to user-centered design, transformation design draws upon interdisciplinary teams to explore complex problems. Transformation design gives special prominence to defining a problem, encouraging participation of users and empowering them throughout the process, rather than just producing a solution for them (Burns, Cottam, Vanstone, & Winhall, 2006).

Service design and product service systems are presented as promising approaches to achieve breakthrough innovations, and non-traditional applications for social and environmental sustainability (Manzini & Vezzoli, 2003; Saco & Goncalves, 2008). Design for Social Innovation and Sustainability Network (DESI), was founded in 2009 by Ezio Manzini at Politecnico di Milano and evolved to a network of design labs in several design schools around the world. The DESI network was formed through several insightful international activities held between 2006 and 2008 such as a European research project proposing sustainable solutions to everyday life (EMUDE); UNEP supported Creative Communities Sustainable Lifestyles (CCSL) project focusing on India, Brazil, China and Africa; and Changing the Change conference held in Torino in 2008. NID and The Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) from Ahmedabad were two partners of the CCSL project (SDS, 2009). This network uses design thinking and design knowledge together with tools borrowed from service design and product service systems such as blueprints, journey maps, system maps to co-create, with local, regional and global partners, socially relevant scenarios, solutions and communication programs (Manzini, 2007; Meroni, 2007).

The social impact of design has been studied under different names in literature such as design for social impact, design for social well-being, socially responsible design, design for social innovation, design for social and social design (Continuum, 2008; Hillgren et al., 2011; Margolin & Margolin, 2002; Sacchetti, 2011). Although they

have more or less similar meanings enriched with the historical concerns of the discipline, in this thesis, “design for social innovation” refers to intentionally proposed, direct and indirect social impact of design.

3.1.1 Social design in practice: Methods and approaches

Since early 2000s, design for social innovation movement with various functions and distinct priorities, comprises a wide array of practitioners mainly from the developed world and all disciplines of design expertise. Actors of the movement are non-profits, for-profits and hybrids, partners of associations, governments, social service providers, and corporate social responsibility initiatives. In this movement designers, similar to other social actors, are urged to work on the major social, cultural, political, and economical instances brought upon by globalization. As a common feature, they all employ design thinking in their processes to solve different types of societal problems.

Although various articles give special emphasis to the ethical and social responsibilities of design on human dignity and social well-being (Buchanan, 2001b; Margolin, 2007) attempts to create a universal approach for social design are built around the problem solving process sequels such as engagement, assessment, planning, implementation, evaluation and termination (Margolin & Margolin, 2002). Practical examples include versions of design thinking guides. For instance, Human Centered Design (HCD) Toolkit, developed by IDEO, comes with similar steps for general problem solving; Hear (collecting stories and inspirations from people), create (participatory workshops for creating tangible solutions) and deliver (realizing solutions with rapid revenue and cost modelling, capability assessment). Similar to HCD Toolkit, Design for Social Impact Workshop document supported by Rockefeller Foundation, describes three major steps for social innovation outlined as develop and connect; visibility credibility and momentum; robustness, scale and efficacy (Continuum, 2008). The HCD Toolkit is a collection of numerous tools and methods borrowed from ethnography, design research and participatory design to foster empathy, creativity and innovation (Hillgren et al., 2011). Both, the HCD Toolkit and Design for Social Impact guide by IDEO, explain ways and means of social innovation through best practices (IDEO, 2008, 2009).

Another guide is “Collective Action Toolkit” developed by Frog (Url-1). This toolkit is a step-by-step guide for groups willing to reach a social goal.

Design with Intent is another set of open innovation toolkit focusing on imposing personal values on user experience and the behaviour change (Fabricant, 2010; Lockton, Harrison, & Stanton, 2010). The toolkit is created by Lockton et al. (2013) and distributed by Requisite Variety, a UK based design-thinking consultancy firm. Not only large corporations but also social design organizations like Catapult use The Design with Intent Toolkit to foster behaviour change towards sustainability through designed products and services.

Design for social innovation practitioners come from various types of organizations with different motivations. For instance, non-profit design organizations generally accept donations and fees for their service. IDEO.org, Architecture for Humanity, Catapult Design, Design That Matters, Project H Design, Mayo Clinic and DOTT fall in this classification. They often allow volunteers to join their projects and publish their works to facilitate dissemination of innovation. IDEO.org is a popular one, which works as a non-profit spin-off of large design company IDEO. The organization focuses on wide variety of projects, from poverty alleviation to healthcare, mostly in BoP countries. Moreover, IDEO.org provides open access to HCD toolkits and design for social impact guides. The organization also creates open access platforms where activist and volunteers working for social well-being from all around the world can meet online, share their experiences and empower each other's projects.

In comparison, academic research centers and design labs also act like non-profit organizations such as MIT D-Lab and the DESIS. Their uniqueness is based on their academic research abilities and investment in education. D-Lab for instance develops appropriate technology products including community water testing and treatment systems and human-powered agricultural processing machines, and provides education and training programs to help build creative capacity. Whereas, the DESIS network addresses sustainable lifestyles and social innovation mainly for urban communities. In addition to them, for-profit design companies also work in this field including large design consultancy firms like IDEO, Continuum, Frog and Requisite

Variety. Since design for social innovation is relatively a new research field, there are few researches classifying actors and social design approaches.

As one of them, the study of Emilson et al. (2011) defines three design for social innovation approaches listed as follows:

- Service design, transformation design and design for public services, which emerged in the UK by collaboration of the British Design Council and the public sector. DOTT Cornwall, ThinkPublic and Engine are not for profit and for profit organizations working with this approach
- Creative communities for sustainable lifestyles and sustainable design approach, which originated in Politecnico Di Milano and evolved to the DESIS, a network of universities and research centers focusing on small, local and bottom-up creative collaborations for social innovation. Product service systems methodology is an important part of this approach (Jegou & Manzini, 2008; Manzini, 2002, 2009)
- Design thinking and design for development approaches, which are mainly used by large design innovation oriented organizations including IDEO, Project H Design and Mayo Clinic, and addresses social and economic problems of BoP and developing countries

To be able to understand how design for social innovation occurs, it is productive to explore the approaches together with the problem areas they address. The taxonomy illustrated by Emilson et al. (2011) reveals that there are roughly two distinct problem areas. The first and second approaches address social innovations for developed countries or urban areas of developing countries. Additionally, those approaches are usually realized by European institutions like the DESIS network and DOTT Cornwall. Both perspectives emerged in Europe and generally draw on service design principles in order to facilitate or replace government services. Problems of developed countries and urban areas of developing countries usually involve the aging community, health problems, safety problems and food security. In such a setting, most of the time technological and economical infrastructures are available for interventions, social and cultural norms are not conflicting with the solution ecosystem.

In contrast, the third approach, which is mostly realized by western designers and design consultancy organizations, usually deals with developing countries and BoP countries.

Tackled unmet needs stemming from underdevelopment include child deaths, extreme poverty, epidemic diseases, lack of drinking water and sanitation. IDEO and many other USA based large design innovation firms, non-profit organisations like Catapult Design and MIT D-Lab are developers, leaders and implementers of this approach. As a consequence of underdevelopment, most of the time there is no infrastructure for adopting the usual “western” products as solutions, and socio-cultural norms and traditions are not in favor of a behavior change where people are extremely poor to adopt a product or service innovation without financial support of government or an NGO (de Boer, Steen, & Posthumus, 2013; Garrette & Karnani, 2010; Gupta & Khilji, 2013; Tukker, 2005). BoP countries and many underserved communities in developing countries can fall into this category. Although the framework drawn by Emilson et al. (2011) doesn't cover approaches of organizations like IDE and KickStart, due to the common features of their problem areas and organizations' emphasis on development, it is possible to enlarge the category to also include them.

In addition to the taxonomy of Emilson et al. (2011), socio-economic needs of communities in the developing world such as rural people, small farmers losing their advantage against large corporations or the underserved populations such as minorities would be another problem area. These groups face less infrastructural problems than BoP but are still disadvantaged compared to other developed urban ecosystems. In these geographies, general problems have to do with mobilizing capabilities, elimination of poverty and lack of sustainable livelihoods to adopt social innovation (Akşit, 2006; Reardon et al., 2007; Sonne, 2010a). Amir's (2004) criticism about industrial production-focused design policies of developing countries is still valid since people in these countries continue to face poverty and unemployment. Small, local, decentralized enterprises equipped with clean technologies can sustain local needs and provide them with sustainable livelihoods. Nevertheless, for such a transition to occur in developing countries, design needs to reposition itself closer to the social realities. Thus developing countries like Turkey, India and Brazil need customized approaches addressing the destructive impact of

their growing economies across rural lands to contribute MDGs while overcoming wicked social problems.

3.1.2 Contextualising design intervention in the research

The word “intervention” means “to come between, interrupt” (Intervention, n.d.a) and “to become involved in something (such as a conflict) in order to have an influence on what happens” (Intervention, n.d.b), while “design intervention” imposes an agency on design to actualize the intervention process. Kaya (2011), in her dissertation, argues design intervention and interventionism in design, through various projects addressing social problems with a tone of a criticism. Author addresses Wodiczko’s “critical vehicles” as an early example of design intervention. In this perspective, designer, like an artist, creates a medium to intervene in order to criticize an on-going issue. In an interesting experiment with a similar perspective, Routarinne and Redström (2007) locate two design prototypes, an “Energy curtain” and the “Erratic radio,” in different households to collect responses in order to gain an in depth understanding on the power of design to enable and disable forms of behavior. In their study, authors use objects as intervention tools to convey “sustainability” consciousness and states domestication as a method of design intervention.

Design literature, especially those dealing with the social impact of design, mention “design intervention” as a method to address on-going social or sustainability issues (Bhamra et al., 2011; Blyth et al., 2011; Dewberry & Johnson, 2010; Manzini, 2012). Gong et al. (2010) use the approach of Creative Communities for Sustainable Lifestyles borrowed from DESIS, and thereby identify service design as a viable approach to intervene in social innovations. Junginger and Sangiorgi (2009) bridge between theories and practices of service design and organisational change to give a similar perspective on service design intervention for creating changes in an organisation. Although the intensity of designer’s involvement and outcomes changes, common features of all these interventions are their goals as transformation of a current practice, structure, circumstance or behaviour.

However, Jonas et al. (2009) in their article discussing design intervention in a social context and in a business context, criticise the relieving logic based social

interventions for being expensive in the long term and for reducing the capacities of the societies to solve their own problems. Authors move the practice of design intervention from a normative (criticism) plane towards purpose-oriented effectiveness plane. Kaya (2011), in her thesis, conveys another example of interventions in the local knowledge by design: the Jawaja experiment realised in the early 1970s in rural India (which, as an aside, was one of the motivations for this study to be undertaken and will be briefly discussed in the next sections). However, unlike Wodizcko's critical vehicles, the Jawaja experiment involves the long-term engagement of the designer in the ecosystem, which might be interpreted with the purpose-oriented explanation of Jonas et al. (2009). Thus, design goes beyond a single interruption to a more strategic and systematic relationship. NID was the main actor of Jawaja intervention and as Mehta (2012) states, the institution has its own intervention model customized to preserve the values of traditional Indian society and to generate employment opportunities. This intervention is closer to Manzini's (2012) definition of large and system-based interventions.

Design intervention argued by Mehta (2012) requires a holistic understanding of the context in a range of terms from available skills and resources to market demand, and as the author states such design intervention "goes beyond product/design solutions to that of a catalyst to bring in new changes and new vision" and "... have a strong impact on the sustainable development of the Indian economy" (p. 183). As stated earlier, the research aims to bridge between design for social innovation efforts and rural sustainability goals, thus, in this study, design intervention stands for strategic and purpose-oriented contribution of the designer, which addresses many levels of development activities and might occur in various forms. Moreover, throughout the thesis, intervention, contribution and diffusion were used as interchangeable terms to identify this type of impact that designer have.

The shift in the market towards sustainability has opened new intervention targets for design, such as support of basic needs and infrastructures, aid facilitation, design of education, regeneration of craft, promotion of small and local enterprises (A. Chatterjee, 2005). Theoretically, design, like any other actor, can intervene in a socio-economic system through certain leverage points (D. Meadows, 1999) and in design vocabulary, these interventions could be features, experiences, systems and strategies (Moritz, 2005). Higher orders of design have the potential to influence

through higher leverage points (Buchanan, 1992) while every design intervention has an impact on all levels with some degree (Ranjan, 1998). Design does not only influence products and services but also business and management, as design's holistic approach can be an augmenting tool for development of BMs, and management of organizations (Buchanan, 2008).

Design, intervenes in and fosters innovation in a system in various levels from features to ideologies. Building upon Meadows' (2008) leverage points as a framework to intervene in a system, using innovation classifications (Keeley, Pikkell, Quinn, & Walters, 2013; Schumpeter, 1943) and levels of design (Buchanan, 2001a; Moritz, 2005) and design intervention (Dewberry & Johnson, 2010; Ranjan, 1998) it is possible to come up with a list of intervention levels that designers can approach: (i) product level interventions (including tactical level and elaborative level interventions), (ii) innovative level interventions, (iii) experience level interventions and (iv) strategic level interventions.

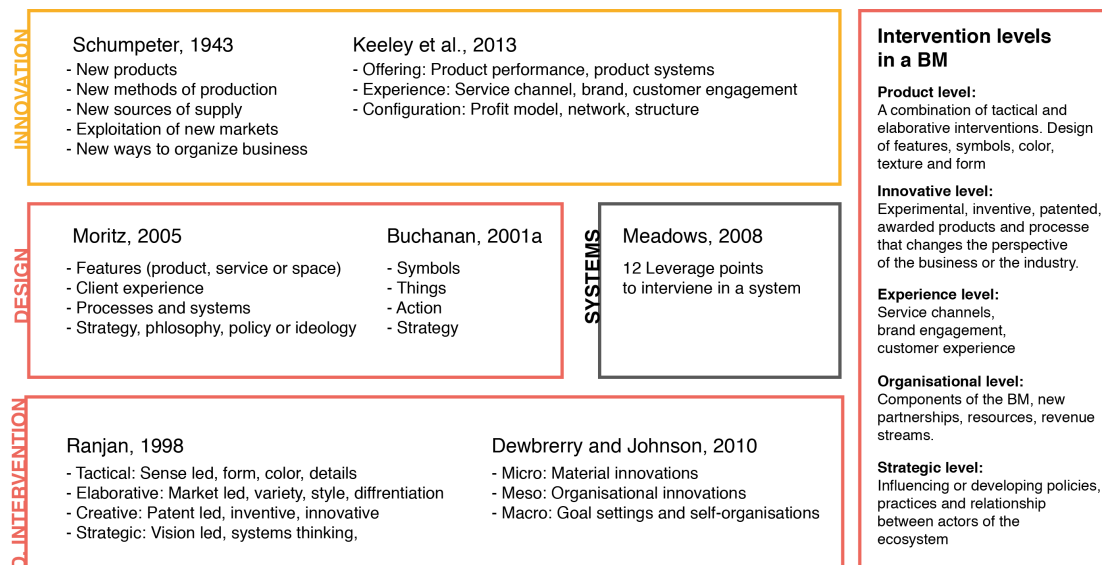


Figure 3.1 : Levels of design intervention.

3.1.3 Social BMs

Identifying a BM as social is not an easy task. Almost all private, for-profit, non-profit and charity organizations may undertake activities that fall within the definition of social innovation (Certo & Miller, 2008). Although "social value is subjective, negotiated between stakeholders, contingent and open to reappraisal, and involves incommensurable elements which cannot easily be grouped into single metric such as

value of equality and sustainability for future generations” (Nicholls, 2006, p. 58); and cannot be separated from economic value (J. D. Thompson & MacMillan, 2010), a considerable amount of literature on social innovation puts forth developed social value as the crucial factor to identifying a business as social (Auerswald, 2009; Boons & Lüdeke-Freund, 2013; Phills et al., 2008; Seelos & Mair, 2005; Sinkovics, Sinkovics, & Yamin, 2014). Nevertheless, value proposition is considered to be the core of any BM and for social BMs, the social value should be in the center of a BM innovation while it is supported with technological and process oriented approaches (Boons & Lüdeke-Freund, 2013; H. Chesbrough, 2010; Osterwalder & Pigneur, 2013; C. Zott et al., 2011; Christoph Zott & Amit, 2007, 2008).

In regards of BM innovation, design has always been part of the success of a strategy by fostering innovation in various targets (Brown & Katz, 2011; Buxton, 2007; Casadesus-Masanell & Ricart, 2011; Drews, 2009; Lockwood, 2009; Mutlu & Er, 2003). Through analysis from a systems point of view, Morris (2013) defines thirty two possible innovation categories in a business including tangible items such as technology and packaging, and intangible notions such as service mode and brand image. Design thinking can enhance innovation at almost all of these targets including more strategic level, too. BM design is not only about activity system design but also figuring out value propositions, value capturing systems and strategy (Teece, 2010). With an innovative approach, Chatterjee (2013) presents a roadmap for firms to design a BM in two steps. According to the author, the first step is based on choosing a generic BM, which is developed from Porter’s (1998) strategy models including efficiency based, perceived value based, loyalty based and network efficiency. Chatterjee (2013) explains the next step of BM design as iteratively building the value capture logic, core objectives and activity system of a business. In this step, design thinking can put forward; iterative, creative and less linear ways of customized strategy building for businesses (Carlopio, 2009). A great body of literature support that design thinking as a versatile approach that facilitates human centered innovation both in business and social contexts (Brown & Katz, 2011; Brown & Wyatt, 2010; Brown, 2008, 2009a) can foster BM innovations in many aspects such as: translating emotions of customers into business vocabulary, reducing the innovation risk through prototyping, observation of patterns, abductive thinking, action learning and reflective practice (Beckman & Barry, 2007; Clark & Smith,

2008; Drews, 2009; Dunne et al., 2006; Gerber & Carroll, 2012; Martin, 2009a, 2009b; Sato, 2009; Ungaretti et al., 2009). As a promising shade of centuries old creative thinking and systems thinking (Norman, 2010), design thinking can be a panacea for innovation while there are still challenges to be faced by designers in the context of social innovation.

3.1.4 New perspectives and challenges on enabling social BMs

Morelli (2007) identifies the challenge that contemporary design has to face as an “epochal shift”, which is similar to the shift from handicraft production to industrial production. This shift actually replaces traditional material products in the framework of distributed manufacturing so that the whole production and distribution processes must be radically re-designed and a large design program has to be developed (Manzini, 2012). According to Morelli (2007) with the paradigm shift, underserved populations would be addressed not as consumers of end products and services, but designers and developers of their own solutions. Thus, designer should focus on customers’ capabilities and accept them as resources for which design becomes a tool for facilitation. Oosterlaken (2009) adopts capabilities approach into design and defines “capability sensitive design” as a social model for design. In this new context, not only the end product but also the design process itself is the added value for in terms of approaches to development (Coward & James Fathers, 2005). From a similar points of view, Jonas et al. (2009) in their study argue for new intervention areas for designers and explain the changing social role of organizations as: “beyond products, supporting local networks of stakeholders, and rather than providing ultimate relieving solutions, they are providing semi-finished platforms, including products and services that will enable people to create value according to their individual needs” (p.5)

In such a relationship, designers and consumers become actors of an innovation ecosystem. Simanis and Hart (2008), from a similar perspective with Morelli (2007), underline that underserved populations are not passive consumers of products and services but business partners (see Figure 3.2). According to this perspective, the new approaches include creating business ecosystems developing sustainable value, designing new technologies with an emphasis of BoP and transforming entire sectors

through collaborative entrepreneurship (S. L. Hart, Milstein, & Caggiano, 2010; London & Hart, 2011).

New roles for designers include; creating scenarios, platforms and management strategies to enable micro-enterprises, positions in local institutions, cooperatives and self-help groups developing their own solutions.

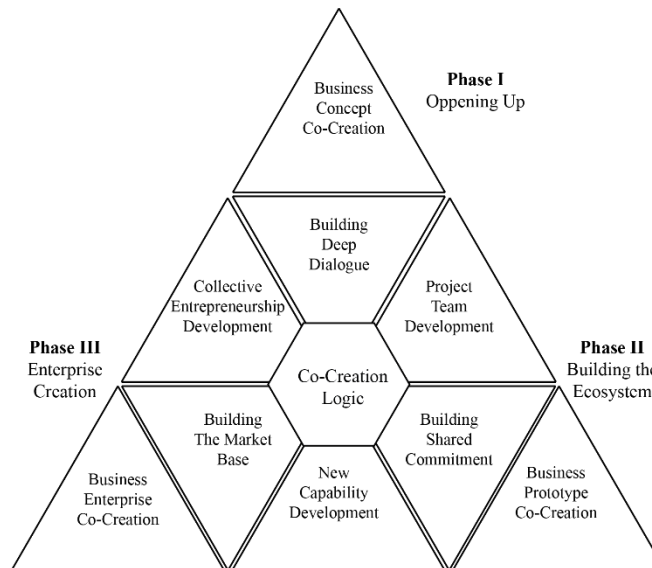


Figure 3.2 : The BoP protocol, adapted from (Simanis and Hart, 2008).

In this perspective, the design of “enabling platforms” (Jegou & Manzini, 2008; Morelli, 2007) which behave like intermediaries that connect stakeholders and resources to empower bottom-up initiatives and foster social innovation (Murray et al., 2010; Seravalli, 2011), could be an appropriate approach for problems of rural communities in developing countries. Nevertheless, in such a scenario, design has to face not only challenges of engaging all the stakeholders including consumers, producers, local people, institutions and NGO’s into the design process but also has to consider future stakeholders (Björgvinsson et al., 2012; London & Hart, 2011). Simanis and Hart (2008) strongly emphasizes building an ecosystem, which is also a challenging task for design.

As a model of success, Teekampagne is an inspiring example from Günter Faltn – a Berlin based Economics professor - in which social, economic and environmental aspects are considered thoughtfully to generate economic and social value in the BM. In this model the business ecosystem includes cooperation with an NGO for ensuring environmental sustainability and providing training for workers. Moreover, reflecting

the transparency of the business, what they call “trade not aid”, cultivates trust among the consumers and brings about much more welfare and empowerment for the workers (Asmuth, 2009). Although economical value proposition is limited to Darjeeling tea; transparency and close relationships with NGOs to support development of the region become crucial social value propositions driving the business.

As another example for designing BM components, Indian designer Rebecca Rubens (2013), in her approach, develops a comprehensive sustainability labelling scheme for Vietnamese artisans. This scheme and labelling are used as a checklist addressing material considerations, production considerations, distribution considerations, consumer-use considerations and end-of-life handling considerations. In addition to that, labelling helps consumers to understand the social and sustainability value of craft products while establishing trust with artisans. Designers need to use and sometimes redesign invisible components and structures such as fair trade label or sustainability labelling in order to ensure the social and environmental sustainability of the business.

Thus, another challenge for the designer is the necessity to understand and use business vocabulary and tools. Fortunately, design researchers and practitioners are aware of this need and building new connections between disciplines. Jon Kolko (2012) in his book “Wicked Problems Worth Solving”, explores design in social contexts with an encouraging voice. Author, besides design thinking tools and methods that help adductive thinking and building empathy with user, also lists a set of tools for planning a business such as revenue and expense worksheet, triple-tiered subsidy worksheet and product and feature roadmap. Overall, there seems to be some evidence in literature to indicate that designers are about to face several challenges in social innovation projects:

- Designer’s inabilities in driving the implementation process (Emilson et al., 2011)
- Cost of design consultants (Emilson et al., 2011)
- Not having long-term commitment in the projects (Emilson et al., 2011), lack of accountability after the project is over (Kolko, 2012)

- Superficiality of proposals, assuming unrealistic expectations because of ignoring the evidence and field experiences (Emilsson et al., 2011; Kolko, 2012), failing to gain deep, tacit knowledge (Kolko, 2012)
- Lack of economic and organizational skills (Emilsson et al., 2011), social science thinking (Merholtz, 2010)
- Lack of abilities to develop, test and spread robust theories of change (Schulman, 2010)
- Lack of skills in dealing with policy, and ethical questions raised by avoiding politics with non-government based social services (Tonkinwise, 2010)
- Lack of knowledge about the public sector and inability to effect change (McCullagh, 2010)
- Having mental barriers which prevents designers to engage in social projects much more (Ö. Er & Kaya, 2008)
- Lack of meaningful trust and relationship with all stakeholders (Kolko, 2012)
- Lack of long term strategic thinking not synchronized with development goals (Balaram, 2009)

In order to overcome these challenges, design needs to start collaborating much more closely with other disciplines, and engage in a long-term transformative relationship with stakeholders. Within a more focused framework, Vyas (1991) discusses the role of design in small manufacturing activities in rural India. Author mentions Jawaja experiment as a successful example to represent the ways in which designers could be involved in interdisciplinary teams to change entire craft production processes starting with the procurement of material, processing the raw material, designing and developing a line of new products to bypass the existing exploitative marketing channels, finding new market outlets and, most important, planning from the very start, an eventual withdrawal of the team, so that the craftsmen would control their own destiny by means of cooperative groups. In such a case, design intervention becomes more deliberate and involves long-term strategic contribution or diffusion in the system, where design becomes part of the ecosystem and transforms the whole

rather than assert a short and quick impact. Apparently, involving in the numerous steps of a social business process renders the designer with new roles together with several challenges, which will be discussed briefly in the next section.

3.1.5 Identifying designers' new roles

Morelli (2007) calls attention to the fact that, social actors including designers, have to work on economic, cultural and social effects of globalization. However, this new social attachment, quite different from the reactions expected of industrial society, moves its centre of focus to systems, services, organizations and policies than products, manufacturing and technology (Emilson et al., 2011). Drawing on that, designer's profile has enlarged its capabilities from designing tangible products, visualising and holistic thinking to working within multidisciplinary teams, understanding these disciplines, creating strategies and even managing them. This calls a type of employee profile; "T shape" individuals, that has been coined by a business consultancy firm, McKinsey, and adopted to design by IDEO (Brown, 2009b; Yavuz, 2007).

The definition refers to the form of letter "T", where the vertical line addresses major competencies of these individuals most probably gained through the discipline they were educated or had enough experience to be proficient on, like analytical thinking for a business person. Additionally, horizontal line of the letter reaching both sides represents the individual's empathy and relationship with other disciplines. Since these type of people are expected to be relatively fast learners and easy adapters, they are usually promising candidates for management. In his article published online at Core77, McCulagh (2010) explains how IDEO described T shaped designer, departing from this definition. According to IDEO, vertical line of T represents experience and expertise in design, which involves, creativity, drawing techniques, visualization and prototyping. Additionally, in this case horizontal line of the letter means any other discipline varying from ethnography to psychology, with which the designer identifies and improves his capabilities accordingly. However, the spectrum that is supposed to be encompassed by this horizontal line is not clearly defined for a designer working in the context of social innovation.

Design is expanding its territory and performing new roles through this evolution. One of the few studies concerning the new roles of industrial design is Valtonen's (2005) analysis presenting a Finnish perspective. According to this study; while designers were responsible mainly for creation of products in the 1950's, they later became experts on end customer and they started to work in multidisciplinary teams to create complex technological solutions, and eventually they have gained new roles on design management to create brands and experiences, and lately they have been assigned to lead, support and drive innovation at the national level (Valtonen, 2005).

A more comprehensive PhD research by Lauren Tan (2012) aiming to understand the different roles of the designer in design-for-social-good-projects, and several other studies following the same paradigm (Tan, 2008, 2009; J. Yee, Jefferies, & Tan, 2014; J. S. R. Yee, Tan, & Meredith, 2009) identify eight distinct roles:

- Facilitator: Joining stakeholder groups, enabling better collaboration, mobilizing and energizing thinking of others
- Communicator: Using visuals to initiate conversations and gain feedback.
- Capability builder: Transferring design processes and methods to businesses, acting as a 'conduit' in the knowledge transfer process
- Strategist: Involved in designing and planning action and policy to achieve a major or overall aim
- Researcher: Doing research with stakeholders, drawing research methods from architecture, development studies, anthropology, social sciences, marketing, business and so forth
- (Social) Entrepreneur: Involving end-to-end process of developing and rolling out an idea
- Co-creator: Participatory design and co-design
- Provocateur: Using design to create a provocation

A recent research conducted by Cipolla and Moura (2012) discusses the roles of designer in the context of social innovations in Brazil, and identifies four distinct types as follows:

- Empowerer: from identification to scaling up, empower ideas
- Multiplier: replicate solutions in other contexts to solve social challenges
- Envisioner: envisions more sustainable scenarios
- Connector: dealers, entrepreneurs and institutions that link together people, ideas, money and power

While Cipolla and Moura (2012) draw broader roles, noticeably, these roles have overlapping domains, and designers may perform several roles in one project. Such roles are generally defined as the way design acts to create desired impact on objects, people or organizations, and none of the roles have superiority over the other. Designer can be the object, subject or both in such an act. For instance, designer as “co-creator” defines the role of designer as joining a co-creation act with people. Additionally, designer as “communicator” means that design facilitates some type of communication between the parties, which would not be possible naturally. These researches shed light on the expanding role of the designer in social innovation through mostly service design oriented projects held in urban areas. Thus, there is still a gap in the literature concerning the emerging role of the designer far as enabling BMs to foster social innovations in rural, of developing countries.

Kaya’s (2011) dissertation identifying a methodology for design intervention with homecraft practitioners from Southeast Turkey portrays the designer as an enabler who transfer tacit knowledge to practitioners. In this study, the designer was trained as an industrial designer and was also the researcher as a participant observer during the study. While Kaya had performed the role of “enabler” during the workshops, actually her main occupation motivating her to be there was her “researcher” identity.

The occupation of a designer is related to the affiliation or identity that designer embodies. Being a student, faculty or activist are different affiliations associated to

designers in this study. In this perspective, designers may have various types of identities or occupations to become actors within the ecosystem, which may also give clues about the transformation of designer.

3.2 Research Design

The main purpose of this research is to understand the design interventions aimed to foster social innovation and development through enabling livelihoods in rural regions of developing countries. Although design practitioners and researchers are increasingly interested in the social role of design, so far, there has been little discussion about how design could be employed for creating BMs for the poor. Understanding the forms and the impact of design interventions, roles and occupations of designers during the project would help design researchers and practitioners to improve their tools to nurture rural micro BMs in developing countries such as Turkey. In this manner, the research aims to contribute to body of knowledge in following ways:

- Exploring the linkages between design for social innovation, BM generation and sustainable rural development
- Identifying new roles and intervention approaches for design
- Improving the understanding of development agencies in a way that design could be employed in a broader and more efficient way

As discussed in the previous sections, design for social innovation projects are conducted in various contexts and not directly associated with the business activities. Thus, linking design for social innovation practices with BM generation activities would give designers the opportunity of customizing their approaches according to expected outcomes in the context of BMs. Narrowing down the scope of the research according to the target group of influence, such as rural communities in developing countries, not only clarifies connections between social innovations and sustainable rural development activities in developing countries but also gives a general view to social BMs emerged in rural areas.

Examining existent design intervention practices in a context that has not been studied in literature before can help the identification of context specific roles and challenges. Defined roles and levels of influences of designers would improve the expectations of development agencies and designers themselves about potentials of design interventions. Thus, to be able to support these contributions, the research is shaped to reach five objectives.

- Critically reviewing social innovation and rural development literature and identifying the intersections of the fields to create linkages in terms of goals and approaches
- Critically reviewing design for social innovation literature and identifying characteristics of design interventions
- Identifying common actors, their relationships and roles; common pitfalls and challenges of social design interventions in rural development
- Defining types and specifications of social BMs in rural areas
- Explaining how social innovation emerges through BMs enabled by design in rural areas, by building a descriptive model

Reviewing literature with a focus on social innovation, rural development and design intervention helps identify of the gaps in the knowledge to be addressed and reasoning of the conceptual framework (see Chapter 2, Figure 2.1). Reviewed literature indicates limited information about common actors and their roles. Thus, identification of actors, their relationships and roles, possible pitfalls and challenges should be researched in the context of developing countries. Achieving all these objectives makes it possible to reach the final objective, which proposes a descriptive model abstracted from the analysis of collected data. In this manner, the research focuses on answering the following question:

How can design foster social innovation by enabling rural, non-farm BMs in developing countries? Following sub-questions are appended to the main question to be able to grasp the necessary knowledge to describe how the phenomenon occurs.

- What types of organisational models are acting in the ecosystems?

- What types of roles and motivations do designers have in these models?
- In which levels and dimensions can design intervention enable social BMs in rural areas?
- What types of social innovation can occur in rural, through BMs enabled by design?
- What are the major challenges to this area of design?

Exploring answers of these questions through relevant literature provides an introduction to the issue and help formation of the research design. Nevertheless, complex nature of social and developmental interventions makes it difficult to analyse the process. Another challenge for studying the impact of such an intervention is the time limit of an average PhD study. These types of projects usually include relatively long preparation and implementation phases. Additionally, maturity of the projects, which allows observation of impacts, takes a lot longer. Therefore, most of the time, successful design interventions are illustrated with participatory design processes and designed solutions as outcomes, rather than the impacts of intervention. As a reflection of these challenges, little research is available about the long-term impact of social design interventions.

Other underlying reasons might be the difficulty of social impact evaluation and the identification of design influence in a social phenomenon. Lack of feedbacks emerging from long-term results of an intervention project, constrains design discipline to identify gaps and possible improvement targets for intervention tools and approaches. In a broader perspective, this feedback would improve the social perspective of design education. This research focuses on undertaken projects to understand the influence of interventions and the outcomes with a systems perspective.

3.2.1 Research method

Research approaches could be classified into two broad categories, quantitative and qualitative. While quantitative research projects have statistical advantages, as they allow logical and replicable analysis of large amount of data, they are usually applied

in laboratory conditions in which the environmental conditions and significant variables are strictly controlled and measured. Additionally, qualitative research is mostly based on social and behavioural studies in which it is generally expected that the design would emerge and develop during data collection period.

As was discussed previously, design intervention is a context dependent and complex phenomenon, which involves various actors and relationships. Each intervention has to be researched in its own specific context, which limits quantitative approaches to create a universally representative and replicable model. For these types of phenomenon, facts and data are part of socially constructed reality, not an objective reality. Additionally, dynamic nature of variables is not easy to measure. In addition to that, the purpose of the research is not to create a casual explanation or prediction but formulate an interpretation and contextualization of design interventions in rural development efforts. Thus, a qualitative research design is in this case more applicable to use than a quantitative one.

This research focuses on how social innovation occurs through BMs enabled by design, and how it is linked with sustainable rural development goals. Such an issue should not be explored through one lens, but rather a variety of lenses to allow multiple facets of the phenomenon to be revealed and understood.

As one of the major design traditions in qualitative research, case study methodology is developed in social sciences and generally deals with in-depth investigation of a single person, group, event or community. Case studies are seen as an appropriate communication method to convey the complexity and specific nature of a phenomenon (Stake, 1995). Yin (2003) points out case study as an appropriate research method if the study focuses on answering “how” and “why” while contextual conditions are important although boundaries between the phenomena and the context is blurry. In this manner, rather than a quantitative research focusing on a few aspects on many design intervention cases, a case study would be an appropriate approach to investigate this phenomenon within its context using a variety of data. In literature, there are two approaches that guide case study methodologies, which are developed by Robert Stake (1995) and Robert Yin (2003). They define several types for case studies including; explanatory, exploratory, descriptive, multiple (Yin, 2003), intrinsic, instrumental and collective (Stake, 1995).

Although in-depth research of a single design intervention case would offer insight into the process, actors and their relationships, it might not be sufficient to understand the different roles of design, and to identify various actors and stakeholders in the innovation ecosystem. Additionally, using more than one case in a research projects limits the depth of knowledge gained but allows for a comparison between elements across different cases. In this manner, multiple case studies (Yin, 2003) and collective case studies (Stake, 1995) are appropriate methods for exploring similarities and differences within and between cases. According to Yin (2003) multiple case studies are considered relatively robust and reliable but also extremely time consuming and expensive. Consequently, to be able to have an ecosystem level of understanding, this study employs multiple case study method to observe similarities and differences between various components of the cases including; actors, their relationships, social innovations and design inputs. Figure 3.3 summarizes the research design of the study in three phases.

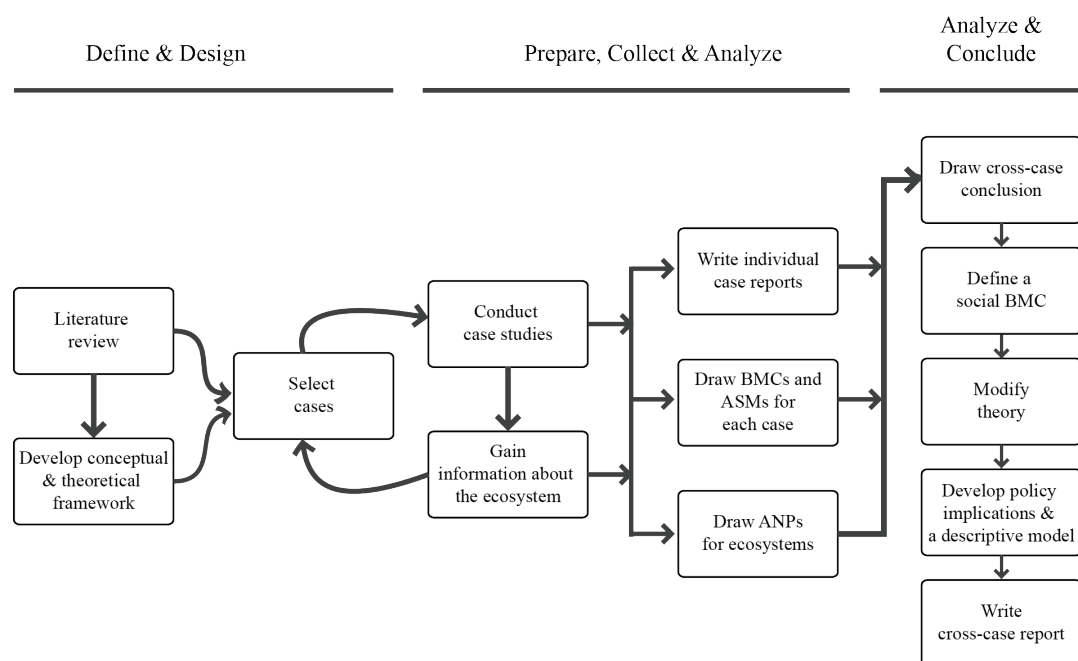


Figure 3.3 : Case study research design.

The literature review chapter presents a conceptual and theoretical framework, which shapes the purpose, objectives and scope of the research. Phases of preparation, data collection and analysis will be explained in the next sections of this chapter.

3.2.2 Selecting cases

Yin (2003) and Stake (1995) underline the importance of the boundaries for case study research. In this research, case studies were created and used to detail BMs enabled by design intervention and to discuss the different roles of the designer. For this reason, the research focuses on development projects that fulfil these preconditions:

- Design intervention should have occurred during the project
- Rural community in a developing country should have been addressed by the project
- Either as part of the plans or as a consequence of the project, a BM involving local actors should have emerged at a non-farm sector, which creates income for local people
- Project should have been implemented and outcomes should be observable

Besides these four preconditions mentioned above, there is no other specified filter concerned with the type or initiator of business, product or service being produced or types of social innovations that have emerged.

