Socio-Reflexive Regional Learning in the Khorasan (Northeast Iran) Saffron Cluster

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Abstract

The central thesis of this research is that the policymaker’s ontological understanding about human learning – influenced by social and economic theories including those that fall within the urban economic development discipline – has a profound effect on the initiatives designed and implemented for urban and regional economic development. The Khorasan Saffron cluster in northeast Iran is taken as a paradigmatic case study to investigate this thesis. While this region is the producer of more than 80% of the saffron consumed around the world, it has been unsuccessful in capturing a higher portion of the value in this value chain. Through a qualitative methodology centered on semi-structured interviews, various policies and initiatives addressing this issue from 2005 to 2012 are investigated by employing a conceptual framework that differentiates between socio-reflexive learning and three other possible types of human learning that either dismiss the sociality of human learning or overlook the role of mental models in this process. Findings suggest that the socio-reflexive learning ontology provides the most consistent and comprehensive explanation about the victories achieved in the saffron cluster by integrating processes of identity building and trust building in the process of balancing reflexive and adaptive learning. This research also proposes a breakthrough transformation of urban economic and international development initiatives, as well as a shift towards pragmatism in economic geography.

Keywords: Cluster development; Regional learning; Mental models; Reflexive and adaptive learning; identity building; Khorasan Saffron industry
Dedication

To my Family,
and especially to ‘Baba’ who established the foundations of what I have become capable of in the past two decades, to be able to write this thesis;

To the saffron cluster,
with hope that this reflection would assist them in taking efficient actions towards a brighter future;

To Issa Mansouri, Reza Taziki,
and all other cluster development people in Iran. I hope I have been an honest and trustworthy narrator and communicator of a small piece of what “we” did together;

To all whom I have learned from and employed their thoughts,
among them Michael Storper, Peter Senge, Chris Argyris, Alinaghi Mashayekhi, Etienne Wenger, Bent Flyvbjerg, Judith Green, and John Dewey;

To Azadeh,
for all her support, assistance, intelligence and patience;

And finally,

To the Wayfarer and the Wayseeker,
for all their inspiring fortitude and hope.
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This research would not have been possible without the generous support I have received from Simon Fraser University and particularly, the Urban Studies Program. Much more valuable than the financial support has been the intellectual, reflexive and critical community that has been – and is – created by the faculty and students in this program; and of course, Terri Evans who makes all of it work. I would like to thank Peter Hall, Paddy Smith, Meg Holden, Karen Ferguson and Evelyn Pinkerton at SFU for all I have learned from them, and for all their patience and guidance in assisting me to articulate and communicate my arguments. My thanks also go to Leah Anderson for her kind support for editing this piece.

Many thanks go to my supervisor Peter Hall for his thoughtful supervision, invaluable suggestions, and most importantly, his trust in me and my thoughts. My thanks also go to Pam Stern.

I am grateful to all of my interviewees who, with their busy schedules and daily struggles, sacrificed some of their time for this research that I hope will benefit them. Thanks for your precious time, thanks for answering the hard questions, and thanks for accepting my request to dig into your lives and businesses.

Thank you to Reza Taziki for all his support, for his great interest in this project, and his logistical assistance for conducting the interviews in Mashhad.

And finally, thanks to my Azadeh, for the numerous things that I can thank her for; among them, the reflexive life we have lived together – with emphasis on the past three years – that part of it is reflected in this piece.
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<th>Full Form</th>
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<tr>
<td>CDA</td>
<td>Cluster Development Agent</td>
</tr>
<tr>
<td>IIRRP</td>
<td>Iran Industries Renewal and Restructuring Program</td>
</tr>
<tr>
<td>ISIPO</td>
<td>Iran Small Industries and Industrial Parks Organization</td>
</tr>
<tr>
<td>JETRO</td>
<td>Japan External Trade Organization</td>
</tr>
<tr>
<td>KSCDP</td>
<td>Khorasan Saffron Cluster Development Project</td>
</tr>
<tr>
<td>NS4F</td>
<td>National Council for Saffron</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>TPO</td>
<td>Trade Promotion Organization</td>
</tr>
<tr>
<td>UAE</td>
<td>United Arab Emirates</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<td>UNIDO</td>
<td>United Nations Industrial Development Organization</td>
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## Glossary

### CDA
A neutral resident (or someone who is willing to reside in the cluster for the period of the project) in a non-beneficiary situation with respect to the business of the cluster is chosen to be involved in development of the cluster as the Cluster Development Agent (CDA). The CDA holds characteristics such as being capable in systematic and analytical thinking and setting strategies. They possess an ability to lead and facilitate, are eager to learn and participate in team-work and have experience in executive affairs. The CDA is also familiar with the business environment in the region in which the cluster is located. (Mansouri, 2005; ISIPO, 2007) In the case of the Khorasan Saffron cluster, Mr. Reza Taziki has been the CDA.

### Saffron dealer
The middleman that receives the saffron from farmers and sells it to the traders. The saffron dealer can perform a wide range of activities including prepayment to farmers, cleaning and drying saffron, preparing the facilities for cleaning and drying, selling the flower or the cleaned strips.

### Saffron retailers
300-400 sellers of saffron and other local products in Mashhad Bazaar and other retail locations in Mashhad city. A union of saffron retailers is authorized by the City of Mashhad to provide certificates for selling saffron.

### Saffron trader
The main focus of my research about the saffron industry and the business actors that receive saffron (usually dried and cleaned) from farmers or dealers to be sold to businesses and distributors of food products in Iran and abroad. There are around 100 of these traders in Mashhad and the Khorasan region.
1. Introduction

In *The Competitive Advantage of Nations* (Porter, 1990) and particularly, *Regional Economic Performance* (Porter, 2003), Michael Porter called attention to the role of the cluster – which he defines as “a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities” (Porter, 2000). Since then, clusters, cluster initiatives, cluster development and regional economic development based on cluster initiatives have gained much attention (Martin & Sunley, 2003; Ketels, 2003; Cortright, 2006; OECD, 2007). There are various interpretations and orientations of this concept in industrial policy, innovation policy, and regional development policies (OECD, 2007). But for developing countries, the concept has been used as an international development policy. For instance, many agencies, including the International Labour Organization (ILO), Inter-American Development Bank (IDB) and United Nations Industrial Development Organization (UNIDO) have employed cluster development for economic development and poverty reduction among other goals (OECD, 2007). This has been applied in various contexts including cities. In Iran, with the cooperation of Iran Small Industries and Industrial Parks Organization (ISIPO) and UNIDO, UNIDO’s approach to cluster development was adopted, customized and implemented for small and medium business cluster development from 2005 to 2010 throughout the country. One of the most successful urban context oriented projects implemented as part of this program has been the Khorasan (Northeast Iran) Saffron Cluster development project\(^1\) concentrated in the city of Mashhad. This project has been successful in bringing forward solutions to two very critical pressure points in the saffron industry in Khorasan; namely, international non-bulk trade of saffron and establishment of modern facilities (Taziki, 2011).

\(^1\) According to ISIPO internal monitoring
I have used the first section of this thesis to provide some background and context for my research. More specifically, I will provide information about Mashhad (Iran’s second largest city), the evolution of the saffron industry in the Khorasan province and Mashhad, and the Khorasan Saffron Cluster Development Project (KSCDP). This will set the stage for my research question: ‘how did the saffron business actors of Mashhad learn non-bulk international trade of saffron through the cluster development process and what sort of learning led them to participate in the establishment of the Saffron complex?’

Following broader debates in heterodox economics, learning in urban and regional economic development (Storper, 2002; Hudson, 1999; Morgan, 1997; Cooke, 2002; Maskell and Malmberg, 1999; Maskell et al, 1998; Holbrook & Wolfe, 2000; Gertler and Wolfe, 2002; Rutten and Boekema, 2007; to name a few) has been widely related to the innovation and systems of innovation discourse (Lundvall, 1992; Johnson, 1992; Gregersen and Johnson, 1997; Lundvall, 2007; Cooke, 2002; Gertler & Wolfe, 2002; to name a few). In this research, I have developed a conceptual framework to distinguish this dominant view from a socio-reflexive understanding of learning.

Here, I present this conceptual framework as a paradigmatic qualitative case study (Flyvbjerg, 2001) based mainly on interviews with business owners and a review of secondary data. Specifically, I investigate the change or stability of perceptions and shared perceptions of business owners and other important decision makers of the saffron business firms to see which mechanism of learning has been at work in this cluster development project. Also, aligned with the conceptual framework, I investigate the interplay between learning (individually and socially), identity and trust building, and power relations in the development process.

I ask for your patience in reading this piece as it is complex and deep but also engaging and consistent. As the thesis is organized in a multi-layered way, it may be useful to conceptualize it as an onion; I will lift layers in four stages to reach the ontological heart and respond to my research question. As mentioned above, the surface layer provides background for my research and gives context - especially for readers unfamiliar with the Khorasan region and Mashhad, the saffron industry and the cluster development approach (chapter 2). Then, after explaining my literature review,
conceptual framework and methodology (chapters 3 and 4), I will move to a second layer to re-frame the saffron industry’s evolution and the history of the players that will be referred to in the coming chapters. This will lead to opening up the objective black box of the industry reported as aggregate numbers in the previous chapters (chapter 5). In chapters 6 and 7 I will peel a third layer to show how interventions in the industry (including the cluster development program) have shaped its evolution. Finally, in chapter 8, by uncovering the fourth layer, I dig deepest to see what have been the underlying and embedded learning processes in the evolution of Khorasan’s saffron industry.

I conclude with policy implications for the saffron cluster and development of the Khorasan region on one hand and for enhancement of international development and regional development initiatives and policies on the other. I also suggest future directions for research to improve theories, methodologies and practices of development in regional and urban sustainable development.
2. Background

In this chapter, I will first provide some context about the Khorasan region, the city of Mashhad and the organization of socio-economic reflexivity in this region. From here, I will move toward providing some background about the evolution of the saffron industry in this region and the world in order to pave the way for briefly introducing the policies that have been used to change the course of evolution in this industry. Specifically, I will introduce the Khorasan Saffron Cluster Development Project (KSCDP) to set the stage for my research question about investigating the differences of development policies in this industry from a learning perspective.

2.1. Mashhad: central location of an agricultural province

Iran’s former Khorasan\(^2\) province is located in the northeast of Iran and has been historically part of the Greater Khorasan region which included parts of Afghanistan, Turkmenistan, Tajikistan and Uzbekistan, as well as Iran (Greater Khorasan History, 2009). Unlike newly discovered industrial districts that have absorbed much attention in the literature – exemplified by Silicon Valley – Khorasan has been a major agricultural production site in Iran for centuries and also a source of artisan products (iran.ir, n.d). The central cities of the larger Khorasan region that have been centers of regional trade for this agricultural region have changed throughout its long history. However, since the Sassanid empire in the 3\(^{rd}\) century, Balkh and Herat in Afghanistan, Samarqand and Bukhara in Uzbekistan, Marv in Turkmenistan and Neyshabur, Sabzevar and most importantly for this research, Toos (predecessor of Mashhad) in Iran have been major cities throughout the 17 century long history of the region.

\(^2\) Khorasan originally means "land where the sun rises" as it was the most eastern part of Iranian's world in the 3\(^{rd}\) to 7\(^{th}\) century. (Greater Khorasan History, 2009)
In the early 9th century, with the change of the Abbasid dynasty of Caliphs capital from Baghdad to Toos and the arrival and martyrdom of the eighth Shiah Imam -Ali al-Reza- in Toos and his burying in Sanabad (a small village near Toos), Sanabad gradually took over Toos’ centrality with a new name: Mashhad al-Reza (afterwards shortened to Mashhad); the place of al-Reza’s martyrdom. Carrying the trade and governance centrality of Khorasan until the late 16th century along religious centrality due to Imam al-Reza’s shrine/tomb, Mashhad’s superiority among other Iranian cities amplified during the rule of the Shiah dominated Safavid Kingdom and it eventually became Iran’s capital in the Afsharid period in the second half of the 18th century.
Since then Mashhad has been the central city of Northeast Iran and, with the formation of the modern Iran, has been considered the seat of the Khorasan province\(^3\) (Iran’s largest province until 2004 with 313,335 Km\(^2\) – 19% of Iran- with just over 7.5 Million inhabitants in 2011 – 10% of the country) for the last century. Mashhad was officially established as a city in 1918 (Ministry of Interior portal, n.d.). Mashhad’s first city council started work on April 29, 1999, and since then the city mayor has been selected by the council.

*Figure 2.2 Former Khorasan province and the three new Khorasan provinces*

Note: Created by Google maps

\(^3\) Khorasan was Iran’s largest province until the early 2004 with the central city of Mashhad but it was divided into three provinces, namely Khorasan Razavi (which included Mashhad), North Khorasan and South Khorasan; the latter being the major site of Saffron production.
Today, Mashhad is Iran’s second most populated city with just over 3 million inhabitants\(^4\). The city’s socioeconomic dynamics are built around the reflexivity (Storper, 1997) produced by the interaction between: 1) The holy shrine – in regard to the 20 million per year pilgrims (Taziki, 2008) and the theological schools as well as the economic dominance of Astan Quds Razavi\(^5\); 2) The governmental administration for the now Khorasan Razavi province; and 3) Businesses – aside from the tourism industry – mostly concentrated on food processing and trade, and other manufacturing companies including a branch of Iran Khodro industrial group; one of the two leading automobile manufacturers in Iran.

Among the agricultural products traded in the city of Mashhad that shape the city’s economy, saffron stands out as one of the most profitable and exclusive products (in terms of concentration of production and trade) of the region.

### 2.2. Evolution of Khorasan’s saffron cluster

Mediterranean in origin, saffron is a spice widely used in Persian, Mediterranean, Arab, and Turkish cuisines, liquors and sweets. For most of the 20\(^{th}\) century, Spain led worldwide production and exports of saffron (Taziki, 2008). However, the rise of massive saffron production in Iran in the 1970s\(^6\) has led to a domination of Iranian saffron production – specifically in the Khorasan region over the last two decades. This industry has had a significant role as an export base (North, 1955; Storper, 1997) of the Khorasan region, particularly in terms of packaging and trade in the city of Mashhad over the last two decades.\(^7\) Until the early 2000s, saffron agricultural production was largely concentrated in the southern part of Khorasan province and its trade was centered in

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\(^4\) According to 2011 Census data (Statistical center of Iran, 2011)

\(^5\) An autonomous charitable foundation for administration of the shrine and the endowments made to it. Since the revolution it has grown to an enormous conglomerate with 19,000 employees and running auto plants, agricultural businesses, and many other enterprises (Astan Quds Razavi, n.d.), mostly in Mashhad and the Khorasan region

\(^6\) Over 80% of production (mostly -over 90%- in the Khorasan region) in all years since then and as much as 95% in many years of the last decade. (Ehtesham et al., 2011; Ghahremani Asl et al., 2011)

\(^7\) Nowadays, around 85 thousand families are related to the production of saffron in the former Khorasan province rural areas (Taziki, 2008).
Mashhad’s Bazaar. In the 2000s, with the increasing profitability of saffron production (and with no relation with the new administrative boundaries), many farmers in Khorasan Razavi (and also North Khorasan) turned to saffron production. Mashhad remained the center of trade throughout these years. The change that occurred in this period is illustrated in figure 2.3.

Until the early 1990s only informal traders and some retail stores traded saffron in Mashhad’s Bazaar. Between that time and the late 2000s about 100 companies specializing in the packaging and trade of saffron established themselves in Khorasan (Taziki, 2008). According to Taziki (2008), in 2008, 72 of these firms were located in Mashhad and Toos industrial estate (see figure 2.4). Production facilities and firms are found elsewhere in the region, particularly in Birjand, the central city of South Khorasan province. However, it became clear in this research that all major players in the rural areas also had offices in Mashhad and most of the firm owners regularly visited or lived in Mashhad (Taziki, 2008; Iran Saffron Union, 2012; INTV C8; INTV D; INTV E; INTV N). Figure 2.4 shows that the saffron processing and trading firms are particularly concentrated in the urban area of Mashhad Al-Reza Bazaar.

The establishment of a producers’ cooperative by the government in the early 2000s and its oligopolistic manner of trade led to an increase in the price of saffron in the late 2000s. This was accompanied by promotion of the agricultural production of saffron (INTV D; INTV E).

8 All interviews have been anonymized by letters, using the letter X in many instances. I have also disguised the interviewees by pseudonyms (including when they are named by others). A final measure for anonymity of the interviewees has been using multiple pseudo names. It is due to the latter that the reader will be introduced to more names than my actual number of interviewees.
The gratification of large profits from bulk trade in the late 1990s and early 2000s faded away with the exponential establishment of new firms and stabilization of prices in 2006. This new era of competition called for more sophisticated strategies towards

Many of these are owned by farmers that have become traders, or sons of farmers that have been raised in Mashhad.
international trade, along with process improvements such as non-bulk trade of saffron in international markets and improvements in facilities (Taziki, 2008; 2011).