Although there is no commonly accepted criterion that identifies the rationale of classification, the concept of “developing country” generally refers to relatively lower standards of living but higher rates of economic growth compared to developed countries. For instance, United Nations Statistics Division (UNSD) classifies developed and developing regions in contrast to least developed countries (UNSD, 2013). Additionally, UNDP uses HDI for the basis of classification in order to account for the multifaceted nature of development. UNDP’s 2013 dated HDI report presents relative improvement in HDI value of countries between 1990-2012, and classifies, Turkey, Brazil, Mexico, Ghana, China, Bangladesh and India as “High HDI improvers, globally integrated”. Between these countries, Turkey and India perform similar values in relative improvement in HDI (UNSD, 2013). Turkey, India, Brazil and China are also mentioned in the group of NIC in some researches (Khanna & Palepu, 2006; Sharma, 2012).

China, India, Brazil, Indonesia and many other countries from the Southern hemisphere stand out not only due to their accelerated economic growth but also with their small, brave, innovative enterprises, which employ new BMs and without hesitation competes with the large multinational companies of the Northern Hemisphere (Bildirici & Bakirtas, 2014; Chandler et al., 2002; Sinkovics et al., 2014). Turkey might harbour the same advantages due to its growing economy. Although there are differences in many aspects, similarities do exist between Turkey and India. However, because of its relatively large population living under poverty, India, receives a lot more attention from global design firms, non-profit organizations and academic research centers such as IDEO, Frog, Catapult, IDE and DESIS employing various approaches to overcome social and developmental problems.

India, with its large landscape and population, is one of the most dynamic developing countries in the world. Extreme poverty exists next to the high quality lives stemming from unequal distribution of income. Moreover, because of harsh climate conditions and geographical diversity, over 70 % of this large population lives in rural areas covering over 500.000 villages (Mehta, 2012). All these facts attract national and international actors of social innovation scene to the country. India, as a developing country, practices all forms of industrialisation while millions of Indians make a living off handmade products. The latest five-year plan for Handcraft Sector points out that 6,7 million artisans were registered in India, while it is expected that number might be around 200 million (Ministry of Textiles, 2011). In addition to that, non-farm artisanal activities form the backbone of rural economy. Government policies expect to increase the employment in handicraft sector while aiming at higher export rates. The report indicates that export rate of handicrafts is expected to reach approximately US \$ 6 Billion in 2017. Indian artisans, similar to many other artisans of developing countries, are faced with the loss of market share to mass manufactured products and had to move to urban cities to work as unskilled employees. This makes it important topic for sustainable rural development of India. Since 1960s, the Indian government, NPOs and private sector plays an important role on harnessing the potential of handicraft sector. The report proposes social, technological, marketing, financial and infrastructure related interventions and for

some of these interventions, support directly design institutions such as NID and NIFT (Ministry of Textiles, 2011).

Design support for bottom-up initiatives is not a coincidence in India. The Ahmedabad Conference in 1979 at NID was a milestone for the design policies of the country where community-centred projects were advocated by Schumacher and Papanek. Parallel with the ideas of Gandhi, highly respected legendary leader of the country, design interventions support a self-sustaining, bottom-up and harmonic development model which respects traditional values of society and aims to improve existent capabilities and qualities of the community (Mehta, 2012). Given this perspective, NID has had a crucial role and customized intervention model for decades. These motifs feature India as an appropriate laboratory to observe design oriented rural development and social innovation projects to identify actors, emerging social innovations and roles of designers. Langrish (1993) mentions five distinct ways of selecting cases for a case study:

- The comparative: carefully selected few cases for comparison
- The representative: employing notions of statistical validity
- The best practice: selecting cases according to the best performance, especially to improve the practice
- The one next door: selection of examples for practical reasons
- The 'cor' took at that: selecting unusual or extraordinary examples
- The taxonomic: cases are selected according to subgroups

The research focuses on non-farm entrepreneurs fostering endogenous development in rural. A rural tourism initiative could be an example for this definition. Nevertheless, from the beginning tourism cases were excluded from the list of possible cases to research intentionally. The reason behind this decision is the essential emphasis of research given to production activities.

Among all successful examples, stemming from its historical mission and iconic intervention projects of NID such as bamboo project at Northeast represents rich

content to observe as best practices. Bamboo intervention was far beyond a simple developmental support; it influenced national policies and attracted international funds. This intervention underlined the importance of bamboo as a renewable resource and the Northeast was potentially one of the richest areas with its natural resources combined with embedded craft skill. Thus, three cases related to bamboo intervention were chosen as the case of resource oriented design intervention addressing rural development through craft entrepreneurship.

Rich natural resources could easily be a starting point for many rural intervention projects however, entrepreneurship oriented interventions aiming at endogenous development do not only stand on existence of natural resources but also availability and quality of human capital. That is the case in Kutch region, which is famous for textile art and has been the center of textile trade since early twentieth century (A. Berg & Hukkinen, 2011; Patel, Patel, & Chudhary, 2008).

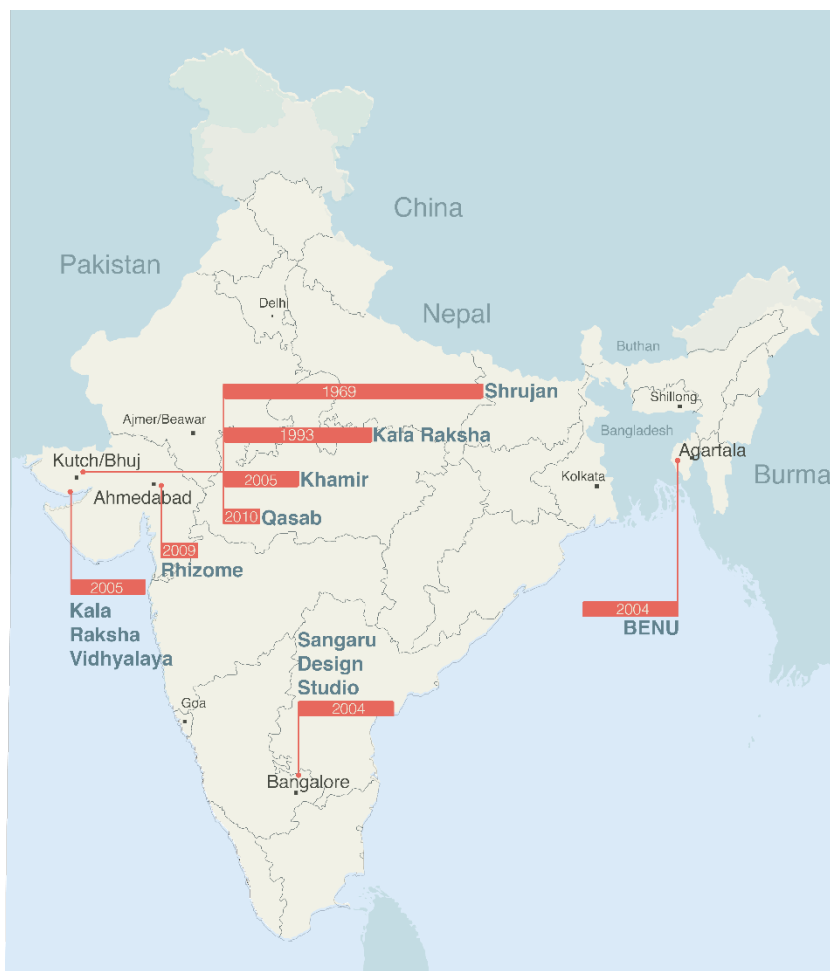


Figure 3.4 : Cases illustrated on the map of India.

Even though with a lack of raw materials for fabric production, the region with its inherent craft knowledge and traditions, always remained as a specific spot for textile craft (Trived & Soni, 2013). In this manner, four cases related to Kutch were chosen as models of human capital and skill oriented design intervention addressing rural development through craft entrepreneurship.

Among these seven cases, founded on the knowledge gained through a review of the literature, BENU and Kala Raksha were chosen as prior to the field research. However, remaining five cases were selected from many possibilities, during early phases of the field research. Main motivation for choosing those specific cases was developed through the initial interviews, which were conducted with the NID faculty, experts of the field and design organisations, to understand the background about design-craft collaboration in modern context and design interventions.

Second motivation was the process of ecosystem mapping while actors and relationships oriented the decision-making. To be able to identify critical links between actors, organisations and business models, overall seven cases with different characteristics were selected (see Table 3.1). In this manner, selection of cases were an iterative process of decision making and shaped by the knowledge gained during the process.

Table 3.1 : Introduction to the cases.

	BENU	Rhizome	Sangaru Design Studio	Kala Raksha Vidhyalaya	Shrujan	Qasab	Khamir
Description	A self-help group	Company	Company	Trust	Trust	Company	Trust
Founder/co-founder	M. Roy	R. Rubens	S. Sangaru	J.Frater, P. Bhanani	C. Shroff	P. Shah, M.Shah	P. Shah, M. Shah
Location	Agartala	Ahmedabad	Bangalore	Bhuj	Bhuj	Bhuj	Bhuj
Key Goals	Producing bamboo based furniture and other crafts. Empowering local people	Empowering Kotwalia community Producing bamboo furniture	Design company producing contemporary bamboo products	Preserving embroidery art and craft	Producing exquisite embroidery. Preservation of embroidery art and craft Empowering local women	Empower local women Foster entrepreneurship Revive embroidery craft	Preservation and promotion of all crafts of Kutch

Although, it is not easy to define an ideal number of cases, generally four to ten cases are considered to work well when a theoretical saturation has been reached (Kathleen

M. Eisenhardt & Graebner, 2007). In total, seven cases from two main focus areas were selected for reaching theoretical saturation.

3.2.3 Data collection techniques

While according to Stake (1995) the crucial part of case study research is not the investigation methods but the object of study, Yin (2003) gives much more emphasis on the methods and techniques and characterizes case study as an empirical inquiry. Design interventions occur in various forms and intervention projects include numerous actors. Most of the time it is difficult to explore success of an intervention in a short period. As a matter of fact, because of collaborative and participatory nature of projects, it is almost impossible to isolate design efforts and evaluate its success.

Case studies require multiple data sources and collection techniques including: literature reviews, observation, experiments, documentation, workshops, interviews and questionnaires. Physical artefacts, documentation, letters, emails, memos, drawings, sketches, reports, websites, archives, structured and semi-structured interviews, direct-formal or casual observations and participant observations are seen specific to case studies (Yin, 2003) while action research and ethnography are also listed along with them (Robson, 1993).

In this research, most of these data collection methods were used to gather information. A list of primary and secondary data resources for each case is presented in Table 3.2. The crucial data was gathered by semi-structured interviews with the main actors of the projects. Semi structured interviews conducted with twenty six people sought answers to following underlying questions:

- What are the main components of the organization's BM?
- Who are the actors and what are their roles in the ecosystem?
- What is the general understanding about craft-design relationship in a contemporary context?

Table 3.2 : Data resources.

	Interviews about BM	Interviews about ecosystem	Secondary data resources	Supplementary visits
BENU	Founder A master artisan	4 Faculty member from academic institutions (NID, IIM-A, CEPT)	Academic articles, books TBM, BCDI documents and reports NID craft reports, student projects CEPT DICRC workshop reports and documents	Quicksand (Innovation Consultancy) NIF and SRISTI Jawaja Artisan Alliance Maya Organic NIFT Shillong
Rhizome	Co-founders			
Sangaru	Founder	3 Designer		
Kala Raksh	Co-founder Museum Officer	A senior architect		
Shrujan	Project Director Designer	8 Students (NID, NIFT Shillong)		
Qasab	Co-founder	7 Master artisan		
Khamir	Officer	2 TBM officer		
		1 BCDI officer		
		Local people		

During the interviews, voice recording and note taking methods were used to keep the qualitative data. Interviews took around an hour in average and interviewee was asked about certain aspects of the business and his/her experience with the organization. Voice recordings of interviews were transcribed and documented in a format prepared for the research (see Appendix A.2). Interviewees were asked to sign a confidentiality agreement, which informed them about the research and also requested their consent for publication (see Appendix A.1).

Observations were shaped through personal experiences, collected product samples, pictures, videos and notes. All observations took place in the natural settings of cases to be able to grasp the phenomena within the entire setting.

Several visits to the ateliers of artisans, meetings with local people and their living environment constitute the major material for observation which help conduct abductive reasoning during the analysis phase. Although field observations sometimes include more reliable information about the certain aspects of a phenomenon, it has its own limitations. Such as the modified behaviour of people when they know that they are being observed. However, observations are still an important part of this case study research since they lead to further understanding of the situation by providing valuable background information about the cases and triangulation of the data collected with other resources.

Another valuable data resource was the archives of NID library, which include hundreds of craft documentation reports, field visit documentations, and student projects and other published media such as books and journals. Spending several weeks at the NID library for a systematic review of decades old archives related to bamboo intervention and the textile craft of Kutch region, refreshed my general understanding for both ecosystems and the mission of NID in India.

3.2.4 Conceptual definitions of variables

According to conceptual models, in the rural development context, design intervenes in BMs to enable the creation of social and economic value by contributing in various components of the BM, and consequently social innovation occurs (See Figure 2.1). In such a framework, BM acts as the common plane for tracing the contribution of design and generation of activities for social innovation and sustainable rural development in the region. In this manner, as seen on Figure 3.5 research questions were linked with relevant theory and concepts reached through literature review.

In order to understand the roles and motivations of designers in these BMs, twelve roles were identified; facilitator, communicator, capability builder, strategist, researcher, (social) entrepreneur, co-creator, provocateur, empowerer, multiplier, envisioner, connector were used as a template. On each BM, traces of these roles were searched through activities realized by designers and new roles were investigated to make a contribution to the literature. In addition to these roles, changing occupations of designers were identified in order to be able to gain an understanding about the progress of relationships between actors and changing career path of designers.

Levels of design intervention in each case were identified by using the pattern identified through literature review on orders of design, intervention levels and leverage points to intervene in a system. According to this pattern, expected intervention levels are listed from less influential towards more effective as tactical level, market level, innovative level, experience level and strategic level. Through the research, those intervention levels were confirmed and a new intervention level was identified.



Figure 3.5 : Research questions, variables and contributions.

UNDP's (2014a) business classification according to profit models and Peredo and McLean's (2006) taxonomy on BMs based on the dominance of social goals were used as guidance to classify BMs in the ecosystem. Out of the collected data a new Social BM Template was developed. In order to identify social innovations occurring through the enablement of BMs, social innovation themes pointed out by Butkeviciene (2009) and Rüede and Lutz (2012) were used. However, the seven cases of study supported new social innovation themes in the rural context, which will be discussed in the next chapter. As a distinct aspect, major challenges pointed out in the literature were examined in the case study research through interviews and personal observations, in order to confirm and contribute to the literature on this issue.

3.2.5 Method of analysis

Since computerized techniques for interpretation are limited handling qualitative data requires huge amounts of time to organize and analyze. Notes, pictures, videos, voice recordings and product samples were carefully organized and reviewed several times during the research. The notebook itself was a tool for reviewing the previously collected data, taking simple notes for the analysis and recording the possible steps to be taken or questions to ask. In this manner, the notebook was the primary guide for the data collection and iterative thinking process.

Voice recordings were done via an application called “Voice record pro,” installed both on a smartphone and tablet, which allows note taking and creating bookmarks while recording. Recordings were transcribed right after the interviews. These transcriptions were crosschecked with notes taken during interviews and necessary corrections were underlined on the notebook. To overcome the language barrier, often times a local person who could translate from English to Hindi and from Hindi to local language, helped during the interviews.

While dealing with qualitative data, the issue of generalization as one of the main points, is always questioned. Collected data from qualitative case studies do not lead to a statistical generalization; mostly analytical generalizations based on reasoning are possible (K. M. Eisenhardt, 1989; Kathleen M. Eisenhardt & Graebner, 2007). Limitation on generalization of data, failing to explore rival explanations, using inconsistent analytical tools and researcher bias may cause a lack of precision such as demission of certain patterns or identification of non-existent patterns. There are several techniques pointed out in the literature to reduce bias such as content analysis, cognitive mapping, matrices and categorization. Computer software, such as NVivo also helps reduce the burden on the researcher. However, it is not possible to claim a perfect technique to deal with qualitative data.

In the literature, three types of reasoning principles were defined: deductive, inductive and abductive. Analysis of a case study research can usually employ one or a combination of these reasonings. Deductive reasoning uses formulated hypothesis in the beginning of the process, and seeks testable consequences. Additionally inductive reasoning aims to generate a theory or concept based on the data collected within the case, which is the main pattern in Grounded Theory (Glaser & Strauss, 1967). The third type of reasoning is abductive, which is briefly mentioned as a character of design thinking in Chapter 2. During the analysis phase of the research, mostly inductive reasoning was used while deductive and abductive reasoning methods were generally supplemental.

Yin (2003) mentions five general strategies for analysis of case studies, which link data to theoretical propositions, explanation building, time series, logic models, pattern matching and cross-case synthesis. Theoretical propositions and hypothesis are helpful to plan and focus on relevant data by organizing the entire case study but

also for defining alternative explanations. In the absence of theoretical proposition or hypothesis, the case study can be analysed to build an explanation through casual links. In this way, it is possible to explain why or how something has happened. Pattern matching is a favourable approach for comparing predicted effects or patterns with observed data. Time series is also a technique quite similar to pattern matching but uses temporal patterns. The crucial aspect of time series technique is its potential to use statistical techniques for chronological analysis such as regression analysis. Additionally, logic model technique uses a mix of pattern matching and time series. These logic models could be represented as casual maps. The cross case synthesis applies more than one case and uses one or more of those five strategies mentioned.

For the research, cross case analysis and synthesis of defined seven cases was done using BM as a logic model to build an explanation of how design intervention can enable BMs in rural areas to support sustainable development. To be able to handle analysis and synthesis of cases the pattern shown in Figure 3.6 was used.

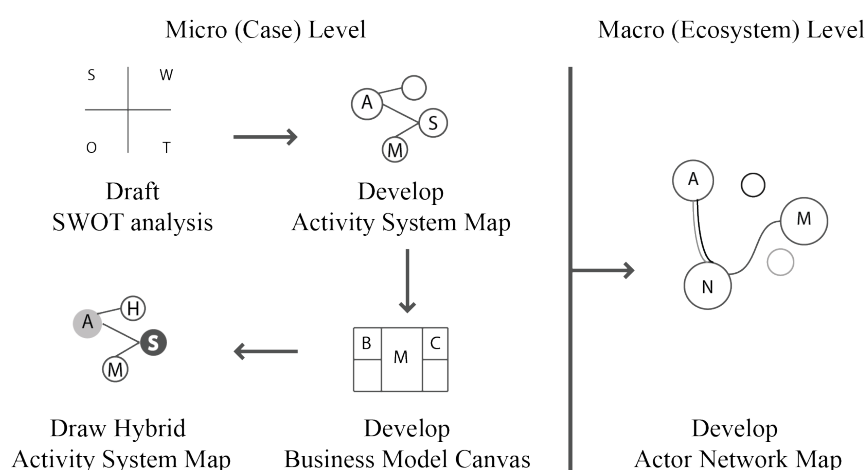


Figure 3.6 : Logical models used for analysing cases.

Micro level analysis of BM includes four steps and which use three different types of tool to explore the strategies, activities and other components of BM. Additionally, for a macro view, systems perspective is employed to identify actors and their relationships in the network. Details of these models will be explained in following paragraphs of this chapter.

SWOT analysis is one of the approaches used in the analysis of an organization's strategic position through its 'strengths, weaknesses, opportunities and threats'. SWOT stands for the acronym of these four words.

Strengths and weakness indicate organization's internal factors while opportunities and threats are factors stemming from external forces, the environment of the organization. SWOT was increasingly used in the preliminary stages of strategic planning and decision making since 1960s (Porter, 1980). Although it is an easy to use and versatile tool, it receives criticism for lack of logical link with the implementation phase, lack of conflict resolution, using unclear and ambiguous phrases, and requiring only a single level of analysis (Goel et al., 2011; Hill & Westbrook, 1997). Nevertheless, SWOT analysis was used as a tool to approach the organizations strategic position for enabling further exploration of its BM.

The main goal of the research is exploring how design enables BMs to foster social innovations and development. Thus, it is necessary to observe the BMs at a certain phase of its lifecycle. It should be mature; therefore, the initial phase of a business might not be suitable for such an observation. Since a BM is codified abstract representation of business logic. Preparing BM visuals for all of the cases would help make a comparison between them and reaching a conclusion. Additionally, each case is part of a complex social system, which should be analysed with a macro level lens. In this sense mapping is a good way to visualize a system, its actors and their interrelationships.

BM is the logic of firm, the way it operates and how it creates value for its stakeholders. Casadesus-Masanell and Richart (2010) use operation logic of a machine as an analogy to describe the representativeness of a BM. According to this analogy, just like a machine operating in a particular way stemming from the different components and relationships between these components, a BM creates value for its user in a particular way because of its components and the way these components are organized and related to each other.

As mentioned in the previous chapter, BM is a reflection of a realized strategy which is "mapping a particular journey an organization's course and its onward movement in space and time" (Cummings & Wilson, 2003, p. 1). Thus, visual representation form of a BM is also context dependent. In this manner, if a BM is considered as a map describing the operation model of an enterprise, the visual representation of the map should be adjusted according to the context in which it is going to be used.

Different types of maps present information with different levels of abstraction, such as a map of London metro lines and migration map of animals.

Since the thesis tackle with only implemented projects and mainly social BMs there will always be complementary information from surrounding context. Although solely a BM is not enough to forecast its sustainability or success, it is still a tool to represent the underlying logic of a firm in a visual way. Since the role of BM is relatively different than it is in the common practice, it might be needed to create a new form of visualization emerged from existent practices but customized for this research.

Johnson et al. (2008) break down a BM into four elements: a customer value proposition, profit formula, key resources, and key processes. Other scholars also attempt to describe components of a BM including various templates and lists (Hamel, 2000; Kundisch, John, Honnacker, & Meier, 2012; Leschke, 2013; Mair & Schoen, 2005).

A recent research from Mason and Spring (2011) tries to provide clarification and to define a common ground for discussions about BMs (see Figure 3.7). They argue that the value of BMs lies in their ability to frame action and reveal connections between those actions, across multiple levels of analysis. They define three common building blocks for any BM: technology, market offering and network architecture.

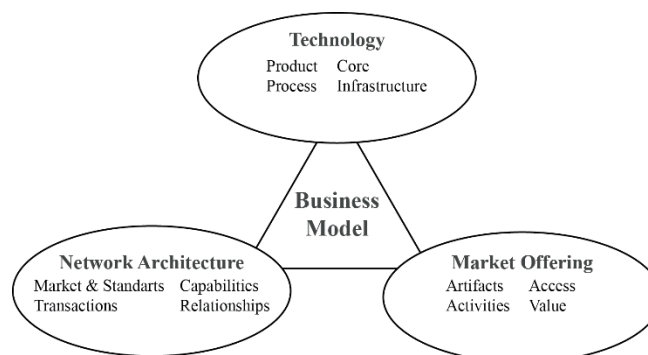


Figure 3.7 : BM Elements, adapted from (Mason & Spring, 2011).

Using similar components, one of the most popular and recent BM visualization tool is BMC proposed by Osterwalder and Pigneur (2011) which is presented on Figure 3.8. According to the authors, defining a customer segment to be served is a crucial decision that an organization must consciously make, which will influence the rest of the BM design around it. Specifically aligned with customer segments, value

propositions describe products and services that solves customers' problem or satisfy their need. In this manner, a value proposition is pointed out as the reason for a customer to choose one company (Osterwalder & Pigneur, 2011). Such process of analysis was used for each case study in order to identify the components of BMs.

Business Model Canvas				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
The network of suppliers and partners that make the business model work.	The most important things a company must do to make its BM operate successfully.	Products and services that solves customers' problem or satisfy their need.	The types of relationships a company establishes with specific Customer Segments.	Different groups of people or organizations to be served with the products or services of the business.
	Key Resources The most important assets required to make a BM to create and offer a Value Proposition, reach markets, maintain relationships with Customer Segments, and earn revenues.		Channels Ways and means a company communicates, reaches and deliver a Value Proposition to its Customer Segments. Touchpoints that shape customer experience.	
Cost Structure The most important costs incurred while operating under a particular business model.		Revenue Streams The cash a company generates from each Customer Segment. Different pricing mechanism or technique, such as fixed list prices, bargaining, auctioning, market dependency, volume dependency, or yield management.		

Figure 3.8 : BMC, adapted from (Osterwalder & Pigneur, 2011).

While Osterwalder and Pigneur's (2011) BMC is quite useful to show important assets on one chart, it lacks an explanation of business processes. On the contrary, many other approaches concentrate on the business processes to represent the logic such as Board of Innovation's BM visualization toolkit (Url-5.). This toolkit models the relationship between actors through financial, material and service flows, which are similar to system maps used for representing PSSs.

Hence, the way Board of Innovation visualizes BMs helps viewer to understand the process and relationship with stakeholders better than BMC, as seen on Figure 3.9. The BMC has been criticized for its lack of analysis of competition, business goals, strategies, KPI's, performance measurements and presenting mixed level of abstraction between elements (Ching & Fauvel, 2013). In this manner, Casadesus-Masanell and Ricart's (2010) casual loop diagram, which is very similar to Porter's (1998)

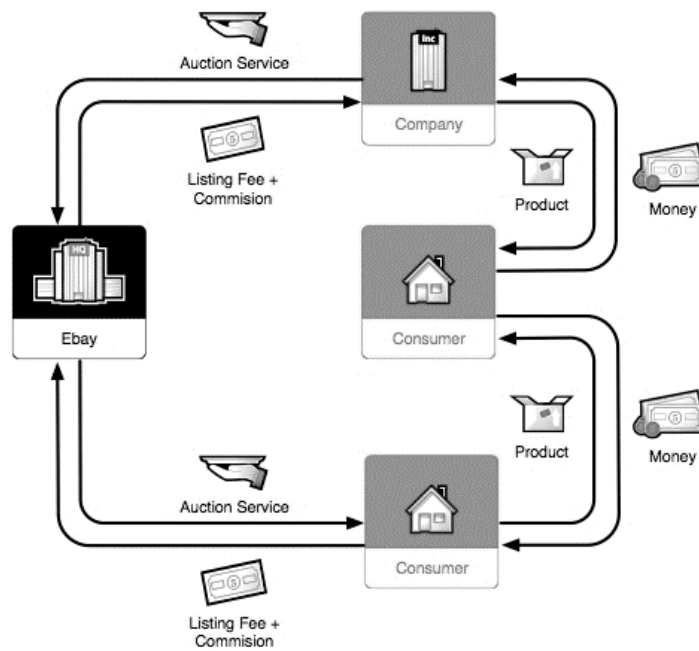


Figure 3.9 : eBay Business Model (Url-5).

Activity System Map (ASM), stands out as another approach showing relationships between actors and activities. The superiority of the ASM approach or casual loop diagram is founded on the way they visualise business logic as strategies and activities in related to each other. This way, one can see the conflicts and compatibility between strategies and actual activities easier than BMC. Therefore, ASM was used as a complementary tool to understand each BM containing key activities and strategies.

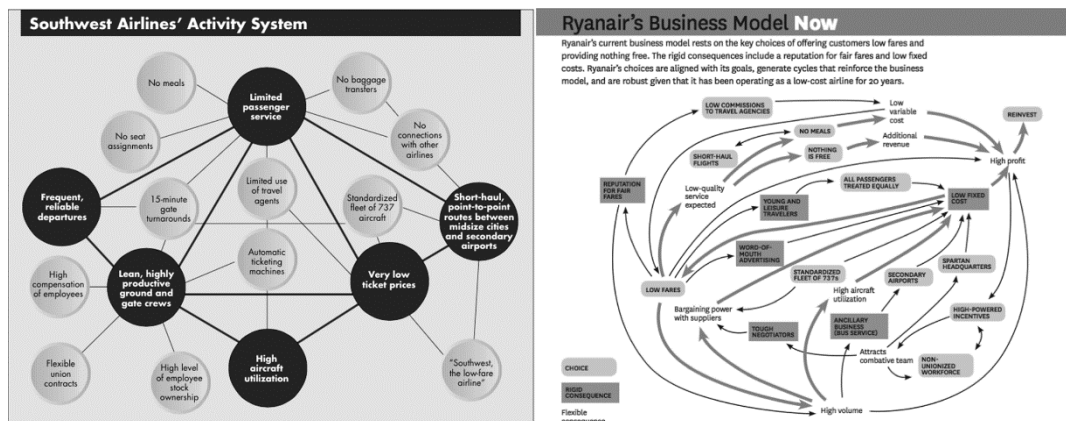


Figure 3.10 : ASM and closed loop diagram, adapted from (Casadesus-Masanell & Ricart, 2011; Porter, 1996).

SWOT, BMC and ASM are defined as complementary techniques and used step by step in order to analyse each BM. Additionally, for this research another hybrid tool was developed which identifies nine components of BMC on an ASM.

This hybrid tool, which is called Hybrid Activity System Map (HASM), facilitates systematic analysis of business activities and strategies as part of each component, and therefore allows identification of common relationship chains between partners, businesses and customers.

Relatively speaking, all BM visualization approaches have their own advantages and disadvantages. Lack of clear connections between building blocks is a missing point of BMC, while comparability of BMs is an important aspect for the research where ASM is lacking. In addition to that, these tools are not customized for analysing businesses with social agendas. Mair and Schoen (2005) borrow the set of BM components identified by Hamel (2000) in their study and explain social entrepreneurial BMs with five elements: customer interface, core strategy, strategic resources and value networks. Authors confirm that commercial BMs and social BMs have similar fundamental components. Similarly, Osterwalder and Pigneur (2011) claim that BMC is capable as a tool to show alignment of social and economic purposes and shall be used for analysing social BMs.

Hence, for a social BM Yunus et al. (2010) define two distinct profit equations, social and economic equations derived through value propositions and value constellations. Social BM template provided by Yunus et al. (2010) introduces a duality of social and economic value creation which is different from a regular BM template.

Additionally, two other attempts in the literature aim to develop a social BM using some of the building blocks from BMC and Social BM Template (Aure, 2014; Márquez, Reficco, & Berger, 2010).

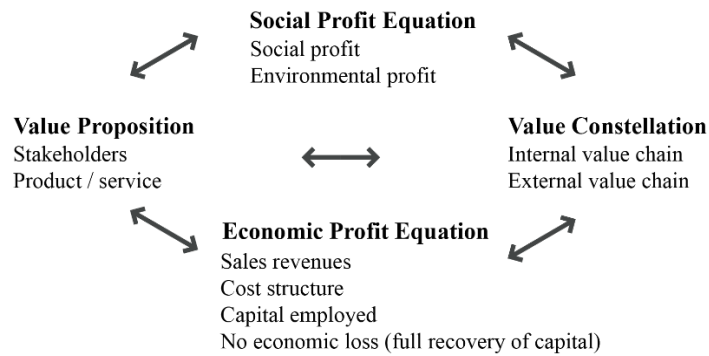


Figure 3.11 : Components of a Social BM Template, adapted from (Yunus et al., 2010).

Similarly, Michelini and Fiorentino (2012) in their research identifying differences between social BMs and inclusive BMs, use a combination of BMC and Social Business Model Template as shown in Figure 3.12; however it is not designed to be used for analysing an existent BM.

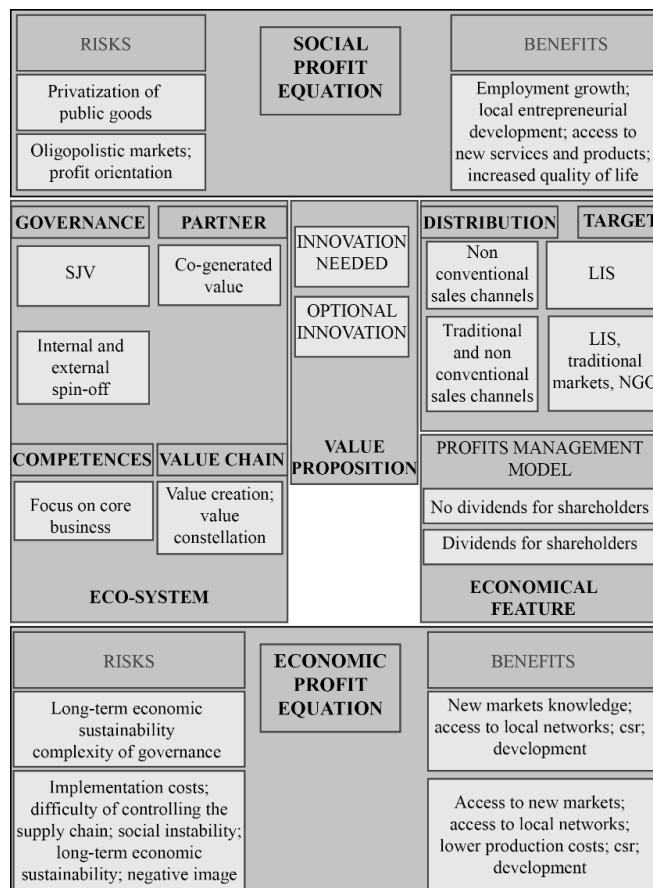


Figure 3.12 : Comparison between the social and the inclusive BMs, adapted from (Michelini & Fiorentino, 2012).

Relationship chains identified through HASMs help identification of the link between designer and social innovation in the BM context. In addition to that, the relationship chains observed in all of the seven cases, allow developing a new Social

BM Template, which answers all the criticism raised to existent tools by using data collected from field research.

Nevertheless, understanding a complex phenomenon needs more than exploring sub-systems in an isolated way. Indeed, identification of a social innovation ecosystem needs a higher-level of analysis.

Systems thinking, as an alternative to linear casual thinking, propose circular causation where the cause and effect are functions of each other. Systems thinking stresses importance of the relationships among a system's parts rather than the attributions of the part, which is seen useful especially for identifying structures, patterns and events in a complex situation (Richmond, 1993). Ecosystems also constitute complex structures of relationships where a sense of community exists. Interaction between living and non-living components of an ecosystem creates nutrient and energy cycles between stakeholders.

Thus, ecosystems generally defined by networks of interactions between components, and between the components and the environment. Similar to biological ecosystems, innovation ecosystems include various stakeholders fulfilling different roles and creating nutrition cycles fostering innovation (Hautamäki, 2010). Therefore, diversity of actors, strength of interaction networks and complex feedback loops vitalize the ecosystem. For this research, in order to examine organizations and people as actors of a holistic system, another visualization tool is chosen which was used by Morelli (2007) to identify actors and their relationships for a PSS (see Figure 3.13).

This map identifies relationships between various types of entities, which could be summed as actors. Indeed, analysing a system through all of its components and their network is an effective technique to see how these relationships cause certain behaviours of the system.

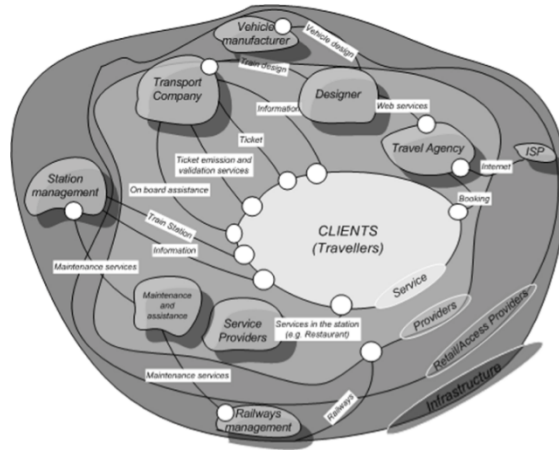


Figure 3.13 : Map of actors, products, services and infrastructures (Morelli, 2007, p. 11).

This study seeks design diffusion and social innovation behaviour of the system in which designers and rural people are critical actors. Therefore, Actor Network Maps (ANM) was developed for Bamboo intervention and Kutch ecosystem in order to evaluate key elements, information flows and behaviours of the innovation ecosystem.

3.3 Introduction to the Cases

In order to provide the background information for the reader, prior to the chapter describing the results of the case study analysis, a brief introduction to both ecosystems including seven cases is presented in this section.

3.3.1 The Northeast India bamboo intervention

Northeast region of India constitutes Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura states, which are surrounded by China, Bhutan, Bangladesh and Myanmar. The only connection with the rest of the country is a narrow corridor, which is called, “the chicken’s neck.” Its rich tropical flora and fauna, biodiversity, over two hundred local languages and tribal communities foster diversified traditions and local customs. The region has a physical disadvantage causing geo-political and emotional isolation. However, the “Look east” policy developed by Indian Government in 1991 was an opportunity for the development of the region as a gateway to Southeast Asia (Gangte, 2011). Agriculture, especially tea cultivation is one of the major economic activities of the region even though deforestation stands as a danger for the flora. Low urbanization

and income levels below the average of the country, characterize the main obstacles in front of the region (Gangte, 2011). Other major assets of the region are large bamboo plantation and local knowledge of bamboo use in daily needs.

One of the most comprehensive books about bamboo craft, “Bamboo and Cane Crafts of Northeast India” does not only represent tremendous fieldwork of NID faculty and students who have visited the North East India between 1979 to 1986 but also constitutes a source for designers who are willing to use the material and local methods in design (Ranjan, Pandya, & Ghanshyam, 1986). The book was an outcome of the research undertaken with the call of All India Handicrafts Board, which is now called Development Commissioner of Handicrafts. Several different tribes and ethnic groups constitute the population of the North-eastern region and the book served as a reference for displaying the similarities and differences between the way local people use bamboo and products made of bamboo.

Commenced fieldwork was continued until the late 1990s with research and documentation on embedded knowledge, natural and human capital, and also workshops and training conducted for local artisans. The report authored by M.P. Ranjan and submitted to an initiative of UNDP and Government of India was another milestone for bamboo craft focused design intervention to Northeast (Ranjan, 1999). The report dated back 1999 points out to a serious imbalance created by government oriented development processes, and underlines potential for industrial entrepreneurship enabling employment and income generation while region’s rich products, skills and techniques were mostly used to satisfy the daily needs of local communities. The report proposes six scenarios for development of the region and calls participation of local agencies to be selected as partners in the implementation of these plans.

While the governmental support is seen as necessary for developing the infrastructure, a pro-poor entrepreneurship based on endogenous development strategy is underlined in the project. Craft is defined as the strength of the region and a feasible starting point for development of entrepreneurial attitude. During the early 2000s Indian government looked at bamboo as a key for nationwide developmental strategies. National Mission on Bamboo Technology and Trade Development was part of this transformation. The report brought out by Planning Commission pointed

out the importance of multi-disciplinary bamboo development for the future of country (Ministry of Agriculture Government of India, 2005).

Since then, NID Outreach Program had a close relationship with the region. NID students and faculty conducted craft documentation reports, project reports and student projects. The strategy, which is conceived with the leading role of M.P. Ranjan in mind, reformed the operational strategy of Bamboo and Cane Development Institute (BCDI), which was set up long before, in 1974, by Development Commissioner of Handicrafts, Ministry of Textiles, and Government of India.

The institute is located in Agartala, the capital city of Tripura state, and is still functioning. Major concern of the initiative is empowering people through enhancing bamboo handicraft skills in order to generate self-employment.

According to a recent report published by Tripura Bamboo Mission (TBM), the state has vast bamboo resources and a long tradition of bamboo supporting livelihoods and craft knowledge (TBM, 2014a). TBM is another local institution, which was launched by Government of Tripura at Agartala in 2007 with a “farm to market” approach. This approach includes strategies and operations for bamboo cultivation, training and workshops for local people to facilitate their starting of their own businesses, creating, supporting and managing clusters; promoting, consolidating and strengthening the value chain, expanding the production base and improved returns for all stakeholders and marketing activities.

In the region, bamboo is generally used for producing baskets, incense sticks, mats and decorative objects and furniture. According to the TBM report, 12 of 28 producers fabricate basketry products while only two furniture makers exist (TBM, 2014b). As furniture sector has a higher potential of added value by design, following interventions of NID was also focused on furniture making. Among them, Katlamara Chalo project was a series of workshops and training seasons solely focused on bamboo furniture (Ranjan, 2007). The project was conducted between 2005- 2007 and three cases related to this intervention were selected for this research: BENU, Rhizome and Sangaru Design Studio.

Bamboo Enterprises United (BENU) was founded in 2004 in Katlamara, which is a village 40 km from Agartala. BENU is a federation of nine self-help groups concerned with bamboo plantation, production and sales. The organization itself is a kind of self-help group and was founded by a local artisan, Manna Roy, who was trained at BCDI in 2001 during NID workshops. Additionally, Manna also worked as a trainer for the Katlamara Chalo project. A unique aspect of the Katlamara Chalo project is its holistic approach mainly driven by M.P. Ranjan and his team. The booklet prepared for the project constitutes a reference document for local artisans and entrepreneurs (Ranjan, 2007) while the Katlamara Business Plan published in 2010 brings forward the issue and presents a fully featured business plan including all aspects (NID, 2010). This case constitutes a design enabled BM, initiated by a local artisan as entrepreneur.



Figure 3.14 : BENU production unit at Katlamara Village, Agartala.

Rhizome is an Ahmedabad based social design enterprise producing bamboo furniture with a tribal community. Rebecca Rubens, a former design student at NID, founded the organisation in 2009 and part of the team headed by M.P. Ranjan. She had also conducted a graduation project with support of TBM for designing marketable bamboo products with local artisans, including BENU. This case is representative of a social initiative, which was founded by a design student, and creating social value for rural people.

Sangaru Design Studio was initiated in 2004, and established in Bangalore in 2009 by Sandeep Sangaru. As a former NID faculty, S. Sangaru has worked at BCDI for training local artisans. Sangaru Design Studio produces award winning, contemporary bamboo furniture. Although it is neither rural enterprise nor has clear social goals, it represents an interesting case because of the founder's close relationship with craft and rural communities. In this manner, this case is an example for a design faculty as an entrepreneur of a social value creating BM enabling rural artisans.

3.3.2 Kutch as a district of craft tradition.

Kutch or Kachchh, is a district in Gujarat located at the western part of the country where the climate is completely different than Tripura, since dry lands and deserts are integral part of the geography. The district, stemming from its border to Pakistan and tribal groups emigrated from various countries, has become a cradle for rich and diverse culture of craft. Textile art and craft of the region, especially embroidery craft in the context of local production has been topic of many researches (M. Berg, 2013; Bhandare, 2006; Deepika & Jyotishi, 2011; Edwards, 2005; Patel et al., 2008). Although the region had already been considered as economically backward, after the 2001 earthquake, creating livelihoods became even more difficult for local people. However, besides salt production and cement industry, nowadays textile craft is an important livelihood opportunity for Kutchi communities while diffusion of design plays key role to enable craft skill based BMs in the region.

Even though embroidery has been a traditional practice of craft done by local women, and passed from generation to generation without commercialization, in the 1960's it has started to become a viable business, and especially after the 2001 earthquake, people started to sell their precious embroidery pieces preserved from their ancestors. This transformation not only drew attention from profit seeking opportunistic dealers and craft lover national consumers to the region, but also social organisations trying to preserve the local craft and create empowerment for Kutchi women. Among those social initiatives, four organisations were chosen as successful cases to be researched in this study; Kala Raksha, Shrujan, Qasab and Khamir.

Founded in 1993, Kala Raksha Trust aims at preservation of traditional arts and crafts with a special emphasis on embroidery practice. During its second decade, the organisation set up a sister initiative called Kala Raksha Vidhyalaya (KRV) in 2005, which is the only design school for artisans and the main reason for choosing the organisation as a case study.



Figure 3.15 : Kala Raksha Museum, Bhuj.

Kala Raksha works with around 1000 artisans from seven communities living in 25 villages around Kutch, while Kala Raksha Center is located in Sumrasar Sheikh Village, 25 km from Bhuj, and the central city of Kutch. The co-founder and director of KRV, Judy Frater, was awarded an Ashoka Fellowship in 2003, the Sir Misha Black international award for the project in 2009 and “The Pillar of Hindustani Society” award from Trans Asian Chamber of Commerce & Industry in Mumbai in 2009. Moreover, the school has been recognized by UNESCO’s Artists in Development Programme and has received funding from many organisations including Norwegian Ministry of Foreign Affairs. In this manner, Kala Raksha does not only represent an important case to explore craft – design collaboration producing for contemporary market but also a BM with strong social purposes.

Shrujan Trust was founded in 1969 as one of the earliest non-profit intervention set up in Bhuj. Similar to Kala Raksha, the organisation is focused on the preservation of diverse embroidery tradition and the creation of income for local women. Chanda

Shroff, founder of the organisation, was accepted as the first Indian laureate of Rolex Awards in 2006, because of her initiative (Bhandare, 2006). The initiative produces saris with exclusive embroideries done by 3500 women from more than 140 villages of Kutch. Creating high quality outcomes while working with thousands of artisans from widely separated villages, Shrujan constitutes a case of design intervention in a well organized manner.

Qasab is another large organisation working with embroidery artisans, while in Kutchi language the word Qasab means the craft skill. The non profit umbrella organisation of Qasab, the Kutch Mahila Vikas Sangathan (KMVS) was founded in 1989 with a mission to empower Kutchi rural women through raising their awareness, organizing and mobilizing local collectives to enable them addressing their own problems for a sustainable socio-economic transformation of the region. However, Qasab was established as a self-sustaining producer sub-group of KMVS in 1997 and became a producer company in 2010 for marketing the products under the same brand name. Today, Qasab network has around 1200 embroidery artisans from all around Kutch.

Khamir is another non-profit initiative founded in 2005 for embracing not only embroidery but all types of Kutchi crafts including leather, pottery, metal work, printed and woven textile, rogan painting and namda. The name of Khamir, stands for Kachchh Heritage, Art, Music, Information and Resources and in local language the word Khamir means “intrinsic pride.” With such an inclusive mission, the organisation fills the gap in the region towards preservation and promotion of all crafts existing in Kutch.

3.4 Summary

In this chapter, a detailed explanation of the purpose and objectives of this research were presented. The main question of the research deals with the ways in which design intervention fosters social innovation by enabling rural, non-farm BMs in developing countries. In the research design section, brief explanation of the case study method and data collection methods were revealed. Cases were selected from two intervention areas, which would be classified as best practices. In total, seven BMs were identified as research subjects: BENU, Rhizome, Sangaru, Kala Raksha,

Shrujan, Qasab and Khamir. Furthermore, four different BM analysing tools: SWOT, ASM, BMC and HASM, were identified to be used in conjunction with each other in order to explore strategies and BM components of each case. In addition to these, an ANM was introduced which allows for observation of the overall picture of innovation ecosystems.

4. ANALYSIS OF THE CASES

This chapter presents a detailed analysis of seven BMs. As it was explained in the previous section, SWOT analysis, BMC, ASM and HASM are used for exploring the business logics along with the involvement of design and social innovations. This chapter is organized in four sections.

The first section explores bamboo project ecosystem and interrelationships between actors with a specific emphasis on the role of NID. Three selected BMs are further examined in the sub sections, in order to conduct a deeper analysis of the ecosystem. The second section uses the same analysis pattern with a stress on location. Craft ecosystem in Kutch is examined through selected four BMs in this section.

The third section presents a synthesis about identified roles and motivations of designers, their contribution to enable BMs, identified social innovations and major challenges that designers are facing in social projects targeting rural areas. The fourth section discusses features of social BMs through an aggregated BMC and illustrates a conceptual Social BM Template departing from identified gaps of BM visualisation tools employed in this study. In the last section of the chapter, similarities and differences between two ecosystems are discussed in detail in order to come up with a descriptive design integration model for developing countries.

4.1 Bamboo Project and Dissemination of Knowledge

Bamboo project targeting rural population of the Northeast India constitutes a showcase of a design institution involving proactively in a mission, which was set up by collaboration of various actors including intergovernmental development organisations. The project aims at a top-down to bottom up initiative shaped around influential strategies of NID faculties, specifically former industrial design professor M.P. Ranjan and his team. The Bamboo Project ANM presented in Figure 4.1 identifies several key actors involved in the ecosystem since the late 1990s as follows:

- Two intergovernmental development organisations; UNDP and United Nations Industrial Development Organisation (UNIDO)
- Five designers, six master craftsmen working with bamboo, a faculty member and an activist
- Three design institutions (NID, NIFT and CEPT) and their three sub-initiatives (Outreach, CFBI and DICRC)
- Two state government (Tripura and Gujarat) and two non-profit governmental organisation facilitating development in local (BCDI and TBM)
- Two NGOs facilitating development in rural areas (TBDC and Eklavya)
- Four enterprises and two SHGs producing bamboo furniture and working with two rural communities from Katlamara and Kotwalia

During the bamboo project, CFBI and Outreach Programme, which are both NID initiatives, took key roles in planning, conducting and disseminating various forms of interaction between the institute and rural communities. Therefore, the initial two interviews were conducted. The first interview was conducted with former NID faculty and chairperson of Center for Bamboo Initiatives (CFBI) Prof. M.P. Ranjan, and the second interview was conducted with coordinator of DESIS India, former Outreach Programme chairperson, Prof. S. Mehta.

For this part of the study, a preferable field research strategy has emerged through these initial interviews, which were conducted to set a ground for the rest of the investigation of the bamboo project ecosystem. Identified relationships between the cases and the actors of the ecosystem allow to observe the diffusion of design and dissemination of knowledge. Another reason for employing such a strategy was to fully understand the role of NID and its customized intervention model addressing rural development and social innovation problems. Consequently, the actor network map presented in Figure 4.1 illustrates five levels of dissemination, where the initial strategies and knowledge are transformed into a new state at each level.

The flow captured on the map starts with the UNDP report as one of the first palpable outcome of on-going efforts exploring endogenous development potentials

of the Northeast region (Ranjan, 1999). According to the author M.P. Ranjan, the report was a great achievement to influence the policies to gain a larger support to realize bamboo based development strategies. These strategies have been studied for decades through many research and documentation projects prior to the report (personal communication, October 23, 2013). At this level, the government policy concerning the transformation of several local organisations and financial support for further research and development projects were shaped through accumulated knowledge and experience on bamboo plants, human skills and local resources of the region (Ranjan, 1999).

BCDI, as one of the several local government initiatives, was established in the region in 1974. Nevertheless, the structure and the curriculum of BCDI were also reformed in 2001 as designed in the strategies pointed out by the bamboo report. Throughout the process, it is possible to claim that M.P. Ranjan acted as a strategist to realize the project. According to a report covering achievements of BCDI between the period of 2002 to 2004; 160 bamboo craftsmen were trained with the curriculum of three to six months. Moreover, many workshops and seminars were conducted to support craftsmen, students and professionals, and in order to develop design entrepreneurs; 35 students were trained, more than twelve documentation and field research projects were conducted (Ranjan, 2004).

The main curriculum of certificate programs includes basic design lectures to develop understanding of colour, form, isometric drawing and fundamentals of geometry building (Korjan, 2004). Although bamboo has been a common material for the region to produce almost everything, value added products in the market were limited to baskets, mats and fishing rods. Through the project, bamboo has been used in several forms such as weaving bamboo fibres, block printing with various parts of the plant, flattening bamboo, coal production and furniture making. Moreover, dissemination of accumulated knowledge has sustained through published materials, videos, workshops and training seasons organized all around India. Additionally, transformation of BCDI towards a more proactive role has opened new progress opportunities for bamboo and cane plantation studies and innovation in product, technology, process and market (Ranjan et al., 2001).

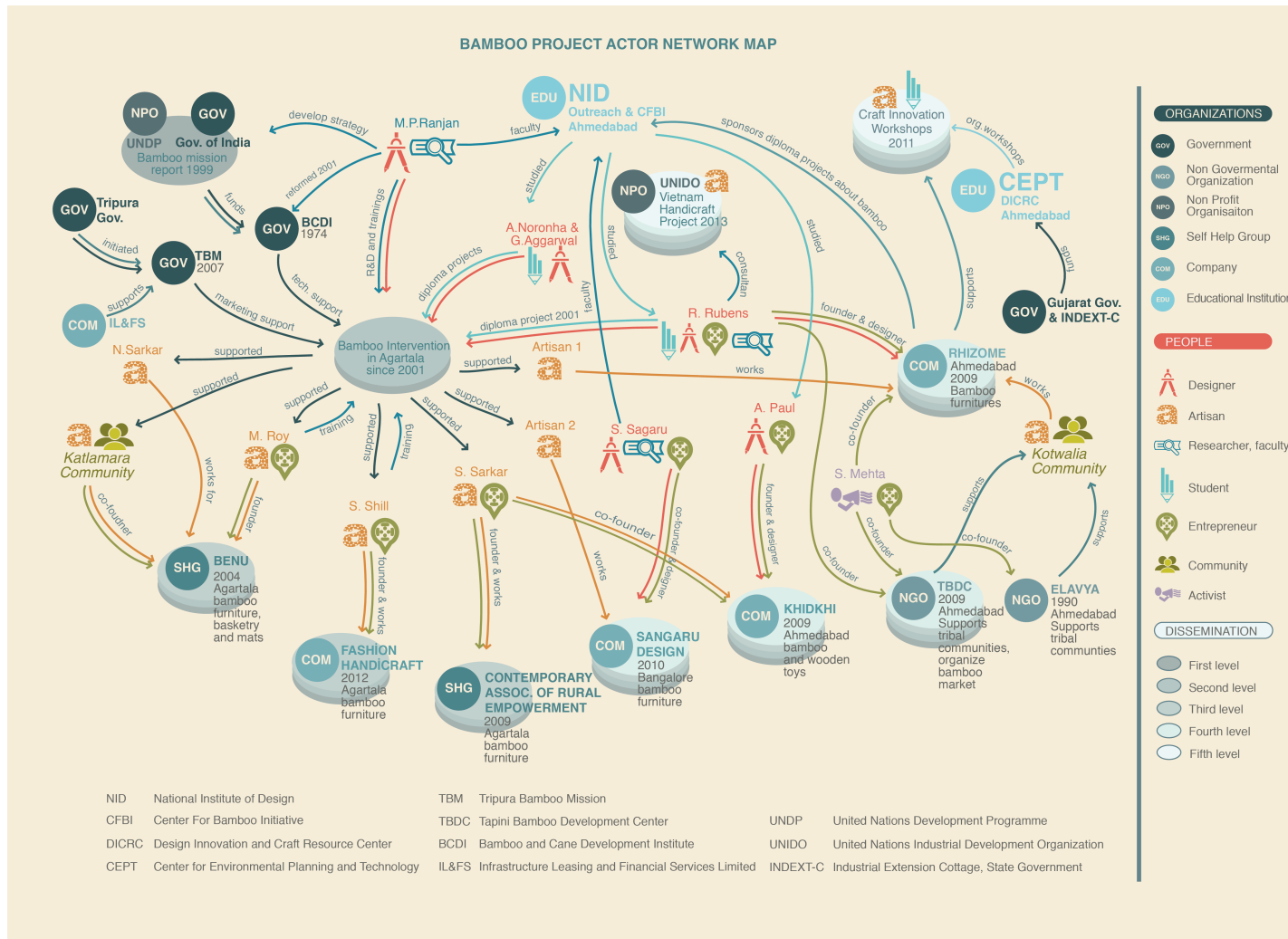


Figure 4.1 : Bamboo Project ANM.

M. Roy, S. Sarkar, N. Sarkar and S. Shill were there artisans among hundreds of people from rural Agartala, who have participated in intensive training seasons at BCDI during the early 2000s. As a reflection of the main strategy, addressing overall development of the Northeast was pointed out as the second level of dissemination. At this level, a local innovation ecosystem was set up with the contribution of non-local actors including design faculty and students.

In cooperation with artisans capable of producing various types of bamboo craft, M. Roy founded BENU at Katlamara village, in 2004. Likewise, subsequent to their work experience on various bamboo projects around India, S. Sarkar and S. Shill established their own initiatives back in rural Agartala. At this point, entrepreneurial behaviour of trained rural craftsmen constitutes the third level of the knowledge dissemination. Villagers, who were initially trained as master artisans, at this level become entrepreneurs in their own village and they start to contribute development of the village creating employment and training opportunities.



Figure 4.2 : Bamboo basketry training with Zimbabwean artisans at BCDI, Agartala.

The Katlamara Chalo project is an example for such contribution, which was conducted in the village between 2005 and 2007 by an NID team under the supervision of M.P. Ranjan. The project, which involved a series of workshops, introduction of new tools and production processes for bamboo crafting, was conducted at the BENU facilities while M. Roy took part as trainer (Ranjan, 2007).

Similarly, S. Shill and S. Sarkar often work as trainer at the projects held by BCDI and bamboo craft lectures at NID.

The UNDP report addressing bamboo as a renewable resource for development projects at the North-Eastern Region was the first formulation of embedded knowledge collected through frequent field visits and craft documentation. In addition, bamboo projects conducted in Agartala were identified as the second phase, in which development policy was actualized in collaboration with rural people.

The endogenous development strategy aiming to nurture bamboo craft based rural entrepreneurship, has yielded as establishment of SHGs and companies by master craftsmen in the region. At this third phase experience on design and development of bamboo products, business intelligence and entrepreneurial activities become part of the ecosystem.

BCDI used to be the center of technical innovation, where new designs and manufacturing methods were experimented to foster entrepreneurial behaviour. Today, the proactive role of BCDI is shared with TBM, a development organisation initiated by Tripura Government in 2007. This organisation deals with sustainability of bamboo plantations, formation of rural clusters, conducting training seasons, supporting management of production process and searching new markets for artisans, while cooperating with a Delhi based private development initiative, Infrastructure Leasing and Financial Services Limited (IL& FS). As one of the major marketing assistance for bamboo artisans in the Tripura state, role of TBM characterizes the holistic business-minded nature of the third phase.

However, as of BCDI, furniture making is not in the main focus of TBM's recent efforts, due to relatively low number of artisans practicing bamboo furniture craft. Relatively higher complexity in design and development of furniture and limited regional demand appear as potential causes of this situation. Even though they are not in the bamboo furniture platform as intensely as they were anymore, both TBM and BCDI still continue to participate conversation with BENU and other furniture craftsmen. This network continuously supports BENU concerning technical and marketing issues.

According to M. Roy, M.P. Ranjan did not only give them training but also provided motivation to start their business (personal communication, October 20, 2013). Besides technical and psychological support, the encouragement includes royalty free designs, which facilitate the connection of the artisan to market. For instance, some of the products produced by BENU and Fashion Handicraft are still similar or same to those co-designed by M.P. Ranjan and his team. Moreover, these designs are still called “Ranjan Design” in daily language.

When S. Shill came back to Katlamara in 2012 to start his own business, he used the same “Easy Chair” design with small improvements as shown in Figure 4.3. It is possible to claim that design of the products, production methods and business models constitutes a crucial element nurturing entrepreneurial behaviour in rural context.



Figure 4.3 : Easy Chair produced by BENU and Fashion Handicraft, Katlamara.

Furthermore, the impact of bamboo project spilled over the borders of the Northeast. Years after her visit to the Northeast, R. Rubens established a social design enterprise in Gujarat and hired a bamboo artisan from the region. Her social design enterprise, Rhizome, addresses developmental problems of Kotwalia community fighting against extreme poverty in rural Gujarat.

Another former NID student A. Paul was introduced to bamboo through S. Sankar’s lectures at NID. Although A. Paul has never been involved in the bamboo project, he

and S. Sankar have joined their forces in order to establish a company called Khidkhi producing and selling handcrafted bamboo toys. A. Paul was excited to explain the meaning of the name Khidkhi as “windows” in English, and he associated it with their hope to open new markets (A. Paul, personal communication, October 31, 2013). Moreover, the Khidkhi also symbolise the reflections of bamboo project as a window opening new opportunities of collaboration and entrepreneurship for both design students and artisans.

All these initiatives were neither at the core of the initial bamboo strategy, nor actualised in the Northeast. However, through design entrepreneurship, they have eventually expanded the bamboo craft market, spread the knowledge, mobilized local artisans and increased employment opportunities. Additionally, through TBDC, the NGO co-founded by R. Rubens, these accumulated knowledge and enlarged network moves to another plane by addressing social problems of rural communities. At this fourth phase of dissemination, embedded knowledge was transferred to a new dimension with emergence of new organisational models in the ecosystem.

At the fifth phase of dissemination, a blend of social and technical knowledge created by R. Rubens spills back to academia and intergovernmental development agencies. In addition to the sponsorship of NID diploma projects dealing with bamboo craft in rural communities, Rhizome supports Craft Innovation Workshops conducted at Design Innovation and Craft Resource Center (DICRC) in collaboration with TBDC and Evlavya Foundation. These workshops mainly target design students and artisans. Moreover, R. Rubens' personal experience and research intelligence have recently shaped a UNIDO development project targeting bamboo artisans at Vietnam. For this project, R. Rubens has developed a craft mark ensuring originality and sustainability of local bamboo handicrafts (Rubens, 2013).

As seen on the case of R. Rubens and A. Paul, identified designers have various roles and occupations in different phases, which could be categorized into three groups.

- Scholar and/or researcher: M.P. Ranjan, S. Sangaru, R. Rubens
- Student: A. Noronha, G. Aggarwal, R. Rubens, A. Paul
- Entrepreneur: R. Rubens, A. Paul, S. Sangaru

Remarkably, the transformation of professional occupations and roles in the becomes visible on the Bamboo Project ANM. The most prominent pattern identified on the map is the transition from being a student to an entrepreneur. A. Paul and R. Rubens constitute examples of this pattern. R. Rubens was not interested in going to the Northeast and working with bamboo, subsequently she had recognised it as a viable social business model (personal communication, October 28, 2013). Moreover, two other NID graduate we interviewed, A. Noronha and G. Aggarwal keep their interest in setting up a bamboo craft based design enterprise sooner or later (personal communication, January 31, 2014).

The researcher identity of R. Rubens stems from her on-going PhD study. Her experience and gained craft knowledge now facilitate value creation for other communities facing poverty and unemployment. Additionally, that scientific knowledge coming from her researcher identity carries the academic debate towards new horizons. Her role at the UNIDO project in Vietnam, introduces a new dimension to the ecosystem. This project includes creating methods and tools for organizing trade activities in a more fair and supportive condition for rural artisans.

In summary, the ecosystem represents how actors and their relationships reinforce the system through dissemination and transformation of embedded knowledge. Establishment of social and commercial enterprises cultivates social innovations and endogenous development of rural India. In order to identify how these enterprises create social and economic value following sections examine details of three crucial BMs of this ecosystem.

4.1.1 BENU

Located at Katlamara village surrounded with tea gardens and bamboo plantations, BENU still embodies the influence of initial strategic level design intervention. Furniture manufacturing was strategically pointed out by these strategies in order to maximize the added value of craftsmanship with the use of locally available materials and tools.

Another factor was the availability of the “Kanakkaich” bamboo in the region, which is a specific type originated in Bangladesh and carried to the Northeast by refugees during the separation of countries (M. Roy, personal communication, November 20,

2013). M.P. Ranjan had recognised the large plantation of this uncommon bamboo type during his early field visits to document local knowledge. Specificity of this bamboo type lies under its relatively high density and the narrow hollow located in the center of its body. This specification allows artisans bending bamboo rods via heat treatment. During the training and workshops, NID team worked together with BCDI to develop processes, tools and equipment to facilitate bamboo-bending process. M. Roy's father was one of those farmers who brought this specific type of bamboo to the region and he still owns large Kanakkaich plantation in Agartala. His ambition on bamboo craft and availability of Kanakkaich bamboo made him an ideal entrepreneur.

Draft SWOT analysis shows the major strengths of the organisation as availability of raw materials and bamboo craft skills. In addition, the BM constitutes certain weaknesses such as having geographically distant from the rest of the country. Increasing demand of young Indians' urban housings is a clear opportunity whereas increased profit margins of rubber farming create a risk for the bamboo plantations. The ASM prepared for BENU reflects signs of initial strategies, such as increasing bamboo use, producing green furniture and minimizing production costs using locally available materials and simple manufacturing tools. Like many other craft oriented businesses, key resources of this BM are identified as locally available raw materials and bamboo craft knowledge and skills of local people. Moreover, tens of royalty-free furniture designs by professional designers, design faculties and students; new bamboo processing methods and tools and new joints the allow various assembly forms appear as the key resources on the BMC. Using these key resources, BENU designs, develops and produces sustainable and well-designed bamboo furniture for mostly B2B market. Because of their relatively higher price, most of BENU products fall short to target Katlamara community. Additionally, selling fishing rods still constitutes a viable and easy transaction for the organisation despite their limited value addition capacity.

BENU creates social value through supporting development of the village, creating employment opportunities and spreading bamboo craftsmanship throughout the country. In this manner, customer segment of BENU covers mostly mid & high segment Indian consumers, hotels, architects, international fishing rod consumers, development agencies, artisans and design institutions.

BENU - Business Model Canvas				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Katlamara Vilalgers: Bamboo artisans & workforce	Production and design Specialised bamboo cultivation	Sustainable, green well designed bamboo furniture	Dedicated personal assistance Co-creation	Mostly mid&high segment local consumers B2B: Hotels etc. Architects
NID: Transferring and engaging design-craft knowledge	Co-Design of products Teaching bamboo furniture craftsmanship	Fishing rods		International fishing rod consumers
TBM: Marketing support	Key Resources		Channels	
BCDI: Support for technical and design innovation	Skilled local craftsmen Young labour from the village	Support development of the village	Awareness through word of mouth, customers, website	Development agencies
Local Government: Financial support for facilities	Large bamboo plantation Manufacturing equipment Borax treatment tank	Teaching bamboo furniture craftsmanship	Purchase via TBM, mail personal communication	Artisans Design institutions
Local charity org.	Novel bamboo designs Novel manufacturing methods Novel bamboo joint designs			NGO's
Cost Structure		Revenue Streams		
Value driven cost structure		Fixed Pricing for regular products		
Labour cost Logistics cost Raw material		Product Feature Dependent Price for custom made products		
		Expert Fee for services		

Figure 4.4 : BMC for BENU.

Revenue streams and the cost structure of BENU reflect common pattern of a small manufacturing firm. Related to marketing, design and development of products; TBM, BCDI, NID and NIFT are identified as the key partners. These institutions, especially NID, support BENU with a valuable design network that offers new market opportunities through architecture and design projects. Another key partner is the local charity organisation, which was founded by M. Roy. This charity organisation established the first English primary school of the village. The school and the little temple next to it play an important role for social development of the village, in terms of education, social cohesion and trust building. The organisation was also supported by government funds for establishment of the production site and equipment.

During my visit to the village, I worked with a group of four students from NIFT Shillong, who were invited to the village by TBM in order to improve the design capabilities of BENU. This type of connections brings fresh design ideas to the village. However, such workshops are usually quite short in time and often not sufficient enough to develop a new product, like a new knockdown furniture.

Knockdown designs are crucial for the BM since airline is the only viable way to reach to other part of the country. Thus, geographical disadvantage of Agartala is one

of the major barriers for BENU to scale up. Although new designs continue to enrich the product range, knockdown furniture models are almost limited with those designed and developed by NID team.

Various institutions, governmental development agencies and banks fulfill local artisans' need for finance, technology and know-how. However, access to design network through partnerships with local and national design institutions is a crucial factor of this BM. During my one week stay in the village, M. Roy claimed several times that they need an “expert designer” in order to create new knock-down product family (M. Roy, personal communication, November 20, 2013). The expert designer he pointed out might be M.P. Ranjan and his team. Such “expert designs” continue to be a trigger for new entrepreneurship and live in the market for decades. Moreover, such products become a symbol conveying certain intelligence and story. For instance, the knockdown chair designed by M.P. Ranjan, which is called as MPR Organic Chair was commonly used as stimulus for bamboo furniture entrepreneurship in the region. The very same model is recently sold at the shop of Tripura Forest Development and Plantation Corporation Limited (TFDPC) together with rubber wood furniture.



Figure 4.5 : MPR Chair blueprint at BENU and one marketed at TFDPC shop, Agartala.

Rubber forestry challenges bamboo in two dimensions: first, the plant supports an almost effortless way of earning money through collecting and selling rubber extract, and second rubber wood is a convenient material to produce wide variety of goods. In this manner, TBM officers try to nurture bamboo plantation against rubber through various scientific researches and developing bamboo applications. At this point, superiority of bamboo over rubber wood appears as high strength and lower density. Although, many of the initial strategies drawn by NID team are still valid for the BM, some activities are not aligned with these strategies. For instance, it is not easy to claim that there is a consistent design language between products. While some products reflect contemporary features, others do not share the same language. In addition, the clear stress on green and sustainable products dissolves with particular manufacturing practices such as use of melamine for surface finishing and pressured borax tanks for bamboo treatment.



Figure 4.6 : Various design language of BENU products, Agartala.

In order to compensate the desired gloss finishing of melamine, NIFT students have tried various natural materials like tealeaf, which is widely available in the region. Another contradiction is the borax treatment process. Borax treatment is a common way to prolong product life, whereas rich starch involved in bamboo cells attracts insects. Usually, artisans use low-tech and relatively slow way to treat bamboo rods like keeping them in borax poll for some days. Contrary, the pressured tank injects the liquid into the cells faster. Reaching high efficiency by mechanising the process

is an understandable behaviour of a mass-manufacturing unit. However, it is questionable for craft production, which by nature involves more manual labour.

To sum up, design was part of the initial strategies that triggered establishment of this BM and is still a crucial part of it. Following list classifies various intervention levels that major contributions of designers addressed in this BM.

- Research level: Prior to the project, documentations on bamboo craft and artisanship in the Northeast India have a great influence on starting the project and its further progress
- Product level: A combination of tactical level contributions as design of the colour, texture and forms of bamboo material and market level contributions such as designing green bamboo furniture and product families addressing market demands
- Innovative level: Design of new joints to enable new ways to assemble furniture
- Organisational level: Design of simplified manufacturing tools and minimization of non-local raw materials. New partnerships, designer artisan collaborations with workshops and training seasons conducted by BCDI, TBM and NID
- Strategic level: Increasing employment in the region through leveraging capabilities of local people and enabling them to be entrepreneurs, increasing bamboo use and craftsmanship in India

Prior to the beginning of the enterprise and during its operations, designers take several roles including communicator, strategist, capability builder, co-creator, and facilitator. Researching about endogenous knowledge and materials, building communication between various stakeholders and co-creating new products are crucial contributions of design in order to enable business models in rural areas.

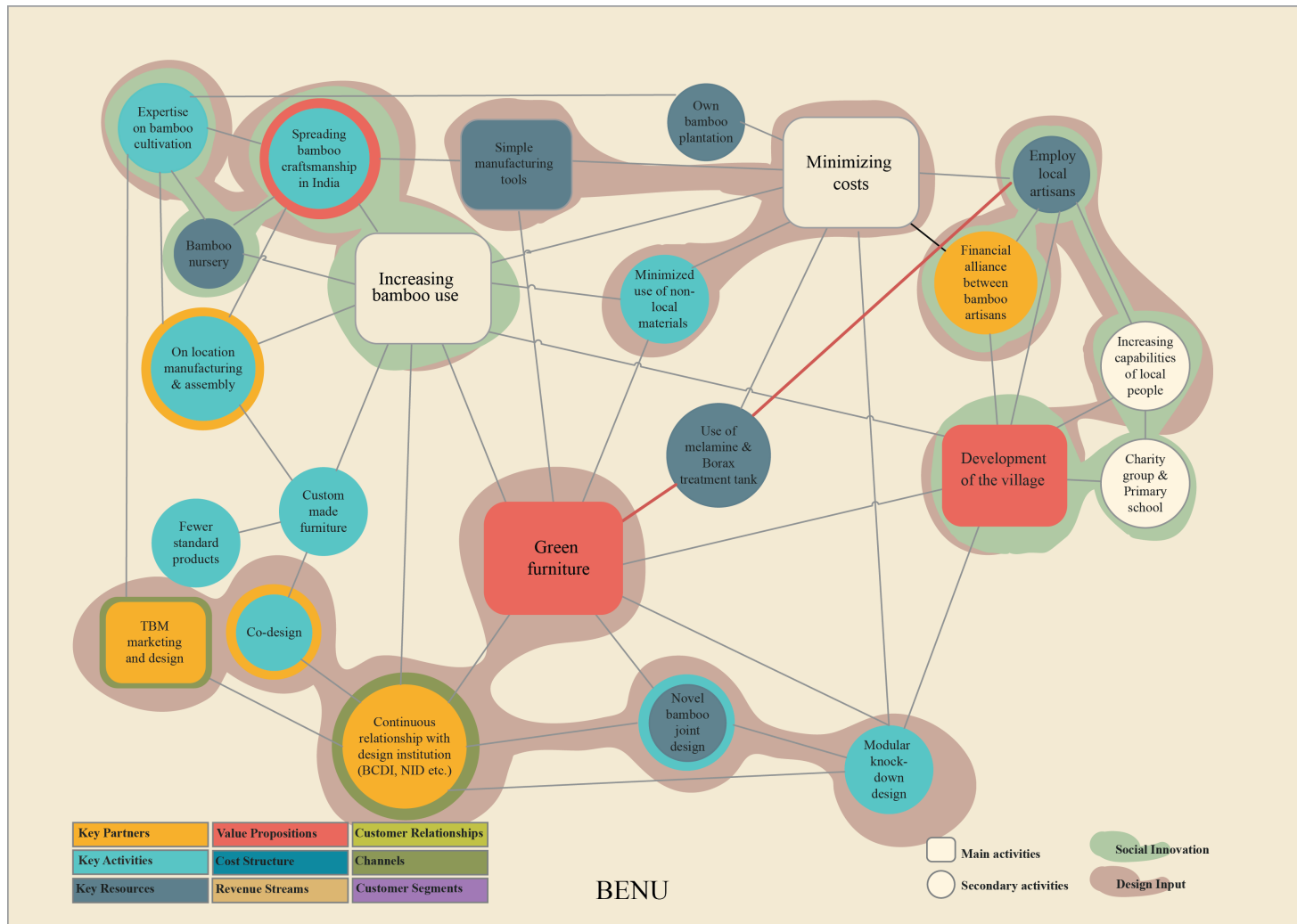


Figure 4.7 : HASM for BENU.

In addition to them, M.P Ranjan has a kind of project champion or celebrity role in this case, since his name has been used to identify some bamboo chair designs in the region. His name stands for a certain background and purpose of action that facilitates building trust between guest designers and local people. This role has a symbiotic relationship with the multiplier role mentioned by Cipolla and Moura (2012). Additionally, designing and developing furniture with renewable materials provides a green and handcrafted alternative in the market.

However, the most prominent role observed in this case is the “BM developer” role of designer. The BM proposal authored by NID faculties reveals detailed components of potential bamboo furniture craft initiative (NID, 2010). Besides product or process innovation, design of BM involves making strategic decisions regarding the target market, sales channels and customer relations. Moreover, establishment of the organisation and its activities in the village foster several social innovations as follows:

- Workshop and training activities increase capabilities of local people, create new employment opportunities for artisans and enable rural people with new knowledge for livelihoods
- Besides BENU itself, the charity group is an example of local action group formation, which tackles with local problems and creates financial alliance between artisans
- Building collaborations with TBM, research and practice on bamboo plantation help spreading use of bamboo as a sustainable natural resource
- Simplifying necessary production tools and equipment to reduce initial investment and supporting artisans with royalty free joint and furniture designs help spreading bamboo artisanship throughout the country, facilitating new enterprises
- Establishment of the first English teaching primary school in the village

4.1.2 Rhizome

Rhizome is a botanical term that usually means modified subterranean stem of a plant that is found underground. Deleuze and Guattari (1987) defines the rhizome concept as a network of connections without any specific starting point or end while the crucial role of rhizome of a plant is sustaining vegetative reproduction process through lateral spread. This growing network is flexible enough to be attached and to jump into future. Similarly, R. Rubens describes the aim of their “Rhizome” concept as connecting traditional producer communities with innovation and market in a less industrial value chain. As mentioned before, R. Rubens was one of the NID graduate students who have visited the Northeast during her study. Those visits have remarkably changed her vision about craft and bamboo as a raw material.

So, I went there with no enthusiasm, no expectations or something like that. It was mind blowing. There, everything was bamboo. First I said wow. It was so amazing, how many things you can do with bamboo. And the second thing is what boring people. They make everything with bamboo. .. Then I found out that people in poor places. They are not industrial designer like, I ’m a wood expert I make everything out of wood. They are actually do stuff that make sense. So everything that they make with bamboo could not be made with any other locally available material. Because if it was, they would do it. (Rebecca Rubens, personal communication, October 28, 2013).

The critical change in the perspective of a design student is prominent in this case. This change evokes further possibilities like working with bamboo craft in development sector and founding a social enterprise and an NGO. In addition to her access to design network, her previous experience and reputation on in development sector constitute major strengths of the BM. Another important strength is close collaboration of former activist S. Mehta and R. Rubens. This collaboration leads emergence of several organisations working for same strategic goal in different ways.

Rhizome shares similar market opportunity with BENU as increased demand of young Indians moving in separate houses in urbanized areas. However, Rhizome acts much more market oriented because it intensively employs design intelligence and uses diverse channels to reach target customer. The shop in Ahmedabad city stands as the major marketing channel while exhibitions and magazine interviews help increasing the brand awareness.

Rhizome - Business Model Canvas				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Eklavia Foundation supporting Kotwalia poeple & sustaining the social value creation. the foundation gets funds from development agencies TBDC supporting innovation on bamboo craftsmanship and technical problem solving marketing etc.” Design insitutions (NID,CEPT)	Design, development and production Trainings and workshops with artisans and designers Research and documentation about craft knowledge	Contemporary & sustainable lifestyle, furniture & fashion products (Bamboo Canopy) Design consultancy service Serving development projects in terms of craft- market connection, capacity building trainings and workshops and research & documentation	Dedicated personal assistance Co-creation	Mostly mid&high segment local consumers B2B: Hotels etc. Architects
	Key Resources		Channels	
	Canopy Brand Access to NID network Kotwalia community & skilled artisans Kotwalia bamboo plantation		Awareness: Exhibitions, magazines, website, Facebook Sales: exhibitions, magazines, third party websites	Development agencies Artisans Design institutions NGO's
Cost Structure		Revenue Streams		
Value driven cost structure Labour cost Logistics cost Raw material		Fixed Pricing for regular products Product Feature Dependent Price for custom made products Expert Fee for services		

Figure 4.8 : BMC for Rhizome.