According to Taziki (2008; 2011) and many interviews, despite this promotion of saffron trade in Khorasan and particularly in Mashhad since the change of the production site from Spain to Iran, Spanish (and afterwards United Arab Emirates (UAE), particularly Dubai) firms continued to dominate the international trade of this product. This is best shown in the export targets of Iran’s saffron; while saffron is used around the world, 80% of Iran’s saffron is exported to just four countries (Spain, UAE, Italy and France) – mostly for re-export. (Taziki, 2008)

While many policies and initiatives have been put forward as strategies for overcoming the dominance of saffron re-exporters, these have not achieved much success. In particular, the Iranian Trade Promotion Organization (TPO) removed export incentives for bulk export of saffron and established tariffs for exporting high volume packages as a trade limitation to increase the non-bulk and retail export of the product (Taziki, 2008; INTVs C; D; I; J; K). This has mostly led to increased costs associated with putting the saffron into small packages. At best, this brings the value of packaging (which is very small) to Mashhad; in other cases, it leads European and Arab buyers to buy in small packages, open them and re-sell the product in their own packages\(^{10}\) (INTVs C; D; I; J; K; N). In a more recent effort the National Council for Saffron (NC4F) was initiated by the trade ministry to coordinate stakeholders, but it resulted in no more than some meetings and a quality standardization process for saffron packaging (mentioned in almost all interviews).

\(^{10}\) In this way the Iranian bulk producer receives the export incentive and the cost of packaging, but does not move up the value chain in the trade and marketing of saffron.
2.3. Khorasan Saffron Cluster Development Project

In another attempt to develop this business in the Khorasan region, the Khorasan saffron cluster development project (KSCDP) was initiated by the Iran Small Industries and Industrial Parks Organization (ISIPO) Khorasan Razavi branch\(^{11}\) in the summer of 2008. Defining a cluster as a concentration of firms working within a particular industry in a particular geography that are complementary to each other and have common threats and opportunities (Mansouri, 2005)\(^{12}\), the saffron business agglomeration was identified as a priority cluster and a three year cluster development project was initiated based on UNIDO cluster development methodology.

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\(^{11}\) Hereafter referred to as ISIPO Khorasan

\(^{12}\) There is much debate about clusters among business economists (Michael Porter, Christian Ketels, etc), economic geographers (Martin, Sunley, etc) and regional economic development and international development practitioners among other contributors. While this debate could be interpreted based on the framework that I develop in the following chapter, I have avoided digging deep into the debates of this fussy (Markusen, 1999) and cavalier (Martin and Sunley, 2003) concept, focusing instead on the actual processes of learning that happen in the saffron cluster.
According to the UNIDO model for cluster development, when the prioritized clusters are identified and selected, a neutral resident (or someone who is willing to reside in the cluster for the period of the project) who is in a non-beneficiary situation in respect to the business of the cluster, is chosen to be involved in development of each cluster as the Cluster Development Agent (CDA). (Mansouri, 2005) The CDA typically possesses the following characteristics: capable of systematic and analytical thinking; strategically minded; able to lead and facilitate; eager to learn and participate in teamwork; experienced in executive affairs; and familiar with the business environment in the region in which the cluster is located (ISIPO, 2007).

In the case of the saffron cluster, Mr. Reza Taziki was selected as the CDA. He signed a three year contract with ISIPO Khorasan to implement the development project based on the following procedures (Figure 2.5):

1- Diagnostic study: an evaluation of the current condition of the cluster, as well as the national and global environment governing business in the industry of the cluster. This was based on a predetermined methodology using economic and industrial analysis, dynamic systems, social capital analysis and strategic planning methods (ABCD Foundation, 2009). According to the diagnostic study for KSCDP (Taziki, 2008), the main source of underdevelopment in this cluster had been weakness in international trade. Hence, international market promotion was selected as the cluster’s strategy.

2- Trust building: considering that the development process requires a degree of social investment and mutual understanding between cluster members themselves, as well as between cluster members and other governmental and non-governmental actors (i.e. support institutions such as trade promotion, financial and educational institutions), it is necessary to promote the development of social capital among stakeholders of the cluster through different trust building methods (ABCD Foundation, 2009). In the case of KSCDP, although sufficient funding was not provided by ISIPO Khorasan, the CDA conducted some trust building and sensitizing projects. These included preparation of a brochure that included the names of most saffron firms for distribution at a common

13 In the training sessions of such trust building activity, the CDA is taught that the first phase is to develop trust between the cluster members and himself/herself and then between themselves and finally between them and the institutions at work in the cluster.
booth of saffron producers’ products at the 2008 Food Industry Expo in collaboration with the Saffron Exporters Association in Tehran.

**Figure 2.5 UNIDO cluster development process**

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3- Preparing of action plans: the action plan is comprised of the vision, strategies and short term operational plans which are written after the completion of the diagnostic study for implementation in the following year. Ideally, the plan is prepared by the CDA in the first years of the project and is implemented following approval by a project steering committee. With the assistance of the CDA, cluster representatives are supposed to prepare the action plan annually and present the resulting document to the steering committee. When the cluster development project is finished, the cluster umbrella network (the overarching network of the cluster) is responsible for the preparation of up-coming action plans. In KSCDP this guideline was not completely followed due to conflict that existed within the cluster.
4- Implementation of action plans: this phase of the development process is the longest of the development project and includes implementation of all sub-projects defined in the action plans. In KSCDP, for instance, networks of firm owners that had some basic trust in each other and had shown interest in working with each other in prior sensitization programs were matched with independent consultants (one consultant per network) to conduct market development projects. By connecting an Iranian business service development program funding was obtained for market research projects in Malaysia, Venezuela, South Korea and Japan. After researching these markets for the networks, the consultants visited the countries with network members in the latter phases of the projects (Taziki, 2011).

5- Exit phase: when the cluster reaches a considerable level of development and independence in defining and leading necessary projects, the CDA will gradually – within 4 to 6 months of declaration – exit the cluster. In case of KSCDP the 3 year contract was not extended; although, as will be discussed further, the activities of the CDA continued beyond this period.

In KSCDP the market research projects and particularly the Malaysia project turned into a great success. Following the success in Malaysia, the core network that was built in Malaysia took lead in the cluster and assumed a more significant presence in the Persian Gulf countries. For example, saffron firms participated in Qatar’s and Dubai’s large food expos in cooperative booths (Taziki, 2011).

Aside from achievements in Malaysia and the Persian Gulf, the sense of cooperation and trust that was built through these activities led to a long negotiation between the saffron firms with ISIPO to assist them with moving from their traditional, non-industrial facilities to modern facilities in Toos industrial park. These negotiations led to a plan to build new facilities for 18 firms as a concentrated saffron area in the Toos industrial estate. Based on this plan, negotiations were conducted with provincial head offices of banks for receiving loans. The 18 firms established a cooperative and the building of the saffron complex has begun. The cooperative has also planned for a common Research and Development (R&D) facility and a marketing consultancy service for this complex (Taziki, 2011).
The central question of my research is why did KSCDP lead to victories and sustainable changes in the cluster, while other policies did not bring such success? I argue that this can be explained by utilizing a conceptual framework that recognizes distinct understandings about human learning in processes of urban and regional development. I will develop this conceptual framework of socio-reflexive learning in the next chapter.
3. Conceptual framework

To investigate ‘how did the Saffron business actors of Mashhad learn non-bulk international trade of Saffron through the cluster development process and what sort of learning led them to participate in the establishment of the Saffron complex?’ I have positioned this question in the broader literature on urban and regional development. I have employed the (heterodox) economic geography and particularly the ‘regional learning’ discourse within it as an alternative theory – to mechanistic (Storper, 1997; Conti and Giaccaria, 2001) and lower order complex system conceptualizations (Foster, 2005; Martin and Sunley, 2010) – for understanding the processes of regional development. The following literature review reveals the necessity of focusing on learning processes in understanding urban and regional development. Finally, based on this conclusion I have turned to the literature on social learning in order to build an enhanced conceptual framework for understanding the underlying processes that lead to regional development in cluster development.

3.1. Urban & regional development: Putting the debates in a complex system framework

Since its emergence in the early 20th century by the representation of industrial districts in economics by Marshall (1920) and the tradition of Germanic geometry in regional science (Bathelt and Gluckler, 2003; Krugman, 1995), a (and maybe “the”) central question for economic geography has been organized around the uneven distribution of economic activity in space. This question has oscillated between positivist and constructivist perspectives that on the one hand, search for theories to better observe and diagnose the formation and growth of cities (as the most outstanding feature of the unevenness of economic activities in space), and on the other, seek the best strategies for intervention towards urban and regional development (growth). This broader literature has led to an understanding of the importance of clusters (Porter,
1990) and untraded interdependencies (Storper, 1997) in the competitiveness of regions from both perspectives. Aligned with other social sciences (Midgley, 2000) this body of literature has undergone a breakthrough shift from mechanistic perspectives to systemic (Storper, 1997) and complexity (Martin and Sunley, 2010) perspectives in recent decades; a shift that leads to new paths for understanding how learning happens in regions and cities.

This shift is articulated by Michael Storper (1997) in his influential book, *The Regional World: Territorial Development in a Global Economy*. Storper introduces four schools of thought that describe the city as a machine: “a geographically dense socioeconomic system that functions according to the laws of a kind of urban-economic physics” (p.222). These four theories are: 1) The global-dual city (Sassen, 2001); 2) the world city or the multinational capitalism’s bureaucratic hierarchy (Friedmann and Wolff, 1982; Friedmann, 1986); 3) the information city or the city as a machine of cyber-flows (Castells, 1989); and 4) the post-Fordist, or flexible city (localization and agglomeration urban economics based on Allen Scott (1988) and Krugman (1995) among others). Storper criticizes these scholars for their conceptions of the city as a machine of global financial capital, multinational enterprise, information processing and flexible input-output structures; in other words, conceptions that understand the city as “predictable, functional, inherently understandable objects seen from a discrete distance by an independent subject” (Midgley, 2000, p.2).

These concerns about shortcomings in theories of regional and urban growth could be reframed in a complexity framework (Martin and Sunley, 2010 among others) to illustrate the ontological shortcomings underlying these theories. Attention could be drawn to the richer frameworks, built around the learning discourse, that have been provided by economic geography proper (Overman, 2004) or heterodox economic geography (Storper, 1997; 2011).

### 3.1.1. A complex system perspective to urban growth theories

Complex systems and complexity theory have become popular since the 1980s (Martin and Sunley, 2010; Bammer, 2005; Foster, 2005; Sawyer, 2005), although thoughts about them in social science have been around – albeit implicitly – since the
1940s (Martin and Sunley, 2010; Sawyer, 2005). While their popularization has been grounded in physics and biology, their implication for understanding social systems and specifically economics can be tracked in Arthur’s work (Sawyer, 2005; Martin and Sunley, 2010). As many, including Martin and Sunley (2010; 2007), Foster (2005), Midgley (2000) and Bammer (2005) argue, it seems difficult to provide a comprehensive definition for complexity theory. Nevertheless, some generic aspects (Martin and Sunley, 2010) or general properties (Foster, 2005) are common among various interpretations (Bammer, 2005). These include, but are not limited to: 1) the theory’s multi-scalar nature and openness; 2) emergence and self-organization; and 3) irreversibility and path-dependence. It is these properties of complex systems that have led writers such as Storper (1997) to argue against simplistic theories about regions – theories that do not consider the openness, self-organization and irreversibility of socio-economic processes.

The multi-scalar and openness property highlights the connectivity and continuity of complex systems both internally and in their interaction with their environment. In regard to the internal dimension, multi-scalarity emphasizes the fact that “the functions and relations [and feedbacks] are distributed across system components at a whole variety of scales [thus it is multi-scalar], giving the system a high degree of distribution connectivity” (Martin and Sunley, 2010, p.97). In this regard, the region or places are whole but also a component part of a larger system where connections matter in the creation of higher level organized complexity (Foster, 2005). In regard to external interactions, the boundary between a complex system and its environment is neither fixed, nor easy to identify. This makes understanding the system as a closed system dependent on context (and observer). Thus, such non-isolated systems tend to be subject to constant interaction and exchange with their environments (Martin and Sunley, 2010).

The emergence and self-organization property highlights the potential of macro-scale (whole system) structures and dynamics to emerge spontaneously out of the micro-scale behaviours and interactions of system components. This characteristic shows how simple interactions with neighbouring components leads to complex overall system-level structure and behaviour (Martin and Sunley, 2010; Foster, 2005; Sawyer, 2005).
Irreversibility addresses the fact that because of various feedbacks and mutually self-reinforcing interactions amongst components (non-linear dynamics), complex systems are irreversible (Martin and Sunley, 2010). Furthermore, even if the systems return to a similar status (from the observer's perspective), they have nonetheless changed. Looking at it from a network perspective, it could be said that because of the connections that exist and do not exist, the state of the complex system is irreversible (Foster, 2005). This characteristic leads to path dependence and lock-in in such systems.

Moving beyond the machine-system dichotomy, a second layer of concern is raised by the fact that complex systems can exist within the physiochemical, biologic and social domains. Martin and Sunley (2010) criticize attempts at generalizing the laws and dynamics that complexity theorists (as reflected in the works of Arthur and Krugman) present. Martin and Sunley (2010) argue that the complexity framework they themselves inspire is not the epistemological version of complex systems that writers such as Krugman (articulated as new economic geography) have been after – the idea that emphasizes discovery of formal abstract mathematical rules or “a single, unified meta-theory of complexity” that could be applied to all complex systems.

In a more recent piece, Storper (2011) takes a similar position, critiquing the latest development in two new schools of thought about the regional development question. Rooted in the prior schools but reframed in a complexity framework, the new theoretical streams are: new economic geography, based on Paul Krugman's (1991) work on geography and trade (building on prior work by Myrdal (1957), Hirschman (1958), Perroux (Harrison, 1992) and Marshall (1920)); and the new neoclassic urban economics (developing the traditional ideas of Von Thunen about land rent and land use (Krugman, 1995)).

Storper shows that these revised theories, while providing insight, lack a convincing understanding about the process of change; they discuss only how “people go to jobs and jobs go to people” with different abstract assumptions. He argues that this makes neither theory useful for policy making about development. Secondly, Storper claims that these theories include too many unrealistic assumptions and hence, unrealistic outcomes. This includes new economic geography’s prediction of a long-run,
interregional income convergence that will emerge as the result of declining trade costs, allowing greater sorting of production between regions that compete (also due to increasing labour mobility). He points out the weakness of new economic geography in integrating innovation and learning effects in their models, albeit recognizing its importance. Finding problems with the “accidents” explanation about the “where” of agglomeration provided by new economic geography, Storper finally, draws attention to both schools’ shortcomings in explaining the core-periphery distribution of people and firms\textsuperscript{14}.

These objections – by Martin and Sunley, and Storper among others (Murphy, 2003; 2006a, Harrison, 1993; Conti, 2005; Conti and Giaccaria, 2001) – could be reframed as an objection to the extension of first order complex system dynamics for higher order complex systems in John Foster’s orders of complexity framework (Foster, 2005). This next step would lead to recognizing some decisive factors in picturing different types of learning.

3.1.2. Learning in different orders of complex systems

Foster (2005) has presented a framework for understanding the differences between various domains of complex systems by introducing additional properties for distinguishing between orders of complexity. These orders of complex systems reveal how they differ in regard to learning and knowledge processing. He introduces four orders of complexity to clarify between the physiochemical, biologic, human-included and social domains (Table 3.1). According to Foster’s framework, for physiochemical (1\textsuperscript{st} order) complex systems, non-adaptive exchange of energy exists and thus, learning is limited to adjustment. For biologic (2\textsuperscript{nd} order) complex systems, “knowledge is imposed by experience” (p.877), either through selection and genes or through experiences such as hunting. This learning process, called adaptive learning, might be understood using evolutionary models.

\textsuperscript{14} Because according to new economic geography, scale should drive everything to “core”, it cannot explain the reason of some going to the periphery; and because in new neoclassic urban economics (which includes incorporation of housing prices in the picture) the more convincing theory is only used for the margins of the theory and is not integrated in the overall long term effects and thus is a partial explanation.
Metaphors of both these orders of complexity and the epistemological models created for understanding them could be used for understanding complex systems that include humans and interaction of humans. However, due to critical characteristics in the latter categories, those models would have both ontological and epistemological shortcomings. In the urban and regional contexts, the new economic geography and new neoclassic urban economics downgrade human complex systems to first order complex systems in their modeling. By contrast, heterodox economic geographers have attempted to theorize regions at a higher level of complexity – although in many instances limited to 2nd order models – and thus provide better conceptual frameworks for understanding the development process that leads to unevenness in space by focusing on processes of learning.