Moreover, Rhizome conducts online sales over its website and various third-party online shops. It is necessary to mention that, the emphasis on being green and sustainable is clearer at the BM in comparison with BENU. One reason might be their active social work aiming to create livelihoods and improving well-being of Kotwalia community. However, the BM also communicate “sustainability” more effectively through the design language embedded in products, published materials and website.

The company collaborates with two non-profit organisations in order to sustain a less industrial value chain while supporting development of local communities. Briefly, between those two organisations, Eklavia Foundation is engaged in social goals, while TBDC works on organizing and improving bamboo market. In collaboration with Eklavia Foundation, the BM addresses social and developmental problems of one of the poorest community in Gujarat, Kotwalia community.

Value propositions of the company do not involve only in products but also design consultancy service. The design intelligence and experience on social development make services an important potential for the revenue stream. Main value proposals of the BM include craft oriented research, documentation, skill and capacity building, product and graphic design and production streamlining services. Additionally, the

company provides design service to local development agencies working for empowerment of rural people and enablement of rural BMs.

For instance, the candleholder presented in Figure 4.9 was designed for TBM as part of the product line targeting high-end spa and wellness market.



Figure 4.9 : Three examples from Rhizome’s product range (Url-6) Rhizome.

Thanks to researcher R.Rubens, and her experience in development sector, Rhizome’s contribution on knowledge creation reaches another level with “VietCraft Value” developed for UNIDO. This branding manual includes sustainability labelling and assessment procedure facilitating fair trade business for Vietnamese bamboo artisans (Rubens, 2013). Designers contribute to enable this social design enterprise at research, product, organisational and strategic levels.

- Research level: Research and documentation on craft and embedded knowledge of Kotwalia community
- Product level: Tactical level interventions such as design of the colour, texture and forms from bamboo furniture, and market level interventions such as design of marketable, contemporary, sustainable, lifestyle furniture and fashion products, product families
- Organisational level: Developing expertise on mature bamboo cultivation, using simple manufacturing tools, developing labour intensive technologies, using local and renewable materials, working with students on their graduation projects. Designer artisan collaborations with workshops and training seasons, Bamboo Canopy as brand of products
- Strategic level: Establishing artisan market connection using a labour intensive value chain, developing Vietcraft Value as a certification of sustainable handicraft

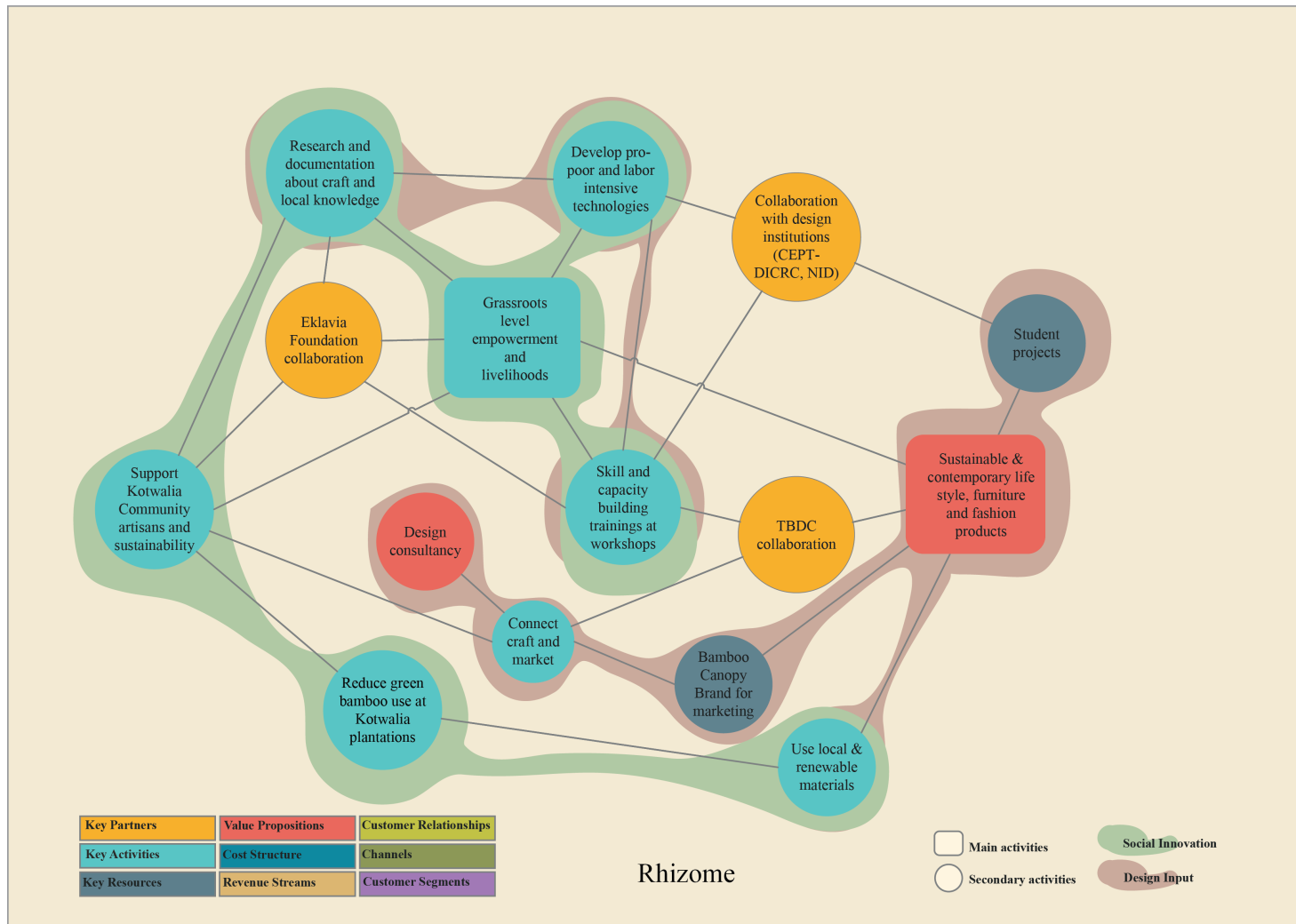


Figure 4.10 : HASM for Rhizome.

Moreover, in order to integrate in the BM in these levels, designers take various roles as researcher, communicator, strategist, capacity builder, co-creator, facilitator and activist. Still, the “social entrepreneur” role is the most prominent role that R. Rubens have. As a social entrepreneur, she establishes organisations to support social goal of Rhizome, aligns their purposes and activities accordingly and fosters dissemination of knowledge.

Rhizome sponsors graduate level student projects on bamboo craft, which shows its support for dissemination of knowledge and sustainability of young generation’s interest in craft. Additionally, Rhizome’s support for bamboo workshops at DICRC accelerates the process of skill building and consequently nurtures the social innovation ecosystem. As identified on HASM, strategically aligned activities of Rhizome’s BM foster a number of social innovations:

- Use of local and renewable materials and reduction of green bamboo harvesting through mature bamboo use in production and improvement of environmental sustainability awareness of Kotwalia community
- Research and documentation projects on craft and local knowledge supports preservation of traditional culture.
- Development of pro-poor and labour-intensive technologies that support grassroots level empowerment and livelihoods
- Skill and capacity building training and workshops to support community with new knowledge for making profit

Sangaru Design Studio was initiated in 2004 by a former NID faculty, S. Sangaru, who portrays a close relationship with traditional crafts. Personally, he has run several bamboo craft workshops at BCDI in Agartala and like R. Rubens, he designed bamboo products for TBM in 2007. Moreover, his interest in craft was born through his previous works in several other development projects aiming to promote various local craft including wood carving artisans of Kashmir (personal communication, January 24, 2014).

Sangaru Design Studio - Business Model Canvas				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Artisans producing various types of craft NDBI, incubation fund	Design and production Bamboo cultivation Experimenting with crafts Co-creation with artisans	High end, contemporary handcrafted bamboo furniture and accessories	Personal assistance Co-creation	High segment global and local consumers Hotels Architects
	Key Resources Artisan network Small bamboo plantation Academic network (NID) Workshop, production equipment and tools	Improving the value and image of bamboo crafts Increasing artisan collaboration	Channels Awareness: Exhibitions, awards, magazines, website Purchase via exhibitions, awards, magazines, website	Artisans
Cost Structure		Revenue Streams		
Value driven cost structure Labour cost Logistics cost Raw material		Fixed Pricing for regular products Product Feature Dependent Price for custom made products Expert Fee for services		

Figure 4.11 : BMC for Sangaru Design Studio.

Like two other bamboo furniture initiative mentioned in this chapter, S. Sangaru emphasises the sustainability and greenness of his products. Although the BM doesn't address a specific social problem, it supports the ecosystem with a vital role. Through his strong intention on using traditional craft practice in design and his work experience in local development agencies, S. Sangaru has granted access to a large network of craftspeople spread all over India. Within this perspective, his innovative BM cultivates social innovation in the ecosystem through mobilizing artisans, improving their capacities and helping dissemination of knowledge. In 2009, he was awarded with Red Dot: Best of Best for his 'Truss Me' furniture and took attention of global design scene onto bamboo. His innovative approach to form bamboo using its high tensile strength is the crucial point used to create light but strong structure. Truss Me won Grand and Gold awards at Design for Asia in 2011. One year later, in 2012, he was awarded by British Council in the Young Creative Entrepreneur in the Design for Social Impact category (Madhok, 2012).

His studio accepts interns and students who wish to learn and apply craft in their designs. Moreover he sponsors post-graduate diploma projects on various uses of craft in design. However, continuous experiments with materials and craft techniques stay in the border of traditional and environment friendly way of production.

For instance, he doesn't use pressure borax treatment; instead he boils bamboo with borax and keeps underground for a while.



Figure 4.12 : Truss Me unit and product family (Url-7).

The Northeast bamboo project was an inspirational part of his career. He reveals that the initial concept of triangular “Truss Me” module was actually designed during his work at BCDI in early 2000s (personal communication, January 24, 2014). In 2006, he visited the region again in order to develop a concept for TBM, and he used this triangular module in his design, however, it has never become commercial. Bangalore facility of Sangaru Design includes a small bamboo plantation and a workshop in which four artisans regularly work. The number reaches to ten depending on the amount of orders. Remarkably, an artisan he met during the projects at the Northeast now works for him regularly at the Bangalore unit.

His ambition to experiment on different types craft and materials actually fosters collaboration of artisans with each other. Thus, all actors involved in this process learn new methods of production to create products, which is an example for indirect social innovation emerging indirectly.

S. Sangaru is an important figure for Indian designers. Moreover, the BM embraces traditional craft methods and demonstrates the use of traditional craft techniques in design and development of contemporary and competitive products. His ambition to use craft by pushing physical limits of the material and quality of craftsmanship, consequently upgrades skills of artisans and enables them to expand their product range.



Figure 4.13 : Pictures from Sangaru's workshop at Bangalore.

Designers, including graduate students, internships and S.Sangaru himself, contribute to the BM in various levels as follows:

- Research level: Research about various types of craft practice and local culture enriches the design
- Product level: Tactical level interventions such as design of the colour, texture and forms of bamboo and other crafts, mixed materials and market level interventions including design of innovative, contemporary goods such as Truss Me product family
- Innovative level: Experimenting through products using various materials and craft techniques. Award winning Truss Me products
- Organisational level: Expertise on bamboo cultivation, using special production tools for mixing various crafts, using local and renewable materials, working with students on their graduation projects, designer-artisan collaborations, workshops and training organisations
- Strategic level: Increasing the image of bamboo products worldwide

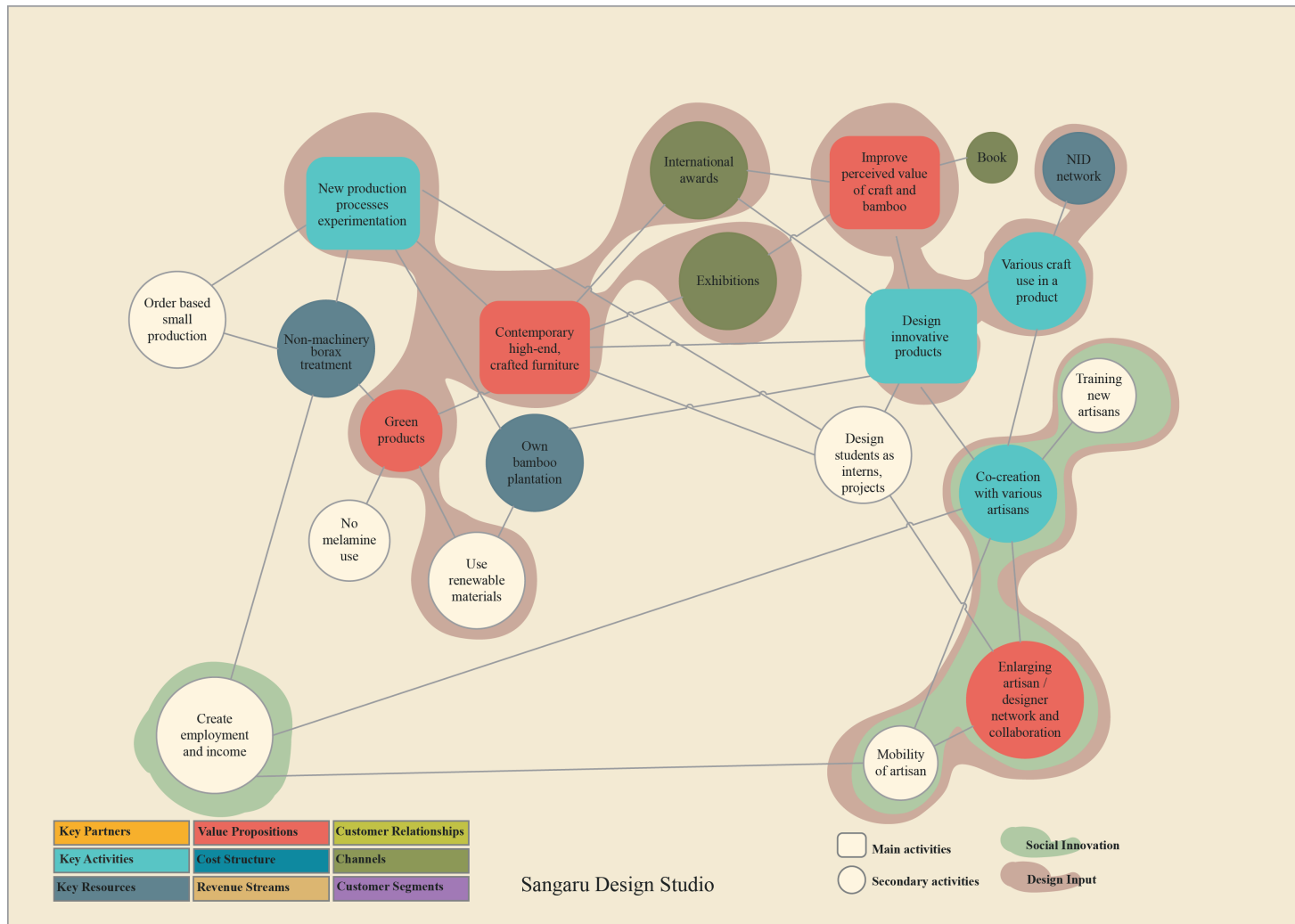


Figure 4.14 : HASM for Sangaru Design Studio.

S. Sangaru, the initiator of the BM, is a social entrepreneur and he takes several other roles including researcher, communicator, strategist, capability builder, co-creator and facilitator. However, two roles appear to be more prominent among all, “project champion” and “network builder”. Through his award winning innovative bamboo furniture designs, he promotes bamboo as a renewable material and craft making as a viable business. This promotion definitely expands the volume of bamboo furniture market and may inspire young designers to work in crafts. Yet, network builder role of S. Sangaru cultivates opportunities of experimentation and innovation in design and craft. In this way, a broad landscape of possibilities appears for designers and artisans. As briefly mentioned above, several types of social innovation occur through the BM such as training and employment opportunities for artisans, expanding artisan network and supporting mobility of artisans.

4.2 Exploring Kutch Ecosystem

Kutch is the largest district of India and cradle of diverse handicraft traditions. Government policies in favour of craft sector promote establishment of numerous non-profit and for-profit organisations practicing top-down and bottom-up initiatives in Kutch. The common goal of these organisations is to generate income opportunities for local people and preserving the local culture through craft economy. Especially after the 2001 earthquake, which has demolished the central city and its surroundings, such attempts have increased exponentially. This study focuses on four organisations having different perspectives for similar rural development and social innovation goals. Although governmental support was the initial push for foundation of these organisations, mostly bottom-up and flexible BMs form the relationships between actors of Kutch network. Moreover, formal and informal relationships between actors create a vivid innovation ecosystem fostering both business and social innovation.

Unique craft atmosphere of Kutch is entirely attractive for all designers, and textile designers show particular interest. Region’s well reputed and widely practiced traditional embroidery craft, which consist of hundreds of cracked glass pieces sewn into the cloth, constitutes quite a labour intensive work. Thus, often Kutchi embroideries are known as mirror work. However, as P. Shah corrects, there is a lot more than cracked mirrors (personal communication, December 26, 2013).

Unique skills and capabilities of artisans receive great appreciation from professionals. Artisans' self-confidence and respect for their own work change radically the face of the craft in this region. Besides producing and selling crafts that represents their own culture and traditions, Kutchi artisans are quite aware of their crucial role in the tourism, as well.

The Kutch craft ANM presented in Figure 4.15 identifies several key actors involved in the ecosystem:

- Government of India, Development Commissioner of Handicraft
- Four private companies, two of them established in Kutch
- Six non-profit organisations, one of them founded by local artisans
- National and local design institutions
- Four designers, four master artisans, seven entrepreneurs and three activists

The field research realized in Kutch has followed a different investigation approach than the one employed for the Bamboo Project. Instead of seeking relationship patterns between organisations as it was for the bamboo cases, the location itself was identified as a starting point like an innovation milieu concept. Also, in comparison with bamboo cases, for Kutch the main driver of innovation is the craft skill of local artisans, not the material. In this manner, the ANM prepared for Kutch ecosystem constitutes less number of actors compared to Bamboo Project Ecosystem. Interrelationships between examined four organisations reveal the characteristics of an innovation milieu in the region.

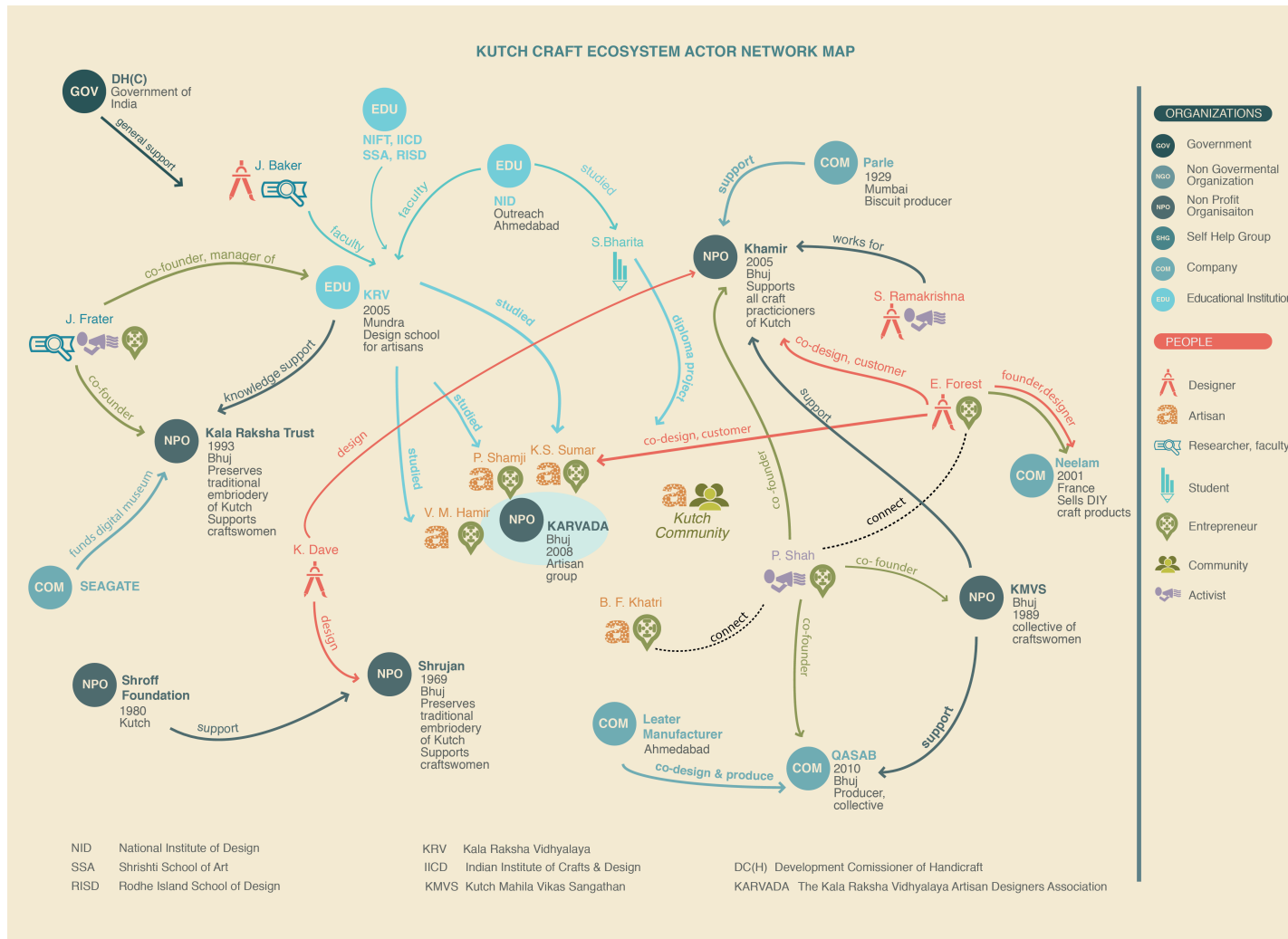


Figure 4.15 : Kutch Craft Ecosystem ANM.

Among four organisations included in the study, Shrujan and Qasab drive commercial success of embroidery craft of the region by generating income for large amount of artisans. Moreover, Kala Raksha and Khamir particularly emphasize development of local artisans. The artisan design approach of KRV revitalizes the craft scene and refreshes artisans' abilities through design education. Additionally, Qasab's facilitation of business development between artisans and designers stands out as a vital role for encouraging new entrepreneurs to start up their businesses. Similar to the bamboo ecosystem, Kutch ecosystem is also quite dependent on the continuous relationships between actors. Some of designers involved in this ecosystem illustrated on the Kutch ANM with several have several occupational identities as follows:

- Scholar and/or researcher: J. Baker
- Student: S. Bhartia
- Entrepreneur: E. Forest, J. Frater
- Freelance consultant: K. Dave
- Member of non-profit organisations: S. Ramakrishna, J. Frater

Following sections will discuss roles and motivations of these designers in four BMs

4.2.1 Kala Raksha

Established in early 1990s, the organisation has dedicated its resources and activities to the preservation of traditional arts and crafts. Kala Raksha's Resource Center and Museum keeps huge amount of research and documentation about traditional embroidery work of Kutch. Each year, an average of ten artisans are trained to be artisan designer in the sister initiative; KRV design institution. Although as a trust, time-to-time donations and funds are received, the organisation concentrates on creating income through sales of artisanal works in order to sustain artisanship and to keep the tradition from abandoning the area.

Design is an integral part of the Kala Raksha's key activities to keep products marketable. Beyond single product designs, the organisation acts as a fashion brand and comes up with special collections exhibited regularly in Mumbai. The Kala Raksha design team is responsible for analysing inputs gained from market researches and creating ideas for new collections. These ideas are discussed and

developed during several workshops conducted in collaboration with master artisans and experts to refine product design. In the organisational scheme, the design team orders raw materials and fabric while marketing department checks the result and gives approval for production. Additionally, field supervisors are responsible to manage the production in the villages, similar to other textile craft organisations working with artisans of Kutch. There are several underlying reasons that make this system effective, such as distance between villages and differences in their cultural codes.

Since the stand point of Kala Raksha is the preservation of local art and culture, product innovation is restricted with certain traditional motifs and possible combinations of them. However, this does not mean that there is lack of novelty in their products. To the contrary, rich and diverse craft tradition of the region provides great opportunities for innovation.

Availability of rich embroidery culture, which involves vast variety of styles and application techniques, continuous relationships with design institutions and practitioners, the artisan design programme and well reputed Kala Raksha brand are some of the major strengths that the BM has. Obviously, co-founder Judy Frater³ has an important share on those strengths. One of the weaknesses is the difficulty of managing craft production process, which creates similar challenges for almost all organisations working on crafts.

Environment friendly product demand of the market is a clear opportunity for all organisations studied in this chapter. However, craft organisations established in Kutch receive additional benefits of tourism where bamboo craft organisations are not sufficient. Local government gradually invests in the region to expand tourism activities. Thus, increasing demand of tourists stand out as an opportunity for the organisation. Additionally, governmental support for marketing craft products facilitates financially encouraging business environment. Although it is not possible to claim existence of a wild competition, local organisations with similar approaches are potential threats for Kala Raksha, since they share the same market and funds targeting development of Kutch.

³ Judy Frater resigned from Kala Raksha Vidhyalaya on 28 February 2014 and founded a new design education focused craft organisation, Somaiya Kala Vidya, in Kutch. For more information please see: <https://threadsofidentity.wordpress.com>

As seen in Figure 4.16, the BMC prepared for Kala Raksha reveals the fact that the organisation has both economic and social value propositions. Eco-friendly and good quality embroidery products are the main economic value proposition that targets national and global customers. Additionally, development of the region and preservation of traditional arts and crafts are the prominent social value propositions of the organisation. The revenue streams of Kala Raksha involve the Kala Raksha campus shop sales and at exhibitions that are conducted all around India. Although the amount is rather symbolic and not really enough to sustain its operations, KRV education fees collected from artisans constitute additional revenue stream for the organisation.

Kala Raksha - Business Model Canvas				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
KRV: Design education for artisans National and international organisations: Funding KRT Design institutions NID, NIFT, IICD, RISD: Supporting and sustaining design education at KRV KARVADA Local artisans	Design, development and production of craft Craft research and documentation Capacity development: design workshops, education (KRV) Health, education and microfinance support	Good quality, ecofriendly embroidery handicraft products Preservation of traditional embroidery art and craft Income generation for artisans Development of the region KRV Education	Personal communication Co-creation Channels Awareness & sales through: Exhibitions and shows Craft showroom in Bhuj A shop at Ilark Hotel Bhuj Webpage, Facebook	National and global consumers, tourists (no segmentation) Local artisans
Cost Structure		Revenue Streams		
Value driven cost structure Labour cost Operational costs Raw material		Fixed Pricing for regular products, discounts for wholesale Shop sales, retail sales (KRT) Education fee (KRV)		

Figure 4.16 : BMC for Kala Raksha.

KRV constitutes a promising example for partnership of public, private and community. As one of the partners, Development Commissioner of Handicraft has funded the organisation during the establishment of KRV. Likewise, Seagate Corporation has supported Kala Raksha Museum in order to digitalise craft database of the museum involving tangible artefacts. The organisation keeps close relationships with Indian design institutions including NID, NIFT, IICD and Srishti School of Art. In addition to them, faculties from New York Fashion Institute of Technology and Rhode Island School of Design have contributed the initial process of curriculum development for KRV (Frater & Bhanani, 2010; Frater, 2012).

The curriculum includes six sessions spread over one year period and includes lectures like colour techniques, basic design, market orientation, concept and communication, finishing and collection development, merchandising and presentation. KRV has a separate budget and a certain degree of autonomy in the organisation. Nevertheless, in order to encourage the participation, the institution supports new artisans with a small stipend.

The unique “artisan design” trademark upgrades the strategic value and enriches the organisation’s innovation capacity. This strategy does not only create new vision for individual artisans but also enables them to use another language to communicate over product. S. Bhartia is a former NID student who conducted several workshops for her graduation project in the region, and worked with several artisans from different villages. She stresses that during those workshops and field visits, the way designers were able to communicate with artisans was not only deep and detailed but also motivational for designers to learn more about craft production (S.Bhartia, personal communication, December 17, 2013). Likewise, interviews with artisans who took KRV education also confirmed this reality.

For instance, V.M. Hamir is a KRV alumnus handloom artisan who weaves modern motifs on silk and cotton textile at his atelier located at the courtyard of his house. Nevertheless, his reputation on weaving reaches beyond the country. He was invited as an expert to several workshops conducted at European universities. The influence of design education was quite observable at his works.



Figure 4.17 : V.M. Hamir and his handloom atelier, Bhuj.

During my visit to his atelier, he was proud to show his design assignments he did during a yearlong design education. Yet his self-confidence instinct and pride of craft even motivated his daughter to become an artisan in future. When the conversation comes to the curriculum, according to V.M. Hamir, basic design education was quite enjoyable while marketing was difficult (personal communication, December 29, 2013). His comment reveals the fact that, business operation intelligence is still one of the tricky parts for craft entrepreneurship. Interviews with two other KRV alumni producing handloom craft with distinct characteristics have revealed that design education enriches innovation capabilities of artisans through encouraging them using their personal characteristics. While V.M. Hamir was experimenting with modern motifs on textile, others were using in the traditional motifs with innovative combinations. Moreover, there were artisans creating art works mixing block printing and hand painting in one piece. In such production, artisanship moves away its position from mass manufacturing plane towards a more artistic plane.



Figure 4.18 : Kala Raksha products from the museum, Bhuj.

Likewise other organisations targeting development of artisans, Kala Raksha actually create some type of craft tourism in the region. Tourist information bureaus and local hotels promote activities of organisations through posters and flyers. In this perspective, craft exhibitions are important tourism activities for the region after

famous desert festival happening once a year. Besides the natural beauty of the salt lake, craft and local culture constitute the most attractive content of the event.

Similar to other organisations examined in this section, Kala Raksha's product line involves traditional items along with contemporary products to attract urban Indian and western customers. Colour palette and details of embroidery is designed to look simpler with earth tones. Typical items include bags, shawls and cushion covers along with traditional Indian dresses such as "salvar-kamizes", jackets and "dupattas".

Faculties and students from various design institutions, professional designers and Mrs. Judy Frater herself have several levels of contribution to enable BM. In this manner, design intervention occurs in many levels as follows:

- Research level: Documentation of craft traditions of various ethnic groups, embroidery craft as tangible objects and the meaning, stories and culture attached to this motifs and objects
- Product level: Including tactical level interventions such as preserving and interpreting traditional motifs and market level interventions like continuous efforts of designing marketable collections
- Experience level: Design of the museum and other facilities as a touristic spot, design of the KRV education
- Organisational level: Introduction of artisan design trademark, fair trade and price committees
- Strategic level: KRV design institution that shifts the vision of the organisation and future of artisans

In this BM, designers take roles as researcher, strategist, co-creator, facilitator, coordinator and social entrepreneur. However "educator" stands out as the crucial role of designer identified in this case. This education improves artisans' design capacity, their ability to communicate over design, understand market demand and answer accordingly. Design education also increases pride of craft, which is crucial for survival of craft economy since it motivates their children to choose craft as a future career instead of immigrating to cities.

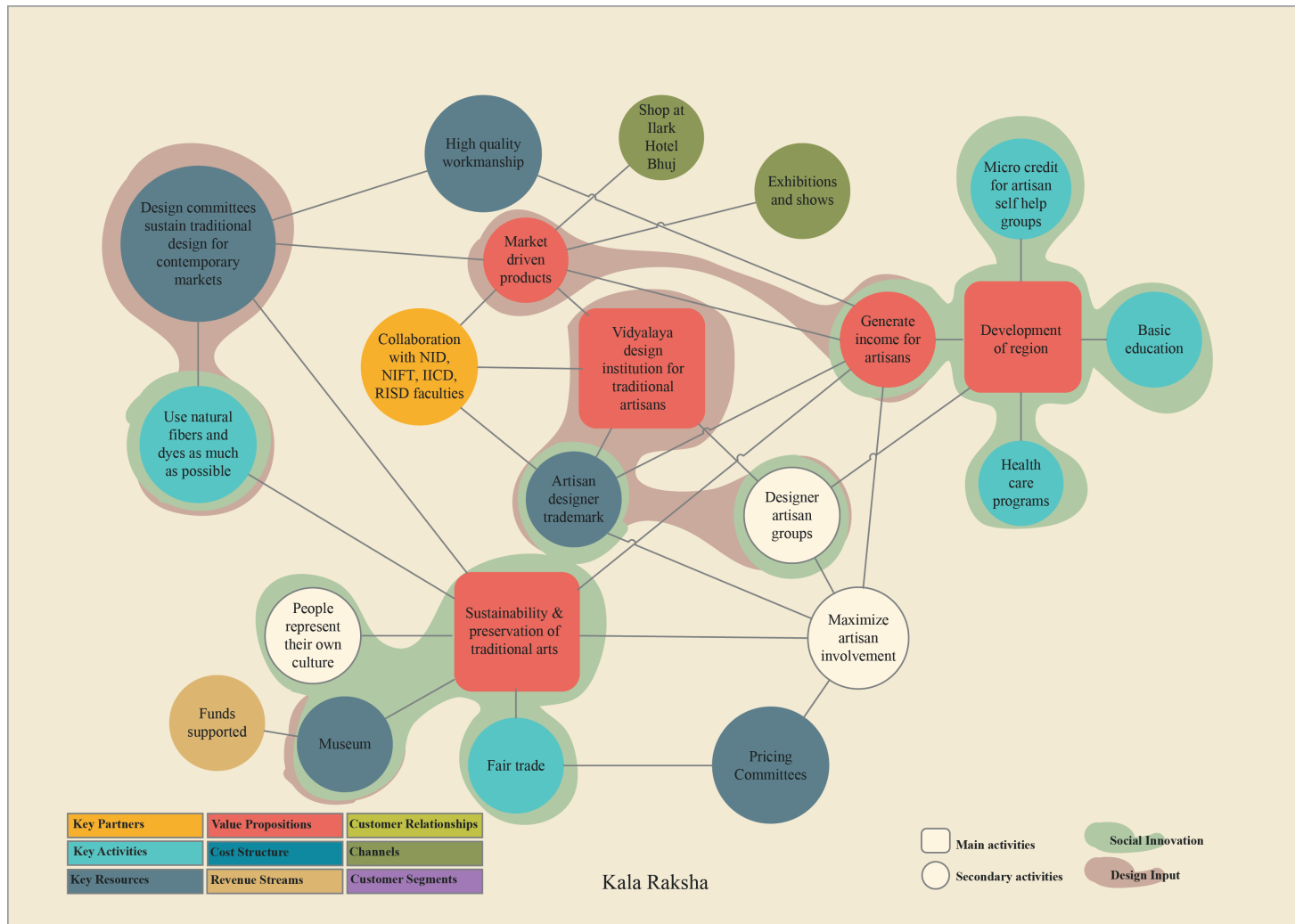


Figure 4.19 : HASM for Kala Raksha.

Kala Raksha puts a special emphasis on promotion of artisans along with their products. HASM of Kala Raksha reveals the importance of artisan design concept. The organisation aims to involve artisans as much as possible into the management process. The organisation assigns artisans in the pricing committee to decide the amount of labour spent in different stitches and motifs. In this way, they ensure fair wages for each artisan. As seen on the Kala Raksha HASM, several types of social innovation have emerged from this BM.

- Introduction of new education opportunities and design courses for artisans to increase their capabilities
- Emergence of new services like crafting tourism and design education
- Formation of local action group, KARVADA (the designer artisan alumni group)
- Change in attitudes through increase in the pride of craft making and change in young generation's perception of craft
- Establishment of the museum and online craft database in order to preserve the craft and support resources for innovation
- Introduction of fair trade pricing committees and fair wages, changing social structure of business
- Development activities aiming to improve health conditions and focusing basic education of villagers
- Income generation activities through employing artisans, training and employing people as tailors in the organisation

4.2.2 Shrujan

Shrujan Trust targets the largest artisan population among four Kutchi organisations studied in this chapter. Established as a corporate social responsibility leg of the Shroff industries, the organisation has a managing member from Shroff Foundation. The organisational mission stresses on improving lives of rural women, preserving local craft and creating premium quality products for the market. Aiming at highest quality, adapting process management methods, targeting large group of artisans and being one of the pioneers in the region glow as major strengths of the organisation,

while being very professional on production process may seem as a weaknesses for craft sector. Similar to Kala Raksha, growth of tourism in the region is an opportunity for the organisation while competition rose by other organisations is a treat. However, Shrujan products are easily distinguished and differentiated with their finest quality and relatively higher price in comparison to regular products available in small shops all around Bhuj.

Shrujan - Business Model Canvas				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Design Institutions: interns and graduation projects	Design, development and production	Premium quality embroidery products	Limited aftersale service	High segment local and global customers, tourists
Local artisans	Improve capabilities of artisans	Livelihoods for craftswomen living in remote villages		Resellers
	Research and documentation about craft and culture			
	Resource management and quality assurance process			
	Key Resources		Channels	
	Artisanal skills	Preservation of embroidery and craft culture	Awareness & sales through:	Local artisans
	Rich craft tradition of Kutch		Retail outlet at Bujoudi	
	In-house designer team		Exhibitions	
	Design interns		Resellers	
	Process management methods		Webpage, Facebook	
	Large showroom, museum designbank			
Cost Structure		Revenue Streams		
Value driven cost structure		Fixed Pricing for regular products, discounts for wholesale		
Labour cost		Donations and funds		
Operational costs		Shop sales, job order and wholesale		
Raw material				

Figure 4.20 : BMC for Shrujan.

BM of Shrujan allows receiving donations and funds, however revenue streams mostly rely on sales. Marketing channels include exhibitions, retailers and shops in various locations, whereas sales in Bhuj do not constitute the biggest part of income generation. Working regularly with over 3500 artisans from different villages obliges Shrujan to develop production management tools like product coding to assure quality and an artisan supervision system. Specific emphasis on quality is observable over the textile goods exhibited and sold in the showroom at the campus of Shrujan.

Physical and digital design banks are essential resources for the organisation in terms of product innovation. Although, the design bank is not open to public but only to artisans and designers, well-established museum with documented craft goods is open to visitors. In this manner, the campus of Shrujan constitutes an important tourist attraction asset. Moreover, the organisation looks ahead of this position with a

new facility plan going to shelter rooms for various craft demonstration activities and larger exhibition halls. During my visit to the city in January 2014, the construction was still going on for this large building. Yet, that is a sign of Shrujan's desire to gain larger share from the region's tourism pie.



Figure 4.21 : An embroidery craft sample from the Shrujan exhibition, Bhuj.