**Table 3.1  Learning in four orders of complexity**

<table>
<thead>
<tr>
<th>Order of Complexity</th>
<th>zero</th>
<th>first</th>
<th>second</th>
<th>third</th>
<th>fourth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain and objective examples</td>
<td>Mechanistic</td>
<td>Physio-chemical</td>
<td>Biological</td>
<td>Lonely human in nature</td>
<td>Socioeconomic system</td>
</tr>
<tr>
<td>Openness, multi-scalarity and interconnectedness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergence and self-organization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irreversibility and path dependence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evolution and adaptive reaction or learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental models as part of knowledge structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creative adaptation or reflexive learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared mental models as part of the knowledge structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social learning</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

According to Foster (2005), for 3rd (and also 4th) order complex systems that include humans, “the biological system interacts not only with its environment as a data field, but also through images formed of possible worlds, i.e., connections between elements in the knowledge structure that need not have existed in observed reality. Knowledge, for these complex systems, is no longer just an accumulation of
experiences; it is also a source of ‘mental models’ that can be used to determine aspects of reality” (p.877). Foster concludes that systems that include mental models are “complex and adaptive, but adaptation is more than natural selection-it involves creativity” (p.877); the latter is what Storper (1997) defines as “reflexive learning”. The highest (4th) order of complexity comes into being “when mental models interact with each other” (p.877) or when people imagine about each other’s imaginations. This characteristic reflects what could be understood as social learning.

This distinction shows how extending lower order complexity models to ontologically higher order complexity phenomena neglects a decisive characteristic of such phenomena: mental models. Heterodox economic geographers have worked towards the development of higher order complex system inspired models for understanding regions and cities (as ontologically higher order complex systems). In the next section I will review these attempts to show how different models of regional learning have been articulated for understanding regional and urban development. Further, I will illustrate a shift from a 2nd order inspired perception of embedded learning in the region towards a higher level framework. This will set the stage for introducing my conceptual framework for this research.

3.2. Heterodox economic geography and regional learning

Alternative theories for understanding regional development provided by heterodox economic geographers have challenged the unrealistic assumptions, and mechanistic and first order complex system models of mainstream economics and other prevalent theories – especially in regard to the lack of a convincing understanding about processes of change. In a broader sense, these approaches have borrowed, intentionally or unintentionally, from different schools of heterodox economics: institutional (Veblen, 1898 (1998); Hodgson, 1994), cultural (based on Putnam, 1993), relational (Granovetter, 1985), social (Smelser and Swedberg, 1994) and evolutionary (Nelson and Winter, 1982; Nelson, 1995). Within the broader heterodox economic geography, three basic dimensions have created different schools of thought for understanding the processes of change in spatial unevenness. These include the micro-
macro dialectic or the agency-structure problem (Murphy, 2003; Veblen, 1898 (1998); Storper, 1997), the degree of rationality of actors (Amin and Cohendet, 2004; Storper, 1997; Ettlinger, 2003) and the evolutionary or non-evolutionary understanding of socio-economic systems (Boschma and Martin, 2010).

While some of the models in heterodox economic geography provide a deterministic, machine-like conceptualization for understanding regions, there has been a significant effort to move to higher order complex systems in understanding regions as well. These efforts include those that have positioned their conceptualization of regions in the adaptive or second order complex system framework and those that have tried moving beyond the second order of complexity. The most sophisticated and convincing theories have discussed the development of regions from a learning perspective. Introducing the concepts of regional learning and learning regions (Wolfe and Gertler, 2002; Storper, 2002; Hudson, 1999, Rutten and Boekema, 2007), these theories maintain the conceptualization of knowledge creation and learning as the fundamental distinguishing element of orders of complexity (as described in the previous section), and place them at the core of their models.

The existing frameworks for understanding learning in space can be differentiated based (a) on their conception of knowledge as codifiable or tacit, pragmatic or possessed, social or individual, strongly or weakly rationalistic (Gertler, 2003, Amin and Cohendet, 2004). However, they could also be distinguished based on their: (b) unit of analysis – firm-institutions, regions as a whole, and practice-oriented subjectivities and inter-subjectivities at different levels (Wolfe and Gertler, 2002; Amin and Cohendet, 2004, Murphy, 2006a, Turner, 2010); (c) assumed embeddedness of economic activity in either social, relational, structural, institutional, political, and cognitive forms (Hess, 2004, Zukin and DiMaggio, 1990, Rutten and Boekema, 2007); (d) aim of the learning process- (functional) competitiveness or (systemic) development of regions (Conti and Giaccaria, 2001; Storper, 2002; Lovering, 1999; Moulart and Nussbaumer, 2005); (e) conceptualization of agents and their relation with institutions – emergence, institutional (structural), structuration and morphogenesis (Murphy, 2003; Ettlinger, 2003, Storper, 1997; Archer, 1995); (f) type of social capital and trust – determinist or cultural, temporal or swift; and pragmatist or practice-oriented (Wolfe, 2002, Cohen and Fields, 1999, Cooke, 2002; Murphy, 2006a); and (g) even their home and originating geography –
North American, European (Wolfe, 2002) or perhaps, transatlantic. These distinguishing characteristics can help identify three possible approaches to regional learning: institutional (or institutional-evolutionary) regional learning; socially embedded regional learning; and socio-cognitive regional learning (see Table 3.2).

**Table 3.2 Three conceptualizations of regional learning in economic geography**

<table>
<thead>
<tr>
<th>Distinguishing feature</th>
<th>Institutional regional learning</th>
<th>Socially embedded regional learning</th>
<th>Socio-cognitive regional learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conception of knowledge</td>
<td>Possessed, routine and technology focused, mostly codifiable, ...</td>
<td>Possessed, social, cognitive included, non-codifiable, ...</td>
<td>Pragmatic, socio-cognitive, non-codifiable, ...</td>
</tr>
<tr>
<td>Unit of analysis</td>
<td>Firms and institutions in regions</td>
<td>Social relations, constructs and networks in regions</td>
<td>Individuals, communities and clusters in regions</td>
</tr>
<tr>
<td>Assumed embeddedness</td>
<td>Firms embedded in institutions (political/cultural embeddedness)</td>
<td>Relational and structural/cultural embeddedness</td>
<td>Socio-cognitive embeddedness in addition to others</td>
</tr>
<tr>
<td>Aim of learning process</td>
<td>Competitiveness</td>
<td>Competitiveness</td>
<td>Development</td>
</tr>
<tr>
<td>Structure-agency approach</td>
<td>Structural</td>
<td>Struggling between structure and agency / structuration</td>
<td>Pragmatist / Morphogenetic</td>
</tr>
<tr>
<td>Understanding of trust and social capital</td>
<td>Swift trust and social capital in institutions</td>
<td>Deterministic-historic-cultural social capital</td>
<td>Pragmatistic approach which focuses on trusting practices</td>
</tr>
<tr>
<td>Home and origin continent</td>
<td>North American</td>
<td>European</td>
<td>Transatlantic?!</td>
</tr>
</tbody>
</table>

Source: author

Turning back to the complexity framework, the institutional-evolutionary approach has adopted a second order complex system perspective for understanding regions as adaptive learning systems. It has done so by considering routines, organizations, institutions and their co-evolution at the center of analysis. Efforts of the socially-embedded approach to move beyond this order of complexity have been criticized (Lovering, 1999; Taylor, 2005; Amin and Cohendet, 2004; Moulaert and Nussbaumer,
Criticism centres on problems in considering emergence and rationality-oriented perspective, due to a policy-led theorizing.

The socio-cognitive approach has attempted to bring complexity characteristics back to the socially-embedded regional learning conceptualization. It has done so by focusing on the “mental models” concept as distinguishing third and fourth order complex systems from lower orders of complexity. In pursuit of their objective, proponents of this approach have concentrated on different aspects of the learning process for human beings and human collectives. The literature on social and organizational learning has been particularly significant (Amin and Cohendet, 2004; Munoz et al, 2011; Murphy, 2006a; Wenger, 1998; Senge, 1990; Argyris and Schon, 1978; Kim, 1993). I will follow this lead in the next section to develop the conceptual framework of my research.

3.3. Social learning: a higher order complex system perspective to learning in regions

One route towards the enhancement of theories of regional learning has been provided by the social learning literature. This literature has been explored by heterodox economic geographers within organizational learning and also through the concepts of communities of practice and epistemic communities (Wenger, 1998; 2010; Amin and Cohendet, 2004; Amin and Roberts, 2008; Benner, 2003; Iskander et al, 2010; Holden, 2008). It provides an alternative understanding of the underlying processes of learning in a region.

3.3.1. Mental models, reflexive and adaptive learning

Returning to the complexity framework, it is clear that in this framework the point of departure from an evolutionary understanding of socio-economic systems to a higher

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These writers do not mention that their critics are towards the complexity framework but their critics could be brought into this framework.
order complexity lies in the concept of mental models. While this concept has not been further developed by Foster (2005), it has been developed by writers in other fields such as organizational learning and evolutionary economics. Within the latter, Munoz et al. (2011) have introduced “action-plans” as an alternative basic unit of variation, selection and retention to overcome the blindness of evolutionary processes (the intrinsic deterministic understanding of change). Defining action-plans as “the agent’s projective linkage of means (which include specific action) to goals (or ends)” (p.195) they conceptualize “action-plans” (p.195) as projections of the action that an individual is executing in practice. In this regard, action plans involve schemata, paradigms, beliefs and viewpoints in establishing goals on one hand, and routines in practice on the other. This indicates that based on context, action-plans are developed (as a projection in the individual’s mind) when action is being done. Munoz et al. also point out that “an action-plan may be considered as a quasi-decomposable system” which points out the holistic nature of mental models. In other words, they can be deconstructed and categorized by the observer for diagnosis but are ontologically a decomposable whole; a gestalt.

Within organizational learning\textsuperscript{16} (Argyris, 1977; Argyris and Schon, 1978; 1974; Senge, 1990; Kim, 1993) with a noteworthy background in pragmatic theory (Schon, 2000; Argyris and Schon, 1978; Argyris, 1987), the concept of mental models has been defined and used similarly to the way in which Munoz et al (2011) define action-plans. Building on Peter Senge’s definition (based on Chris Argyris’ ideas), Kim (1993) defines mental models as “deeply held internal images of how the world works” (p. 40). In contrast to a static memory, Kim finds mental models dynamic in the way they influence seeing and doing. Elaborating on this, he defines two parts of mental models: frameworks and routines. While frameworks coincide with Nonaka’s (1994) definition of mental models and highlight the internalized beliefs and worldviews as “theories-in-use” (Argyris, 1977), routines are described as the part of mental models that guide “steps in order to complete a task” (Kim, 1993, p.40). Hence, in regard to the orders of complexity framework, the definition of mental models could be refined as the active knowledge

\textsuperscript{16} Another stream of organization learning (Nonaka, 1994) reviews “mental models” with a different conceptualization that is not reviewed here.
structure or gestalt of third order complex systems in relation to their environment – both in the form of images and routines.

From here, Kim (1993) articulates a new understanding of individual learning that is conceptualized from a constructivist perspective (Wenger, 1998) that views human beings as a third order complex system. Kim first shows that earlier understandings of learning in organizations have been based on a behaviourist perspective. Within this perspective, he introduces ‘single loop learning’ based on Lewin’s experimental learning model, as interpreted by Kofman (Figure 3.1). In single loop learning, a person designs based on abstract concepts, implements that design, observes the reaction of the environment to the implemented design, and finally, assesses his/her observation and re-designs for a new action. Based on this conceptualization Kim defines ‘double loop learning’ (referring to Argyris) as “the process through which individual [single loop] learning affects individual mental models; which in turn affects future [single loop] learning.”17 (p.45). (Figure 3.2)

**Figure 3.1 Individual single loop or adaptive learning**

![Individual single loop or adaptive learning diagram](image)

Note: redesigned by inspiration from Kim (1993, p.39)

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17 Munoz et al’s definition of “action-plans” although very close and beneficial in understanding mental models is less favorable than mental models for my work due to involving an implicit overlap between the design phase of the single loop and the frameworks and routines of Kim’s model – in regard to my aim to distinguish between adaptive and reflexive learning. Also their definition of action-plans is less synchronized to a pragmatic view in the sense that they make distinction between the constitution and selection of action-plans and their actual deployment. (referring to Page 197, Munoz et al, 2011)
Building on this definition, single loop and double loop learning could be brought into a more consistent language with the complexity framework as follows: Adaptive learning (single loop learning) is the accumulation of knowledge that leads to adaptive experience without change of mental models. Because it does not include change of mental models, it could be envisaged for second order complex systems and thus, legitimately understood by evolutionary concepts such as selection, fit and chance. Reflexive learning is the change of mental models of a third order complex system in their interaction with the environment, which may or may not lead to an adaptation in the single loop learning process.

**Figure 3.2  Individual mental models and double loop (reflexive) learning**

Note: Adapted from Kim (1993, p.40)); The arrows from routines and frameworks to operational and conceptual learning show how mental models affect the single loop of learning; the arrow from the single loop learning oval to mental models represents the change of mental models or double loop learning based on the experiences of single loop learning.

### 3.3.2.  Shared mental models for social entities in the region

According to the ‘orders of complexity framework’, Foster (2005) introduces fourth order complex systems based on the interaction of mental models. Using the conceptualization of mental models above (as the practice oriented cognitive basis of
theorizing human learning) and also using the concept of social embeddedness provided by Rutten and Boekema (2007), as well as Murphy’s (2006) extracts about intersubjectivity from social psychology, shared mental models could be defined for fourth order complex systems. Shared mental models are the inter-subjective (Murphy, 2006) property of a fourth order complex system (Foster, 2005), emerging as the dynamic outcome of interaction between mental models of third order complex systems within it that gives a social reality (Rutten and Boekema, 2007) to the network of the third order complex systems that are in interaction.

This sort of socio-cognitive understanding of social embeddedness has been best described in the social and regional learning literature as the properties of communities of practice. It is also implicit in the concepts of “social fields” (Fløysand and Jakobsen, 2010), “overlapping networks” (Ettlinger, 2003), “spheres of life” (Murphy, 2003; Ettlinger, 2003) and, local-global networks (Conti, 2005).

The organizational learning literature has used this idea in describing learning organizations. For instance, Kim (1993) uses Argyris and Schon (1978), and Senge’s (1990) contributions to extend the definition of mental models to organizations (as one sort of fourth order complex system) and to introduce shared mental models. According to Kim (1990), the dynamic memory of an organization that has “the capacity to affect the way an individual or organization views the world and takes action” could be understood as its shared mental models; that is constituted of the “standard operating procedures (SOPs)” or “organizational routines” and its “weltanschauung” (worldview) (p.45)\(^\text{18}\).

Building on the findings of researchers in economic geography and other disciplines, some important points in understanding shared mental models are summarized below:

1) It is important to recognize that there is no need for every interaction of fourth order complex systems to lead to the emergence of a shared mental model. As

\(^{18}\) It should be noted that this definition of shared mental models for large corporations is somehow ambitious and the following ideas from cultural studies provides a better understanding about organizational shared mental models from an ethnographic perspective.
illustrated in Rutten and Boekema’s (2007) types of social embeddedness, the social relation of individuals could take a relational and structural form which does not include the emergence of a social entity (or at least it is weak and unrecognized by the third order complex systems (humans) inside). Hence, not all networks of people and firms are social entities with shared mental models; rather, they might be put together by objective and formal contracts.

2) In this sense, a culture and region (and thus cultural embeddedness) could be envisaged as a higher order of complexity including the interaction of the mental models of third order complex systems and shared mental models of fourth order complex systems, leading to the emergence of a higher order shared mental model system. The latter is presented in Sherry Ortner’s (1973) cultural studies framework for “key scenarios” and “root metaphors” for a culture.

3) Having shared mental models within a social entity such as a workplace, family, or personal network does not mean that an individual's mental models are completely active in each interaction. A shared mental model is the outcome of the interaction of mental models of the participating individuals. If this knowledge structure is envisioned as a network of nodes and relations, nodes can be understood as being active and engaged with nodes of another knowledge structure in one “social field” (Fløysand and Jakobsen, 2010) and inactive in other social fields.

4) Organizational usage of shared mental models gives little emphasis to identity building and meaning making processes that occur simultaneously with the emergence of shared mental models. In contrast, the community sense, with its more fluid boundaries (Martin and Sunley, 2010, p.104), gives identity building a central role in the conceptualization of communities of practice (Wenger, 1998), social fields and overlapping industry networks (Murphy, 2003).

3.3.3. Social learning: the learning processes in fourth order complex systems

Kim (1993) uses the concept of shared mental models to expand the conceptualization of organizational learning from the behavioural (single loop) framework to a socio-cognitive framework. He defines double loop and single loop learning for
organizations. Extending his definition to other fourth order complex systems which have shared mental models, ‘reflexive social learning’ or ‘socio-reflexive learning’ could be defined as ‘the learning process of a social entity that includes a change of shared mental models of that social entity’. Also, using the definition of adaptive learning for individuals, ‘adaptive social learning’ could be defined as ‘the process of adaptation of a social entity to environmental feedback without change in its shared mental models’.

Application of reflexive and adaptive learning to fourth order complex systems with less visible boundaries (in comparison to organizations) has some significant challenges. These challenges highlight critical issues in regard to the identity and common action that these social entities perceive and practice:

1) The reflexive learning of an individual can initiate a reflexive social change if the individual’s action occurs in the context of interaction or common action with other members of a social entity. Reflexive learning must also be incorporated into the shared mental model system after interaction with other individuals in order to bring about social reflexive learning. On the contrary, – as illustrated in figure 3.3 – individual reflexive learning is not the end of the change process because without the change of conventions – “mutually coherent expectations and practices, which are sometimes manifested as formal institutions and rules, often not” (Storper, 2002, p.138) – these conventions will produce a paradoxical situation for the actor: on one hand s/he has realized the need for changing her/his mental models but on the other hand, changed mental models might seem to oppose the conventions.

2) If the individual is conceptualized without social entities such as communities of practice (with shared mental models) s/he will not have a role into changing conventions, and hence, institutions. In Figure 3.3 it is shown that at the initial moment of action (T1) no reflexive learning happens. Consequently, at the next moment (T2) the action is carried out based on the same mental models. When reflexive learning happens in T2, it does not signal conventions for change because conventions are pictured as stable and not interacting with the mental models. This leads the individual to a dilemma: either to act based on (now) unconventional ways or to draw back and accept the conventions. In either case, the new knowledge is not institutionalized and the institutions at work in the objective world would provide an opposing role through power relations in the next instant of action.
3) The process of change in shared mental models is integrated with processes of identity building (Wenger, 2010). In some cases, it might move towards a stronger sense of identity and belonging; in more negative cases, it may lead to a fading meaning for the social entity. This process of identity building or “identification” includes: “engagement” in the common actions of the members of the social entity; “imagination,” through the shared frameworks about the relation the social entity has with the outside world and to its members; and “alignment” with the feedback the social entity receives from the common action of its members (Wenger, 2010, p.184). Unlike Wenger’s desire to extend communities of practice to very wide groups of people (Snyder & Wenger, 2010), I suggest that a more careful treatment of learning and identity making of social entities (including communities of practice) is necessary. Conflicting identities (Hong et al, 2009) within communities of practice – not only among individuals, but among individuals and social entities and social entities with each other – complicates the
practices of power (in a Foucaultian sense (Allen, 1997) as a set of strategies, techniques and practices) and the communities of practice conceptualization for them.

4) Contrary to the process pictured above, if the individual’s shared mental models change in interaction with other members of a social entity that has shared mental models (i.e. a community of practice or social field like a family, a workplace, etc.) a route for change of conventions and institutions could be envisaged. As shown in Figure 3.4, the part of conventions that is active in a situation of common action constitutes the shared mental models of the acting social entity.

At this point in time, conventions can be understood as stabilized shared mental models of other social entities that are not acting at that specific moment. What is important is that, after the process of social reflexive learning – based on individual reflexive learning – the part of conventions that overlap with the shared mental models of the acting social entity would be changed. This could bring potential change to the overall interaction between the nodes and relations that build conventions as a structure of knowledge. Hence, conventions at T2 could be transformed. The emerging set of conventions legitimizes a new set of shared mental models and thus, the action of the social entity and the individual members is changed. This is reflected in the objective actions that they pursue in T2 or future points of time.

The next phase of this process is the conflict between conventional-legitimate actions that are not in harmony with the objective power relations enforced by institutions in the first loop of learning. This would lead to challenging the legitimacy of these institutions and attempts to change them. The reaction of institutions to the attempts of the social entity to change them – through other social or individual entities – could bring about new institutions that are in harmony with the new conventions.
5) The process illustrated in figure 3.4 and described above is a neat and tidy model of the messy process that happens in reality. It is the long term process of institutional change that leads to sustainability of the change and shows how difficult the process of change can be. This does not preclude the possibility that short cuts could be made in this process. Through power games, institutional change can be directed by individuals and social groups without a change of conventions. The non-desirable conflict and backlash brought on by such power games negatively influences the sustainability of change. In Kim’s (1993) words – based on March and Olsen (1975) – many incomplete learning cycles could be envisaged. What is important is that these incomplete or partial cycles of learning are not always negative, but they have consequences.

6) This framework can assist us in moving beyond an empirical reasoning for “confidence”, “small experiments” and “talk” in the process of learning (Storper, 2002).
As Dupuy and Torre (2006) illustrate, instead of viewing trust as a predetermined attribute – either through community confidence (articulated either by the historic view or institutional view) or interpersonal confidence – processes of trust relationships should be the focus of understanding trust. In this sense, as Murphy (2006a) articulates, for each trusting relationship, an inter-subjective relation is constructed based on the prior experiences of the people in that interaction (in regard to each other and also elsewhere) and the perceived stock of social capital that exists in that context. As soon as (or even before) this inter-subjectivity is objectified with a common action, it is intertwined with an identity building process. The ‘low identity-low trust’ situation allows low risk common actions (or experiments). Yet, if these small experiments build on each other, they strengthen the stock of social capital between people and build shared mental models that include more positive risk taking perceptions for the next common action. This process also accompanies the identity building process and might lead to creation of objective institutions like cooperatives, joint ventures and associations. Failure of the experiments can lead to a decline in trust and common identity.

7) The interaction that leads to reflexive social learning in a social entity is best described by the concept of “dialogue” (Senge, 1990; Isaacs, 1993). As conceptualized by Isaacs (1993), in dialogue we seek to realize our mental models, analyze them and gain a shared meaning. Thus, dialogue includes a degree of reflexive learning (both socially and individually). In contrast, ‘talk’ (Storper, 2002) between individuals could be towards consensus building within which, according to Isaacs, people seek some rational means to limit options and focus on the ones that are logically acceptable to most. Applying this idea to Storper’s (1997) conceptualization suggests that dialogue could be considered the “intensive communicative interaction” and not the “shallow contact” (p.273).

Considering these facts, social learning could be defined for a social entity as the overall processes of reflexive and adaptive social learning that are balanced by trust building and identity building processes.

Using the language introduced above, it can be argued that policy makers carry mental models about embedded learning in society and that these models influence how they picture problems and what solutions or interventions they propose for overcoming
socio-economic issues. In this research I have used the conceptual framework described above to investigate the learning processes that have occurred in the saffron cluster – in regard to the cluster development project itself, as well as other developmental policies introduced in the previous chapter. This framework will assist me in illustrating how different ontological perspectives about the embedded learning of humans and their networks in the eyes of policymakers, have led to different policies with varying rates of success in the saffron cluster. In the next chapter I will introduce my research design and methodology; a methodology that is aligned with considering mental models and shared mental models and their transformation.
4. Methodology and research design

4.1. Designing the research

According to the conceptual framework outlined above, different approaches to learning would provide rival interpretations about the learning processes that have been at work in the cluster’s lifecycle. My aim in this research has been to include mental models in understanding processes of development. According to my conceptual framework, if the mental models of decision makers (mostly firm owners) have not changed, while their actions and behaviours change, adaptive change has taken place. Thus, behavioural theories in economic geography, such as evolutionary economic geography or new economic geography, can be used to frame how the change occurred. Alternately, when a reported change of mental models has prompted the behaviour of firm owners to change, a reflexive change has happened. Either of these changes should be explored to see what role the cluster development project had in influencing (negatively or positively) the learning process. This can be done by examining it according to the process of social learning introduced in the conceptual framework. This investigation includes related issues of identity building, trust and power relations as well.

In designing my research I have employed a case study method as Baxter (2010), Berg (2009), Eisenhardt (1989), and Flyvbjerg (2001) describe. Baxter (2010) defines a case study as “the study of a single instance or small number of instances of a phenomena in order to explore in-depth nuances of the phenomena and the contextual influences on and explanation of that phenomena”. According to Eisenhardt (1989) and Baxter (2010), case study research can involve qualitative, quantitative, or both types of data. I have used both, but have leaned towards the qualitative side. Berg (2009) emphasizes the importance of case studies in bridging the gap between foundational studies and practice, which is the goal of my research. Flyvbjerg (2001) takes this even further, arguing that the case study is the way that social science can “make sense”
again. He reviews Dreyfus’ model of the learning process of humans and argues that higher level learning which is closely related to context, experience and intuition\textsuperscript{19}, can only be understood through case studies.\textsuperscript{20}

Following Flyvbjerg’s (2001) categorization (p.79) my case study is a paradigmatic case which aims to develop a metaphor for the domain which the case concerns. In regard to Stake’s (1994 as cited in Berg, 2009) categorization of purposes of case studies, my case study is ‘intrinsic’. In other words, I wish to better understand a particular case because of its uniqueness. This differs from an ‘instrumental’ case study, which is used when the researcher focuses on a case to provide insight into an issue for making it more generalizable. According to Yin’s (as cited in Berg, 2009) categorization of case studies, mine is an explanatory case study, as it tries to explain how development can be better understood through reflexive learning. Finally, in regard to time, my case study is longitudinal.

### 4.2. Methodology

Following the conceptual framework of my research and the case study design above that distinguishes between reflexive and adaptive learning\textsuperscript{21}, this case study investigates the change or stability of perceptions and routines and the shared perceptions and routines of business owners and other important decision makers of saffron business enterprises in the Khorasan region. It seeks to identify whether reflexive or adaptive learning mechanisms (individually and socially) have been at work in the cluster development project, leading to the international non-bulk trade of saffron and establishment of the saffron complex in the Toos industrial estate.

\textsuperscript{19} He basically argues that learning includes mental models and that their creation is very complex; to a degree that even the learner could not describe how s/he had learned.

\textsuperscript{20} He also introduces three intellectual virtues of Aristotle (\textit{episteme, techne and phronesis}) and argues that the domain of social sciences is in the latter and builds a case for the priority of the particular (the case study) for social science research.

\textsuperscript{21} Which in its simplest stance differentiates them by the change or stability of mental models (perceptions and routines that people act based on them)
As this process has happened over the last 3 years (and is still underway) I have attempted to understand the stability or change of perceptions and routines among saffron business cluster actors over the past approximately 5 years. In doing so, I have used semi-structured interviews and content analysis of secondary data as my research methods. I chose these methods because the information that I needed had not been produced by other people and could only be found in talking with the saffron cluster actors. I also lacked the resources (money and time) to organize focus groups or other similar methods for my research.

Below, I describe my data collection in more detail. However, I first note that I acted as the technical advisor for the saffron cluster development project from 2008 to 2011. Throughout this period I was in contact with firm owners and governmental agencies related to the saffron industry. This contact included: monthly meetings with the cluster development agent (CDA); reading and commenting on his reports about the cluster development project (including his diagnostic study (Taziki, 2008), which is unique and the most comprehensive study of the Saffron industry in Iran); writing assessments about the improvement of the project; and many other interactions centered around project funding. In this three year period I made several short trips to Mashhad, which aside from meeting with the CDA, included visiting firm facilities and having short interview-like conversations with firm owners and governmental staff related to the saffron industry. Due in part to this involvement, I have maintained a keen interest in the saffron industry for the last 4 years and have followed related developments (including price fluctuations and media interviews with industry actors).

Before starting my official research, I reviewed the following: a diagnostic study report, including an overview of the saffron industry and the technological, market and production issues in it; a history of the evolution of the industry in the Khorasan region; analysis of the current dynamics of the industry using value chain analysis, social capital assessment and institutional diagnosis; and the possible strategic moves for the development of the cluster. I also reviewed other reports related to the cluster development project. Lastly, I had a conversation with the cluster development agent and the staff of the ISIPO Khorasan and discussed my research with them.
In regard to this research, I would describe myself as a semi-action-researcher. This is because I have been involved in the action that has been the subject of study to some extent, but not completely. This fact has had both positive and negative effects. On one hand, I came to this study with preconceptions about the business and the cluster development process. Throughout the study I have remained conscious of these preconceptions and tried as much as possible not to let them influence the research. Another negative effect is related to the judgement (mental models) of interviewees approaching me as a proponent of cluster development. I have attempted to overcome this problem by guaranteeing anonymity in my consent forms and expressing the fact that my research is aimed towards understanding the shortcomings of cluster development for future research and action. I have also explained that I do not have direct business intention about the saffron industry itself. I believe this has had a positive effect in helping me overcome this challenge in my research. On the other hand, my prior interaction has provided me with background knowledge about the cluster and actors so that the efficiency and depth of the research has increased considerably.

The official research was carried out after receiving ethics approval in April of 2012. With the support of Simon Fraser University, I conducted interviews and secondary data collection in Iran during April and May.

4.2.1. Secondary data collection

Secondary data was collected to indicate changes that have happened in the saffron business. This data includes information about firms, employment, sales, production and turnover. It also includes the data reported by the internal diagnostic study of the cluster development project and related reports. I gained permission to access these sources from the Khorasan branch ISIPO authorities and the CDA.

The secondary data collection also included a review of regulations and rules that have influenced the saffron business. These included export incentives and the by-laws, meeting minutes and agendas of new establishments to the extent that they were available. This data was used to investigate the rationale of regulations and decisions related to the saffron industry. Also, I used these documents to identify some of my
interviewees. Permission to access most of these sources was not needed because they were available to the public.

Other secondary data that I collected includes news articles and interviews with informants (including business owners) of the saffron industry. All of these were available online (about 200 short news pieces). These sources assisted me in identifying potential interviewees and provided some understanding of the decision-making context and mental models of the interviewees.

Finally, I have used databases on saffron export and import from Iran, Spain, UAE and other countries from the United Nations Commodity Trade Statistics Database (UN comtrade, n.d.) to understand changes in international saffron trade.

4.2.2. Primary data collection

My primary aim has been to understand the individual and collective decision-making processes of firm owners in different critical moments over the last 5 years in order to discuss the predictability of rival interpretations of learning processes. I have investigated these critical moments to find: first, the detailed context in which decisions were made (to understand the institutional, material and environmental limitations that decision-makers faced in that specific situation); and second, the specific dynamics and cause and effect relationships that the firm owner considered in making his decision (to understand the mental models as much as possible). I conducted interviews with two groups: saffron business owners and CEOs, and government staff and managers. Interviews usually took place at the workplace of the interviewee:

1) Saffron business owners and CEOs (12 interviews): this group was the main target of the interviews and my questions for them were mostly aimed at: getting a history of their business decisions, specifically over the last 5 years; their participation in the cluster development process; the guiding principles of their decisions in this period; their reaction to changes in policies and initiatives; their reasons for joining or not joining the networks and consortia; and their knowledge about the place of their business in the saffron industry (see appendix A for a full list of questions). With permission, I also used documents, brochures and official data produced by some of the firms to understand the
interviewees and the firms and to put them in context. Finally, interviews included discussion of perceived changes in other firm owners and competitors. In interviews with each firm owner I included specific questions about how they interpreted the decision making processes of their colleagues. I did so in order to gain another perspective and to find out what actions, behaviours and talks or reflections they had observed or perceived, especially in situations of common action or decision-making.

Respondents were mostly selected through the secondary data review and through interviews with the union director, governmental staff and the CDA. Following Yin’s (2003) advice on doing interviews, I avoided bias by asking ‘how’ questions instead of ‘why’ questions. Among the 12 firm owners that were interviewed, were the president of the Union of Saffron Exporters (who is also the president of the Union of Saffron Retailers), the chairman of the ‘Non-Government Fund for Promotion of Export of Saffron’, and several board members of these organizations. These individuals were interviewed both as firm owners and as industry representatives. Interviews normally lasted between 90-120 minutes and were all recorded and transcribed afterwards.

Because of my prior relations with the cluster, I was able to interview most of the leading firm owners and many who had participated in the cluster development action plans. However, I was not able to reach many of the very small traders and firms. I do not believe this had a significant effect on my study, as many of my interviewees had started as small traders or owners of small firms. Nevertheless, interviews with some of these actors could have enhanced the study.