Likewise Kala Raksha, Shrujan fundamentally aims to preserve traditional embroidery craft by developing new products. The organisation originates its creations on the motifs and stitches traditionally innovated by artisans. However, involvement of artisans in product innovation is relatively limited as compared to Kala Raksha. The organisation targets high-end market segment by improving quality of products, which usually means finer embroidery work and shorter stitches. Yet, this approach is limited to the physical structure of fabric.

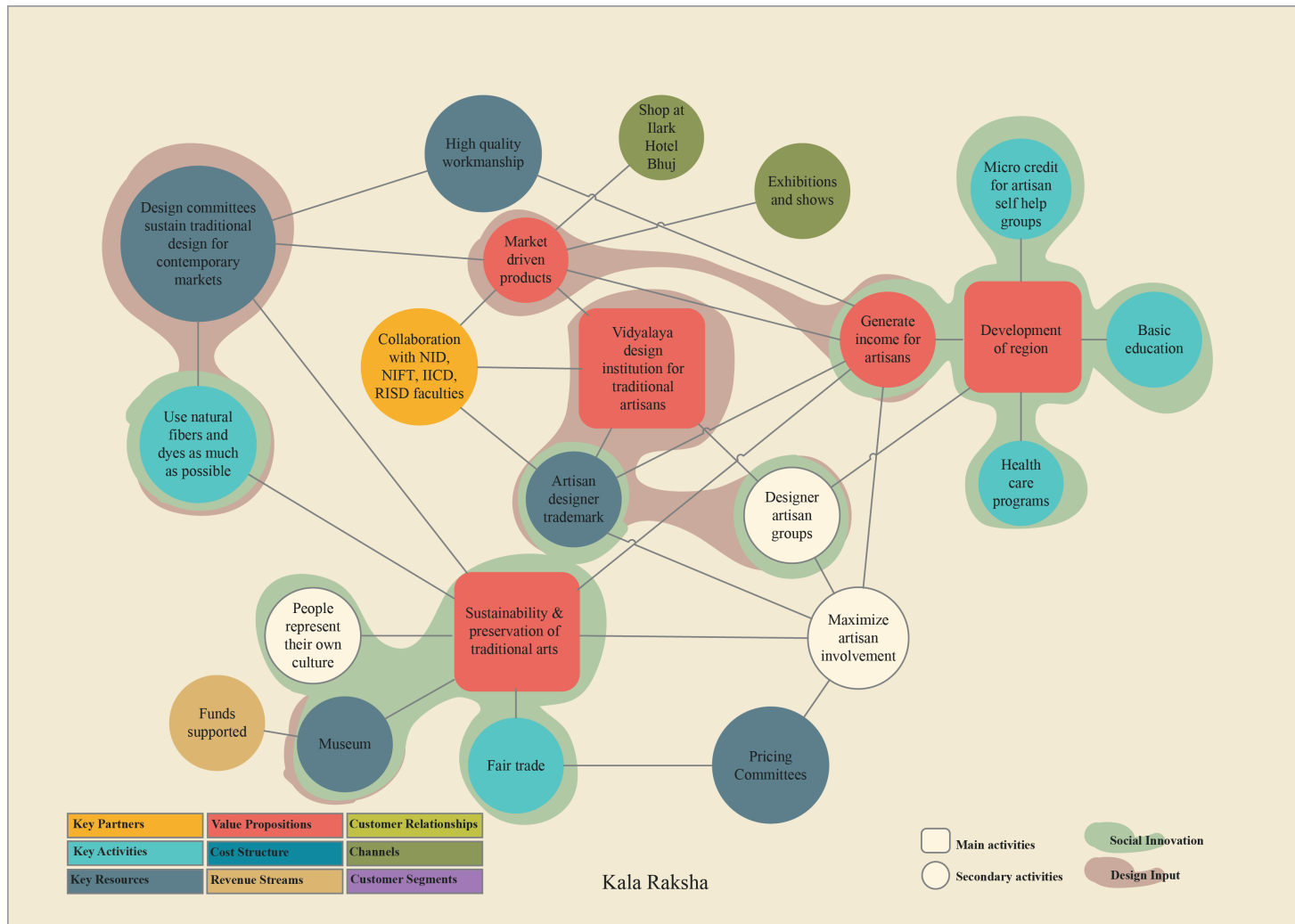


Figure 4.22 : HASM for Shrujan.

As A. Shroff (personal communication, January 11, 2014) explains, the production process in Shrujan usually starts with the design team. The team is responsible to define the composition as combinations of motifs sourced from the design bank. Later on, the same team decides the products for the embroidery to be implemented on. After these decisions, artisans are supplied with customized kits by field supervisors. These kits include all necessary information and material like colours and motifs to be applied, raw material and tools to be used. In this process, artisans are asked to fill in the textile printed frames using predefined embroidery types and colour instructions. Even though the output quality is above satisfactory, the approach has certain weaknesses in terms of taking artisans apart from product innovation process.

Unlike bamboo furniture, embroidery craft by itself does not constitute the end product. Thus, amount of the artisanal contribution in the outcome vary depending on the design of the product. For instance, a hand woven embroidered shirt would constitute intense artisanal input while added craftwork might remain limited if it is applied on an industrially produced handbag. Consequently, reducing artisanal input in the production process contradicts with the craft based livelihoods strategy of the BM. Under these circumstances, Shrujan employs a critical pro-artisan filter in design decisions, which rejects any design involving less than twenty per cent craft input. Such a strategy is the outcome of a rigid business intelligence of a non-profit organisation.

In the production process, artisan-grading system is used to identify the appropriate artisan group to be assigned for suitable work. Since every artisan has a different level of skill, capability and allocable time on craft production, the organisation gives decision according to the grade of every artisan. However, this method is not limiting the involvement of wannabe artisans. On the contrary, often relatives of artisan women are easily involved in the work and start earning income through simplified and sub-divided work pieces (S. Gera, personal communication, January 13, 2014). In this manner, production management system encourages new artisans to start learning and practicing craft. Yet, further dividing the craft work into smaller parts may also result in alienating artisan from the whole product and thus the instinct proud embedded in crafting may fade out, and consequently the whole process turns

into a more mechanistic way of manufacturing. In summary, designers enable the BM at four levels.

- Research level: Documentation of embroidery craft as tangible objects and its meaning, ethnic roots, stories and culture attached to distinct motifs and objects
- Product level: Tactical level interventions as preserving and interpreting traditional motifs in new products, and market level interventions such as continuous efforts to design marketable embroidered products
- Experience level: Design of museum and Shrujan campus as a touristic visit spot
- Organisational level: Design of semi-finished products to be filled by artisans and artisan grading system

Shrujan stands out as a successful and large craft organisation effectively covering thousands of artisans from diverse rural settings. The organisation creates livelihood opportunities for thousands of people with its strong motivation of producing marketable high quality products. In terms of partnership with design institutions, Shrujan is rather conservative. Roles of designers in this case mainly include co-creator, coordinator and capacity builder. Additionally, as shown in the Shrujan's HASM, the BM fosters several social innovation themes as follows:

- Changing social roles and attitudes of rural women, enabling them to earn income
- Fostering dissemination knowledge of profit making
- Preservation of local crafts and culture

4.2.3 Qasab

Qasab was initiated as an income generation project for KMVS in 1997, but later, it evolved into a self-sustaining enterprise. The idea to provide Kutchi women the opportunity to sell their embroidery handicraft without leaving their villages and without intervention of profit-motivated middlemen. P. Shah (personal communication, December 26, 2013) and M. Raste are founding members of KMVS,

Qasab and Khamir, which will be examined in the next section. Both have been working in numerous development projects in the region for decades. Similar to Shrujan and Kala Raksha, Qasab is focused on embroidery craft but unlike them, the organisation is a producer company working based on cooperative principles. The company does not accept funds and donations, hence the revenue streams include only sales. This emerges as an important strength of the organisation, while the field experience of founding members also a crucial asset. Qasab has a central office located in Bhuj, which is also an advantage in terms of touristic accessibility.

Qasab mainly targets B2B market and this is both an advantage and weaknesses for the organisation. Relying on bulk sales and creating partnerships with industrial enterprises stand for strengths and opportunities. Whereas working with bulk orders, even though it never reaches a mass manufacturing level, could stress on standardisation efforts and may create a threat for handicraft production process.

QASAB - Business Model Canvas				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
KMVS for access to large artisan network, local knowledge, to support sustainability of craft tradition and development of the region Industrial partners as suppliers and a part of production process Local artisans	Design, development and production	Good quality crafted products with very fine finishes	Personal communication	Mostly B2B, wholesale National and global consumers, tourists (no segmentation)
	Benchmarking and network access support for business development between artisans, designers and entrepreneurs		Co-creation	
	Key Resources	Facilitate designer, artisan entrepreneur collaborations through networking	Channels	Local artisans Designers Entrepreneurs
	Artisanal skills	Preservation of embroidery tradition craft of Kutch	Awareness & sales through:	
	Showroom in Bhuj	Create livelihoods for local craftswomen	Craft showroom in Bhuj	
	Rich craft tradition of Kutch		A shop at Prince Hotel Bhuj	
	Past experience and network from KMVS		Webpage, Facebook	
Cost Structure		Revenue Streams		
Value driven cost structure		Fixed Pricing for regular products, discounts for wholesale		
Labour cost		Shop sales, job order and wholesale		
Operational costs				
Raw material				

Figure 4.23 : BMC for Qasab.

The main value proposition of the company is empowering women with livelihoods while facilitating craft-design collaboration supporting entrepreneurship and business development. Although the customer segment mainly involves B2B market, outstanding works of 1200 artisans working for the organisation is available for individual consumers at the Qasab showroom and at the shop inside the Ilark Hotel

located in Bhuj. P. Shah, co-founder of Qasab, has enormous experience in development projects in the region through KMVS, thus, his network and past experiences constitute an important resource for the organisation facilitating craft design collaborations.

Resellers and distributors from Canada, Europe, all over India and other parts of Asia offer good quality embroidery crafted products of Qasab. However, products do not emphasize the social impact of the organisation, which stems from the initial strategy of the business. As P. Shah underlines Qasab did not choose to stand on the social role of the organisation, in contrary, it was built as a proper self-sufficient business.

So, we create something that can absorb this as well as appeal to the aesthetics of the modern buyer. When you see something, it is not just buying it because you want to support some charity. So, we decided to bring a change, we are not a philanthropic organisation . . . , this has to be something fair to all. , i.e. to the customer, as well as to producer. Artisan gets better return, but customer also gets good value to of the money, this has to be balanced” (personal communication, December 26, 2013).

However, this doesn't change the fact that women working for Qasab are empowered in many aspects besides livelihoods. Similar to other three organisations mentioned in this section, benefits received by women foster social changes in their lives including increased respect and freedom, access to education and health services for them and their family.



Figure 4.24 : Qasab shop and products, Bhuj.

During the production process, in house designers are responsible for the design of products, whereas a few field supervisors work with artisans to produce embroidery crafts. Generally, traditional motifs and stitches are applied on products with little modifications to make them more marketable. These modifications include changes in the palette from contrast towards muted colours, reduced use of decorative objects and replacement of silk fabric with cotton. Qasab often collaborates with large industries and co-designs new products with them. For instance, embroidery applied leather bag was co-designed and produced with an Ahmedabad based leather factory.

To facilitate collaboration between artisans, designers and entrepreneurs is one of the crucial value proposition offered by Qasab's business intelligence. This facilitation process creates social and economic value supporting all stakeholders' mutual benefit. Neelam, a French company offering hand crafted authentic Indian fabric, is just an example among many other facilitation cases.

Neelam's current managers, a designer-carpenter couple, met P. Shah to develop new business opportunities with Kutchi artisans. Although, Qasab doesn't gain a direct economic profit out of the facilitation process, results of these collaborations increase the potential of the cooperative and networking capabilities of artisans. As D. Timor from Neelam states during the interview, "knowing Pankajbhai is knowing all the artisans of Kutch" (personal communication, December 26, 2013).

Neelam creates a niche market in France for embroidery and handloom craft originated in Kutch. The BM of Neelam could also be a research case in order to investigate how design entrepreneurship shifts the function of a product and enables it in a different market. However, the value proposition does not constitute finished-products, because they do not match with European consumers' taste. Instead, the company offers DIY sets for customers to help them create their own craft by using embroidered fabric pieces. Customers usually embed these embroideries into their own products or create compositions as art pieces.

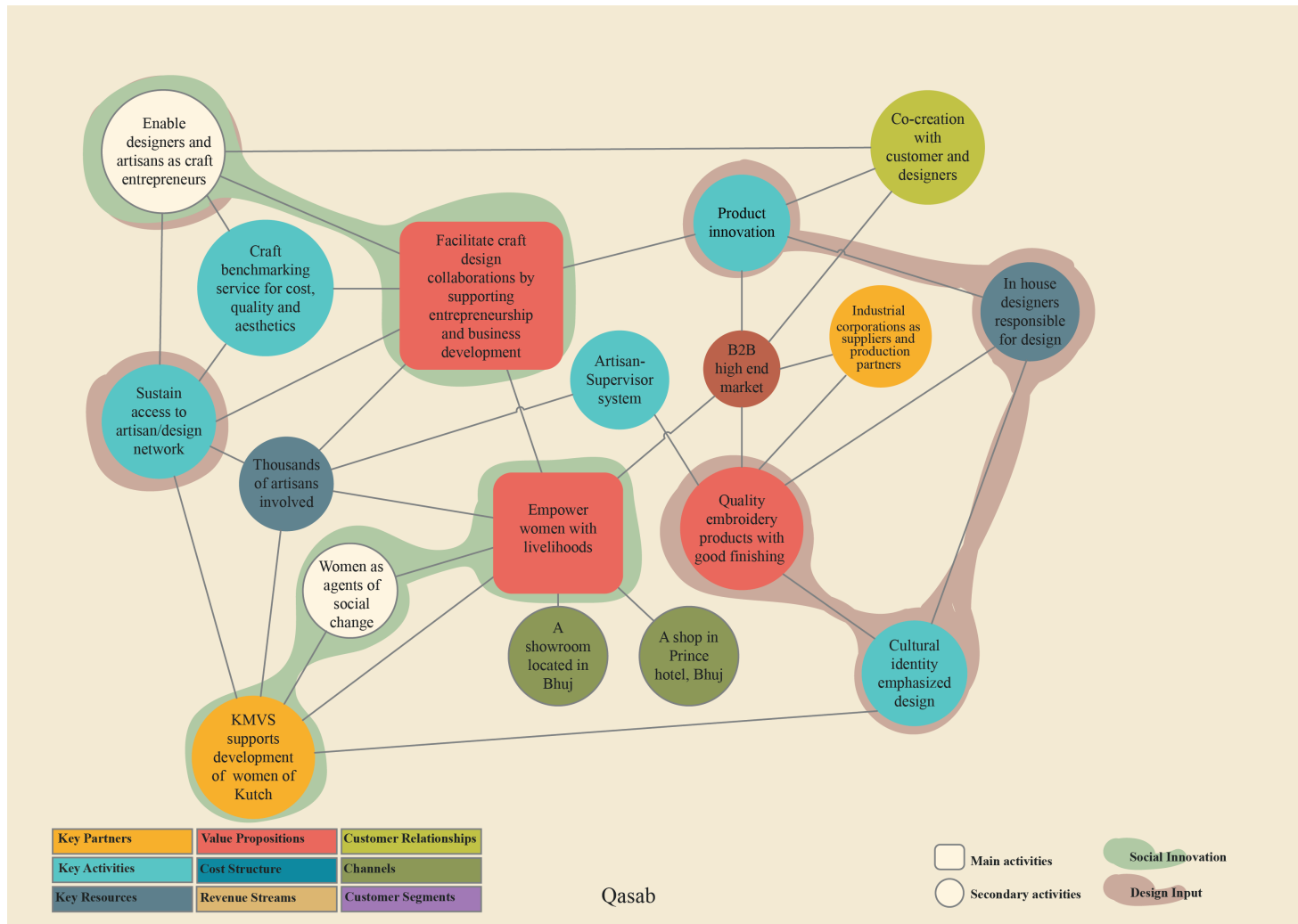


Figure 4.25 : HASM for Qasab.

Although they were running this business for quite a while, they were not satisfied with the quality of craft produced by artisans. In this case, the crucial input offered by Qasab was arrangement of a meeting with right artisans capable and ambitious enough to produce the desired outcome. Moreover, through Qasab, they met other artisans such as B. Khatri practicing tie & dye craft. Later on, they were invited to explore B. Khatri's workshop for collaboration opportunities. In this way, Qasab provides a benchmarking service, promoted artisans as entrepreneurs and fostered business development between artisans and designers.

During the interview, P. Shah summarized in following sentences how he makes it easy for entrepreneurs to start a business with local artisans:

First time when we started at USA market, this man said, everybody is interested in craft and this kind of things, we said ok, how much weight you can carry, and how rupees can you invest. You tell us and we will make the package for you. He came back and said 32kg and 35000 Rupees. And we put together a bag full of products. And he kept asking for more and more and this worked for many years (personal communication, December 26, 2013).

The business development facilitation role is quite encouraging for both artisans and designers. P. Shah's deep knowledge about the region and business understanding was so immersive that it even convinced me to invest in this type of collaborative business. In this case, designers enable the BM of Qasab in many levels and forms.

- Research level: Research and documentation of embroidery craft culture
- Product level: A combination of tactical level interventions such as preserving and interpreting traditional motifs and market level interventions like designing contemporary product and marketable collections
- Organisational level: Designers' collaboration with artisans, developing new business opportunities for both of them
- Strategic level: Fostering artisan-designer collaboration and enabling entrepreneurship through new product design and development

Through offered social and economic value propositions, three major social innovations occur.

- Facilitation of collaboration between designers and artisans, access to each network changes the way artisans work. In addition, artisans gain new knowledge about market and product to make profit through collaborative innovation process
- Qasab identifies women as agents of social change, and with the livelihood opportunities, they are enabled to create change. KMVS's support for women of Kutch also overlaps with the efforts of Qasab as the producer group, which acts like a cooperative. In this manner, a change in community behaviour and attitude emerge as social innovation themes
- Preservation of local craft and culture is another social innovation stand out in this case

4.2.4 Khamir

Initiated in 2005, Khamir is a relatively younger in comparison to other Kutchi organisations involved in this study. Kutch is a region rich with diverse craft culture besides embroidery. Stemming from this fact, Khamir was co-founded by P. Shah and M. Raste to embrace all craftspeople together with their cultural values and traditions. In this manner, the organisation acts more like a social enterprise trying to preserve craft culture of Kutch within a holistic perspective, whereas Qasab and Shrujan are mainly focused on creating income for rural people. Covering diverse craft traditions, fostering collaboration and innovation are the main strengths of the organisation. Additionally, the campus building designed by a CEPT faculty emerges as another strength. Peripheral location of the campus might be pointed as a weakness, as well.

Khamir does accept donations and funds, but mainly relies on product sales as revenue streams. The campus includes a shop, a guesthouse, exhibition halls and interactive craft demonstration rooms where artisans work on various crafts. Thus, increased tourist attention to the local craft is an opportunity for the BM. The guesthouse is open for visitors who are interested in collaborating with craftsmen and designers. Another opportunity is collaboration potentials with industrial firms and NGOs willing to realize philanthropic work in the region. Although it has unique

market position, local competitors are still a threat for the organisation. For instance, Shrujan's new facility will be in a direct competition with Khamir.

Khamir's holistic development approach is in the centre of its strategies and activities. Moreover, the organisation support developmental activities, for instance "Out of the box" education seasons provide unique experience for local children.

The service aims to train them with basic lectures like language and math, and also to introducing them to numerous craft works at the campus. Consequently, children are expected to realize the value of artisanship and respect it as a career.

Khamir - Business Model Canvas				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Government of Gujarat Khamir for its foundation	Facilitate design, development and production of craft Regular procurements from artisans Artisan development activities Platform for innovating products, processes, prototypes Documenting and promoting craft and artisans	Good quality crafted products in various types Open craft studio and guesthouse for artisans and designers Preservation of all Kutch's crafts and culture	Online service for wholesale customers Co-creation	National and global consumers, tourists (no segmentation) B2B wholesale
Various NPOs and commercial corporations support for: - development of the region - recycled plastic weaving camel wool and organic cotton projects	Key Resources Khamir campus building (Museum,shop,craft studio) Artisanal skills Artisan & designer network Rich craft tradition of Kutch	Innovative products and processes Support development of artisans	Channels Craft outlet in the campus A butique in Ahmedabad Exhibitions, fests, auctions Online shop Webpage, Facebook, Blog	Local artisans Designers Entrepreneurs
Local artisans				
Cost Structure		Revenue Streams		
Value driven cost structure Labour cost Operational costs Raw material Procurements from artisans		Fixed Pricing for regular products, discounts for wholesale Shop sales, job order and wholesale Gusthouse rents Donations and funds		

Figure 4.26 : BMC fo Khamir.

The BMC reveals the fact that in addition to sales, collaboration with wide variety of partner organisations is an important driver of its activities. For its innovative recycled plastic weaving project, Parle4 supports recycled plastics materials while KMVS engages local women to collect recycled plastics from the region. Development of organic cotton fabric is another innovative project conducted by Khamir. Increased market demand of organic fabric and natural dyes might be main reason for initiation of this project. However, there are other reasons beneath.

⁴ Parle is a company producing biscuits and other types of package food and founded during British colonial times. For more information please see: <http://www.parleproducts.com>.

Lack of rain and increased cost of conventional farming have caused the decay of cotton farming in the region although once it was a common occupation. Consequently, artisans started to purchase fabric from other cities in order to continue practicing craft. For this project, Khamir collaborates with several partners to revive organic cotton farming which needs much less rain and much less operational cost. In addition to collaboration with farmers, for this project, Khamir works with artisans to create new designs for organic cotton fabric products.



Figure 4.27 : Recycled plastic woven fabric, Khamir Campus, Bhuj.

In this manner, Khamir supports innovation and experimentation to explore future opportunities of craft economy. As an architect employed in Khamir, S. Ramakrishna (personal communication, December 28, 2014) underlines that craft has to change and evolve according to the circumstances of its environment but it will survive. This approach is well aligned with Khamir’s strategies and activities as seen on Figure 4.28.

Khamir invests in research and documentation. Moreover, well-designed exhibitions take attract tourists, designers and entrepreneurs. For instance, a recent exhibition titled “Kachchh ji Chhaap 500 Years of Batik and Block Print” was about the famous Khatri family lives in Kutch. This family has its own methods to produce and use naturel dyes on block printing and the exhibition includes huge amount of data revealing the history of the family and their natural dye tradition.

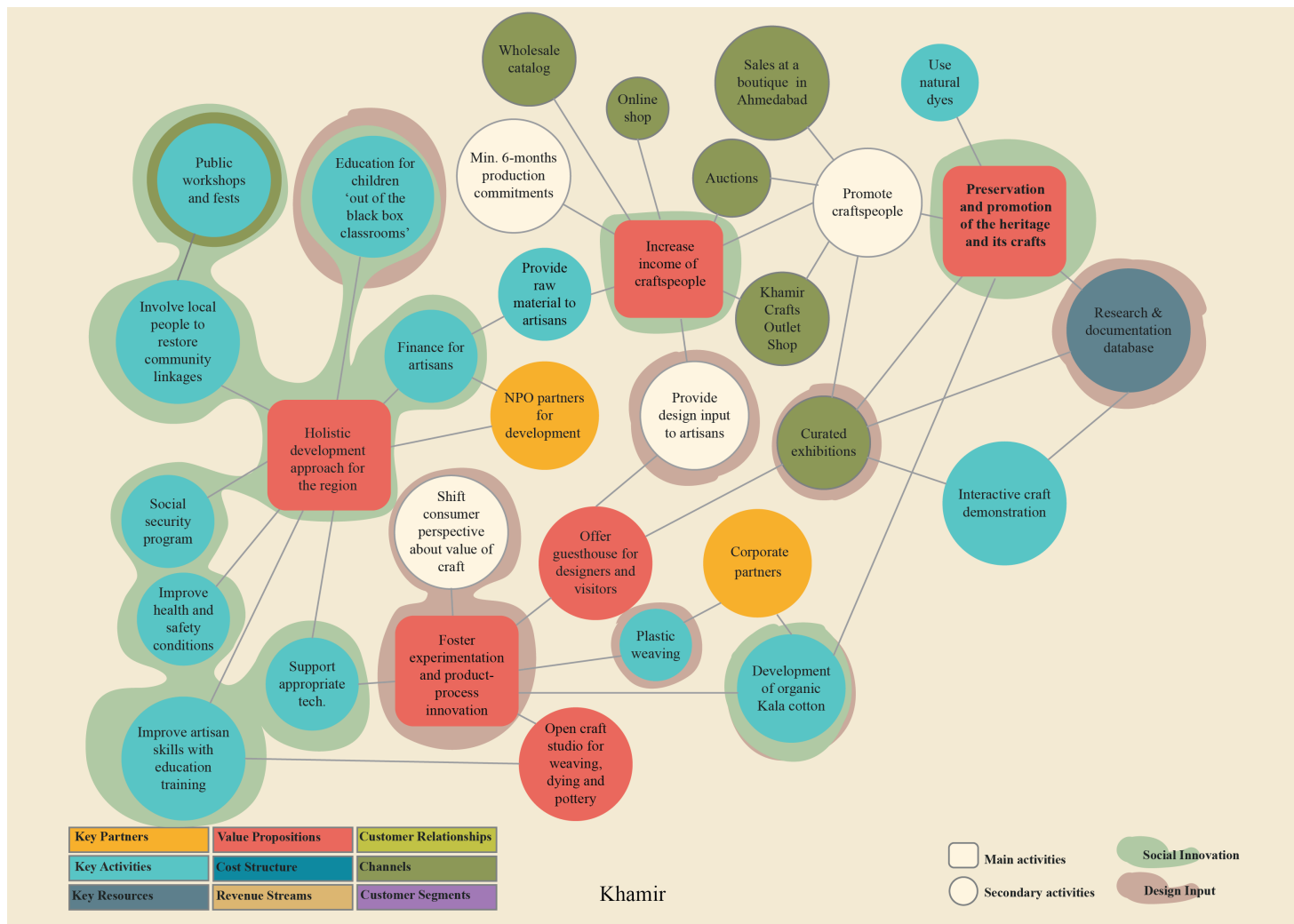


Figure 4.28 : HASM for Khamir.

To foster artisans as artists innovating their craft boldly, Khamir organizes auctions for unique block-print and batik crafted large textile masterpieces. The latest auction was also open for online bidding, which connects unique works of artisans with global consumers. In summary, for dissemination of traditional knowledge and promotion of artisans, Khamir uses various communication forms including its own website, blogs and video sharing domains.

For example, a recent documentary video titled “Master artisans and their pieces” exposes various forms of textile craft boldly designed and applied on fabric (Khamir, 2014). In this video, mechanised production processes designed by artisans emerges as a grassroots innovation. Moreover, Khamir supports appropriate technology development for craft production. However, mechanization of craft process would be a point to criticize in terms of reduced handwork.

The organisation has close relationships with designers through both institutional and personal collaborations. Consequently, designers enable this BM contributing in various levels as follows:

- Research level: Research and documentation about artisans, their life, craft and local culture
- Product level: Tactical level interventions such as preserving and interpreting traditional motifs, collaborating with designers to design new motifs and symbols. Additionally, market level interventions like designing marketable collections made of various crafts
- Experience level: Design of museum, exhibitions and the guesthouse, which eventually contribute client experience in the campus. Out of the box school
- Organisational level: Plastic woven fabric products via collaboration of commercial companies supplying waste plastic material and non-profit organisations helping collection of plastic from garbage in the district
- Strategic level: Introduction and promotion of organic cotton farming, which alters products and processes, and also encourages other sectors to transform and adapt

In this BM, designers take several roles including researcher, capacity builder, co-creator, facilitator and coordinator in this BM. Moreover, designers take the transformer role discussing and innovating the future of craft. The HASM of Khamir reveals several social innovations emerged through this BM.

- New services such as craft tourism, education for local children
- Several development activities such as social security programs, health and safety improvement activities, supporting artisans with finance and credits
- Supporting appropriate technology development
- Involving local people into the innovation process restores the community linkages
- Research and documentation efforts help preservation of local knowledge while videos and published materials presented in museum create awareness, increase the pride of artisan and also attract tourists
- Training and education for artisans and basic education for children conducted in campus
- Organic Kala Cotton re-introduces cotton farming and creates a raw material to market link for new livelihoods opportunities
- Income generation activities through employing artisans, training and employing people in the organization

4.3 Social BMs Enabled by Design

All of the BMs mentioned in this study create both social and economic value for their stakeholders. According to UNDP (2014a) report, there are four distinct categories for social BMs: CSR, social enterprise, inclusive business and mainstream business. Seven cases studied in this research are variations of social enterprises positioned somewhere in between CSR and inclusive business. For instance, among all cases, Sangaru Design Studio has the least socially oriented goals whereas Khamir, Kala Raksha and Shrujan have strict social goals and strategies influencing their activities. Departing from Peredo and McLean's (2006) classification of BMs according to the dominance of social goals, Figure 4.29 identifies the role of design innovation in those seven BMs.

Design is an important part of all BMs. Khamir and Sangaru Design Studio employ design innovation driven models in which new business opportunities are created through exploration of new production processes, new use of materials, forms and functions. Both give special emphasis on preservation of craft tradition but also search for the future of craft and artisanship. However, Khamir with its exclusive social goals, positions itself on the right whereas Sangaru Design Studio's social goals are subordinated to other goals and, thus, are positioned on the left hand side on the chart.

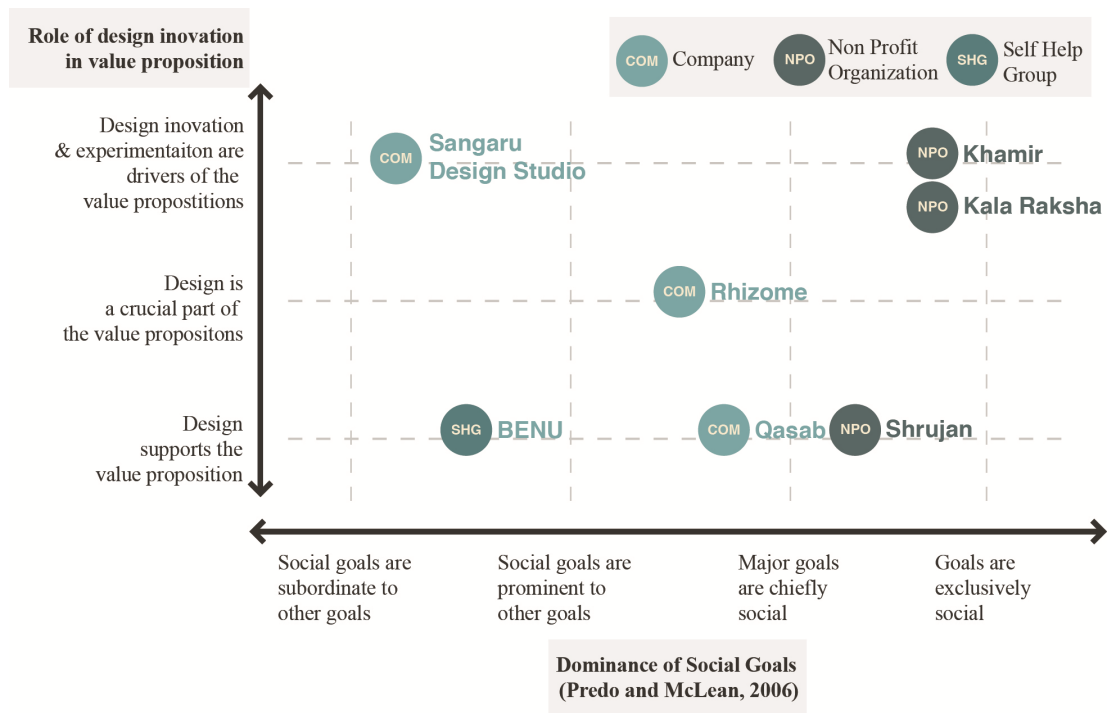


Figure 4.29 : A comparison of BMs according to their social goals and role of design.

Kala Raksha employs design innovation and experimentation as drivers of the artisan design concept. However, in comparison to Khamir, the organisation is rather focused on preservation of embroidery craft than experimenting with other crafts. Additionally, Shrujan and Qasab are positioned almost at the same point of the chart. Though Qasab clearly identifies itself as a self-sufficient brand, due to its organic relationship with KMVS and its cooperative type structure targeting empowerment of rural women positions itself at right hand side of the chart. Kala Raksha, Qasab and Shrujan aim to preserve embroidery craft tradition but this concern doesn't limit them merely with traditional products, instead they all design goods for the requirements of contemporary market such as a mobile phone cover.

Moreover, Rhizome represents a unique blend of social and economic goals and positions itself in the centre of the chart. Design innovation is crucial for the organisation but experimentation is not the major driver of the BM. Furthermore, in the BM of BENU, design and experimentation of production process are assets mainly received from the ecosystem through on-going relationships. However, empowerment of rural community and capacity building are common social value propositions offered by BENU and Rhizome.

Rhizome expands its social impact through collaborations with NGOs whereas BENU is able to build closer relationships with rural community through developed feedback loops in the system. For instance, The Khatia Baba charity group and the village's first English teaching primary school named after the charity group were founded by M. Roy as a reflection of those feedback loops indicating educational needs of the rural community. Additionally, by establishing the production units in rural areas, both BENU and Rhizome improve the accessibility of rural communities to production facilities.

In both ecosystems, designers were identified in five distinct occupations: scholar and/or researcher, student, entrepreneur, freelance consultant and member of non-profit organisation. As it is expected, scholars and researchers essentially focus on generation and accumulation of knowledge and often engage in longer projects, which make them ideal for reaching deep embedded knowledge. Additionally, social innovation and development projects frequently remain as a temporary practice for students. However, this temporary engagement also establishes an opportunity of encountering developmental problems of rural areas. Consequently, such collaborations have potentials to change perspective of students as it was for R. Rubens, G. Aggarwal and A. Noronha.

Entrepreneur designers are critical actors of the ecosystem changing its dynamics through creative destruction. Consequently, such initiatives embrace design innovation much more than regular enterprises and strengthen the link between artisans and design institutions. Moreover, as illustrated in the cases of Sangaru Design Studio and Rhizome, through sponsorships for student projects and collaborations with educational institutions, they financially nurture future researches and sustain establishment of new relationships between students and artisans.

A freelance consultant occupation is an anticipated step at the career path of a designer. However, the same cannot be claimed about a member of non-profit organisation. Economic dynamics and societal objectives of a non-profit organisation are not really familiar with a typical designer who often associated with a role on commercial competitiveness of corporations. However, as it was discussed in the literature review, borders between non-profit, for-profit and governmental organisations are becoming blurry especially in the context of sustainable development and social impact.

As non-profit organisations, Kala Raksha and Shrujan embrace marketing departments and production management processes, like a commercial company. Furthermore, social responsibility projects of commercial companies act as a non-profit organisation and use same communication tools to develop social argumentations. Thus, designers need to adjust their perspective according to this new context, which includes hybrid enterprises as actors.

4.3.1 Roles and contributions of designers

In both ecosystems, designers take several roles in order to enable BMs to foster social innovation in rural context. Most of the roles explained in the design literature were also recognized in this research (Cipolla & Moura, 2012; Tan, 2008, 2009, 2012). However, some roles appear as prominent, like project champion, BM developer, social entrepreneur, craft advocator, network builder, educator and transformer.

Likewise in the celebrity role, in the “project champion” role, designer’s name is used for identification of certain types of products, processes and strategic plans. For instance, M.P. Ranjan’s presence in the Northeast is an illustration of this role, which still supports motivation for local people and carries the information as a set of ideas and network access. In this perspective, the project champion role has a symbiotic relationship with the multiplier role and strategist role. Moreover, often, by definition the project champion role covers both of them.

Functional activities like strategic contribution to a development project and gaining experience in repeating a project successfully nurtures this role. Furthermore, this role promotes renewable materials or sustainable production processes, which eventually

change perspective of the market developing green alternatives of existing products. Additional crucial impact of this role is to bring focus of designers on the material, as it is for the case of S. Sangaru, who consequently promotes bamboo as a green resource to produce contemporary products.

The “BM developer” role and the entrepreneur role are quite close to each other since both roles involve certain business intelligence. Nevertheless, business thinking and ability to use business-planning tools are not qualifications expected from a common designer figure. However, as it was discussed in previous chapter, T shaped designers can take this role to enable social BMs in rural.

As a further phase of BM developer role, designers bare economic risk themselves and take the role of “social entrepreneur” just like R. Rubens, A. Paul and S. Sangaru. In comparison to BM developer role, social entrepreneur role proactively investigates local aspects of rural capital as components of potential BM and formulates a creative destruction. Moreover, social entrepreneur role identified in this study functions on establishment of both commercial and non-profit initiatives.

The “Craft advocator” role of the designer exists in all cases but is prominent especially in the case of Khamir. With this role, designers promote artisans and their culture in various forms of public communication including exhibitions, auctions, published media and video documentaries. These efforts eventually help preserving the culture and contribute to researches aim to identify embedded tacit knowledge. Another form of advocacy occurs on the sustainability aspects of craft. In some cases, design focuses on changing the general understanding of market concerning with craft or specifically some type of material. Expressing the functional and symbolic value of craft products in such a way that convinces consumers to buy craft products instead of mass manufactured ones is also a task for the designer.

Promoting bamboo furniture against cane portraits a good example of that. Furniture made out of cane are generally sold cheaper in the national market and perceived as unstable. Moreover, bamboo furniture experience is not saturated in the market. Thus, the low quality feeling and cheapness of cane furniture were used to draw back bamboo furniture sales. Generally customers are either willing to pay way little for bamboo furniture stemming from the “cheapness” perception derived from past

experiences with cane products, or prefer to buy industrially manufactured wooden furniture. The Northeast bamboo project addressed this very perception of the market. In this sense, the crucial role of designer emerges as changing the consumer preference towards more sustainable alternatives. Thus it is possible to claim that, the “craft advocator” expands to cover the “sustainable alternative developer”.

Designer as “network builder” is another noticeable role in the case of Sangaru Design Studio. As a virtuous circle, S. Sangaru experiments with craft and co-design new products with artisans, which eventually allow him meeting new artisans and enlarging the network. This network engages new artisans to the BM as partners, creates new livelihood opportunities for artisans and increases their capabilities.

Even though the “educator” role could be easily associated with educational activities of the faculty, in the case of Kala Raksha, the “educator” role involves more than teaching and covers designing innovative and easy ways to facilitate conveying design knowledge to artisans. Through this role, designers enable artisans to design their own products and thus foster innovation in the BM. Consequently, artisan designers gain a new language to communicate with professionals and enhance their respond to changing market demands.

Moreover, “transformer” role of designer includes exploration of future of the craft and experiments with appropriate technology interventions in order to develop new processes, production equipment and materials. Recycled plastic material and organic cotton fabrics of Khamir, appropriate technology interventions of Rhizom aim to close the gap between market and artisans, and DIY products of Neelam illustrate patterns of this role. In this manner, through this role, designer can enable a BM with products, services, production processes, new partnerships or strategic decisions in order to transform current practice into a new one which is more sustainable, eco-friendly and beneficial for artisans.