2) Government staff and managers related to the saffron business - especially those that had been working with the saffron industry within the last 5-10 years (5 interviews). I found these interviewees through my prior relations with the cluster. I asked them about the following: the history of their involvement with the saffron industry; the interactions they have had; and their experiences with people in the industry. I was particularly interested in their experiences related to the policies and initiatives under research (including the cluster development process). I asked about their understanding of the policies, the reactions of saffron businessmen, their perception of change in their work, their actions and their improvements. Interviewees
consisted of past and present staff of ISIPO (Khorasan branch), Khorasan trade organization, and Iran Trade Promotion Organization (TPO).

I attempted to secure an interview with the National Saffron Council President (who is also Mashhad’s Chamber of Commerce President of Industries, Mines and Agriculture), but was unsuccessful. Instead, I spoke unofficially with staff members. This did not end up being a significant shortcoming in my research, as interviews with many members showed that the council had not been involved in, and did not have much to say about many aspects of my research. I also tried to interview the president of the rural cooperative for saffron but scheduling issues prevented this from happening.

One very important interviewee in this research was Mr. Taziki, KSCDP Cluster Development Agent. I have more than 5 hours of recorded interview with him in addition to many hours of informal chats that we had about the cluster and his experiences with cluster actors.

4.2.3. Sampling and Triangulation

I used a theoretical sampling (Glaser and Strauss, 1967) strategy for my research, as it was conducted with the aim of discovering categories and their properties, and to develop the interrelationships into a theory. My initial plan was to sample until I reached saturation (Glaser and Strauss, 1967); in other words, until category formation was exhausted and no additional data was being found to develop or add to the properties of a category. To a great extent, I was able to achieve this in my 17 interviews. However, it would have been better if I had been able to build trust and overcome ethical limitations for interviewing smaller firm owners and traders.

As described above, I started this research with some theories in mind but I have endeavoured to be as honest and open-minded as possible in understanding how learning has happened in this cluster. Starting without any theory in mind is not possible but I have tried to exclude them as much as I have been aware of them.

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22 In Eisenhardt’s (1989) language, when the addition of new places or people added little new data and little new insight.
For this challenge I have considered Yin’s tests for social science research. Yin (2009, p.40) describes four common tests for all social science methods, including case studies: construct validity, internal validity, external validity and reliability. External validity is mostly an issue of research design and thus out of scope for here. For the other three tests, Yin (2003) presents three principles of data collection for increasing the construct validity, internal validity and reliability of the conducted research: 1) using multiple sources of evidence with data triangulation as a way of overcoming internal validity issues and to assist with construct validity; 2) organizing and documenting data by creating a case study database which is mostly concerned with construct validity and separating the second order concepts of the researcher from first order concepts (Van Maanen, 1979); and 3) allowing potential follow-up on case study evidence by maintaining a chain of evidence as a response to issues of reliability.

In my research I have used triangulation (Yin, 2009) through semi-structured interviews to investigate some of the key decisions that have been made by business-owners. This was accompanied by data from secondary sources for verification. I structured each interview based on information from prior interviews and secondary data to understand specific events that had been a turning point for these businesses. I transcribed all interviews and organized this data alongside my secondary data before my analysis.

In the following four chapters I will provide the findings of my research. First, I will illustrate the evolution of the saffron industry and the different actors (with different styles of business and mental models) that have emerged in this industry. Then, in two chapters, I will move to the policies that have been designed and implemented for the development of the industry over the past decade. I will describe the ontological basis of each of them according to the framework introduced above. Finally, I will discuss my assessment of the learning that has happened in the cluster according to my conceptual framework.

23 To have one case study or many which my case is only based on one at the higher level and is considered a single case study
5. Re-framing the saffron cluster

In this chapter I will re-frame the evolution of the saffron industry in Mashhad and Khorasan towards its recent situation, based on the findings of my primary and secondary research. I will briefly discuss the most important features in its evolution that have had path dependent effects on the current issues of the industry so that policy design and implementation (presented in Chapter 6) can be understood in this context. I will first review very briefly, the decisive features of the evolution of the industry until the 1990s. I will then move on to growth periods in the 1990s and 2000s. Focusing more specifically on the outcomes of the industry’s path, I will introduce two categories of firms based on secondary data and part of the interviews. This will set the stage for understanding interventions that have been carried out in the industry and their learning effects.

5.1. The birth and stagnation of an urban industry: saffron trade before the 1990s in Mashhad

Taziki (2008) reviews the evolution of the saffron industry in Mashhad (and the Khorasan region) over six decades. According to him, the 1990s heralded a turning point towards growth for the industry. As he describes and as interviews also suggested (INTV H; INTV K; INTV L; INTV D), until the 1960s the vast majority of saffron was only traded by convenient stores and 10 to 12 herbal stores (traditional drug stores) located around the shrine of Imam Al-Reza. Apart from this, only one major exporter in Tehran is reported for this period (INTV O; INTV H; INTV M). In the late 1960s, Mashhad was experiencing significant immigration of rural farmers and their children into the city – mostly from south Khorasan. Searching for jobs, these newcomers presented the idea of providing saffron in smaller plastic packages instead of wrapping it in scrap paper from a bulk bin, as was the practice of convenience or herbal stores (Taziki, 2008; INTV H; INTV M; INTV D). Entering the business with this idea, these new saffron traders had the
advantage of strong ties with saffron-producing rural areas that the existing retailers lacked. This advantage, along with their flexibility in entering new ventures, earned them a reputation as an increasingly important source of saffron for foreign (mostly Arab) exporters (INTV X; INTV D; Taziki, 2008). This led to the first direct exports of saffron from Mashhad to Saudi Arabia in 1970 by one of these traders (INTV X).

An important point here is that the early exports of saffron from Mashhad were all based on passive marketing activity that dominated the industry for about two decades. In other words, importers came and found saffron traders in Mashhad and traders provided saffron without any idea about who used saffron, where it was consumed or how this occurred. The quotation below illustrates how the export business was practiced at that time:

“…my customer in the 1970s asked for very simple packages... he said he will package them there himself... at least this was what he told me... he was my major customer and was a huge help in establishing my business. With the income I had from this customer I brought a house for myself after two years in Mashhad and then I moved to buying a store for myself... I lost him afterwards because I only had a [telephone] number for him and that didn't work after the revolution [late 1970s]…” (INTV X).

This small passage from a leading exporter of the time first shows that he had one major customer who made him very rich; second, it illustrates how ignorant he was about the market that his product was used in. This ignorant and passive marketing activity did not seem to indicate weakness because of the underdeveloped and competitor-free market that existed at that time, and the growing demand from within Iran and the Arab countries in the late 1970s (due to rising oil prices and the wealth that brought luxury products such as saffron to the market basket of more middle-class Iranian and Arab consumers).

Another notable feature of these businesses in the 1960s and 1970s is that they were shaped as family businesses because of the price of saffron and the trust requirement for handling it (INTV H, INTV L, INTV M). There was also a concentration of traders originating from south Khorasan and specifically, a village called Charmeh. This village is described by one of the interviewees:
“…I’m from Ferdous [region]. This work has been transferred to me from my father. Many people in the saffron business are from a village named Charmeh in south Khorasan: Miri, Salari, Abbaszadeh (all of them), Shahri, Zabihi, Elahi; we came to Mashhad when I was only 40 days...We had saffron agricultural production at our village. My father came to the city to work for a family member at that time... soon he wanted to open up his own store but this family member that knew saffron trade much better, but was illiterate, asked him to stay with him. Afterwards he became my father-in-law…” (INTV X)

This flourishing and growing business reached stagnation when the macro political and economic climate in Iran became unstable and undesirable for trade as a consequence of the 1978 revolution and eight year war with Iraq in the 1980s.

5.2. 1990s: A period of constant growth for present competitors and new comers

As the war finished, the living conditions of Iranians improved. With these changes, the market for saffron started to grow and economic and political relations with Arab countries (the most available export market) normalized. Significantly, some Iranians who had moved to the Persian Gulf countries and some Kuwaitis who had left Kuwait for Iran (particularly Mashhad\(^{24}\)), played an intermediary role in exporting Iranian products, including saffron, to Kuwait and other Persian Gulf Arab countries (INTV D; INTV I).

Continuing to have a negative effect on trade in this period were the currency control policies enforced by export credits. The valuation of the product that was exported, the need to work with importers in the export process, and limitations on currency exchange were among the problems that limited trade in the early 1990s (INTV D; INTV I; INTV M). The trade decline from 1995 to 1997 reflects these problems (Figure 5.2). Still, it must be noted that a higher exchange rate alongside the growing market was so favourable for exports in this period that all these restrictions could not slow down growth.

\(^{24}\) After Saddam Husain invaded Kuwait in 1990, part of the country’s considerable Shiite population left Kuwait for the Iranian Shiite holy city Mashhad.
Besides internal and regional improvements in trade, especially in the second half of the decade (INTV H), the decline of Spanish saffron production that had started in the early 1930s reached a turning point at the beginning of the 1990s (see figure 5.1). This was mostly due to high labour costs and the entry of Iranian saffron into international markets (the latter was facilitated by Spanish and Arab traders much more than Iranian traders and brand names).²⁵

**Figure 5.1 Decline of saffron production in Spain in the 20th century**

This opened a great space for Iranian saffron to enter a demanding international market in the early 1990s (Taziki, 2008). As can be seen in figure 5.2, the production and exports of saffron increased steadily throughout the 1990s. This activity was concentrated in Khorasan (for agricultural production) and Mashhad (for trade and export). During this period, Spanish and other European firms with international markets started procuring their saffron from the limited number of known Iranian traders (in many

²⁵ One source (Ghahremani, 2010) mentions that this was due to immigration from rural areas to urban areas in the 1980s in Spain (p.24)
cases through Tehran-based traders). As a result, the Mashhad saffron traders grew very quickly throughout the 1990s. They gradually pushed the Tehrani (and also Esfahani and Shirazi) traders to the margins as they established a direct connection with European (as well as Arab) traders and firms.

**Figure 5.2 Growth of Iranian saffron production and export; 1981-2006**

![Graph showing growth of Iranian saffron production and export from 1981 to 2006.](image)

Source: Taziki, 2008 (Translated and years adapted)

The challenges of trade and how marketing was done in this period are described well in Mr. Mahdavi’s interview:

“...between 1987 and 1997, I made trips to Dubai and found some customers there... I went to Dubai because I was not good in foreign languages and Iranians who brought saffron from our customers in Shiraz and Esfahan were there. So we went after them by telephone numbers. Also in 1987 I had a trip to Europe (Spain, France, Germany and Italy). I got a translator there. At that time two other companies exported to Europe. One that had been there for 10-12 years and procured his saffron from us; we gave saffron to him and he gave it to a person who exported to Europe. Now he is our own customer.” (INTV X).

He is actually describing very gently how he circumvented the traders in Esfahan and Shiraz, as well as, in his last sentence, an established company in Tehran. Mr. Khorasani is another saffron trader who describes the dominance of the Spanish firms in the market as follows:
“...Until 1997 European countries were dominant. They even sent saffron from Europe to Kuwait. But when political relations improved and the embassies opened, we were able to sell in international markets. So you can see that we have been in the market for about 15 years, while the Spanish have been in it for more than a century...” (INTV H).

This favourable situation for trade made space for younger entrepreneurs (mostly with family backgrounds in saffron) to enter the industry in a couple of ways: first, by providing new products in existing packages (adding extra phases to saffron sorting to allow for simpler consumption) as well as new packages (oriented towards delivery as gifts) (INTV D; INTV K; INTV N; INTV O; INTV L) for internal markets based on newer managing and marketing techniques; and second, to enter the export business with both traditional passive and new active marketing methods (INTV K; INTV N; INTV M; INTV D). This led to improved facilities for packaging saffron (still at residential places in the city) and the establishment of private companies with the main goal of trading saffron in the early 1990s.26

The leading traditional traders and these entrepreneurs became leaders of the industry by establishing firms and receiving certificates for standard production of saffron from Iran’s Standard and Industrial Research Organization (INTV K; INTV D; INTV H; Taziki, 2008). The implementation of standards was initiated by one of the young entrepreneurs and was followed by other traders. This played an important role in giving some order to the chaotic growth of the market. However, the conflict between the leader of the traditional traders and one of the younger entrepreneurs became the start of the main divide in the industry between modern and traditional style firms (INTV H; INTV K; INTV D; Taziki, 2008). While the younger entrepreneurs and some businessmen in the food industry started building new industrial facilities and reorganizing production towards packaging and processing saffron, the traditional style traders continued investing their profits in retaining their market share. Despite the conflict between these two groups, there has been some cooperation between them. For instance, they worked together to establish the retailers and exporters unions for saffron

26 Although the nature of their business was changing, until the early 1990s traders only worked as part of the convenience store retailers union and had no union for themselves. In response to the growth of saffron retailers in Mashhad, the retailers union was established and in response to change of the nature of business from retail domination towards exports, the exporters union was established.
that remained in place until the end of the 1990s (INTV H; INTV K; Taziki, 2008). Nevertheless, the divide has remained a source of distrust and a barrier for collaboration in the industry.

5.3. Saffron industry: Reaching a new limit in the 2000s

By the start of the 21st century, the saffron trading industry in Mashhad had turned into an industry with more than 50 traders – a number that has increased to about 100 today. In order to understand this industry, two other categories of players should be distinguished: the retailers and the dealers or procurers of saffron. Retailers in Mashhad (excluding the above mentioned saffron traders), are typically characterized by having one store in a main retail centre of the city. The vast majority of these retailers, who number from 300-400 (INTV D; Taziki, 2008; INTV H; INTV L), have licenses from the retailers union (which is controlled by the powerful traditional style traders27). Dealers usually have one foot in rural areas, buying saffron in very small batches from farmers (in many cases from one village or even one family) and processing it to sell to the traders; and one foot in Mashhad, dealing with the traders. These dealers cannot be counted very accurately. However, with more than 85000 families related to saffron rural production in the Khorasan region, they can be estimated to number approximately 1000 (INTV D). Some of these dealers have become saffron traders or retailers based on the wealth they gained from the growth of the industry and their own enterprise. The important point is not the number of these firms, but the main players which have remained stable at around 50 firms. Even this group can be reduced to a small number of core firms (10-12 as mentioned in many interviews, including INTV M, INTV L, INTV H, INTV K, INTV D; INTV I) that have dominated the industry over the past two decades.

As explained earlier, Iranian traders had been meeting demand, mostly for bulk saffron, that had previously been met by the Spanish in international markets and the growing market in the middle-east in the 1990s. Iranian saffron traders were gradually

27 Because many of them are selling their brand names and have tight (including family) relationships with them
entering into competition with the Spanish in Europe and elsewhere. However, the division of labour was generally as follows: Iranians produced and prepared the product for wholesale, while the Spanish (and to a lesser degree the Italians, French, Germans and Swiss) took care of retail and worldwide distribution. One of the young entrepreneurs describes what he saw at that time like this: “...the behaviour of the Spanish firms was very bad towards Iranians...they saw Iranians as gipsy saffron sellers...” (INTV K). This is well illustrated in the distribution of export destinations of Iran’s saffron. According to United Nations Statistic Division (UNST) data throughout the 2000s, UAE and Spain have been the primary destinations of Iran’s saffron exports (see appendix B); about three quarters of Iran’s exports are destined for these two countries. This limited export destination is also reported by the cluster development diagnostic study (Taziki, 2008), which states that 81.7% of Iran’s saffron goes to four destinations, namely, Spain, UAE, Saudi Arabia and France. The saffron market report for Iran’s Institute for Trade Studies and Research (Ghahremani, 2010, p. 111) reports this issue as well. It claims that even the rise of exports to UAE is related to the establishment of Spanish firms in UAE that import from Iran and export from UAE to worldwide locations (p.111). Contrary to the limited number of Iranian export destinations, the Spanish have a very long list of export destinations. One of the interviewees puts it like this: “…they export 60% of the saffron that they receive from us to 40 countries...” (INTV D). Further details are provided in appendix B.

As these available wholesale markets reached saturation in the early 2000s, due to an almost complete lack of new product development or new market development activities, the only basis left for competition between the traders in Mashhad was price – especially for traditional style traders. Mr. Motahar describes this competition:

“...Until the last 2-3 years [2008-9], our company was concentrated on Mashhad’s market. But because of the interaction that exists in this market we started to move out. This was because of the competition that exists in this market. Let me give you an example. If you come to buy saffron from me [with cash] and ask for its price, I will give you a price and you will buy it. But you might ask for some time to pay. Then, I will charge you about 100K tomans for a Kilo [the price is about 2200K] because I won’t have the money available to my business for some time. But people neglect this profit when it is about their own packages. My friends do this but I won’t. This way you start with the first buyer and then the next and then the next. This way your profit will relinquish. Now what has been the outcome of this sort of business? In 1992, if I sold saffron I
would have had the money in my account by the end of the day and I didn’t have to go after it. But then it got to be 10-15 days after, then 1 month … and now, I know about friends that receive 6 month cheques. Why do they do this? [he answers himself] Because they want a larger share of the market. Because we are working based on very traditional methods and we are not going after new activities and methods…our only goal is to preserve our market share… for what price are we doing this? …” (INTV L)

Mr. Mahdavi, a leading trader, describes the limited number of customers in international market for saffron. He says that “7-8 are in Italy, 15-16 are in Spain and 3-4 are in France. These are the ones that buy more than 10-20 kilos…” (INTV M).

This understanding of the market has pushed the actors to conclude that:

“Saffron’s [economic] benefit can only be reached in high volumes. You need to focus on this to change the normal 7-8% profit to a 20% profit. This happens because of price fluctuations. But the problem with this is that you cannot do much planning for it because supply and demand are not stable; prices go up and down…” (INTV C).

This dynamic can be brought into the learning framework as follows: assuming a stable mental model that profit in the saffron industry is in higher volumes of sale and no new markets and new products can be developed, the typical trader would ‘plan’ to reduce all costs to bring down the price for more sales – including marketing and new product development costs; he would ‘act’ by selling bulk saffron with his passive marketing activities to buyers that reach him; he would then ‘observe’ that he is losing some customers – and thus, his profit – because of competitors providing lower prices; as a result, he will ‘assess’ (with the unchanged mental model that profit is in large sales) that he needs to lower the price to keep customers and even find new ones by reducing prices or cheating. This process is illustrated in figure 5.3. Here, three important outcomes of this dynamic are worth noting: 1) cheating; 2) diminishing profits; and 3) transfer of cost pressure to farmers.
In regard to cheating, one of the interviewees argued that:

“...In this period (late 1990s) because the market had been limited ... and the number of exporters had increased from 7 or 8 to 37 or 38, competition intensified and some did a lot of cheating ... including copying each other’s brands or closely imitating them ... for instance, one made a Saharriz brand that was very similar to Saharkhiz... [one of the very famous brands]” (INTV X).

Mr. Motahar describes the cheating like this:

“...there are different sorts of cheating in saffron. One is to put the white part of the flower in the bulk packaged product [using artificial but legal colors or with saffron itself]. Because according to the Iranian standard, the color intensity should be 190 but the majority of saffron coming from Khorasan has a color intensity of 270, so they reduce it this way. Another way is to spray water (with salt or sugar) on it. Nowadays, they have gone after other additives that are dangerous but have higher density ... another way of cheating is to test smaller samples ...” (INTV L).

28 For details see Ghahremani, 2010, p.9
One of the interviewees, after describing that cheating had become a very usual aspect of business, described an instance when he faced one of the traders doing this in the late 2000s:

“…for instance, when I showed him that his saffron was so wet and soft that it did not even break when I put it under pressure, he laughed shamefully. They all have water sprays in their sites. They justify it by telling themselves that they are preventing it from breaking during shipment, but actually they are selling water with the saffron. Those customers who know this tell them (when they are buying) ‘I will take my three kilos now because you are going to spray 3 kilos of water on my 100 kilo purchase……” (INTV X).

The other issues – diminishing profits and transfer of cost pressure to farmers – are explained by Mr. Kavakebi, a traditional trader:

“Now the saffron industry has many newcomers and they have destroyed the profit in it. When there were not many competitors, each kilo that was sold for 250K tomans [the price in 2000], yielded 50K tomans profit; that means 20% profit…Today, some people are selling the 2 million toman per kilogram saffron for 10K tomans…This could not be sustained in an inflation in exchange rates and it does not make sense with the inflation in the country…” (INTV I).

In response to diminishing profit, the cost problem was transferred to farmers. Mr. Asgari illustrates the farmers’ reaction in the mid-2000s:

“…saffron had become so cheap that it was not worth production for farmers. I remember farmers telling me: ‘you can come and produce saffron yourself [if you are in such a need]; it’s not worth it for me’…” (INTV O).

Data from the diagnostic study (Taziki, 2008) regarding the price of saffron illustrates this as well. As shown in table 5.1, while inflation rates in Iran were around 12% per year from 2000 to 2006, the price of saffron only increased by about 5% each year in this period.29 This is also shown in figure 5.4. Together, the data shows that the relative price of saffron was decreasing due to the price wars. In the beginning of the 2000s the pressure for cost reduction was so great that some traders – particularly the younger entrepreneurs – started lobbying for an intervention by the government. They wanted price stabilization to motivate farmers for production (INTV O), but were also trying to strengthen their competition with Spanish firms (INTV X).

29 The negative number at the beginning of 2000 should be seen in relation to the high increase the year before.
Table 5.1  Saffron price change and inflation rate trends from 1990 to 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>price (Tomans)</th>
<th>Saffron price change</th>
<th>Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>510000</td>
<td>34.21%</td>
<td>7.6%</td>
</tr>
<tr>
<td>1991</td>
<td>380000</td>
<td>-25.49%</td>
<td>17.1%</td>
</tr>
<tr>
<td>1992</td>
<td>340000</td>
<td>-10.53%</td>
<td>25.8%</td>
</tr>
<tr>
<td>1993</td>
<td>450000</td>
<td>32.35%</td>
<td>21.2%</td>
</tr>
<tr>
<td>1994</td>
<td>550000</td>
<td>22.22%</td>
<td>31.4%</td>
</tr>
<tr>
<td>1995</td>
<td>1300000</td>
<td>136.36%</td>
<td>49.7%</td>
</tr>
<tr>
<td>1996</td>
<td>1300000</td>
<td>0.00%</td>
<td>28.9%</td>
</tr>
<tr>
<td>1997</td>
<td>2000000</td>
<td>53.85%</td>
<td>17.3%</td>
</tr>
<tr>
<td>1998</td>
<td>2236000</td>
<td>11.80%</td>
<td>17.9%</td>
</tr>
<tr>
<td>1999</td>
<td>2914585</td>
<td>30.35%</td>
<td>20.1%</td>
</tr>
<tr>
<td>2000</td>
<td>2654000</td>
<td>-8.94%</td>
<td>14.5%</td>
</tr>
<tr>
<td>2001</td>
<td>2700000</td>
<td>1.73%</td>
<td>11.3%</td>
</tr>
<tr>
<td>2002</td>
<td>2850000</td>
<td>5.56%</td>
<td>14.3%</td>
</tr>
<tr>
<td>2003</td>
<td>3000000</td>
<td>5.26%</td>
<td>16.5%</td>
</tr>
<tr>
<td>2004</td>
<td>3000000</td>
<td>0.00%</td>
<td>14.8%</td>
</tr>
<tr>
<td>2005</td>
<td>3200000</td>
<td>6.67%</td>
<td>13.4%</td>
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<tr>
<td>2006</td>
<td>8500000</td>
<td>165.63%</td>
<td>11.9%</td>
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<td>2007</td>
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<td>158.82%</td>
<td>17.2%</td>
</tr>
<tr>
<td>2008</td>
<td>30000000</td>
<td>36.36%</td>
<td>25.5%</td>
</tr>
<tr>
<td>2009</td>
<td>28000000</td>
<td>-6.67%</td>
<td>13.5%</td>
</tr>
<tr>
<td>2010</td>
<td>40000000</td>
<td>42.86%</td>
<td>10.1%</td>
</tr>
<tr>
<td>2011</td>
<td>30000000</td>
<td>-25.00%</td>
<td>20.6%</td>
</tr>
<tr>
<td>2012</td>
<td>22000000</td>
<td>-26.67%</td>
<td></td>
</tr>
</tbody>
</table>

This long term price war dynamic had important effects on 'how business is done' in the saffron industry and thus, on people’s habits. Mr. Hashemi describes the habit that is created by this type of price war in the saffron industry:

“…the saffron market imbues people with a specific habit; a habit that people must challenge the fluctuation in price every day and this makes a part of the decisions that people make dependent to circumstances of each day and they become accustomed to this sort of thinking…this crowds their minds so that they
cannot think for the long-term...because it is an important part of the business...you have to see how the price has changed and how the exchange rate has changed to gain profit by making small changes in your selling price…” (INTV K).

**Figure 5.4  Saffron price trends and CPI trends (1990=100)**

The other habit that is created by this sort of dynamic is distrust that restricts cooperation in the industry. Mr. Motahar describes it like this:

“…I was in this meeting with some other industry leaders. I told them that we needed to establish a minimum price for saffron. One of them responded to me: ‘this wouldn’t work unless we had a policeman attached to ourselves’…” (INTV L).

This distrust diminishes the possibility of cooperation, however necessary it may be. Mr. Safaee describes:

“Saffron actors were willing to work with each other but because it was a chaotic market and it did not have an organizer and a champion, this great advantage [for the region] could not be managed… no one trusted anyone so no common action could be taken…” (INTV E).
5.4. Modern and traditional firms in the saffron industry

As described earlier, two different groups of firms are recognized in Mashhad’s saffron cluster by some of the actors themselves (INTV K; INTV O; INTV N; INTV L; INTV D; INTV C; INTV I) and many other people from outside of the industry (INTV D; INTV A; INTV F; INTV K). On one hand, there are traditional style traders. These traders are characterized by many outsiders and modern style firms as: having packaging facilities in the urban and residential area of Mashhad; engaging in limited international marketing efforts and negligible new product development; having stronger family relations in their enterprise, but few established relations with development agencies; and, having a lesser university education, among other characteristics. On the other hand, the group of firms that is known as modern or industrial style is characterized by: modern facilities (mostly in the Toos industrial estate, in the vicinity of Mashhad); investment in international marketing and new products; modern business practices, including recruitment of directors for sales and marketing; broader and more open relations with governmental agencies; use of available subsidies; and higher university education.

Although these characteristics provide a general framework for distinguishing between the two groups, there are few firms that fit either of these categories exactly. Very loosely though, of the 92 firms identified by the cluster development report (Taziki, 2008), Taziki finds 7 or 8 having the characteristics of modern firms as described above. My understanding based on this research is that despite certain objective differences, issues of power and identity and also mental models about ‘how business is done’ are more determinant factors in the divide between traditional and modern style, and drive objective outcomes.

I will review the objective differences here and come back to the other issues in later chapters. For this purpose, I have selected two exemplary cases of modern and traditional saffron firms to highlight the most important differences between them. In regard to the modern style firm, it is possible to attain a good understanding by exploring the following interviewee’s decisions in regard to building new facilities, marketing and other issues:
“Question: Where did the idea of building a modern facility come from?

Answer: I did whatever could be done to improve the facilities I had in the city, but because our business was expanding in those years (1995), I had even rented some of the neighbours' basements for our work. This situation especially annoyed them and I understood that it was not going to work for long. When I sought HACCP approval they also told me that the facilities were not appropriate ... Also, cheating had increased in the market and I was really worried that what happened to Iran's pistachio industry could happen to saffron... One of the issues they focused on was questioning the source of the saffron and how it could be confirmed. So I decided to set up something that would show where it was coming from and how we could assure the quality. These factors came together – both the need for capacity and also the responsibility issue – for this decision.

Question: What incentives existed for this development?

Answer: Nothing. There was this [funding] source in the agricultural ministry but after running after it for some time, I gave up. But there was one chance that played an important role. Because of the news about cheating in saffron, many [Iranian] embassies around the world had started to report this to provincial administrations (Governor-General's administration). There was this meeting where they told us that whoever took action for solving the problem would receive support. I was the first person. [With their support] I bought the land in Toos industrial estate's new phase, which was really a desert at that time. I was one of the first businesses [not only in saffron] to receive a parcel there... I had plans to expand that parcel because according to my calculations I wanted to respond to the European demand and about 40-50 tons of saffron was exported to Europe and I wanted to say that I could do this. Because I had planned for this ... processing (saffron), I needed a lot of space. Because this was very sensitive I organized and bought everything with a high quality...

We went to the new facility in 2001... The number of employees was approaching 100 as well [and we were getting big]. I experienced some financial problems in those years [somewhere between 1997 and 2001] because of the investments I was making.

Question: What were these investments?

Answer: Because competition was very intense, the Spanish were abusing the Iranian firms and I wanted to fight them back. I went there and opened a business in 1997 (but it didn’t actually begin operating for some time). The costs associated with that brought a lot of financial pressure. I had a consultant who had worked with Nestle and Coca Cola. His team was recruited with the idea of

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30 Hazard Analysis and Critical Control Points
31 Iran's pistachio exports were banned from the European Union (one of its major markets) in September 1997 due to high levels of aflatoxin. (Boutrif, 1998, p.35)
enhancing my marketing activities. [He skipped from these activities in the interview] Now I have 2-3 firms in Spain engaged in re-export and distribution. They actually support the production we have here. Because we wanted to compete with them we had to be there. Now, we are probably among the top three in Spain (for the last 3-4 years). There is no other Iranian firm that has done such a thing. All our competitors there buy their saffron from Iran.”

Later in the interview he comes back to this and argues that:

“In 1997, most of my marketing was done in Europe and Japan and other places...I did all the marketing myself except some instances where I got help and guidance from some university professors and institutes in Iran…”

With this picture of a modern style leader in mind, I would like to move a story that illustrates a typical but rapidly growing traditional style firm. The story is told by an interviewee (with some exaggeration and mockery) about one of the new traders, Mr. Kalantari, who has recently transformed his activities from dealing to trading:

“This very simple and rural person that I am talking about – Mr. Kalantari – goes to Mr. Noori [one of the leading modern exporters] and Mr. Noori observes him as an honest and trustworthy person, so he gives the responsibility of his firm’s procurement to him. Now what is interesting here is that at the time, Mr. Kalantari was exporting 15 tons himself (maybe 3 times Mr. Noori [laughing at his own exaggeration]). But Mr. Noori still sees him as his employee. Well, Mr. Noori wanted to be in Tehran because of laziness or whatever reason and he didn’t have enough supervision over his workers. At that time, Mr. Kalantari’s work was to buy saffron from farmers in rural areas for Mr. Noori’s firm... Mr. Kalantari took advantage of this situation and Mr. Noori’s trust. He increased his commission [without informing Mr. Noori] and I think he even made more profits than what Mr. Noori was making from exports. Now imagine that in some years Mr. Noori had maybe 14 tons of exports, and Mr. Kalantari was doing this for him for 9 years; then you would understand what a fortune he made in those years. But he could not expose himself in a way that showed that he had made so much money because his boss would have found out. So, he went on with his prior public persona as a simple rural young man. He bought some good assets in that period and established himself.

Another mistake that Mr. Noori made in these years is that he put his customers in the hands of Mr. Kalantari when he brought them to Khorasan. For example, one of Mr. Noori’s most important buyers from India was introduced to Mr. Kalantari during a visit and this customer started a business relationship with Mr. Kalantari. Although, you must keep in mind that Mr. Noori was making a profit all this time as well. His most important market was the European market and for them, quality of the saffron is very important. Mr. Kalantari always procured for him the best saffron through his very strong relations with the region. For instance, when saffron was 900K tomans in the market, he sold saffron to Mr. Noori for about 1100K tomans. This was a superior product but he had calculated
his own profit very high as well. …I feel that people like Mr. Kalantari – because they are not educated well and are not informed – they are afraid to establish a formal business… they fear having to pay taxes so they do not establish firms. They do not want to take any risk. They do not use loans or other bank facilities – not because it is “Riba”\textsuperscript{32} or something like that – but because they are afraid of having loan payments, or in the worst case, that the bank would take over their assets and these sorts of conservative thoughts. The number of people who think this way has grown because of the special situation in Iran’s economy.” (INTV C)

The two very extreme examples above describe how different the two categories are in regard to the aforementioned characteristics for modern style and traditional style firms. These differences can be further explained as follows:

1) While the modern style firm owner invests in marketing consultants in Europe and Iran, the traditional style firm not only does not invest in marketing but also steals customers from a more established firm (be it modern, as in this case, or traditional). One governmental staff describes this difference as follows:

“…even in regard to participating in exhibitions, industrial firms participated better than traditional ones. They knew which product they should take, how they should be dressed and how they should interact with people. Traditionals didn’t attend these markets because you need an initial understanding about them and how to work in them to go there. For instance, they expected to sell products that they had taken with them and because they were not successful in this they returned unsatisfied and concluded that exhibitions are not useful…” (INTV A).

The latter issue that is raised by the governmental staff can be seen in Mr. Sufi’s approach to participation in exhibitions. Mr. Sufi has participated in only two exhibitions. He went to one in Dubai about 3-4 years ago that was exclusively for showing products. Although it included subsidies, he evaluates it as an unsuccessful event; because it was not attended by many people, it was not useful for him. Another exhibition was held in Oman and according to Mr. Sufi, it was a better experience because “it provided the possibility of selling”. His opinion is that “if exhibitions were held for a long period (for a month) it would be better” because he could achieve more sales (INTV B).\textsuperscript{33}

\textsuperscript{32} Improper profit according to religion

\textsuperscript{33} It is also interesting to note that Mr. Moshref asked me after the interview to translate a letter from a customer from China that he had problems with understanding it.
Again, it should be noted that this is not about the volume of exports. Some traditional style firms have very big export customers and are among the best exporters in the industry. What is important are the marketing techniques that are used and how they are engaged in developing new products.