Designers having distinct occupations and various roles, enable BMs through various levels of interventions. These interventions eventually form the integration of design in the ecosystem. The following section discusses the levels designers intervene in components of BMs.

4.3.2 Design for social innovation through BMs

Reviewed literature on design, systems thinking and innovation indicates six intervention levels in a system: tactical, market, innovative, experience, organisational and strategic level interventions (Buchanan, 2001a; Dewberry & Johnson, 2010; Gong, Zhang, & Zhang, 2010; Keeley, Pikkell, Quinn, & Walters, 2013; Meadows, 2008; Moritz, 2005; Ranjan, 1998). Among them, Tactical level and market level interventions are combined under the product level category for this study. Moreover, a new level of intervention was identified as research level.

Research level intervention corresponds to all the efforts undertaken to gathering necessary information about the rural capital, including natural capital, man-made capital, human capital and social capital, in order to identify potential partners, resources and activities of the proposed BM.

Although this level is an integral part of almost all design activities, an effective design research conducted in rural settings would add a crucial value to documentations and inventory reports. For instance, craft documentation reports authored by design students and archived at the NID library reveal facts about how designerly ways of researching can contribute to an archival document a product innovation value. To research craft inventory with a design perspective brings a certain emphasis on objectification and market thinking to the research, and enables further possibilities of marketable product development. In this manner, research level intervention of designer emerges as crucial for development of social BMs based on endogenous capacity of rural areas.

Similar to Ranjan's (1998) description; tactical level interventions include design of colour, texture and forms of material, while market level interventions cover design of marketable products, product families addressing market trends. The combination of these two levels forms the product level interventions. Product level interventions generally increase competitiveness of a BM and are often expected to have contribution of designer in development projects.

Moreover, the experience level corresponds to client experience design, which most likely involves a combination of products and services. Design of client experience shifts the perspective of consumer in a way that goes beyond plain product.

Museums, craft demonstrations and auctions would be examples for client experience design in a social BM.

To intervene through innovative level requires inventive, patented or awarded products and processes. Often such interventions open new perspectives for the business and in a larger context for the industry. For instance, design of novel joints enable assembling various forms of bamboo furniture in an innovative way for BENU. Likewise, recycled plastic fabric developed by Khamir would be an example of innovatively changing fundamental perception about the textile and bringing a new perspective for the industry.

Organisational level interventions go beyond new products and services and emerge through the BM components. Such interventions aim to improve overall business processes from production to marketing. In this manner, to enrich networking capabilities of the BM, to make collaborations with new partners, to design and develop appropriate-technology production tools and processes, to develop expertise on resource reproduction such as bamboo cultivation, to develop artisan-designer trademark, to design semi-finished products which convey production guideline to the artisans are instances of these type of intervention identified in the cases. Moreover, to develop a new value proposition, to change proportions of revenue streams, to identify a new marketing channel and target market would resemble this level of contribution.

And the last but not the least, strategic level interventions include deliberate influences on policies, practices and relationships between actors of the ecosystem. Such interventions stimulate the entire ecosystem and trigger a long-term transformation.

For instance, introduction of organic cotton fabrics, a holistic transformation of certain agriculture practices and establishment of the rural design institution that trains artisans as designers, who eventually shift the whole perspective of craft in the region, are examples identified in the cases. Furthermore these types of interventions refer to critical inputs like development of a mark of excellence, Vietcraft Value, which is a certification of high standards of social, cultural, economic and ecological sustainability. Another character is their correspondence to sustainable development

goals; to increase employment in rural areas leveraging capabilities of local people and to enable them to be entrepreneur are identified as strategic level interventions. In the strategic level, the given emphasis on sustainability can also be conveyed through influencing on the common perception about a renewable resource and promoting it in various levels. Identified contributions of designers in related to emerging social innovations were illustrated in Table 4.1.

Table 4.1 : Design for social innovation through BMs in rural.

Contribution of designers	Social innovations
Through identifying embedded knowledge, traditional practices and local resources as components of value propositions	Preservation of traditional culture and practices Creating new livelihood opportunities for rural people Introduction of new services such as craft tourism
Through development of pro-poor and labour-intensive technologies, sustainable products and processes as components of BMs	Increasing grassroots level empowerment and livelihoods Increasing environmental sustainability conciseness in local Introduction of organic farming activities
Through designing, developing or facilitating capability building activities	Developing education, training and workshop opportunities aim to increasing capabilities of local people
Through facilitation of developmental activities addressing social and economic needs of stakeholders	Development activities such as social security programs, health and safety improvement efforts, supporting artisans with finance and credits
Through building and/or creating access to designer, artisan and institutional networks	Enabling communication network between local and nonlocal artisans and designers Local institutions collaborating with local people to improve resource production Collaboration between designers and artisans
Through promoting craft in cultural and business aspects and increasing awareness on the issue	Online services for promoting local culture and values Changing social roles and attitudes of people through increase in the pride of craft making and change in young generation's perception of craft
Through research and documentation on craft culture and artisans	Fostering dissemination of tacit knowledge of craft making
Through developing inclusive innovation systems and fair business practices	Restoring community linkages through involving local people into the innovation process Introducing fair trade pricing committees and fair wages, changing social structure of business Formation of local action groups and financial alliances

As it was suggested by Ranjan (1998), design can address all intervention levels at the same time in various degrees. However, often the role of designer in developing projects is underestimated as product level intervention. Main contribution of designer in the case of Mardin silver filigree project mentioned in the introduction chapter, was also more or less a product level intervention, which has not really improved their business in long term.

Entrepreneur designers contribute to almost all components of their BM, while in other cases; designers usually become partners supporting BM through resources, activities, social value propositions and channels. In order to identify the connection between design and social innovation through the BM, presented BMCs and ASMs were examined as linkages between main BM components. Findings show that in total 45 links were identified in seven BMs. A list of identified linkages was presented as a table and a visual in Appendix E and Appendix F.

To sum up, taking various roles including project champion, BM developer, social entrepreneur, craft advocator, network builder, educator and transformer; designers enable non-farm BMs in research level, product level, experience level, innovative level, organisational level and strategic level interventions and consequently foster various types of social innovation in rural context.

4.3.3 Major challenges to design addressing rural BMs

Since the research concentrates on implemented projects in order to trace roles and motivations of designers over seven BMs, challenges faced during the intervention process have not been investigated. In this manner, the study does not introduce a new challenge to the literature but merely confirms and examines them in rural context.

First of all, as defined by Morelli (2007), the epochal shift of the whole production and distribution system is a strong challenge for any design effort addressing rural BMs. DIY kits of Neelam is an evidence for such a change in which customers are not passive consumers anymore but active participants of the process. Nevertheless, DIY is a narrow perspective for future of craft and designers need to find new mixtures of products and services to include consumers and to create collaborations between stakeholders.

The second major challenge emerges from the blurry nature of rural innovation ecosystems. These ecosystems involve collaborative entrepreneurs transforming entire sectors as identified by Simanis and Hart (2008), and consequently borders between private, public and non-profit sector fade out. This new business environment is more open, collaborative and social than ever. Thus, designers need to adjust their tools according to this new environment in order to develop effective results.

Designers addressing social needs of rural communities have to focus on BMs in order to ensure sustainability of outcomes. The notion of enabling platforms (Jegou & Manzini, 2008; Morelli, 2007) and more specifically, a type of social inclusive BM would correspond to this need. Thus, in addition to design thinking, they should be equipped with business thinking in order to come up with business solutions addressing wicked social problems of rural settings. This challenge was quite obvious in the case of Mardin silver filigree project. Designing marketable products is not enough to enable BMs in this case, while invisible structures like Vietcraft Value are needed for sustainable solutions. Within this perspective, it is possible to claim that designers need to cope with policies and management concepts much more as they approach to higher-level interventions.

In addition to these challenges, designers' inability to drive implementation process, cost to the project, lack of knowledge about government sector, mental barriers and short-term engagements are main challenges that were mentioned in the literature and also observed in this study.

4.3.4 Towards a social BM Template

Chatterjee (2013) identifies three types of BMs; efficiency based, perceived value based and network value based. All of the cases included in this study fall under the perceived value based BM category. Positioned at the heart of any BMC, value proposition is the crucial feature to identify cases. As seen on the previous sections, value propositions of BMs include products and services, which are subject matter of an economic transaction. In addition, there are social value propositions like preservation of traditional embroidery craft, income generation for artisans and

development of the region, which are neither transactional nor financially measurable.

Figure 4.30 presents an aggregated version of BMC, where all seven BMs were accumulated. Additionally, items marked with bold letters on the canvas, indicate common items shared by all cases. For instance, building partnerships with design institutions is a common pattern of all cases. Additionally, all BMs keep close relationships with NPOs and NGOs, and accept direct or indirect support of local and national governments.

Design, development and production of craft, and capacity building efforts emerge as key activities for all BMs. Moreover, embedded craft knowledge and new products and processes appear as key resources. Although crafted products differ between BMs, all value propositions have a similar emphasis on being eco-friendly, having good quality and being hand crafted. To provide crafted products sustainably stands out as a relevant strategy to benefit from increasing demand of green consumers.

Aggregated BMC				
Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Local and National government: Financial support, policies, regulations	Design, development and production of craft Craft research and documentation	Good quality, ecofriendly crafted products Semi-finished products	Personal communication Co-creation	National and global consumers, tourists (no segmentation) B2B, Hotels mostly Architects Retailers
Local development agencies: coordination, technical and marketing support, networking	Capacity building Sustaining local raw material resources Health, education and microfinance support for rural	Preservation of traditional craft and knowledge		
National and international design institutions	Key Resources Craft skills and knowledge Artisan and designer network Locally available materials and manufacturing tools	Improving value of craft and material Income generation for artisans	Channels Word of mouth Exhibitions and shows Local showrooms Retail shops Web pages Fests Auctions	Entrepreneurs NGO's Local artisans Designers
Non profit Organizations	Codified craft knowledge Novel product and process design Buildings and facilities Process management methods	Development of the region Training and education for designers and artisans		
For profit commercial companies				
Local artisans and action groups				
Cost Structure		Revenue Streams		
Value driven cost structure Labour cost Operational costs Raw material		Fixed Pricing for regular products, discounts for wholesale Shop sales, retail sales Expert Fees for training and education, and other services		

Figure 4.30 : Aggregated BMC.

All BMs lay stress on improving perceived value of craft in contemporary market. Moreover, preservation of traditional crafts and local knowledge, supporting development of the region and generating income for artisans glow as common value propositions. In addition, social value propositions are not only about income

generation in most of the non-profit BMs. Nevertheless, stemming from its social enterprise framework, Rhizome is an exception for this generalization.

Co-creation and personal communication are common customer relationship models for all BMs, while word of mouth, exhibitions and webpages are generally used as marketing channels to reach customer. Customer relationships, marketing channels, revenue streams and cost structures are four promising domains, which are not subjected to innovation in those seven BMs.

Identifying social and economic value propositions under the same component of BMC can cause confusion. Additionally, absence of linkages between different components of the BMC creates ambiguity. The cases demonstrate that usually social value either reinforces the BM through increasing capacity of its key resources, key activities and key partners, or attracts national and international philanthropic funds and sponsorships. For instance, building new capacities and improving artisanal skills actually address capabilities and well-being of artisans who in many cases are key partners of BMs. Such types of relationships are much easier to visualise via ASMs, while the notion of standardised components is lost in this case. Nevertheless, BMC and ASM are equipped with different superiorities. While components of BMC enable analytical comparison between cases, ASM allows illustration of relationships between activities contributing to the underlying strategy of a BM in a more flexible way.

Osterwalder and Pigneur (2011) insist on using BMC to align profit with social value in a BM, whereas Michelini and Fiorentino (2012) and Yunus et al. (2010) underline a duality of social and economic values in their model. Starting from this point of view, and based on the identified linkages between components of seven BMs (see Appendix E), a conceptual BM was developed using notions of duality, flexibility, analytical comparison and interlinking.

The Social BM Template, uses the main building blocks of BMC, and demonstrates inner assets and activities of an enterprise with resources, activities, value propositions and channels. Similarly, unlike BMC, partners and customers are positioned close each other on the template. This relative closeness derives from the identified linkages between business components of seven cases, as listed in

Appendix F. The layout of the Social BM Template is an illustration of closeness relationship between components.

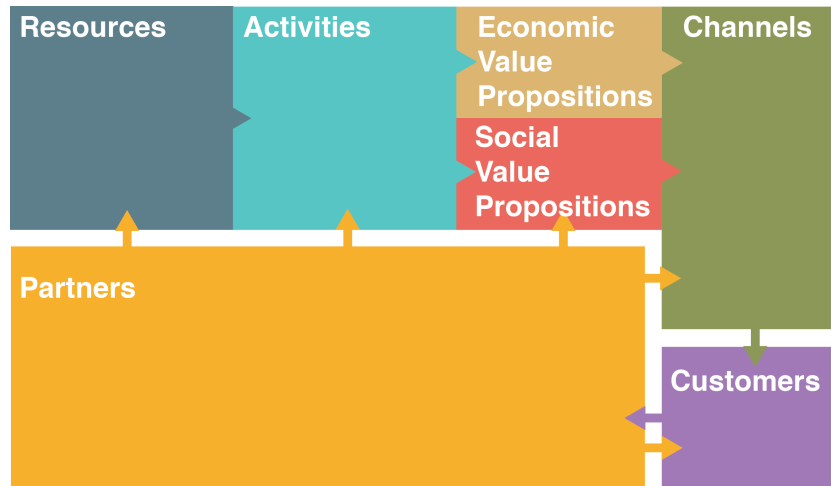


Figure 4.31 : The Social BM Template.

Case study findings show that, partners of a social business usually support value creation through contributing to resources, activities and marketing channels. Furthermore, in some cases partners of the BM directly contribute to social value creation or receive mutual benefit out of it. For instance, artisans in Katlamara directly receive benefit from English primary school education and craft training seasons conducted by BCDI. In addition, their own development helps BENU to create social value propositions.

Concerned with the social value propositions, same interrelations emerge between customers and business, as well. Customers receive developed economic value proposition through channels, whereas they could benefit from social value proposition directly. In this manner, creating linkages between entities under the components of Social BM Template facilitates conceiving overall picture, whether resources, activities and channels are aligned with strategies and used effectively to create social and economic value propositions.

Evidently, partners have a crucial role in social BMs and can contribute through many components. They are located in a position on the template in order to reflect this imputed priority. In following sections of this chapter, proposed Social BM Template is demonstrated using a hypothetical business case.

4.4 Developing a Descriptive Model for Design Integration

Social innovation and rural development are often studied separately in the literature, though in practice these two themes are not really distinct topics. In this manner, fostering economic development increasing employment opportunities and capacity of rural capital is a valid contribution of designers addressing social innovation in rural context (Dong, 2008; Fagerberg & Srholec, 2008; Oosterlaken, 2009). This study underlines the commonalities of social innovation and business innovation from an ecosystem perspective. Generally, an innovation ecosystem involves four distinct capitals; industrial capital, human capital, natural capital and socio-cultural capital (Hautamäki, 2010). Industrial capital corresponds to all types of investment in machinery, transportation and energy while human capital means skills, knowledge, cultural traditions and artefacts. Moreover, socio-cultural capital includes trust, collaboration and values of communities. A traditional innovation policy aims to gain growth through improvement of productivity, whereas an ethical legitimization of innovation policy targets well-being instead of growth (Hautamäki, 2010). Furthermore, well-being is sustained via reproduction of these capitals. Collaboration and partnership between various actors constitute important characters of resilience in ecosystems.

Innovations in both social and business plane improve resilience of the studied ecosystems. Particularly, long-term relationships with design institutions reinforce the innovation loops and also improve capacities of design students through collaborative workshops, internships and graduation projects. In this manner, design institutions act as catalysers of flow between actors of the ecosystem.

As expected, entrepreneurship is an integral part of the ecosystem fostering endogenous rural development. Creative destruction of rural capitals triggers emergence of various value propositions. At this point, profit oriented entrepreneurial motivations gain a new character. All BMs were initiated with a various mix of social and economic purposes addressing different actors.

In this manner, it is crucial to align BM strategically according to the social and economic values emerged and absorbed in the ecosystem. While, national governments and international development agencies stand out as critical actors for

the initiation of projects, creating nurturing environment for social entrepreneurship seems to be a necessity for such ecosystems. Departing from the findings of the research, Figure 2.1 "Design intervention conceptual framework" in Chapter 2 evolved into a larger descriptive model for developing countries as presented in Figure 4.32.

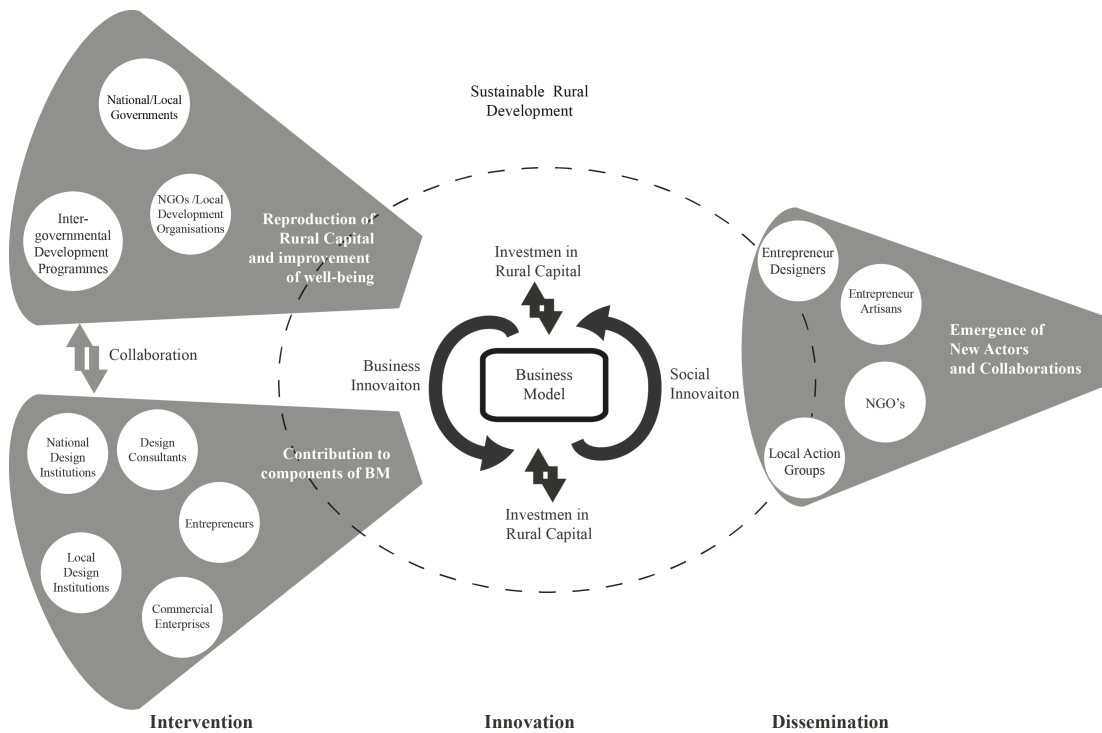


Figure 4.32 : A descriptive design integration model for developing countries.

In this model, social innovation and business innovation emerge together with enabled BMs in rural areas. Designer has six distinct intervention dimensions in BM plane. However, main role of design occurs at institutional level. Design institutions together with other academic institutions have a crucial role on research and documentation of local knowledge and resources. Briefly, actors and their contributions to the ecosystem are listed as follows:

- Intergovernmental development organisations, local and national governments financially support, facilitate and organise development activities
- Local governmental offices and NGOs address social and economic needs of local people, enterprises and cooperatives

- Commercial enterprises build partnerships with local enterprises, sponsor or fund projects of non-profit organisations in local
- Social enterprises and cooperatives develop social BMs in order to creatively destruct and reinvest in rural capital. Consequently they create livelihood opportunities for rural people, improve capabilities and close the gap between artisans and the market
- Local and national design institutions and their outreach initiatives fund and facilitate projects aim to research, document and archive craft culture, local resources. Moreover, they design and develop products, services and BMs for rural entrepreneurs, promote and advocate craft production
- Faculty members, students and designers conduct research and documentation projects, co-design and develop products, services and BMs with rural artisans, build strategies and establish craft initiatives and non-profit organisations as entrepreneurs
- Artisans collaborate with other actors in projects, co-design and develop products, services and business models, turn embedded knowledge into the practice, establish rural micro businesses, support development of rural settings through social innovations

To build collaboration between governments, local authorities and academia is a process of negotiation and often results in establishment of local development organisations. The role of design in the ecosystem especially emerges during the formation of possible products and services as subjects of BMs aligned with market expectations. However, at a higher-level intervention, in addition to new motifs, symbols, colour combinations, forms and products, the designer also deals with new use of locally available resources, development of new production processes and tools. Designing a BM includes strategically aligned decisions covering the whole business process from sustainability of raw material resources to market supply.

Leveraging skills and capabilities of local people and designers is a mutual learning process. In this manner, it is necessary to re-discuss the term “intervention”. All of the cases presented in this study constitute a process of design diffusion instead of design intervention since a diffusion process transforms all participants. For this

reason, relationships conducted through long-term projects are decisive aspects for all the actors to understand each other. This relationship and mutual transformation facilitate collaboration of master artisans and design students in their new set ups.

At this point, it is worth discussing about the formal and informal product innovation behaviour of an ecosystem. The formal innovation usually means designated processes of product innovation, which occurs inside the organisation and between marketing and design departments. For instance, Shrujan embodies such innovation behaviour.

Informal innovation occurs outside of the procedures and often at an unplanned time. For instance, Kala Raksha's tendency to involve artisans into the innovation process sometimes results in bottom up product innovations offered by artisans. Khamir and Sangaru Design Studio are two other organisations using informal innovation loops between partners. Enabling and encouraging artisans to innovate new products would increase informal innovation behaviour of a BM and also strengthen the resilience of the system in competitive markets. In addition, dispatching artisans from innovation process puts them into a relatively passive, fragile and dependent situation.

For innovation ecosystems, as it is in natural ecosystems, growth and success can be attributed to the continuous formation of specialized and diverse entities that nurture, support and interact with each other. In this manner, flexible recycling and dissemination of professionals, ideas and knowledge supports reliance of an innovation ecosystem sustaining dynamism.

4.5 Learning from India for Developing a Rural Non-farm Business Models in Turkey

Demographic structure of rural India is indeed quite different from Turkey. While almost 70 percent of its population and 75 percent of its workforce are still working and living in rural India (Reddy, Reddy, Nagaraj, & Bantilan, 2014), in Turkey only 23 percent of the population lives in rural areas. However, Turkey and India share similar consequences of rural underdevelopment like unemployment and rural-urban migration. Moreover, for both countries, development of rural areas and

improvement of well-being are not the basic interests of local people but also the whole population. Whereupon, reducing rural-urban migration improving quality of rural life and creating livelihood opportunities for rural people are well-accepted principles of development practices (Çelik, 2005).

Seven cases presented are not only portraits of successful craft based BMs but also illustrations of governmental support through development policies and practices. Craft constitutes an important part of Indian culture and still has a crucial role in rural economic activities. Consequently, Indian government engages numerous institutions in order to protect, develop, promote and trade traditional crafts in contemporary markets.

Although support for craft and artisanal activity is relatively less, the territory of today's Turkey, has been a cradle for rich craft culture and traditions in history. And during the early developmental efforts of the young republic, craft was seen as a notion that would help building national identity and supported by exhibitions, museums and promotions (Sisman, Unlu, & Kaygan, 2009). Nevertheless, throughout the modernization and industrialization of the country, craft was not really transformed into a contemporary occupation but remained as a marginal production. As it is still possible to claim an internal and external market for Indian craft products, traditional craft of Turkey is in danger of extinction due to lack of interest from young generation to practice and lack of market demand for crafted products. Şişman et al. (2009) argue that modernization of craft and repositioning in the market is a necessity to revitalize the tradition.

Although it was not as intensive as India, the first and second development plans of modern Turkey, gave special emphasis on the role of handicraft as an economic activity for urbanization of villages. However, besides these plans covering years between 1963 and 1972, the following development plans had little or no encouragement for the establishment of organisations addressing development of handicrafts.

For instance, as an influential mission in the history of Turkish rural development practice, "Village Institutes" were initiated in 1940 aim to increase the public services in rural areas and increasing education opportunities training teachers in

rural areas (Aysal, 2005). Those institutes were not only training teachers to support primary education in rural areas but also enabling them to provide fundamental knowledge of healthcare, art and craft. Within this perspective, Village Institutes were quite successful to increase human capital in rural areas, which eventually influenced on development of the region. However, this promising experience did not stay long due to political instability of the country and unfavourable opinion of the government, so that eventually debates had led to the termination of the project in 1954 (Aysal, 2005).

Having a similar perspective with “Republican Villages”, which were planned by Kemal Atatürk, founder of Republic of Turkey, the “Village–Town” project proposes establishment of modern economic and social structures in rural areas (Çolakoğlu, 2007). As the author states, since the late 1970s, village-town project was applied in several places around the country in order to improve accessibility and infrastructure of target villages, to foster cooperative like agriculture and livestock activities and to improve level of education attainment and democratic participation.

Those attempts were highly criticized for employing out-dated principles of the 1970s and producing an unbearable load for Turkish economy, and eventually they were abandoned. Though, various development policies continued to support rural areas they could not prevent the decrease in rural population (Olhan, 2011). Olhan (2011) underlines that, besides the increase in unemployment and poverty levels, non-farm job opportunities are also extremely limited in rural, which corresponds only 34% of rural population.

Since 1970s, Indian rural development policies continuously support non-farm economic activities at small-scale, moreover, exported handicrafts constitute an important share of the goods produced in rural areas (Lanjouw & Shariff, 2002). Unemployment and decreasing economic activities inevitably reduce the social inclusion in rural communities and force people to immigrate. In this manner, without compromising agricultural production in rural, increasing the production of value added products and services constitute a critical opportunity for the diversification economic activities in rural Turkey. Furthermore, shaped by the EU integration process, recent rural development strategies also give a special emphasis on diversification of rural production. For instance, establishment of participatory,

bottom-up and diversified enterprises are supported by the IPARD (Instrument for Pre-Accession Assistance for Rural Development) program since 2007 (Şerefoğlu & Atsan, 2012).

Overlapping this perspective, in Southeastern Anatolia Project - Entrepreneurship Support Centers (GAP-GIDEM) were founded in Turkey, to establish entrepreneurial culture. As a reflection of this policy, several projects were conducted in collaboration with various institutions encourage entrepreneurship, diversify economic activities and developing various clusters of textile manufacturers, silver filigree artisans, medical aromatic plant cultivators and so on (Sayın, 2006).

One of the GAP-GIDEM supported project, which was discussed briefly in the introduction chapter, aims collaboration between designers and artisans in Mardin.

Although Turkish designers and design scholars show interest in discussing the role and function of craft in design, and experimenting collaboration scenarios (Demircan, 2005; Er & Kaya, 2008; Kaya & Yagiz, 2011; Kocabağ, 2009; Sisman et al., 2009; Turan, 2009), craft inventory researches are mostly conducted in folklore studies. It is possible to claim that the concern of Indian design institutions in systematic research of craft is one of the crucial differences between design educations of two countries.

While promotions, fairs, competitions and awards constitute the main expressions of the public commitment in artisanship in India; public support is not that systematic in Turkey. For instance, 2005 dated national assembly report highlights the extinction of master artisans that continue the traditional craft practice, and indicates the importance of training new masters (TBMM, 2005). However, the report doesn't propose solid implementation policies and programs. Hence, there are numerous institutions, which can potentially support craft economy in various levels. Table 4.2 presents a list of institutions supporting craft and artisans in Turkey. Moreover, acceptance of handicrafts as intangible cultural heritage by UNESCO agreement, which Turkey had been a part since 2006, improves optimism for the future of craft economy in Turkey. Consequently, it is possible to claim that there is a mild and supportive climate in Turkey for craft based local production and establishment of micro enterprises.

Nevertheless, within the rural development goals of modern Turkey, it is necessary to conceive the issue in a broader sense. Usually, craft is associated with activity of making something in a skilful way by hands and investigated as a representation of folk culture.

Table 4.2 : Institutional support for craft in Turkey, adapted from (OKA, 2012).

Ministry of Education	Maturation Institutes (Olgunlaşma Enstitüleri)
	Public Education Centers (Halk Eğitim Merkezleri)
	Practical Art Schools (Pratik Sanat Okulları)
	Vocational School for Women (Kız Meslek Liseleri)
	Anatolian Vocational School for Women (Anadolu Kız Meslek Liseleri)
Ministry of Justice	Handicraft courses for prisoners
Ministry of Customs and Trade	Promotional and publishing activities
Ministry of Food, Agriculture and Livestock	Mobile village courses
Ministry of Culture and Tourism	Research and documentation Courses, promotional and publishing activities
Municipalities and cities	Courses, publishing and promotional activities
Universities	Fine Arts Faculties, Vocational Schools, Research Centers
Banks	Promotional and publishing activities, exhibitions
Trusts	Research, promotional and publishing activities
Associations	Courses, publishing and promotional activities, exhibitions
Private companies	Publishing and promotional activities

However, in this thesis, besides symbolic and cultural aspects, craft is researched as a type of production, which involves some sort of skilled work rather than machinery. Thus, with a small-scale production view, craft is an economic activity, in which local knowledge, skill and resources are used to generate original outputs.

4.5.1 A Hypothetical BM: Natural washing powder enterprise of Tarakli

Well known with preserved Ottoman civilian architecture samples, Tarakli is a small town with seven thousand inhabitants located at 200km east of Istanbul. The history of this small settlement goes back to 5000BC Proto-Hittites.

Thus, throughout the history, various types of craft were practiced in this region, and inhabitants living in several distant villages still try to continue practicing a number of crafts such as wrought iron, boxwood spoon carving and handloom (Çavaç, 2008).

A few years ago, CittaSlow committee accepted the town as a “Slow City”, which corresponds to a given importance to quality of life, environment and cultural diversity. In this perspective, slow cities focus on local production, sustainability of traditions and local knowledge in order to overcome side effects of globalization (Narter & Bayraktaroğlu, 2010). As part of slow city project series, graduate students of Kadir Has University - Industrial Design Department have visited the town in 2012. The goal of the field visit was to identify local resources, skills and traditions in order to design products or services to support slow city transformation of Taraklı.

The design studio course continued for four months from February to May and co-guided by Prof. Dr. İlhan Erhan – head of the department and myself. During the field visits to villages, bazaars and local institutions, in addition to personal observations, interviews were conducted with people and local authorities. The outcomes of student projects include equipment to be used for production, transportation and sales of locally produced crafts and foods.

Furthermore, one project was about an extraordinary use of locally cultivated plant “Çöven Otu”, known as *Gypsophila*. Although the plant is still being used as an aromatic ingredient in local dessert recipes, traditionally it was also consumed as a component for washing clothes. Melda Yanmaz, one of the industrial design students from studio lecture, identified embedded knowledge concerned with this traditional usage area, which is an abandoned custom now. Her intensive research about the plant and its usage includes numerous personal experiments investigating cleaning properties of the plant. After reaching satisfactory results, she built a scenario for her project covering plantation, cultivation, dehydration and grinding processes so that the plant could be used as an alternative washing powder for laundry needs of urban households.

During the development of the project, further discussions were focused on a possible BM in which rural people could produce and sell those kits as livelihoods. However, this idea was not included in the final presentation due to project

preconditions. Based on this graduate project, a hypothetical BM is presented by using social BM Template revealed in previous section.

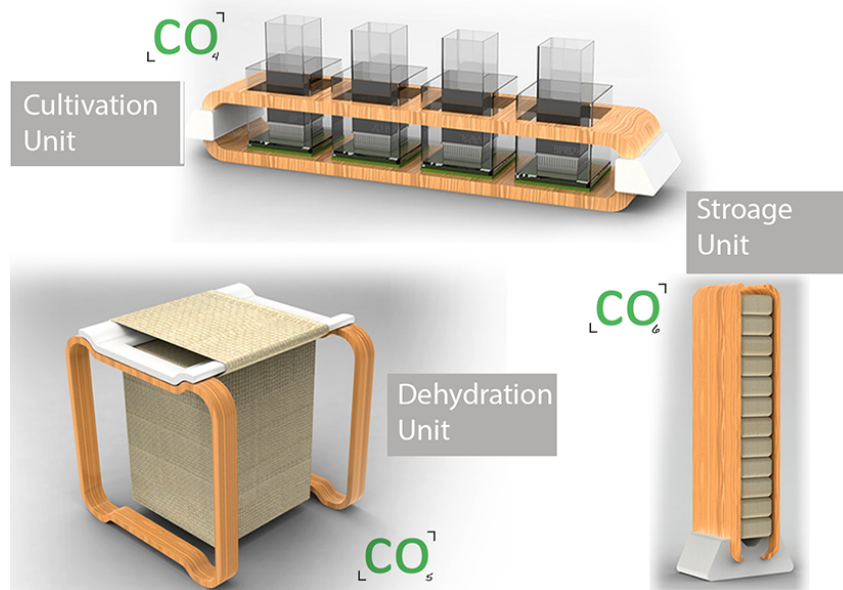
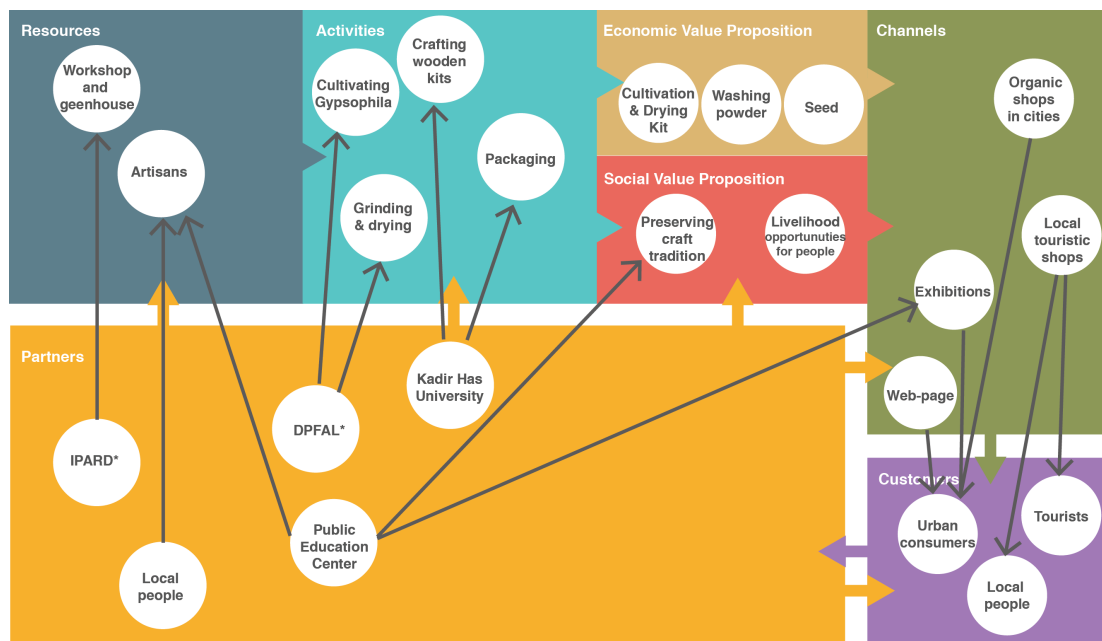


Figure 4.33 : Natural detergent project by Melda Yanmaz, May 2012.

This hypothetical BM proposes DIY Gypsophila cultivation and drying kit targeting urban consumers. These kits are made of carved boxwood and hand-loomed fabric, which employs traditional artisanal activities of the town. In this manner, the BM also proposes preservation of craft tradition and development of livelihood opportunities for local people.



*Directorate of Provincial Food Agriculture and Livestock
*Instrument for Pre-Accession Assistance for Rural Development

Figure 4.34 : Natural Washing Powder BM.

Main financial supporter of such a BM could be local development agencies and IPARD program's micro BM funds. Tarakli Public Education Center could support artisans with training and materials to produce craft and could also contribute to social value proposition directly through research and documentation activities aim to preserve craft tradition. A design institution, for instance Kadir Has University Industrial Design department, could enable the BM through co-design of the kit, packaging and the website.

Through the BM, local people could get the benefit of created livelihood opportunities, while supporting business as labour force. Such a BM critically depends on the knowledge and practice of *Gypsophila* plantation. Local knowledge about the plant and its use as washing powder could be a starting point for experimenting and developing the product fitting the needs of contemporary market. In this manner, partnership with a local institution specialized on plantation of the *Gypsophila* would be a crucial strategy. Local branch of Directorate of Provincial Food Agriculture and Livestock (DPFAL) at the town could be the right address to specialize on this issue and supporting local people.

4.6 Potential Strategies for Craft Economy

The study points out craft as an income generation activity for rural settings and an element of supportive economical strategy for sustainable rural development in developing countries. Craft economy may reflect the underlying principles of endogenous sustainable development promoting the use of local materials and knowledge in addition to entrepreneurial activities. However, as a productive activity, craft is also dependent on the mercy of market economy. Positioning craft products in the economy as non-functional objects to be bought for philanthropic reasons is a failing strategy. Equally, limiting craft production with the souvenir market is also a fruitless idea. Though craft objects are marketed as souvenir in Indian context, remarkable percentage of them expresses use value and embedded instinctive pride of artisan. Compared to India, Turkey seems to be losing its connections with craft consumption, whereas craft sector is becoming just about production of souvenirs.

At this point the very definition of craft becomes crucial. Exploring the craft as any type of activity that involves some particular kind of skilled work and associating craft sector with labour-intensive BMs using locally available and sustainable resources opens another perspective. Moreover, diversification of economic activities in rural is in need of similar livelihoods approaches. Thus, redefining the scope of craft sector is a valuable strategy for a developing country aiming to support development of rural areas.

Keeping a quality standard for craft products is the tricky part of such a business while the thin line between craft and industrial production can be challenging. Separating production into sub-processes and distributing these tasks to different artisans for the sake of efficiency would dispatch them from the instinct pride of crafting whole product. Another disadvantage of such a process would be limiting artisan's involvement into the product innovation process. In practice, local development agencies employing cluster approach sometimes ask artisans to develop as many items as possible in the same quality. Although it is understandable in terms of market demands on quality and standardization, this approach actually conflicts with the very nature of the craft.

Producing in small batches with high quality to target niche markets could be a future for craft economy. Market trends towards more customized niche and green products are promising for a wide variety of craft production. For some cases, hybrid products may involve both handmade and mass manufactured parts. Nevertheless, adopting craft as part of production is a fragile strategy. The role and domination of craft should not be suppressed by machinery production.

Promoting craft economy through sustainability could be another opportunity. For many instances craft production require less material and energy and yet adaptive and customized compared to mass manufacturing. As architect N. Patel states, in many cases using craft instead of prefabricated items, employing traditional production methods actually support sustainability of buildings in long term (personal intervention, November 2, 2013).

Another important possible strategy co-emerging with the revival of craft economy could be empowerment of women. Empowering rural, through enabling women, as

artisans working actively in a live craft economy appears as a legitimate strategy in the context of Kutch. Increasing economic contribution of women, improving health and education opportunities is good way to achieve long-term goals of development. Women are more likely to invest in their home and their children than men, thus, besides utilizing valuable resources of women, such a strategy uses them as change agents in their surroundings.

Crucial difference between the Northeast and Kutch is impact of tourism. Increased accessibility and touristic activities support each other, which lack in the Northeast. A visit to Kutch during in height of the touristic season one can observe intense attraction of Indian and international tourists to the region. Interestingly a great portion of this attraction is gained through the rich craft tradition of the region. Besides marketable craft objects, artisanal production itself is subjected to touristic interest. Experiencing charming and unadulterated India excites tourist while purchasing tangible craft objects through a journey to its history, becomes part of the experience.

Kutchi organisations involved in this study, position themselves according to this potential. They often promote their events in hotels and even two have small shops inside hotels of Bhuj. Additionally, their facilities are customized for presenting the experience of Kutchi craft tradition. For instance, Kala Raksha's central facility located in a village at 25 km north of Bhuj, involves traditional "bhungas" (round buildings), painted in traditional colours, which portrays a typical view of an authentic Kutchi village. Moreover, Khamir's guesthouse, which is generally used by visiting designers and entrepreneurs, is an illustration of innovation-oriented nature of the organisation.

However, the impact of tourism goes beyond that and influences on the life of artisans. Artisans of Kutch are quite curious visitors and often welcome them to their home to show craft production facilities and crafted object. Khatri family is the peak point for that. During my two visits to their block-printing workshop, I had chances to observe how they explain the process of natural dye making and block printing to tourists (see Figure 4.35). Customized demonstration materials to represent each step of the process were simply impressive.

Demonstration tools and scenarios are often associated with the touristification of the region and can have both positive and negative consequences. First of all, embracing and honouring a traditional and sustainable way of production is itself an important asset for promotion of craft. Handmade products usually make customer curious about the production process and engaging this curiosity with manifestation of eco-friendly production process is a convincing strategy. Additionally, involving consumers into the production process increase the total experience of craft.



Figure 4.35 : Demonstration material developed by Khatri Family in order to explain natural-dye making tradition.

Clearly, this natural-dye process has a peculiar value that corresponds to the intrinsic pride of inventive Khatri family. Though, it is not the case in Kutch, such a demonstration approach has a risk to create craft amusement parks where little innovation and artisanal activity really occur and income generation becomes limited to tourist visits. In conclusion, tourism could be beneficiary for craft economy, however it might have drawbacks, as well.

4.7 Concluding Remarks

The ways and means of design intervention fostering social innovation enabling BMs were discussed in this chapter. Collected qualitative data about seven distinct cases were analysed with various tools and techniques including SWOT, ASM, BMC and HASM. Brief information and detailed findings about each case can be found in an aggregated table presented in Appendix D.

Positioning BM concept in the center of the analysis was a conscious strategy to explore business-oriented connections between design and social innovation in the context of sustainable rural development. Among all cases, six distinct levels were identified as designer interventions: research level, product level, innovative level, experience level, organisational level, and strategic level. Moreover, the research has highlighted that government is one of the key partners in most of the cases while partnership between design institutions and local organisations is also a result of governmental policies and supports.

Designers were observed in various occupations in both ecosystems including; scholar or researcher, student, entrepreneur, activist, member of a non-profit or for-profit organisation. The evolution from being a student to activist and finally a social entrepreneur was pointed out as an unusual pattern for most designers' career. Besides their occupations, designers were identified in two ecosystems with various roles including; researcher, dialogue builder, strategist, capacity builder, celebrity, co-creator, facilitator, activist, social entrepreneur, project champion, network builder, BM developer, craft advocator, transformer and educator. Developing BMs was also another role identified for designer. Designers, examining market opportunities, local, natural and social capacities act as an entrepreneur and build a BM containing all aspects. At this point, design of a product or service remains a lower level intervention in comparison to a BM, though many organisations still perceive the role of designer as limited to products or services. Dissemination of best practices as business design showcases could be a good strategy to change this perception.

Moreover, exploration of social value creation opportunities was addressed as an important opportunity for BM development in rural context. Using BM analysis tools could be beneficial for designers to activate their business understanding and to enlarge the vertical line of the letter "T". Illustrated Social BM Template is a tool to be used with such concerns. Additionally, the descriptive model was presented by the end of the chapter, which positions development of rural non-farm BMs in the core of endogenous sustainable development strategies and illustrates designers as a trigger for rural BMs creating both social and business value.

A research level intervention includes all forms of data collection that occurs prior to an intervention project. Frequent field visits, craft documentations, ethnographic research and databases about local resources are parts of this level of intervention. The importance of research level activities lies under intensiveness of field visits. Short-term research interventions are seen as insufficient in many cases. Engaging design scholars and students for such researches are also part of a larger supportive strategy. Government to create knowledge in the field of craft directly or indirectly supported academic research programmes such as Outreach and CFBI of NID and DICRC initiative of CEPT. Therefore, it is possible to highlight that government is one of the key partners for most of the cases studied in this research. The partnership between design institutions and such organisations is also a result of government policies.

Designers are observed in various occupations or affiliations in both ecosystems including; scholar or researcher, student, entrepreneur, activist, member of a for-profit organisation or non-profit organisation. The evolution from being a student to an activist and finally a social entrepreneur is an interesting pattern for a design career. Besides their occupations, designers are involved in the system with various roles including; researcher, dialogue builder, strategist, capacity builder, celebrity, co-creator, facilitator, social entrepreneur, alternative creator, network builder, BM developer and activist.

Creating local, sustainable and crafted alternative to products produced via industrial production methods is an important role identified in this research. Development and sustainability of a healthy craft economy is dependent on such efforts whereas the role of design is crucial. For some cases, design focus on changing the general understanding of market over a material. Promoting bamboo furniture against cane furniture is a good example for that, while furniture made out of cane are generally sold cheaper in the market and perceived as unstable. The bamboo furniture experience was also not saturated in the market. Thus, the low quality feeling and cheapness of cane furniture used to draw back bamboo furniture sales in the market. The Northeast bamboo intervention also targeted this perception in the market whereas customers either will to pay way little for bamboo furniture stemming from the “cheapness” perception derived from past experiences with cane products, or prefer to buy wooden furniture industrially made. In this sense, one of the role of

design seems to change the perception of consumer towards more sustainable products.

Building or developing BMs is also another role for design, identified in this research. Designers understanding market opportunities; local, natural and social capacities act as entrepreneurs and design a BM containing all aspects. At this point, design of a product or service remains as a lower level intervention for BM, though many organisations still perceive the role of design as limited to products or services. Dissemination of best practices as business design showcases could be a good strategy to change the perception. Exploring social value creation opportunities could be also an important opportunity for BM development in the context of rural development. Using BM tools could be beneficial for designers to activate their business understanding and enlarge the vertical line of the letter “T”. Presented Social BM Template is a tool to be used with such concerns. Additionally, the descriptive design intervention model presented by the end of the chapter constitutes an abstract summary for findings examined through a macro lens. This model positions development of rural non-farm BMs in the core of endogenous sustainable development strategies. In this model design intervention is defined as a trigger rural BMs creating social and business value together.

5. CONCLUSION

This chapter reviews and summarizes the study to recall the reader problem statements and main methods used in order to reach the objectives of the research. Following the main implications of the research, the chapter continues with limitations of the research and recommendations for the future researches.

5.1 Linking Design for Social Innovation Efforts with Sustainable Rural Development Goals through BMs

Improving well-being of humankind is a common objective of all disciplines including design, while social innovation stands out as an attractive concept addressing this goal. Additionally, rural areas in developing countries seem to play an important role to cope with adverse effects of globalisation, such as urban migration and unemployment. This research claims that, innovation efforts addressing social problems in rural may not always bring desired results in long term unless they are aligned with overarching goals. In this manner, sustainable development was accepted as a broader perspective for common pursuit of environmental, social and economic goals. Therefore, the research aimed to create connections between designers' contribution to social innovation and development in rural context within well-being and sustainability goals.

However, neither the concept of social innovation nor sustainable rural development is clear enough to create interlinks between efforts and goals. Additionally tracing contribution of design in an organisation or in a project is not an easy task while examining projects implemented years ago. In this manner the research employed the concept of BM as a common plane to facilitate identification of influence of design and impacts as social innovation in rural context.

The study has sought to understand how design enables non-farm BMs in rural to foster social innovations and rural development. Departing from this question, the study was set out to (i) identify the intersections of the concepts of design for social

innovation, BMs and sustainable rural development to create linkages in terms of goals and approaches, (ii) identifying characteristics of design interventions, (iii) identifying common actors, their relationships and roles; common pitfalls and challenges of design interventions in rural, (iv) identifying types and specifications of social BMs in rural, (v) explaining how social innovation emerges through BMs enabled by design in rural.

To be able to reach these objectives, the study was set in five chapters. While the first chapter was an introduction to the research and its structure; the second chapter of the research presented a literature review on sustainable rural development, design for social innovation and business models to build a conceptual and theoretical framework, in order to reach the first objective. Although the vagueness and broadness of the concepts have limited aspects, rural non-farm BMs aiming to improve well-being of rural community was identified as an intersection.

The third chapter was set in three main sections while the first section, which addressed the second objective, presented a synthesis of scientific researches and practical examples to bring a framework for design for social innovation. Common approaches, roles and motivations of design for social innovation movement was discussed and rural areas of developing countries were identified as an often-neglected problem space. Additionally, this section provided a foreground for the rest of the research, by clarifying notions of roles and interventions as traces of design contribution. The qualitative research employed multiple case study method and the scope of the research involved seven business cases from two best-practiced development projects from India. The common features of these cases were the various level contributions of designers from India's primer design institution, NID. Investigating seven cases, the research sought answer to following questions.

- What types of organisational models are acting in the ecosystems?
- What types of roles and motivations do designers have in these models?
- In which levels and dimensions can design enable social BMs in rural?
- What types of social innovations occur in rural through BMs enabled by design?
- What are the major challenges to this area of design

Except the last question tackling with identifying major challenges, rest of the questions were answered by using business schemes of each case illustrated through analysis of BMs and the ecosystem containing them. SWOT analysis, BMC and ASM were used for examining business logics, while ANM were used to identify roles and relationships of actors in an ecosystem perspective.

All of the findings were discussed in the fourth chapter through seven case study and comparative analysis. The results show that numerous organisational models are actors of the system including non-profit, for-profit, intergovernmental, governmental and commercial. While examined seven cases vary between social enterprise and inclusive business, other actors supporting the ecosystem are mainly design institutions, local development agencies, NGOs and private companies. Investigating those actors and their relationships, fourth and fifth objectives were partly achieved, and a descriptive model explaining how design can contribute the ecosystem, by the end of the chapter.

Roles and motivations of designers were investigated in two dimensions. The first dimension was the occupations of the designer, which were scholar and/or researcher, student, entrepreneur, freelance consultant and member of non-profit organisation. These occupations gave clues about the motivations of designers. Additionally, the shift between occupations in time also identifies a pattern, which changes from student to researcher and finally entrepreneur. Another crucial implication of these findings was identified as a challenge for design education focused on competition of companies, since designers are also hired to work in non-profit organisations and NGOs.

The second dimension of roles and motivations were the functional contributions of designers in a social impact project. In addition to the roles acknowledged in the literature, five new roles were identified during the case studies, which are BM developer, craft advocator, network builder, educator and transformer.

The third question was also related to the roles of designers with a different perspective. Reviewing literature on design, innovation and systems thinking, a set of intervention levels were identified for design, which are product level (tactical level and market level), innovative level, experience level, organisational level and

strategic level. Contributions of design aiming to enable BMs were classified through these levels and a new level of intervention was identified. In this manner, “research level intervention” was seen crucial in endogenous development projects since it includes all the efforts undertaken in order to accumulate necessary information exploring embedded knowledge. The critical contribution of design in this level emerges by researching craft inventory with a design perspective, which brings a special stress of objectification and market thinking to the research.

The forth question mainly deals with contextualising social innovations as impacts BMs in rural. In the light of reviewed literature on social innovations in rural context, BMs and their components were reviewed to trace social innovation implications. In addition to the social innovation themes mentioned in the literature, four novel themes were identified (i) preservation of traditional culture and practices, (ii) enabling communication network and building collaboration between local and nonlocal artisans and designers (iii) fostering dissemination of tacit knowledge of craft making, (iv) introducing fair trade pricing committees and fair wages, changing social structure of business.

Due to the dominance of craft orientated businesses, identified social innovation themes were limited to implication of projects on artisans, and could not cover the whole rural community. Other reasons behind this limitation were the language barrier and time, which made it impossible to investigate the social influence of BM in the community.

The last question was mostly about investigating whether challenges identified in the literature for other problem spaces, are valid for projects dealing with enablement of rural non-farm BMs in developing countries or not. However, since the research was focused on implemented projects in order to see outcomes years after their initiation, designers could not be observed during their contribution. In this manner, findings gained from interviews and projects reports have shaped the overall identification of challenges, which were quite confirming the findings of the concerned literature.

Epochal shift in the production and distribution systems and changing structure of business environment were identified as main challenges to tackle with. In addition to them designers cost, their inability to drive implementation process and their

limited knowledge about government sector were underlined as challenges confirmed by literature review.

In summary, it was found out that by taking various roles including craft advocate, project champion, social entrepreneur, network builder, BM developer, educator and transformer; designers can enable non-farm BMs in rural through research level, product level, experience level, innovative level, organisational level and strategic level interventions and consequently fosters social innovations.

Examined BMs were suggesting the crucial role of partnerships in social BMs while partners and customers were often interlinked. Generated through examination of each relationship link between components of BMs, the Social BM Template was presented as new tool for designers and non-designers aiming to develop a social business. The template combines component comparability feature of BMC and flexibility and relationship links of ASM, and built on the major findings about social BMs examined in the study.

Additionally, the findings pointed out that design was generally expected to intervene in product level rather than in a strategic level. Among all, only in some cases contribution of design actually let transformation of whole community in long term. The approach of training artisans as designers does not only give them an opportunity to link their efforts with the market, but also enables them with the language of design which opens many more opportunities in long term. However, these cases do not represent the majority in which design was just employed as a tool to create marketable products for many other interventions aiming rural development. At this point efforts of R. Rubens was influential. Designing invisible structures such as labels representing fair trade or sustainability of craft is a promising strategy for the future of craft economy.

Design intervenes in several levels with various forms. However, the term intervention was also discussed in the thesis. If one explores intervention as an isolated participation of entities, which ends at a certain time, this definition does not really grasp the actual situation. In this manner, the study stresses that; during most of the successful “intervention” projects targeting development problems rather some type of “diffusion” occurs, which transforms all stakeholders into a new state of

being. Designer entrepreneurs collaborating with craftspeople in their set ups were presented as instances for that.

Even though there are financial and educational supports by governmental policies on establishment of micro non-farm BMs in rural, it is not possible to claim that there is a real progress in this area in Turkish context. Although craft was not identified as offering an opportunistic environment for entrepreneurs of Turkey, existence of a basic governmental support and interest from educational institutions of fine arts and folklore studies were stressed. The hypothetical BM discussed as a Turkish case by the end of the chapter, underlined the fact that it might be beneficial to establish a new understanding of craft, which goes beyond traditional meanings and positions itself as a way of production. A second indication of Turkish case was confirming the need for stronger design-craft collaborations, which involved design institutions in the ecosystem as it is in India. Consequently, general policy recommendations for fostering social innovations enabling non-farm BMs in rural areas by design are as follows:

- To stimulate design institutions to join inventory researches in rural areas aiming to identify resources for business opportunities
- To improve awareness of governments and development agencies about the strategic level contributions of designers
- To facilitate long term engagement of designers in such projects
- To modify design education to equip design students with capabilities of BM development
- To design and develop new tools and guides to facilitate social entrepreneurship in rural

As it was discussed partly in the previous paragraphs, there are several limitations that hold back the research for gaining a deeper understanding. Language barrier was a crucial limitation for the quality of data and a constraint to go deeper in one case. Field visit in India, the cradle of thousands of local languages, limits non-local researchers to observe impacts of social change in rural communities. During the interviews with local people, many times one or two translators helped which translates the sentences from local language to Hindi, and from Hindi to English. In

this manner, language barrier was seen as a strong disadvantage to go deep in one case.

Consequently, lack of in-depth analysis of each case also limits the scientific contribution of the study with findings observed on the surface of each case. Stemming from the same constraints, measuring impact of projects on local people were not possible. At this point, it is worth to mention that deep dive into the unpublished archives of NID for more than two weeks was the crucial leap for triangulation of data and gaining deeper understanding.

Time and budget constraints were the main limitation, since the five months were not enough to illustrate relationships of actors wide spread around India. Additionally, the research was conducted without any funding and merely depended on personal savings, which limited transportation costs during the field visit.

And the last, it is possible to mention that the study does introduce an in depth understanding of craft and craftsmen which is a limitation since all of the cases are craft oriented BMs. Employed “business understanding” which automatically impose a simplified concept of craft, was one reason for this preference. The possibility of losing the concentration of the study was seen as another drawback to discuss craft in a multidimensional manner. Underlined policy implications and limitations point out possible domains for future researches which are discussed in the next section.

5.2 Recommendations for Further Researches on Social Innovation and Design

Exploring social innovations and design input over a BM is a novel approach, which can easily be applied to different research contexts. Design for social innovation as a promising topic has been studied within participatory design or co-design perspectives however, a more business oriented participatory design perspective would be an interesting topic for further researches

The research confirms the literature about the blurriness of border between non-profit and for profit organisations in terms of business dynamics. All of the organisations included in this study either have a marketing department or have marketing officers. The approaches and methods of marketing also don't really function different than

for profit companies. A comparison between roles and responsibilities of designers in non-profit and for-profit organisation would be a promising topic for future researches.

The Social BM Template presented in this research should be examined on various contexts. Developing new and more effective templates not only help promoting business understanding in social enterprises, but also help them understand and innovate in their BM. However, the notion of social value creation should be better explored. Expanding the quality of intangibles beyond negotiable goods or functions seems to be crucial to create a further understanding on dynamics of value conversation in social businesses. Exploring how social value is transformed and exchanged between partners and consumers could shed a light to the researches tackling with social enterprises. At this point, Actor Network Theory could have a potential for further analysis of complex relationships between “actants” of the craft network.

The research positions the crucial role of NID in the centre of discussions. Design education is being discussed in India, too. During my visits to three design institutions, NIFT Delhi, NIFT Shillong, CEPT Ahmedabad and NID Ahmedabad I had opportunity to talk the issue with faculties and students from undergraduate and graduate level. Obviously, mission of NID is a cornerstone for design education in India. However, some others questions that for having extra-strong emphasis on craft. NIFT and NID have obligatory modules where students work with artisans for six months or more. And many students work with artisans in villages for their graduation projects. Although many enjoy this opportunity and use it in their future career as an asset, some of the students have actually claimed that they would prefer to concentrate on contemporary western design instead of focusing on revival of traditional crafts.

Tackling with the needs of rural life, reviving connections with craft in design education could be a topic for further researches. However, Indian experience shows that, building collaboration with artisans could be at least a complementary part of design education shaped with contemporary western design discourse. Beyond a nationalistic reflect, setting a design education customized for the need of a developing country sounds like a viable strategy. This strategy could involve open innovation, distributed energy and production systems, maker spaces and digital

tools. However, such a strategy is very much dependent to the strong positioning and supportive policies of government favoring sustainable rural development, instead of a consumption economy. In conclusion, aiming to expand the scope of design towards more social and developmental perspective in developing countries, the study presents an introduction to design for social innovation and development experience of Indian design scene.

To sum up, by taking various roles including project champion, BM developer, social entrepreneur, craft advocator, network builder, educator and transformer; designers enable non-farm BMs through research level, product level, experience level, innovative level, organisational level and strategic level interventions and consequently fosters social innovations.

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APPENDICES

APPENDIX A: Confidentiality Agreement

APPENDIX B: Interview Transcript

APPENDIX C: Interview Notes

APPENDIX D: Case Study Data

APPENDIX E: Illustration of Linkages

APPENDIX F: List of Linkages Between BM Components

APPENDIX A : Confidentiality Agreement

Confidentiality Agreement for Research

I would like to thank you for your participation in the semi-structured interview for my PhD on _____ in _____. The purpose of the interview is to gain a deeper understanding about the role of design interventions for supporting social innovations and development in India. Your honest opinions, insights and experiences on the issue will add value to my research. The voice recordings of the interview will be transcribed for an Appendix, while anything you have asked to be confidential, will remain confidential. Please indicate your consent by writing "X" in the appropriate boxes below:

Do you agree on the transcription of voice recordings to be used in the research?

Yes, I agree	
No, I don't agree	

Your data will be handled confidentially. If results of this study are published or presented, individual names and other personally identifiable information will not be use unless you give explicit permission for this.

Yes, I give permission for the use of my name in the research	
No, I wish to remain anonymous	

Would you agree on your organization's name to be mentioned in the research?

Yes, I give permission for the use of my organization's name in the research	
No, I wish my organization's name to remain confidential	

Would you like to be contacted through your email when any part of the interview is used in the final thesis?

Yes	
No	

Name:	Signature:

Serkan Bayraktaroglu **Istanbul Technical University** Industrial Design Department
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APPENDIX B : Interview Transcript

Interview Transcript	
Serkan Bayraktaroğlu. Istanbul Technical University	
Interviewees P. Shah (P), E. Forest (E), D. Timor (D), B. Khatri (B)	Date 26.12.2013
Case Qasab	Time length 1.44:50
Participant No E1, D3, D4, A3	Location Qasab building, Bhuj
Observations - The Qasab positions itself as a self-sufficient enterprise rather than a philanthropic organization. He does believe in working in market dynamics. - The shop is neat and products are easily recognized with their good quality finishing.	
Main themes - Qasab experience - Development activities in Bhuj - Role of design interventions - Future of craft economy	
Learning - Networking capacity and past experience on developmental activities in Kutch give P. Shah a great business intelligence together with craft knowledge which are fundamental for triggering craft entrepreneurship. - Craftsmen are open for entrepreneurial collaboration with foreigners. Even though there is a language barrier, the product constructs a means of communication.	
Notes A visit to B. Khatri's 'bhandani' tie&dye workshop is set together with designers.	

Q. Design intervention

P. Sometimes it is hard to recognize that there is design element also in craft. How this can be tackled with a way to look at it.? Otherwise it becomes a top-down model.

Q. This is interesting; sometimes we see such top down interventions in Turkey. Designers collaborate with craftsmen with a top down, short-term engagement.

P. We took a different approach. We specially treat artisans as designer and a facilitation process. So they can actually bring out their own designs. They work for the contemporary market. Understanding is very important. What does market require, what their skills are about and how work can be managed.

Q. Qasab has a different name than the organization. How it has started? For creating income for craftsmen? What was the initial strategy of Qasab

P. Two strategies, one thing was to... the income part of the operation but more to look at the conserve identity of the craft, how does one really have an organic evolution. So they are not working in isolation with the one market, skills and culture are about something else. Because everything they are never made for the new market, modern market.

Every craft usually has local context local connection. And in some cases there was sea trade many centuries back, some crafts become global. But most of the craft are still in local context. But then, how to really develop those crafts and create contemporary products so that the skill be used as means of livelihood. Without them loosing their originality, their tradition or their expression.

What is important that.. the strategy can be it should be compatible with the skill that the artisans have. Other than trying to create any designs any thing create for them.. that's a difficult to grasp how to build on the skills. And then we need the element of design to create better products.

Q. But this is a very thin line. Creating products for contemporary market and not alienating craftsmen from their products and traditions is a difficult task, how do you manage that?

P. Yes, yes it was a very big challenge at the context, which we started at a time... Because of fast commercialization, local communities could not effort to practice the craft anymore for themselves. Cost of living was going high. And cost of handmade products were getting higher even for the local users to buy...

So this create a pressure on the craft people how to survive. Because then, they had no longer a market readily available. Because the industrialization, modern materials, synthetic materials come and replace all the craft objects. So artisans were making so many things for the local communities, then local communities change their preferences. So then, local markets were disappearing.

Q.(to Emily) How did you connect with this organization?

D. We are lucky. (laughing..) Sure we are lucky... We restart a business started by a French women.

Q. French women living in France or in India?

E. In France. She had a similar business as us but she decided to stop it

Q. What type of business was it?

E. Create bags and with Indian fabric, embroideries here , with mix all these. But we don't sell bags with quilt, we sell the pattern of embroidery and fabric.

D. Its DIY market we are doing. Use a lot of embroidery, we start with embroidery, color. We try to mix block print fabric, and embroidery.

Q. How did you know about Indian patterns, motifs?

E. Because, we start with this French woman.

P. Back to the story, in 2001 there was a big earthquake in Kutch. People were thinking how to get back, a lot of people wanted to support, help. So this French group, they also wanted to do a campaign. Then we proposed instead of grant of fund, best think can be buying fabric from here. Create a market in France then this would be more sustainable. Grant, something you just use and then maybe this cannot be regenerated. With this idea.. And in the region, a lot of block printing happening. But the block print has problems with printing, sometimes fabric get misprinted, there will be wasting, so they propose that maybe you we can get the misprinted fabric. It can be cut and used. This could be also an idea. So with this kind of discussions, they also like to explore the European market. Because French ladies, European women wanted to make quilts. Possibility to make patchwork quilts with block print fabric, combined with embroidery.

Q. What was her name_

E. [REDACTED] is the name of the French woman.

P. You know this is actually why we started, because of the problems of the print. We think that how do we use this kind of fabric also. So it does not get wasted. Because there is so much waste been created. And you can cut and use the garment, for other products. We discuss how it actually started. But also told to craftspeople that this doesn't mean that you should always create waste. Because this is just more pollution. Focus has to be to create the products, then begin the process of design exploration how to print fabric that would be really good for their markets. Because immediately you are using what is available. But then what we call customized production.

Q. So you were customizing the material according to the main product and also the secondary product that will be produced with the waste?

P. Yeah. That was the idea. Than it has evolved now in many ways. Like they wanted to create a bigger market with this DIY concept. Make it from very regular business. How to really put ore thought into.

Q. Are there other international connection of Qasab?

P Yes, many.

Q Are they only selling your finished products or also creating DIY style business models

P. No they are selling our products. This is a different model. We creative collaborations with different kinds of forms , design ideas, markets cultures. For more broader development of craft. So we tell people we present one concept. Maybe you take something different.

Q. If you excuse me, I would like to know more about your background?

P. I'm a generalist. But my background is more from business but also with social part.
?

Q. You were one of the co-founder of this organization right?

P. Yes.

Q. How many people were there for the initiation of the project?

P. In the beginning I and Mina, my colleague, we got married. We started with Qasab. But before we had another initiative for women empowerment. With friends we have started KMVS. For the women's empowerment part. Before that, we had Gujarat government cooperation, buying craft and presenting into different markets in India through sales outlets on the brand name "Gurjari".

Until 1950s, most craft was local, no national market, no international market, nothing. But very rich skills, mostly creating products for the communities around them. For weavers weaving shawl, rabari for women, rabari for men, for the agriculture, shepherds and block printers print fabric, tie and dye craft etc.

Embroideries were never meant for commercial market, they were only made for wedding ceremonies and personal use. There was no embroidery market at all.

After 50s, modern development came. Two things happened. New products from outside came to the region, cheaper, simple and easy to maintain, bright and new things. Local community was attracted to this kind of goods. And for local craft people it was difficult for local people to match that kind of price and that kind of quantity.

Then the government of India took steps, because India is a very rich heritage.

Every corner of India has some craft. So central government and state government the craft people to get a bigger platform. They organized fairs, exhibitions to promote the crafts. So craft people could get an opportunity to go big cities.

Q. Approximately, which year was that?

P. This is 1950s and 1960s, gradually government started promoting the craft through big fairs and exhibitions to bring the products to national markets. And in 1970s government of Gujarat setup a handicraft development corporation. So that handicrafts of the Gujarat could be procured in big way and sold in a common brand and artisans could get regular work. It was in the brand of Gurjari. Still then market development was not regular.

In this way, designers and boutique people and other people from outside got attracted to craft. They started commissioning orders and they were interested in using and creating new, modern things. So new design ideas from outside came in. And artisans have started to see what people like. They started thinking.

In 1960s a lady from Mumbai, a pioneer, she used to come and she saw the opportunity to create a new market. So the rabari shawls etc. She gave small ideas to artisans.

Q. Who was that lady?

P. [REDACTED]

She went to different villages, saw the craft, she gave small ideas of changing the sizes, changing colors, taking it to new market... so she gave small ideas to artisans and artisans started development.

In 1970s Gujarat government brought in organized effort. They brought designers also to look at the craft and see how this could work. Application of craft was changed but the skill was same.

Q. They didn't change basic motifs and patterns right?

P. Yeah, motifs were all same. but how to engineer the layout using different fabrics, different patterns for different products by using same block in new way. so this kind of new direction gave a new life to the block print craft because otherwise it was dying. So some of the artisans also really thinking this is good. There is hope.

Like there was a pioneering artisan from block print sector who revived the natural dyes. Khatri Muhammed Sidhi.

When it's a new market people change materials like using synthetic dyes. Faster production. But someone like Mr. Khatri came forward, who decided no I want to revive the natural dyes, because this is something we have been working for many centuries. So he did not let go of the technique. Then an attraction to natural dyes

emerged. Designers from outside, people interested in natural dyes came and started experimenting with them to develop it for different products different markets. People from NID started coming and interacting with this family and gain exposure to new ideas. And they also started innovating themselves.

As I said, embroidery was not commercial but in the 50s people from outside started to come and buy. But this was not for sale. But slowly this started to come to the market. People started realizing this also can have a market outside.

Then Kutch started to get many droughts, less and less rain, and farming become difficult. Some families have started selling their own pieces. Some smart people, middlemen, took this opportunity and bring these pieces to exhibitions, some people made artisans work on commission based. So an informal unorganized market market started growing for this kind of a craft, also.

In 60s there is another organization here called Shurjan, they started work, this is from industrial family. They see the opportunity of using embroidery for sarees, so this skill could be good for women to earn some money. They started a small project.

They started making garments, sarees for Indian markets. Embroidery technique for surface ornamentation. So this kind of organization was born in 60s in Kutch. In 70s. Gujarat Government cooperation started and they were looking for all types of crafts. They set up proper showrooms in big cities. Around 21 outlets in big and small cities of India. There was systematic buying and marketing of the products. Exhibitions were also taking up. Other organizations from Delhi was also promoting the craft. Organizations like Dastakaar. Indian government also started to give national awards for artisans.

Q. Which year it was started?

P. Late 60s started to give craft awards.

Q. So at the same time

P. It was all organized effort. Slowly many artisans started to get national awards. Then they could get more opportunities. They were sent to international fairs sponsored by government. Big exhibitions, cash awards and other supports. That was by the central government of India. And state government was like this.

In these 30 years so much was happening without any thought going in. there was no plan. Suddenly so many new markets opened in many different directions. There was no vision for craft itself.

Why craft was dying because modern market didn't understand the intricacy of craft. What is possible with the craft? Then designers were looking at craft, they were using only some elements not development of the craft itself.

In the 80s we were a group of people from this region and some from outside, wanted to look at what is the situation of the people in the villages and rural areas.

Going to the different villages, we realized that rich craft needed a good direction, better market and so on. Slowly we started developmental work with the communities in different ways not only to promote craft but also organizing development, women empowerment, all this kind of issues that were actually concerning the lives of people. Because Kutch was in bad shape, because there was no rain last 40, 50 years, there were droughts, people needed work and people needed support.

We started the first project then government of Gujarat wanted to look at the craftspeople, especially embroidery craftswomen, because other craft they were able to interact, they were nearer to Bhuj, mostly craft was done by men. Embroidery was something done by women and they were living in interior villages.

They proposed a developed organization in Ahmedabad. There could be some people who could do a social project, a study, to see what is happening to the embroidery craft. Were the artisans really getting work, what can be done. Because of commercialization a lot of middlemen came up and started to get a big profit with the work of artisan and artisans were not getting the right return, and because artisan were not directly exposed to the market, not big growth was happening.

In 1989 this project started as KMVS. For women empowerment and development. And craft was one of the focus areas. And Gurjari was the one providing the markets.

Q. Only Gurjari?

P. Yes, because government was buying almost 80% 90% of the work and sold to different outlets. But in between many other crafts, small designers, boutique owners other people also started engaging more and more. Parallel development was also happening in the open market.

Up to 1995 government corporation was running good, they were able to generate orders give work to craftspeople. But then they started finding it difficult to actually sustain the market. Because they could not get into the production aspect, they could only procure craft and try to sell. So when you want to develop craft you need to cover all the areas; artisan skill, management of the materials, organizing the production management, right designs, right quality and taking it to the right market. This become complicated because government's idea was just to promote, it was not actually to the business of doing craft with all the artisans of the region.

At that time our organization actually organized, craftswomen were doing work like cooperative. Because it was important that women could understand what the craft was, what the market was about, how they should have control in their own hands and not to depend on middlemen or the traders in the area.

Q. Was it a cooperative of a type of self-help group?

P. No, It was a type of collective. Informal self-help groups, not a formal structure for the cooperative but in every village there would be small women's groups And then they would federate to a bigger group in one region, and then in Bhuj, there would be federation of all these smaller groups.

Q. How many people were engaged in this groups and federation?

P. With Qasab, it is 1200

Q. Was it also 1200 in the beginning?

P. Beginning it was 700- 800. That was to organize the artisans already working with the Gurjari. The idea was how to demonstrate that how the craft can be developed. There are thousands of artisans in Kutch. But we had to create models which could show, and which could start looking to what were the issues of the craft what was the traditions what were the motifs.

My co-founder, she had worked with the communities, understanding what was the traditions, what were the tradition of communities, how they were using the embroideries, what were all the original motifs, most of that which had got lost with the commercialization. Because every market cannot absorb all the things and sometimes people are not shown all the possibilities. Also as I said communities could not effort to make the embroideries for themselves. Because this was too much time consuming. Many centuries back, there were lots of natural resources and not much pressure to earn more money. So women used to haply create embroiders for the children, weddings, dowries and all the social things. But increasing cost of living, they have to also make living.

So artisans, actually they couldn't practice their art. This is where we came in with the idea that with their own skill, how this could also be a livelihood opportunity. Rather than, going and working as laborers, how would they work as artisans and create enterprise. Actually that could bring their own traditional skills to make living.

In the process was to explore what the original traditions were and understand each of the motifs before they all lost. How to revive. How to create new products with the traditional technique. That was how Qasab was born in 1997. This was independent of the government corporation. It created a business model, which could absorb the work of around thousand women and how to create new markets. Not depend on exhibitions, not depend on orders from this corporation. But start designing and creating own products and finding right markets.

In this process all the aspects had been studied, as what was the original tradition of each of the community. Because each community has a unique was of doing embroidery. All different ethnic communities. Some migrated form Afghanistan and settled in Kutch. The unique way of doing embroidery is a part of the cultural identify. And we didn't want to change that. Rather build on that how to enhance and build on the technique. Because this is a cultural craft. It is such a rich heritage and organic movement happening for centuries. Rather than creating something different and using the skills to do embroidery, some models tried how to use embroideries as skill for income generation.

With Qasab we choose to bring cultural identity through the products. In the process encourage the artisans to bring new and new embroidery designs, explaining to them this could be a good product.. how do you do embroideries for a bag for a cushion cover for panels.

So artisans were facilitated to develop design and then link it to the products. So we played the role of interpreting the market for the artisans and interpreting artisanal skills for the market. This is my specialization.

Actually because when people want to work with a craft, they can immediately come and realize what can be done, but with our experience we explain to them this can be done, this cant be done, this can be done better this way. So how do you really bring everything together, then the how creative collaboration happens so we play the role of facilitators and there are different market, different ways of doing, and on the other hand we also manage enterprise for the artisans so that how does one really start benchmarking standards. The cost, the price, the quality, aesthetics and how to bring together different resources and make it work. Because individually it is difficult for thousand women to actually buy treads fabric in all various colors, quality issues, communication, business management that we set up a different system. That is how Qasab became business model for artisans.

Q. So you supply them all the resources and raw materials?

P. Yes. Ownership is separated with the management. Ownership is with the artisans, management is organizing the operation. We have a team of accountants, store keepers, production managers, coordinators. So everything is organized on day to day basis so the artisans can focus on their production part.

It has the flexibility how they can work at their own homes. We are now coordinating 11 ethnic communities, in 65 villages and around 1200 artisans.

Q. What do you think about the challenge of craft becoming a mass production, alienating craftsmen from the material with standardization, time limit, etc.?

P. That is a challenge has to be addressed. This is what we have been doing, how to balance that. We are saying that it has to be a process, in which artisan has also to be got involved in the process. They are also creating with an understanding that they are working with a market.

It has to be a process which artisans should be involved. They are also creating with an understanding that they are working for a market. And we say we have to do good quality, because doing something for personal use is something that we can have a different preference but once you working as a professional, we are charging right price, so you have to deliver good quality and also understand that to make a product marketable sometimes they might have to bring a little changes. But, this fine line has to be balanced, it shouldn't be changing so much that the identity is lost, how do you keep balancing that, that is where we have to explain to the markets and to our associates who are finally dealing with different customers, this is the tradition, this is the identity, this is the beauty of work. So we create something that can absorb this

as well as appeal to the aesthetics of the modern buyer. When you see something it is not just buying it because you want to support some charity. So we decided to bring a change, we are not a philanthropic organization... this has to be something fair to all. To customer, as well as to producer. Artisan gets better return, but customer also gets good value to money this has to be balanced.

Q. Do you think that there is a need an education for customer to make them understand the product and its value?

P. Yes. This is why we build a network, we are not buyers and sellers, they are all working together. They sensitize what are the issues, how the production is done. So when they are talking to customer they are a part of us. it's like a bigger team, larger network.

Q. (to Emilee and Damien), Do you also explain about the roots of products in France? Do you mention about Qasab?

E. Emilee: yes, we explain to each customer, who did each piece, story of each fabric, embroidery etc. Because our fabric is more expensive than Chinese fabric.

P. This is all through networking and highlighting what is the beauty and uniqueness about this thing. And ultimately product has to speak for itself. Biggest education doesn't come from my words, what they say. Customer has to see the intrinsic work. This has to straight away to recognize that this is something different as quality, its all well, and people should be curious to know. Ok what is this? It is our role to build that kind of a product to bring that kind of curiosity, that is a design challenge. that is a challenge actually people were wanting to work with a craft. Mechanization can come, it can be substituted but you can always bring uniqueness by creating design in such a way that this cannot be made by machine.

Q. You have worked with many designers, how do you collaborate with designers?

P. This collaboration happens, but we have a clear understanding that most of the design part is done with the artisan. Product development, whatever some designing is required, that time there are interactions and interventions with product designers. It could be from NID, it could be from IICD

Q. How does the process occur, do they come to you or you approach to them?

P. Its two way. Because design institutions want to sensitize their students to bring in internees, to come and work with organizations, because for them students should be trained with the practical aspects of craft. They approach us to help our students do internship, this is one way. we want to professionally develop some design, we hire designers.