2) While the exemplar modern style firm has grown to 100 employees, the most longstanding traditional style traders with high export rates have not passed 40-50 full-time recruits. This is to say nothing of the case of Mr. Kalantari and many other traditional owners who work alone or with assistance only from family members. The quality of the recruits by modern and traditional firms is worth considering as well. While the model modern firm has recruited marketing and sales managers, the traditional and many of the modern firms have not recruited anyone out of their immediate families for marketing. Further, most of these recruits are not educated or trained in international marketing. My interview with Mr. Mahdavi, one of the longstanding traditional exporters, explains this and his reason for it:

“Question: Why didn’t you try to recruit people that have been educated in marketing?

Answer: We did that once...when I wanted to go to Europe, we recruited a translator... but he cheated us [he didn't elaborate how]. So we came to the conclusion that we were not going to bring any outsiders into our company...we neither need a degree holder, nor do we need anyone to cheat us...our high school graduates [he means his sons] are enough for us. We will work with them but our money won't go somewhere else.” (INTV X)

Then he went on describing his sons’ capabilities:

“One of them can speak English to a good degree. Another is doing some design work for us. Another of them is studying, and my son in law is responsible for our procurement.” (INTV X)

Mr. Taziki came to a similar conclusion in his cluster development diagnostic report:

“...among the cluster actors, only 20% have an independent marketing section/department or sales section. Even among these few, major marketing activities are usually carried out either by the owner or his children or other close family members. Only two of the firms have independent marketing directors responsible for marketing and sales.” (Taziki, 2008, p.115)
3) While the modern style firm leader has invested in building new facilities (although his ideas are too ambitious and even other modern firms criticize this investment (INTVO)) and interacts with banks for loans, the small traditional style trader is afraid of formalizing his business and receiving loans. According to one of ISIPO’s staff, the reason that many saffron firms did not come forward for establishing industrial facilities was that:

“they were uninformed, they did not think of development and they had this mentality that production could be done in the city in our apartments and that there was no need to have an industrial facility.”

The first serious pressure to move out of the city came in the early 2000s as Mr. Motahar describes:

“In 2003 the City people responsible for supervising food safety came to the sellers union and told us that if the saffron firms did not move out of the city within six months, the City would void their certificates and that only those already in the industrial estates would be certified for processing saffron … I took their words very seriously but others didn’t … Nothing has happened yet in regard to that warning” (INTVL).

Of the 11 saffron processing plants in Khorasan only three are for what would be considered traditional style and 8 are for those that are categorized as modern style firms. These numbers suggest that having facilities is an important factor in being categorized as a modern style firm by modern style actors and industry outsiders. However, it is not determinant because three traditional firms have built their plants but are not referred to as modern firms.

According to the cluster development diagnostic report, in regard to saffron packaging capacity, existing plant capacity exceeds the current market for saffron:

“… the production capacity established in the two Khorasan provinces is about 400 metric tons, while the highest estimate indicates a need for 250 tons. This means that half of the capacity is allocated to saffron by-products and also, in a limited number of firms, to packaging many other products, including dried fruits… this unused capacity is related to parallel investments in this industry - especially in saffron by-products such as tea bags that have not been used because of inappropriate marketing and also the increase in saffron’s price…” (Taziki, 2008, p.73)
4) While the modern style leader builds relationships with institutions related to the industry, takes advantage of governmental support, and broadens his relationship with them afterwards, the traditional style trader tries to be out of sight as much as possible. Moving beyond the extreme case of Mr. Kalantari, the position that many of the traditional firms take is avoiding relations with other institutions. This contrasts with the modern style firms and their active engagement with policy makers to design policies for improvement of the saffron business. This has included lobbying for the price setting policy (INTV O), the targeted incentives policy (INTV I; INTV O; INTV C), the tariffs policy (INTV K; INTV I; INTV O; INTV D) and the creation of non-governmental funds policy (INTV K; INTV M; INTV O; INTV G; INTV L; INTV D). The leader of the modern firms has been involved more than anyone in these activities, but the engagement of others in initiating and implementing the annual saffron fair (INTV X) shows that they are active outside of his initiatives as well. The engagement of the leader of the modern firms with governmental officials, especially in Iran’s Trade Promotion Organization (TPO), is so great that one of the interviewees told me to look at it this way:

“…The government has its own representative among the saffron firms … and he is after his own benefits… he decides the incentives and the criteria for selecting the best exporter of the year …this is why he [the leader of modern firms] has been selected every year since there has been a best exporter selection… since the saffron activists have realized this, they have no hope of receiving government support…” (INTV C)

This sort of conflict between the two groups, and particularly between traditional style firms and the modern style leader, has intensified as a result of his continued formal and informal relations with the government.

5) Finally, it can be understood from the issues raised in the two examples that the education level of the modern style firm and the traditional style firm are miles apart. While not expressed explicitly in the passages, I should add that while the modern style leader mentioned above has a bachelor’s degree the traditional style trader described above has not entered high school (INTV C; INTV D). This is not only relevant in understanding new technologies (hard and soft) for improving their business, but shows itself in their worldviews about developing themselves and their business. For instance, Mr. Hajjar’s situation is described in one of the interviews like this:
“...For instance, Mr. Hajjar, he is selling to a Spanish firm that is owned by an Iranian. 95% of his products are sold to this company. He does not need any marketing because he has a 10 billion toman [about 5 million dollars at that time] turnover. Of this, maybe 30% is profit for him. He never thinks of expanding his business. This is because of who they are; one must know who they have been and who they have become. For a big company, a 3 billion toman profit might be considered nothing and an educated entrepreneur would go after investing this money; but for these people who have been after very small amounts, it is different. This money is a fortune for them. Another example is Mr. Kalantari. He has been a staff for one of the big exporters. But afterwards, by benefiting from the opportunities he had, he has become the purchase manager for that company and he has made great profits...now he is exporting a ton each month, but he does not have any more than a 4th or 5th grade education. How can someone like him be justified to do marketing? Most of these [traditional firms] have come up through this process...in 5 years, 10 years or 15 years...” (INTV X)

The cluster development agent describes the shortage of educated staff in the diagnostic report (Taziki, 2008) like this: “...the shortage of a specialized and educated workforce for international marketing is obvious and the human resources for this issue are mostly limited to graduates of foreign languages that are regularly used for translation and preparation of commercial letters in some firms.” (Taziki, 2008, p.115)

To conclude this review of differences between traditional style and modern style firms, I will integrate them into the learning framework articulated in the literature review. It can be seen that the traditional style firms have insisted on the adaptive learning cycle pictured earlier in figure 5.3. They have maintained stable mental models that profit in the saffron industry is in higher orders of sale and no new markets and new products can be developed. In contrast, the modern style firms have been changing this mental model towards the adaptive learning process modeled below and pictured in figure 5.5:

With a new mental model that profit in the saffron industry could be achieved by investing, the modern style entrepreneur would: ‘plan’ by doing marketing research and marketing plans; ‘act’ by producing new products, branding them and advertising them in new markets; he will then ‘observe’ what the outcome of this investment has been. However, because the new markets do not have many barriers, he would also feel market pressure from the environment that limits the expected return from investment in new products and new markets; so he will ‘assess’ that a change is needed in the amount of investment. Because this has been negatively affected by market pressure it is imaginable that he would either reduce the investments or find ways of overcoming
the pressure from competitors. Without consideration of the last option, the long term outcome of this cycle would be loss of profits for new market development investment and frustration from building new markets and being pushed out by competitors that provide lower prices.

**Figure 5.5  The learning mechanism of modern style firms**

5.5. **A monopoly that does not govern the value chain**

Why do traders in Mashhad have a monopoly in procuring production but they cannot direct higher values of saffron towards the region? This “monopoly/low return” issue is the central dilemma for the saffron industry in Mashhad as articulated by governmental policy makers and staff, as well as the actors themselves. While interest in thinking about and acting towards upgrading, the lower share of the region from saffron’s global value chain, has both private and public dimensions, several attempts for accomplishing this idea have not been satisfactory.

Industry actors have been concerned with overcoming this issue since the 1990s, when they first started to think about a new saffron union (INTV H; INTV K; INTV I). Two unions were initiated and started work almost simultaneously in 2000; one for the
retailers and one for the exporters. While the retailers union was dominated by traditional style traders and those who dominated Mashhad’s bazaar, the exports union was initially controlled by the modern style leader and his allies in the early 2000s. For the traditional style traders, controlling Mashhad’s trade and the dealers and sellers was first priority. For the modern style leader – as he described earlier – competing with the Spanish firms in the international market was the prime concern. Aside from their (the modern style leader and some other modern style firms that gradually became his allies in the exporters union) private initiatives, they started lobbying for governmental intervention in the saffron market in the early 2000s (INTVO). Since then, the government has become more and more alert about the saffron industry and the dilemma described above. Thus, it has designed and implemented policies for overcoming the challenge of low value capture in the region. These policies will be discussed in detail in chapter six and will be articulated in terms of the learning framework prepared in my literature review.

As the last piece of contextual background for understanding my analysis, it is necessary to highlight the conflicts between modern and traditional style firms; conflicts which are largely a consequence of the way these policies were initiated, formulated and implemented.

The desire to control the bulk export of cheap saffron from Iran to international markets in the early 2000s led the leading modern style firm to start lobbying government authorities for their intervention (attempts to overcome this within the industry may have occurred but they were unsuccessful as the main players did not reach agreement). Since then, governmental officials in the agriculture ministry and trade ministries (as well as provincial authorities) have become sensitized about the value of the saffron industry and the ‘monopoly/low return’ dilemma. Consequently, policies for price-setting, re-orienting export incentives towards smaller packages, implementing export barriers (fines) for bulk exports and public-private partnership through non-governmental funds have been pursued in the saffron industry. Most of these policies have not favoured traditional style traders but have benefited modern style firms. This has been the main source of conflict between the two groups. The traditional style firms took over the exporters union after they saw how the policies were benefiting a group of saffron players while others were left out. This conflict and the takeover are well described in Mr. Kavakebi’s (traditional style firm owner) words:
“…The [export] union was cornered by a few people – who took advantage of governmental rents and did not let others flourish – and although we made a great effort, it took 3-4 years of patience and teaming up with those who at least presented themselves as worried about saffron and its future…Those with power had access to government loans and exhibition facilities and they received many loans. We did not know anything about these exhibitions and loans...In the international exhibitions, he was the one seen by foreign buyers and they gradually trusted him... those customers saw them everywhere so they went after them for buying saffron... they didn’t let anyone else flourish…(INTV I).

But from the modern firms’ perspective, the story was different:

“…Some people of the retailers union wanted to be in the exporters union and they had issues with the exporters union about the non-governmental fund...because the exporters union had established the fund, they said they opposed it...it was actually a disagreement between the two unions …” (INTV X)

The takeover of the union by the traditional style firms did not stop the intervening policies (especially the fines policy) from working. The non-governmental fund was marginalized, although it was somewhat successful in promoting Iran’s saffron. Explicit in Mr. Kavakebi’s words are the unsatisfactory activities of the union under its current management. This is implicit in the words of another trader:

“…The union was taken over by some very uneducated, uncivilized and uninformed people about business ... the plague [referring to the tariffs] that the previous group brought for saffron has been resumed by their relations with the government and these new ones have not been successful in removing it...” (INTV X)

34 It is interesting how he changes from “they” to “he”
6. Non-regional policies for intervention in the saffron industry

In this chapter I will employ a learning perspective in reviewing policies that have been initiated, designed and implemented to overcome the "monopoly/low return" dilemma in the Khorasan saffron cluster without an explicit regional dimension, from a learning perspective. I will show which type of learning mechanism inspired these policies and what the outcome of each policy has been. Policies examined here include: the price-setting policy delivered by the agriculture ministry and its provincial divisions; the targeted incentives; the tariff policy; the public-private partnership through non-governmental fund policy delivered by the Trade Promotion Organization (TPO) and the provincial branches of the trade ministry; and the establishment of a National Council for saffron, initiated by the Iranian parliament. I will show that most of these policies embody an adaptive learning perspective at heart. In the next chapter (seven), I will review the cluster development project delivered by ISIPO Khorasan branch as the sole regional policy delivered in regard to the saffron business. Again, I will approach this from a learning perspective. These two chapters, while informative on their own, will set the stage for assessing and discussing learning in the saffron cluster in the succeeding chapter (eight).

6.1. The first saffron-exclusive intervention: price setting

Iranian food and agriculture policy makers understood Iran’s monopoly over the global saffron industry and that despite this monopoly, a limited part of saffron’s value was going to the farmers. This prompted them to intervene in the market-based structure of the product in Iran so that farmers would receive more benefit (INTV D, Ghahremani, 2010; Taziki, 2008). Some interviewees argued that this policy was initiated by some of the younger entrepreneurs (particularly the modern style firm leaders) to set a minimum price in Iran. On one hand, this was intended to motivate farmers to produce more; on
the other, it was meant to decrease the power of Spanish competitors by increasing their purchasing costs (INTV O; INTV K). However, this did not turn out as planned; instead of modern style firms receiving loans for purchasing saffron (INTV O), the government authorized the rural cooperative (a governmental controlled cooperative) to buy 200 billion tomans (about 50 tons, or 21% of the saffron on the market that year) worth of saffron with loans provided by the agricultural bank at the price set by the agricultural ministry (320K tomans per kilogram) in 2004 (Ghahremani, 2010). It can be seen in figure 6.1 that the increase from 2004 to 2005 brought the price of saffron close to the relational CPI (CPI=saffron price=100 in 1990) in 2005. This act raised the price of saffron much more than inflation.

**Figure 6.1  CPI and saffron price close-up; 2000 to 2005**

<table>
<thead>
<tr>
<th>Year</th>
<th>Saffron price</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2001</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>2002</td>
<td>1000</td>
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<td>2004</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>2005</td>
<td>2500</td>
<td>2500</td>
</tr>
</tbody>
</table>

Note: relative saffron price and CPI (‘saffron price in 1990’=CPI=100)

In 2005, driven by the previous year and the stimulation it brought to the market, the agriculture ministry set the price of saffron at 390K tomans per kilogram. However, this time it did not provide any money to the cooperative to buy saffron from farmers. With no money for the cooperative to intervene, there should not have been any further unusual price increase. Yet, because the saffron traders anticipated that the cooperative would buy for the next year, they themselves started buying ahead of the season. Many farmers also decided to keep at least part of their saffron in hope that prices would increase. This mechanism caused greater increases than what the agricultural ministry had planned for; in January 2006, the price reached 430K tomans per kilogram.
Another influential factor that brought a shock to the saffron industry was the harsh winter in 2006 that lowered saffron production by about 60 tons. Together, these circumstances drove the price of saffron to 900K tomans per kilogram in 2006. In 2007, the industry went out of control, and prices skyrocketed to 2200K tomans per kilogram (Ghahremani, 2010, pp. 103-107; INTV M; INTV D). This situation was brought on by a number of factors, including: limited stores in 2006 due to the harsh winter; suspicions about the future price; the highly attractive but risky market of the previous year, which attracted investment that never came to the saffron industry; and finally, the availability of funds in 2006 and 2007 due to the government’s policy of wide distribution of low-interest loans (the rapid-payback-firms policy).

This policy achieved its goal in the short term, with increased profits for farmers who sold at higher prices from 2004 onwards (INTV D; INTV N), and a return to saffron production by many farmers. However, the intervention also produced a decrease in quality and more cheating, as well as a significant switch by industrial saffron users towards the use of artificial colours (INTV B; INTV N; INTV L). The real profits tended to go to big traders with large inventories of stored saffron (INTV D; INTV N). Still, some exporters had to fulfill contracts regardless of the price of saffron; these firms lost profit because they were forced to buy at higher prices, yet were limited in their ability to pass the added costs on to customers (INTV N).

This ended up being a short term situation. In the end, many of the traders that made great profits in short term were affected by the exit of many international customers after the price increase. Mr. Asgari describes this occurrence:

“... Then prices went up to 2 million tomans, then three, then four. Who lost in this process? All that we had done in those years in terms of marketing in Europe and moving towards the U.S. market was lost. Some of them [customers] removed saffron from their list immediately...” (INTV O)

This tension, alongside other dynamics in the saffron industry and Iran’s economy, brought market fluctuations that began the mid 2000s. This has been the main reason for many lost international markets for saffron since then. As Mr. Jahangir describes:
“The problem with saffron, for many international spice companies, is that they cannot plan because of these [market] fluctuations…they even accept these fluctuations if they are informed about them in advance…but the problem is that no one can predict them with more than 50% accuracy…” (INTV C)

Interestingly, these fluctuations and the loss the traders are incurring because of them, are making saffron actors open to a new intervention very similar to the policy described above (INTV H; INTV J, among others).