But mostly we design our own designs with the markets. Because biggest designer is always the market buyer. They can design the best because they know the market.

Q. So is it possible for a customer from Turkey to come with an idea and ask custom made products?

P. This is how we build our model. Design intervention is hardly 20%, 30%, most design intervention is continuous communication with our associates who are working with the market. They come up with their design ideas that interpret their market. Sitting here I cannot imagine what can work in Paris. They can imagine what will work with their markets. But they cannot imagine what are the artisans of Kutch able to do. Then we have, dialogue, communication, interaction, experimentation, and development and see how this can work. This is more sustainable.

Q. How the collaboration occur between customers and artisans? Do they come here and work with artisans.

P. Yes, for example when you come here, you can see all the possible techniques, motifs, material. Then this becomes a large studio. Designers come, artisans come and that kind of interaction becomes possible. With the experience that we have we are immediately able to explain. So every time no one has to reinvent the wheel.

Q. Is it also happening other way around? Is there any case that artisans also come with products which they believe can work in the market?

P. Yes, yes.

Q. Can you give me an example for such a case, which is also sold in the market?

P. Yes, art panels, some of the traditional products also has great design produced in centuries, going to the market. Little change and modifications required can be done. But, with many craftspeople there have been lots of innovations other than embroideries. With the artisans who have been working with the market, like block printer, the weavers, leather artisans many of these people also innovated themselves. In terms of creating new designs.

Q. I've seen a leather bag at the showroom, is it a traditional product?

P. No it's a contemporary bag, which embroidery embedded. So embroidery is the USP of the bag. You can find hundreds of bags in the market, good leather bags; you can never find a leather bag with embroidery.

We think different ways to create marketable products. We have lost of different ideas, like in 1998 we worked with a French painter actually whose ideas to bring a painting, he thought that women can fill the spaces with thread and needle. You are an artist, they also have an art form, you just draw the structure, and they will create the patterns inside. Then it is a collaborative process. This man was from Marseilles.

We explain him that you visualize, and we explain to artisans. The French man and Kutchi women they were talking the language of art, no need translation.

Q. So they were communicating over the product?

P. Yes, over the art. Artisans bring immediately their own ideas, ok we can use this motif here, and this style here. This is this way.. Three four months wonderful piece was created.

These are all different ways of approaching a craft. Then of course whole idea was to strategically having and enterprise. Which ultimately has to become a business.

Qasab products are universal, it can be for anyone. Can be n India, US, Europ, Australia.

Q. So you don't have a specific target customer segment? Such as high-end segment.

P. Yes, but there is a non-negotiable when it comes to quality and what the artisan can do.

When someone comes and says, we want 1000 mirrors, we say no, because it also has to involve the artisan expression inside. This is why I say when you are looking at design; it cannot be just using some elements. Sometimes people want to use only some elements, but not have the character of the craft. Qasab product design philosophy was to bring out the character of craft to each product. When you see a bag, you can easily say this is Jad, this is Rabari ..etc.

Because when we started there were a lot of distorted communications were going on in the market. People thought this is what mirror work. But there is much more to his than just mirror work, mirror is just a small part of it. But someone from outside describe it as mirror work.. someone will just say Kutchi embroidery but every community has its uniqueness. Like when you say Europe English are different, French are different, Spanish are different. Everyone has own specialty. That also has to be reflected we cannot homogenize. Diversity is a reason for celebration.

Q. This is very interesting. I want to go back to the leather bag. Do you buy leather bags or produce them and embed embroidery on?

P. There is a factory in Ahmedabad; we send our embroidery to create our products.

Q. What is the name of that company?

P. ■■■ leather. This is a production unit. We give our embroidery, and we look at the different bag models, and we say we can do this. they had a Russian designer recently. This bag was actually a collaboration with Russian designer. She was doing a collection to this factory, and our products are regularly made, then we had discussion. She as fascinated with embroideries. For her bag collection we created something. Actually which can compliment the embroidery.

Q. I understand the strategy that preserving traditional art and craft but do you have this kind of strategies for material to? Would you use a material which is not locally available? are you open for this kind of experimentations?

P. Yes we are open. See we have to experiment with balance. Its not that every material is produced locally. Most of the material has to come from different places.

But anything that can add value without actually subsuming the craft. Craft shouldn't be just pushed down.

We don't get silk fabric here, we can get from outside... That's fine.

Q. Which channels do you use for sale? I know there is one in Prince hotel and online?

P. No we don't sell online

Q. Can one see the products online?

P. We have a Facebook page. But mostly we are a B2B model. So when we work with them, they have their business. We collaborate then they focus on what we wanted to do here, how do we create.

They focus on their part, we focus on our part. Somebody is selling our products in Vancouver, they have the store. We have been working for many years. Then what kind of product will work, what kind of colors will work are the discussions that we contiguously have. Joint process.

Q. when you compare the amount of sales, is it mostly outside of India?

P. its like fifty fifty.

Q. Do you have anyone selling in Turkey?

P. No.

Q. Maybe I can start, why not.

(laughings)

P. This is how most of people started. This kind of ideas, this kind of discussions. They were also coming with groups and then they organize more friends to come to Kutch, as a tour group, textile groups, and they decided no we want to work for the...

First time when we started at US market, this man said everybody interested in craft and this kind of things, we said ok, how much weight you can carry, and how rupees can you invest. You tell us and we will make the package for you.

He came back and said 32kg and 35000 Rupees. And we put together a bag full of products. And he kept asking for more and more and this worked for many years.

Q. You have mentioned about the government support, in policy level, does it still continue?

P. Yes as a policy it continues.

Q. How about the Gurjari, is this brand still exist? Do they have shops?

P. Yes, it is still there. They have shops in Ahmedabad, Delhi.

Q. What do you think about the support of government, do you think it is relevant?

P. Its not the matter of enough or not enough, it is about strategizing more closely and working more closely to bring the best results. Each one has different structure. As I said government could mostly promote. It can support. This has to work with market economy.

Government ha supported us with infrastructure after the earthquake. We build district level craft center. Collaborated to build our craft center to make bigger platform for craft people.

You can make the best what is available; lots of skill needs more collaboration.

You need individuals, organizations, and businesses, people, who are interested. These are all creative industries. There is a big market for creative economy.

Q. Concerning with the collaboration with design institutions. What do you think about the process of engagement of young designers, students, and interns? Is it a successful collaboration? What could be improved in this type of involvement?

P. There ahs to be orientation for anyone who is coming and going to work with crafts. Without that kind of orientation, for new person it takes a lot of time to understand and learn to technique.

And there is no proper focus to research has to design. Design just for the sake of design doesn't work. Designer also has to understand the market. But there does very less understand about what is marketable and then there is very less understanding of what is producible.

Because any successfully design has to be production friendly. You can keep experimenting just for the sake of creating design. But is it functional, is it easy to manage with resources, how can we optimize. That has to be more strategic.

Product development is that something, that you study any craft and you see. As I said first interventions are not with designers, with market. So most of our design interventions happen with market. Customer feedback, market feedback, associates, we all work together.

Just for a project there can be new ideas, but maybe one out of ten, one out of twenty can work. That is a very short time in 2, 5, 6 months.

Q. So it should be a long-term involvement?

P. Yes, that has to be long term involvement, that ahs to be more focused interaction. Usually there is a various gap between theory and practice.

Q. (to Emily and Damien) did you have a chance to come together with artisans?

E. For the fabric, yes.

Q. How was it, how long have you worked together?

E. This is the first year we work directly with block printer. Until now we were working with organization, we had problems so we changed our way to work, and started to work directly with artisan. But this is very new.

Q. Was it easy to communicate? How was the interaction?

E. Thanks to Pankaj, its easy to communicate, if we were only together maybe it would be difficult to talk.

D. Its easy to talk with the artisans, its not problem. After real problem is the difference between our market, Europe and local market for example we haven't same mind of quality. For this year, for example, the problem was the quality.

E. But its not the artisan

D. No, because, we work with an association, [REDACTED], but this organization doesn't understand the difference between local market and European market.

E. Because we are demanding,

D. Very demanding for quality. For us very important. In France for example, usually Indian fabric, has bad reputation. And first we have to explain our customer that this is wrong. Because in India there are amazing quality fabric. But they don't know. For us it is the first fight to explain, no change your mind, you can see very wonderful craft from India. This is very important for us. If you want to show the best, you need to have the best. With [REDACTED] for example, they don't follow our order. Because they go to artisan, give the artisan for the French couple, do for them.

The problem is when we arrive, we see the quality is not possible. We can't buy this, because we cant sell it. We can pay more, no problem, because our price for regular price. We are more demanding we can pay more. We prefer to artisan take time, and pay more.

E. Communication problem I think.

D. And now we start to work directly with an artisan, I explained directly to artisan you take your time, you do your best. If I grow I can take big order next time. Also if you want to develop more projects you need time.

Of course we have many many ideas but for every idea you need time. If you want to use for example block-printing and including some embroidery..

Q. How long you will be here,

D. From 17 December, until 15 January, one month. Usually we stay shorter. Depends on the project.

P. There is a gap in communication or right management is not used. Actually what he said is important, what is the perception of quality. Two people have different expectations. And also this is a matter of attitude. Because, sometimes it should not be that handwork can be an excuse of bad quality. There is a fine line. You know that this is a quality that can be expected from craft. Here can be some limitation because of the hand technique. But because it is handcraft it shouldn't excuse or because it is handwork so this can be like this. That understanding has to grow with everyone involved in the process.

Q. But their understanding is also growing I guess.

P. Yes, yes, that is what our role have been about. How to facilitate this larger movement. So that craft enterprises grow strong. Apart from organizing women we have been more than supporting craft entrepreneurs to develop because there are a lot of family enterprises. Because this is a cooperative that is different because they are from different villages, embroidery quantities not big for individual to go and market. But otherwise the block printers, weavers, die dyes, a lot of family enterprises working independently with a market. So they just need right kind of direction and it's a matter of the right communication.

D. In Qasab, every year we learn what is possible to do what is not possible to do

(laughings)

P. As an individual I am in more about the development of the sector in this religion. So Qasab has been one project for us, we have been doing many more things, it is related to craft, culture we also trained the rikshaw-man who brought you here. This is easier to manage.

Q. What I observed up to now, it is mostly happening with your team's intelligence, or your experience. Do you think it is possible to replicate this model at another place?

P. Yes, everywhere this could work. See, our intelligence is one part of the story. AS I said, Khatri Mohammed Siddhi has only intelligence. He is not someone like us. I can introduce you to artisans who have developed with their own intelligence. No support, no NGO no government nothing...

When we started to work after the earthquake we decided to support many artisans. We have done very simple approach. Approach of critical support. 33% support we bring in, 33% artisans will innovate themselves, 33% will be done by buyers associate that will come outside. Only one percent is left for the inspiration.

Q. Do you give training and education to those who doesn't know embroidery but want to learn?

P. There are two aspects to it, like Qasab has been more focused company to develop ethnic embroideries produced by the community themselves. This is more like what you call, intellectual property. This is the heritage, skill of this community, so Qasab

membership is open only to those communities who are traditionally practicing the embroidery.

But given to that, if it grows, like the tie-die sector for instance. He is from the Khatri family. Traditionally only Khatri men and women were doing tie & dye. But with the growth of the market now they engage artisans from many communities. People would not have the tradition of tying.

They have grown without any NGO or government support. Only because of the ability of artisans. I tell you very frankly, NGOs hardly contribute 5%,6% visible.

Otherwise, like the tie&dye sector, they have the best showrooms in town. This is built business by their community, by their own enterprise.

So it depends on how much opportunity each one gets. They are working with textile craft, which always have a continuous demand. Every year people are going back to buy more.

But when it becomes stagnate, it is the challenge how do you rise above that. Now I introduce thousands of thousands pieces, now the demand is going slow, because when you are working with craft, this is something actually to balance. What should be craft, what should be mass produced...

Because there is a lot of public domain that is working with business, people want to do this immediately some quick work... sometimes fashion designers use craft for one collection but they have moved on. But the artisan is sitting in expectation of more. This doesn't happen, so this has to be a very sensitive intervention that has to be there with crafts. And that sensitivity that comes after really understanding very closely. Anyone working with craft whether its designer or buyer or business or even for customers, it is all matter of deeper interaction.

Sometimes big companies have merchandisers who may not be trained with the intricacy of craft. Then they don't know that what is difficulty, what is possible. Everything has to be brought out effectively so the best can be done.

But it is not their business to do the entire operation on the ground here, they have to focus on the market, they can't focus on the production...

So someone should take the responsibility on that part...

...

Q. (to Basir) How old are you, what is your name?

B. My name is Khatri Abdul Basir.

Q. You are doing tie&dye, was your father also doing tie&dye?

B. My grandfather was doing.

Q. Why did you choose to do this craft didn't go other cities like Ahmedabad?

B. I started when I was 15.

Q. Who teach you how to do tie&dye?

B. In my community everybody was doing

Q. How old are you?

B. I'm 23 years old.

Q. Are you living in Bhuj now?

B. yes

Q. Are you selling products to a shop, do you own a shop?

B. Yes

Q. Do you work with Qasab?

B. Yes

P. As I said, I have a role to network all these people.

D. Everybody in the city knows Pankaj Bhai.

P. At least in the craft sector, people know. Because we try as much networkable as possible.

Now you see he is form a traditional family of tie&dye. Interestingly his father left the profession, now you see that new generation take back the craft. His father didn't do it, he is inspired to do it. He has been to collage.

Q. Which collage you have studied.

B. Highschool

P. But he has decided to go to traditional occupation. Lots of young people come back to the craft. Block printing you see every family young people are doing block printing. Because now it is going in right direction. So for any traditional craft there is to be an incentive for craftspeople to practice it. If there is a good market, good return then people will come back to the craft. Like how they are saying, if you do right work, good quality work we can bring you more returns and this is the incentive.

Instead of earning hundred rupees doing this, if I can earn hundred fifty rupees then there is more room for growth. But instead of hundred rupees if they say no we can only pay eighty rupees, then that man either loosing hart, or he has to stop... if I earn more he can invest, I can get better block I can organize production. Wherever good returns are growing, crafts are growing. And we see it in Kutch, now people are

experimenting more and more new materials, new challenges, new markets; these are all people working on Internet, on what's-up, on social media.

Q. Probably old generation was not using Internet to see other products, now he has a lot of chance to see products from the world. But he has a lot of chance.

P. Yes, internet actually brought the world closer. Because, many things much easier to work with. Now it is the opportunity that everyone make use of. But the thing is first we have to bring up our work online connected to the mainline of the market. If it is online its easy to connect. But if you are not developed, sophisticated your craft, create a right quality product, then there is a lot of work to go from ground. That is where the design challenge also comes in. what is the responsibility of design. How to create a marketable product, one that is production friendly, efficient use of resources. One that managed easily. Even in terms of the materials to be used. Sometimes you create a complicated product then you look one material here one material somewhere else, one material that is difficulty to find. One has to..

(Phone ringing)

Q. Last questions. It sounds complicated to decide the value of a product so how do you define the price of a product?

P. We have to think all these aspects, the amount of work then the artisanal value, then the cost of the materials, problems and rejection, all of these...

...

We have to consider the artisans work, the artisanal value, the materials, probable waste, rejection, the amount of coordination that have to go in. sometimes you have to go three four times to sure everything is going well. You coordinate different units. Then there are two types of production.

Regular type of production, there can be one kind of cost. When there is highly customized production cost might go up but then you create a higher value product. Then you sell people that you don't need to produce 1000 pieces, just produce 500 pieces but you earn more, if you do better. All these aspects have to be taken care of. When selling typically we take all these costs, and also all your overheads. And see that you can make little bit of surplus. But sometimes being a craft product you can also have a perceived value as you were saying. If it is a really highly good quality product, you can make higher price. Because there is an art value also.

Q. Is there a fixed revenue model? like 60% goes to artisan etc.

P. This is typically works like this, 60% goes to the business part, to artisan, 30% go for the material and sewing and this kind of things and overheads to manage the product. Sometimes, you have very less material but more work on.

So the idea is that it should be equitable distribution. Doing justice to everything, doing justice to the artisans work. Doing justice to the quality of the material. It is nor compromised. Also to have justice to actually manage the enterprise. Everything has to be balanced, otherwise it is not sustainable.

Q. So, is Qasab financially sustainable by getting income only from sales? Not accepting donations or anything else?

P. No, no. only from sales. We are very clear from the beginning we should be efficient business, just because there are a lot of brands available. This is not the Qasab model, Qasab is all about enterprise and if then somebody wants to join for the development effort, then that is different. We can actually we can identify artisans to give the better support, give them more support for other issues. But when it comes to business you produce the right quality, right rate. People also have to be very conscious about the operating cost to make it sustainable model.

Q. Qasab is also a brand that is designed. Logos, published materials etc. who made all those things?

P. We had a graphic designer.

Q. Was an in-house designer?

P. No, it as an agency,

Q. Probably students from design institutions have submitted a report for their internship. May I see some of them?

P. Yes I can show you the report but may of the time, many people come and document all of things, and hardly anything goes back to artisans. Even with you we expect to see.

(laughing)

Q. You will see something, I will send you, I have to do this.

P. Because many times artisans spend many hours talking to people, but then they don't after this publish, it would be good that some people coming there.

Good, Damien wants to leave.

Q. My questions are also finished. Thank you for staying Emilie and Damien.

APPENDIX C: Interview Notes

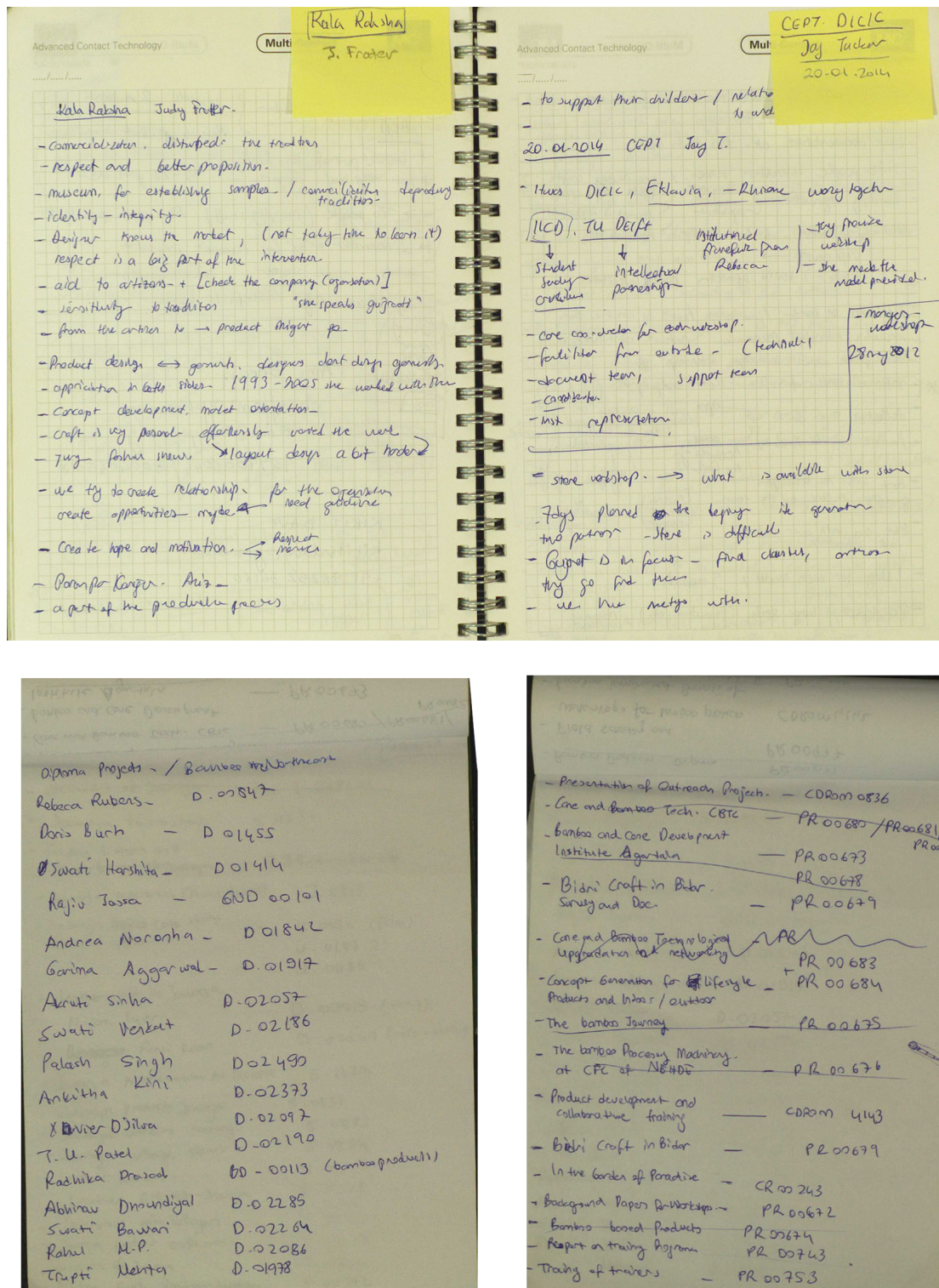


Figure C.1 : Scanned pages from interview notes and archive research.

APPENDIX D: Case Study Data

Table D.1 : Case study data.

Social Enterprise Classification	Name of the Organization	Goals	Major Stakeholders & Partners	Statuses of Designers	Roles of Designers	Social Innovations
Social goals are subordinate to other goals	Sangaru Design Studio	Produce high-end contemporary handcrafted products Improve value of craft and bamboo as a renewable material	Artisans Design Institutions Artisans	Academician, researcher Entrepreneur	Researcher Dialogue builder Strategist Capacity builder Celebrity Co-creator Facilitator Social entrepreneur Alternative creator Network builder	Co-creation with various artisans Enlarging artisan / designer network and collaboration Training new artisans Mobility of artisans Create employment and income
Social goals are prominent and/or subordinate to other goals	BENU	Expand bamboo plantation and cultivation Increase bamboo usage in manufacturing of goods Spread bamboo craftsmanship	Government UNDP NID BCDI TBM Local artisans	Academician, researcher Student Freelance designer	Researcher Dialogue builder Strategist Capacity builder Celebrity Co-creator Facilitator Activist Alternative creator Business model developer	Expertise on bamboo cultivation Spreading bamboo craftsmanship Increase bamboo use Employ local artisans Financial alliance between bamboo artisans Development of the village Increasing capabilities of local people
Major goals are chiefly social and prominent to other goals	Rhizome	Closing the gap between craft and market with labor intensive value chains Support development of rural communities Produce sustainable, contemporary, bamboo products	Government Eklavia Foundation TBDC Design Institutions	Academician, researcher Student Member of a for profit company Activist	Researcher Dialogue builder Strategist Capacity builder Celebrity Co-creator Facilitator Activist Social entrepreneur Alternative creator	Preserving craft and local knowledge Develop pro-poor and labor intensive technologies Skill and capacity building trainings at workshops Use local & renewable materials Grassroots level empowerment and livelihoods Reduce green bamboo use at Kotwalia plantations
Major goals are chiefly social	Shrujan	Sustainable livelihoods for women living in villages Sustain production quality	Government Shroff Foundation	Member of not for profit organization Freelance designer	Co-creator Coordinator Capacity builder	Support sustainable livelihoods for women living in villages Change the role & image of women Improve skills and capabilities of artisans Preservation of traditional embroidery craft & culture of Kutch

Table D.1 (continued) : Case study data.

Social Enterprise Classification	Name of the Organization	Goals	Major Stakeholders & Partners	Statuses of Designers	Roles of Designers	Social Innovations
Major goals are chiefly social	Qasab	Empower women with livelihoods Facilitate, design-craft collaboration and entrepreneurship	Government KMVS Industrial corporations	Member of a for profit organization Freelance designer	Co-creator Coordinator Capacity builder Social entrepreneur	Enable designers and artisans as craft entrepreneurs Facilitate craft design collaborations by supporting entrepreneurship and business development Empower women with livelihoods Women as agents of social change KMVS supports development of women of Kutch
Goals are exclusively social	Kala Raksha	Preservation of local craft and culture Training artisans as designers	Government KRV Design institutions	Academician, researcher Student For profit company Not for profit company Freelance designer	Researcher Strategist Capacity builder Co-creator Facilitator Coordinator Social entrepreneur	Skill and capacity building trainings and workshops Grassroots level empowerment and livelihoods for women Formation of local decision groups Access to national and international design network
Goals are exclusively social	Khamir	Preservation and promotion of the heritage and its crafts Holistic development approach Increase income and livelihoods	Government NPO and NGO partners Commercial partners	Not for profit company member Student For profit company member Freelance designer	Researcher Strategist Capacity builder Co-creator Facilitator Coordinator	Education for children 'out of the black box classrooms' Development of organic Kala cotton Public workshops and fests Involve local people to restore community linkages Holistic development approach for the region Finance for artisans Social security program Improve health and safety conditions Support appropriate tech. Improve artisan skills with education training Increase income of craftspeople Preservation and promotion of the heritage and its crafts

APPENDIX E: Illustration of linkages

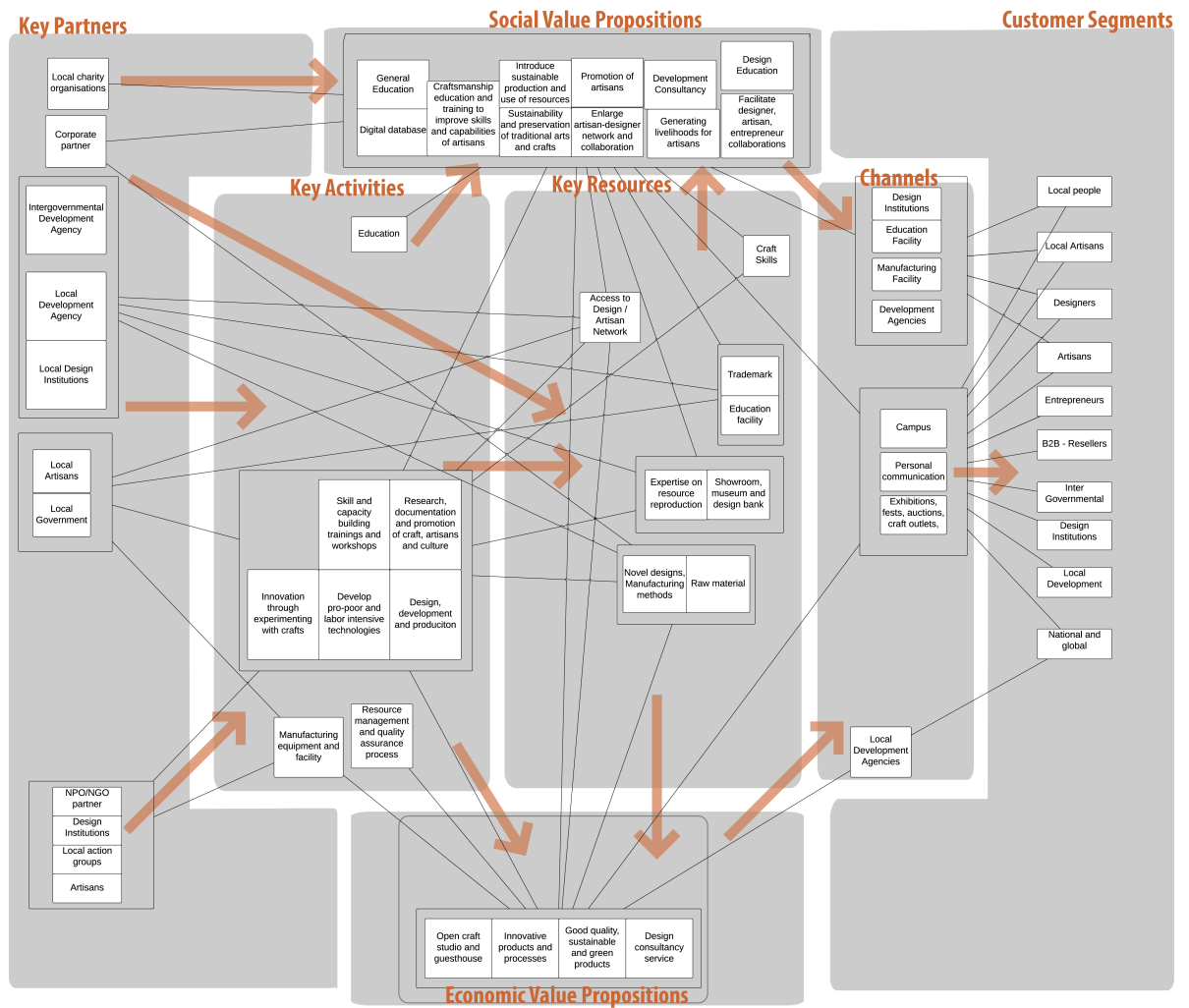


Figure E.1 : Illustration of linkages between components of BM.

APPENDIX F: List of Linkages Between BM Components

Table F.1 : Linkages between components of BMs.

Product	BM	Partners	Activities	Resources	E.V.P.	S.V.P.	Channels	Customer
1 Bamboo	BENU		a8 Design, development and production of craft	a7 Craft Skills		education and training to improve skills and capabilities of artisans	a3 Design Institutions, Development agencies	a3 Artisans, Designers, Design Institutions
2 Bamboo	BENU	a9 Local Artisans	a8 Design, development and production of craft	a7 Craft Skills	a4 Good quality, sustainable and green products	a9 Craftsmanship education and training to improve skills and capabilities of artisans	a7 Manufacturing facility	b1 Local Artisans
3 Bamboo	BENU	a9 Local Artisans	a8 Design, development and production of craft	a7 Craft Skills	a4 Good quality, sustainable and green products	b2 Generating livelihoods for artisans	a7 Manufacturing facility	b1 Local Artisans
4 Bamboo	BENU	a3 Local Development Agency	a2 Expertise on resource reproduction			a8 Introduce sustainable production and use of resources	a3 Design Institutions, Development agencies	b1 Local Artisans
5 Bamboo	BENU	a2 Local charity - organisations				a3 General Education	a6 Education facility	a5 Local people
6 Bamboo	BENU	a3 Local Design Institutions		a3 Novel designs, Manufacturing methods	a4 Good quality, sustainable and green products		a1 Local Development Agencies	a9 Mostly high segment national and global consumers
7 Bamboo	BENU	a4 Local Development Agency		a5 Access to Design / Artisan Network	a4 Good quality, sustainable and green products		a5 Personal communication, Design institutions, Web	a9 Mostly high segment national and global consumers
8 Bamboo	BENU	b2 Design Institutions	a5 Develop pro-poor and labor intensive technologies	a3 Novel designs, Manufacturing methods	a4 Good quality, sustainable and green products		a5 Personal communication, Design institutions, Web	a9 Mostly high segment national and global consumers
9 Bamboo	Rhizome	b1 NPO/NGO partner	a6 Skill and capacity building trainings and workshops		a2 Design consultancy service		a5 Personal communication, Design institutions, Web	a3 Artisans, Designers, Design Institutions
10 Bamboo	Rhizome	b1 NPO/NGO partner	a7 Research, documentation and promotion of craft, artisans and culture			a6 Development Consultancy	a4 Personal communication	a1 Inter Governmental Development Agency
11 Bamboo	Rhizome		a5 Develop pro-poor and labor intensive technologies			a6 Development Consultancy	a7 Manufacturing facility	b1 Local Artisans
12 Bamboo	Rhizome	a9 Local Artisans	a8 Design, development and production of craft	a7 Craft Skills	a4 Good quality, sustainable and green products	b2 Generating livelihoods for artisans	a7 Manufacturing facility	b1 Local Artisans
13 Bamboo	Rhizome	a1 Intergovernmental Development Agency	a4 Trademark			b2 Generating livelihoods for artisans	a3 Design Institutions, Development agencies	b1 Local Artisans
14 Bamboo	Rhizome		a8 Design, development and production of craft		a2 Design consultancy service		a4 Personal communication	a2 Local Development Agency
15 Bamboo	Rhizome	b2 Design Institutions	a8 Design, development and production of craft	a5 Access to Design / Artisan Network	a4 Good quality, sustainable and green products		a9 Exhibitions, fests, auctions, craft outlets, web	a9 Mostly high segment national and global consumers
16 Bamboo	Sangaru D. S.	a6 Artisans	a5 Innovation through experimenting with crafts			a2 Enlarge artisan-designer network and collaboration	a4 Personal communication	a4 Artisans, Designers

Table F.1 (continued): Linkages between components of BMs.

17	Bamboo	Sangaru D. S.	b2 Design Institutions	a8 Design, development and production of craft		a3 Innovative products and processes	b2 Generating livelihoods for artisans	a9 Exhibitions, fests, auctions, craft outlets, web	a9 Mostly high segment national and global consumers
18	Bamboo	Sangaru D. S.	a6 Artisans	a8 Design, development and production of craft			b2 Generating livelihoods for artisans	a7 Manufacturing facility	b1 Local Artisans
19	Bamboo	Sangaru D. S.	b1 NPO/NGO partner		a6 Manufacturing equipment and facility	a3 Innovative products and processes		a9 Exhibitions, fests, auctions, craft outlets, web	a9 Mostly high segment national and global consumers
20	Textile	Kala Raksha	a7 Corporate partner				a1 Digital database	a9 Exhibitions, fests, auctions, craft outlets, web	a4 Artisans, Designers
21	Textile	Kala Raksha		a4 Trademark			a4 Promotion of artisans	a9 Exhibitions, fests, auctions, craft outlets, web	a4 Artisans, Designers
22	Textile	Kala Raksha	a8 Local Government		a1 Education facility		a5 Design Education	a6 Education facility	b1 Local Artisans
23	Textile	Kala Raksha	b2 Design Institutions	a6 Skill and capacity building trainings and workshops			"	a6 Education facility	b1 Local Artisans
24	Textile	Kala Raksha	a5 Local action groups	a6 Skill and capacity building trainings and workshops			a9 Craftsmanship education and training to improve skills and capabilities of artisans	a6 Education facility	b1 Local Artisans
25	Textile	Kala Raksha	b2 Design Institutions	a7 Research, documentation and promotion of craft, artisans and culture	a4 Showroom, museum and design bank		b1 Sustainability and preservation of traditional arts and crafts	a8 Campus	a7 Local artisans, national and global consumers, tourists, designers
26	Textile	Kala Raksha	b2 Design Institutions			a4 Good quality, sustainable and green products	b1 Sustainability and preservation of traditional arts and crafts	a9 Exhibitions, fests, auctions, craft outlets, web	a7 Local artisans, national and global consumers, tourists, designers
27	Textile	Kala Raksha	a9 Local Artisans	a8 Design, development and production of craft		a4 Good quality, sustainable and green products		a9 Exhibitions, fests, auctions, craft outlets, web	a7 Local artisans, national and global consumers, tourists, designers
28	Textile	Khamir	b2 Design Institutions	a8 Design, development and production of craft		a4 Good quality, sustainable and green products	b2 Generating livelihoods for artisans	a9 Exhibitions, fests, auctions, craft outlets, web	b1 Local Artisans
29	Textile	Khamir	a8 Local Government		a6 Manufacturing equipment and facility	a1 Open craft studio and guesthouse		a8 Campus	a6 Artisans, Designers and Entrepreneurs
30	Textile	Khamir		a1 Education			b2 Support development of artisans and local people	a8 Campus	a5 Local people
31	Textile	Khamir	b1 NPO/NGO partner	a5 Innovation through experimenting with crafts		a3 Innovative products and processes	a8 Introduce sustainable production and use of resources	a8 Campus	a5 Local people
32	Textile	Khamir	a9 Local Artisans	a8 Design, development and production of craft		a4 Good quality, sustainable and green products	b2 Generating livelihoods for artisans	a9 Exhibitions, fests, auctions, craft outlets, web	a8 National and global consumers, tourists, B2B

Table F.1 (continued): Linkages between components of BMs.

33	Textile	Khamir	a7 Corporate partner		a2 Raw material	a3 Innovative products and processes		a9 Exhibitions, fests, auctions, craft outlets, web	a8 National and global consumers, tourists, B2B
34	Textile	Khamir	b1 NPO/NGO partner	a8 Design, development and production of craft		a3 Innovative products and processes		a9 Exhibitions, fests, auctions, craft outlets, web	a8 National and global consumers, tourists, B2B
35	Textile	Khamir		a7 Research, documentation and promotion of craft, artisans and culture			b1 Sustainability and preservation of traditional arts and crafts	a9 Exhibitions, fests, auctions, craft outlets, web	a7 Local artisans, national and global consumers, tourists, designers
36	Textile	Khamir	b2 Design Institutions		a5 Access to Design / Artisan Network		a7 Facilitate designer, artisan, entrepreneur collaborations through networking	a8 Campus	a6 Artisans, Designers and Entrepreneurs
37	Textile	Qasab	a9 Local Artisans		a5 Access to Design / Artisan Network		a7 Facilitate designer, artisan, entrepreneur collaborations through networking	a4 Personal communication	a6 Artisans, Designers and Entrepreneurs
38	Textile	Qasab	b1 NPO/NGO partner	a8 Design, development and production of craft	a7 Craft Skills		b1 Sustainability and preservation of traditional arts and crafts	a9 Exhibitions, fests, auctions, craft outlets, web	a6 Artisans, Designers and Entrepreneurs
39	Textile	Qasab	b1 NPO/NGO partner	a8 Design, development and production of craft		a4 Good quality, sustainable and green products	b2 Generating livelihoods for artisans	a9 Exhibitions, fests, auctions, craft outlets, web	a8 National and global consumers, tourists, B2B
40	Textile	Qasab		a8 Design, development and production of craft		a4 Good quality, sustainable and green products		a9 Exhibitions, fests, auctions, craft outlets, web	a8 National and global consumers, tourists, B2B
41	Textile	Shrujan		a3 Resource management and quality assurance process		a4 Good quality, sustainable and green products	b2 Generating livelihoods for artisans	a9 Exhibitions, fests, auctions, craft outlets, web	a9 Mostly high segment national and global consumers
42	Textile	Shrujan	a9 Local Artisans	a8 Design, development and production of craft		a4 Good quality, sustainable and green products		a9 Exhibitions, fests, auctions, craft outlets, web	a9 Mostly high segment national and global consumers
43	Textile	Shrujan	b2 Design Institutions	a8 Design, development and production of craft		a4 Good quality, sustainable and green products	a9 Craftsmanship education and training to improve skills and capabilities of artisans	a9 Exhibitions, fests, auctions, craft outlets, web	a9 Mostly high segment national and global consumers
44	Textile	Shrujan		a6 Skill and capacity building trainings and workshops	a7 Craft Skills	a4 Good quality, sustainable and green products	b2 Generating livelihoods for artisans		
45	Textile	Shrujan		a7 Research, documentation and promotion of craft, artisans and culture	a4 Showroom, museum and design bank		b1 Sustainability and preservation of traditional arts and crafts	a8 Campus	a7 Local artisans, national and global consumers, tourists, designers

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