The quote from Mr. Asgari (representing one of the modern style firms) makes the effect of these policies on dynamic adaptive learning procedures for modern style firms pretty obvious. With the exponential growth of prices, all the investment in understanding new markets, the efforts for introducing saffron and integrating it into consumption patterns, and the new products developed and advertised, were wasted. This is illustrated in figure 6.2. So it is imaginable that some of the firms moved away from the new market/product development idea, or at least decreased their investments in this field.

**Figure 6.2  Price increase effect on the learning dynamics of modern style firms**

![Diagram showing the effect of price increase on modern style firms' learning dynamics.]

Plan: Market research
+ no more market development

Act: new product development, advertisement, Branding
+ withdraw investments

Observe: Return on investment and sales in new markets
i decreased return

Assess: Change amount of Investment in new market development
i decrease investment

Policy: monopolistic price setting

Exponential increase of price

Change of consumption patterns and removal of saffron from use

Env: Low Barriers for competitors to imitate and use developed market
+ Smaller markets and need to move back to established markets

IMM: Profit could be achieved in new markets/products
For the traditional style trader, initial profits realized from the higher price of saffron would soon be used towards buying more saffron (or maybe buying real estate in Mashhad). Especially given the failure of modern style firms, the traditional traders were not interested in investing in new markets. After some time, as shown in figure 6.3, the diminished existing market was crowded again with the returning modern firms, greedy newcomers and the traditional traders. This made the price wars intensify. With no change in mental models, people engaged in the price wars even harder and the decline in prices soon started (2008). Business as usual resumed: grab more of the market share to be able to survive.

Figure 6.3 Price increase effect on the learning dynamics of traditional style firms

6.2. The targeted export incentives intervention

In the first half of the 2000s, general Iranian export promotion incentives were well established (alongside the removal of foreign exchange limitations after the government’s unitization of exchange rates) and as traders argue, they had an important
role in motivating them towards exports (INTV H; INTV I; Taziki, 2008). Saffron was included among the high value exports that received 3% of the value of the exports as export award and many of the big exporters of saffron received extra awards for being exemplary exporters.

In the mid-2000s, two important changes took place concerning export incentives. First, the amount of the prize that was offered in cash was converted into shares of privatizing companies. This was a significant factor alongside delays in receiving the prizes that degraded incentives towards exports for all industries. The second change, which was exclusive to saffron and some other agricultural products, involved an extra incentive for products that were packaged in small packages. Although this started as an extra 1% for packages less than 30 grams, it was integrated with an export limitation policy afterwards. These policies were all based on an understanding that selling in smaller packages would bring more value from the product, more employment to Iran, and would help in branding Iranian products around the world (Taziki, 2008; Ghahremani, 2010; INTV I). I will review the latter policy in the next section but here I will focus on the learning dynamic of the targeted incentives policy.

With the offer of incentives, most traditional style firms (except the ones with large numbers of exports), offered their products to commissioners who dealt with the administrative headaches of receiving them and gave part of what they received to the exporter. This course was generally pursued because the critical mass needed in order to make receiving the incentives cost-effective was not reached. Some less established exporters just exported under export-experts commercial cards (INTV G; INTV L). This did not change with the implementation of extra incentives and because the exporters had not done any marketing, they just continued with the same method. The result was that no establishment of brand names or increase in smaller package exporting was achieved at all. Mr Motahar describes this:

“...The government established some incentives, but this did not result in a profit for the company that would be invested for development. Rather, it brought more competition. It intensified the negative competitions [price wars]. We [our company] never went after the export awards at any stage. Those that went after them properly had very large amounts of exports and it must have been beneficial for them, because receiving them demanded a lot of administrative
work. We used other people’s cards for exports. He, the commissioner, pursued it and gave us a share as well...” (INTV L)

For more established traditional firms the incentives were more fruitful. Mr. Safaee describes his experience:

“... there were the incentive policies that we were offered – export awards for exporting in less than 1 gram (an 8% award), 1-5 grams (6%), 5-10 grams (4%). Although the awards have not been awarded properly since 2009 – they had a better effect. I negotiated with the customers that ‘if you buy from me in small packages, I will not charge you for the packaging’...the customers were motivated in this way. But there were always those who were not willing to change in either way – not with incentives and not with fines. If they needed 100 grams, they would buy four 25 gram packages and would open them up and make a package for their customers...” (INTV E)

Bringing this into the learning dynamics framework as illustrated in figure 6.4, it can be seen that the introduction of incentive and targeted incentive policies would, at best, place this opportunity in the observation step of the traditional trader’s learning dynamic. Specifically, the targeted incentives would provide the input that ‘higher profit could be achieved in non-bulk exports’. Based on this observation, the trader would add this non-bulk advantage to his assessment, but would plan to achieve this with the smallest cost; for instance, by adding very simple packaging facilities to his current packaging in the residential area (INTV I). This would bring more profit to the firms. But with no change in the driving mental model to enter new markets, this new profit would only be incorporated into the cost structure as Mr. Motahar described. Mr. Kavakebi’s understanding is that the policy was only successful in bringing some employment in packaging to the region, which in the saffron industry, was negligible. (INTV I)

For the modern style firm, the effect was somewhat different. One interviewee describes how he sees the effect of the targeted incentives on modern style firms:

“...the incentives did not have a direct influence. They motivated some [saffron traders, both traditional style and modern style] to go into packaging. Even this could not be said. It actually made them think about how they could circumvent it [this was the route chosen by the traditional style firms]. I think a good indicator of the success of this is to see how many new brands and of what quality have been founded in Europe or other important markets. Some of them had their brands [like the modern style leader] and I think even if these incentives did not exist they would have gone this path. They wanted to sell in Europe but they also wanted to put their competitors under pressure. My understanding is that this
[claiming of incentives beside the fines policy] was to put their competitors under pressure. I do not know how successful they have been in Europe. Until recently I could say they were not; but it seems that one of them has been much more successful in the last few years” (INTV X).

**Figure 6.4** The effect of incentives on the learning dynamics of a traditional style trader

The fact that this and the fines were policies initiated by the modern style leader was pointed out by other interviewees as well (INTV H). The discussion above shows that this policy – although beneficial for the modern style firms – has not been the main driver of change in their decision making.

### 6.3. An export restricting policy for promoting exports!

As stated earlier, affected by modern firm negotiations – as representative of the saffron union initially, and independently afterwards – Iran’s Trade Promotion Organization (TPO) designed policies for restricting export of bulk saffron. These policies were executed after the targeted incentives policy and were effective from early 2009. They were aimed at bringing more of the value from saffron to Iran (and particularly to
the Khorasan region) by promoting Iranian packaged saffron under Iranian brand names. According to this policy, packages weighing more than 30 grams were fined at about 150K tomans per Kilo (the price of saffron was about 2 million tomans, so this represents about 7.5 % of the export value). According to the initiators, this policy was part of a broader policy to spend the income from export restrictions on improving the international marketing of saffron (INTV N; INTV K; INTV O). This is apparent in one of the modern firm leader’s interviews:

“…The main idea behind the tariffs policy was to invest the money collected from export of bulk saffron into improving Iranian brands in the world and entering new markets. This was going to be carried out by an organization of saffron firms. Something like the National Saffron Council. The organization would have decided who should do the executive work …” (INTV K)

The unlikeliness that this could be executed by the National Council for Saffron or a similar organization, the problems of redirecting money from government accounts, and the reaction of traditional firms to this policy (before and after its actual execution in 2009), indicate that this claim is questionable (INTV C, INTV D; INTV I; INTV H).

According to the initiators, this has been a successful policy because the amount of small packaged saffron produced in Iran has increased considerably (as reported by TPO and other officials). Also, as one modern style firm owner argues, it has prompted even traditional firms that oppose the non-bulk export of saffron to invest in packaging facilities:

“…The incentive and restriction policies have been effective on firms’ behavior. They have focused their attention and also the world market’s attention on packaging. Since its actual implementation it has been completely effective. I know of firms that have invested about 50 million tomans in packaging while they were proponents of bulk…” (INTV K)

But other voices do not agree with this opinion and the official positive reports. One of the leading modern style firms – as a proponent of this policy – evaluates this policy as follows:

“…In regard to the tariffs, I agree that this was not the way to achieve higher value from saffron. It was an unrealistic expectation to think that this would limit bulk export and the outcome proves this. Now, 25 gram packages are exported, reopened and repackaged by those international brands that have loyal customers. Unfortunately, we did not work on improving the brands beside it.
This could have been achieved by integrating the marketing activities of firms with worldwide advertisement of Iranian saffron...” (INTV N)

A critic of the incentive and tariff policies describes his understanding of the outcome very similarly to the proponent above and criticizes the targets of the policy:

“...My question is what is this policy for? Did we aim to increase our plastics exports? There is the cost of packaging them here and the cost paid in Euros in Spain to open them. This is what the government thinks entrepreneurship is? ... They shouldn’t put a restriction on a product that has been introduced to the world.”

He then criticizes this policy and the incentives policy by explaining what could happen on the ground with these regulations in place:

“According to the set prices ($4200 per kilo for low weights) one will receive $420 for exporting a Kilo in very low weights. My proposal here is that one could even export them in small packages to Turkey and open them up there and receive the $420 award and then do whatever he wanted to do with it there... Even in a best case scenario, someone like Novin who sends packages under one gram, sends them under his [Spanish] brand name in Spain and the branding aim is not achieved at all…” (INTV C)

As Mr. Motahar describes, the proposal mockingly offered above was, in fact, implemented by some traders:

“... When the fines were first implemented, everyone started nagging about them and I do not think that they benefited from this at all. It made them send in smaller packages but it didn’t have an important effect on the firms. Some even went to the Emirates and set up an office so that they could send their products from here to there and open them themselves over there…” (INTV L)

Mr. Safaee, one of the traditional saffron traders, explains his own experience of dealing with this intervention in the industry:

“...Since the tariffs were implemented, customers were forced to buy in 25 gram packages. But after shipment, they opened them. This had a very bad initial impact on the quality of our products –especially for us, given that our slogan was about the rights of the customer. We had to act against our principles. Anyway, a new equilibrium was created and the customer adjusted to this new situation of ours. They bought in 25 gram packages and opened them afterwards. So this didn’t turn into our customers buying 1 gram packages from us. Although, in some special cases when they wanted to buy 10 gram packages, we produced under their brand names...”. (INTV E)

Another traditional trader describes his reaction to the policy like this: “
“… The tariffs – that we were subject to penalties above a certain weight – made many like me – package our prior 500 gram saffron, in twenty 25 gram packages… this was a way of bypassing the law. The customers opened them all and repackaged them in their own packaging. They opened a 500 gram package before and now they opened all of the 25 gram packages. It didn’t have an effect. It was easier before. Although, because the packages were smaller, the potential for cheating was reduced. The cost of packaging was brought into the price as well. It wasn’t really important for them, considering that they are mostly rich countries…” (INTV I)

Translating these arguments to the learning dynamic loops as illustrated in figures 6.5 and 6.6, it is clear that for the traditional style firms, the bulk-export-fines policy was very quickly integrated into the price structure of saffron. As one of the traditional style leaders argues, even with only 7% of Iranian saffron exported in small packages before the new policy was implemented, the loss of awards for the big bulk exporting firms was significant (INTV H).

In regard to the modern style firms and especially their leaders, it can be envisaged that, in the short term, they gained considerable profits for non-bulk exports, which led them to more investment in this field. This strengthened the loop of increasing investment in new products and new markets. However, there were structural problems in the market; traditional style firms were still exporting bulk saffron, although now in small packages that were opened and repackaged outside of Iran. This gave the modern firms a doubled lead in front of their international rivals. But neither this nor the PPP non-governmental fund policy were enough to overcome the “market holes” (INTV N).
An important outcome of this policy’s implementation and its obvious positive outcomes for the initiators, was an intense conflict between traditional style firms as ‘losers’ and modern style firms as suspects for this “plague” (INTV I). It is claimed that the modern style leader’s initial plan for a 40% fine on bulk-exports was opposed even by his own allies (INTV O). This led to his loss of leadership in the exporters union and a direct opposition of traditional style firms and the new leaders of the exporters union with the private public partnership through the non-governmental fund policy. The latter is claimed to be the ignored part of a broader policy aimed at improving international marketing for Iranian saffron. This will be explained next.
6.4. The non-governmental fund (NGF) policy

Based on Iran’s third 5 year development program (2000-2004) for diversifying funding sources for private export enterprises and as a means of public-private partnership in the promotion of exports (INTV K), each exporting association was provided the opportunity to establish one non-governmental fund (NGF) according to the commerce or cooperative laws (TPO, 2009, pp.71-72). In addition to the government’s participation through a matching contribution to the 100 million tomans (around 80 thousand dollars in the mid 2000s) minimum establishment fund, these NGFs would receive 50% of some of their activity costs for promotion of exports through TPO supports (TPO, 2009, pp.71-72). According to this supportive policy (and its continuation in the fourth 5 year development program) the non-governmental fund for saffron promotion was established by the Saffron Exporters Union in 2005 (Taziki, 2008; INTV
K; INTV E; Iranian official newspaper, 2005). The new NGFs (including saffron’s NGF) encountered legal problems (Taziki, 2008; INTV D; INTV L) and to resolve these, TPO decided to support their establishment as limited companies (TPO had to approve their establishment according to the act) founded by members of export associations (including the saffron exporters union). One can speculate that the most important problem with the policy concerned the organizing and shares of competing firms in such establishments that were going to receive generous funding from the government. Given prior tensions, this policy became a central issue for dispute and conflict in the saffron industry, together with the challenges around bulk-export fines.

The initial attempt at establishing the saffron NGF was conducted by the modern style firm leaders who had control over the exporters union at that time (INTV L; INTV K). All major saffron actors were invited to participate in its establishment (INTV D). However, because many traditional traders did not see a big opportunity in this idea, only about 20-25 people gathered and contributed the 100 million tomans needed for the NGF’s establishment (most of these were allied with the modern style leaders received a dominant share). Before any legal registration, traditional traders were informed; they changed their minds about participation, protested the agreements between the initiators, and asked for inclusion in the NGF (INTV L; INTV D). Traditional style firms were heated over talks about fines and the fact that they were initiated by the modern style leaders. Consequently, they rejected offers to buy shares and become shareholders in the NGF. Now, they wanted to have controlling shares (INTV M; INTV L) and the appointment of the union’s new president as the CEO of the NGF (INTV L; INTV O). Here, the modern style leaders with controlling shares decided to ignore the opposition and move forward with those who wanted to maintain the current organization and power structure. Some of the initial shareholders withdrew their shares during this phase (INTV L).

This dispute, along with the lobbying for the bulk-export-fine policy, led to a divide in the industry (INTV D). Mr. Safaee describes this as follows:

35 While one of the founders argues that it was established in 1999 and in the cluster development diagnostic study it is said that it was established in 2003, the official registration shows it was registered on 3rd of March 2005.
“...The conflict between the union (now dominated by the traditional style firms) and the NGF created a situation where they balanced out each other’s efforts. They had no sympathy towards each other and they had opposing opinions.” (INTV E).

Although some of the interviewees were suspicious about the proper spending of funds received by the NGF (INTV I), board members of NGF argue that they have spent much more on programs than what was needed in order to be matched by government subsidies (INTV K; INTV O). The latter claim seems more credible. The NGF particularly focused on promoting saffron exports to Japan and afterwards, Hong Kong (INTV O; INTV K; INYV J; INTV I; INTV N; INTV D). After an initial group visit to Japan, it initiated a three-way relationship between itself, an Iranian university and a Japanese university. One of the leaders reports this, as follows:

“... Some of our plans were successful and went as expected. We had arranged to visit the Japan market in a group. Twenty of us went there with one price list. We went to an exhibition together. We took some university professors from Iran for keynote speeches in our seminar. This became a very good basis for later activities and it motivated us for future activities” (INTV X).

It should be noted that the number twenty is a large exaggeration in this account; while there were twenty visitors, many were not saffron actors. Many interviewees do agree that the NGF has been successful in penetrating the Japanese market (INTV J; INTV D; INTV K; INTV O; INTV D); according to a leader of the NGF, the export of saffron from Iran to Japan has increased threefold (INTV X).

Quantitative analysis of Japanese and Hong Kong saffron import data also supports the claim that they have achieved considerable success. The chart in figure 6.7 shows the share of Iranian and Spanish saffron imports to Japan. The trends in this chart illustrate that Iranians surpassed Spanish exporters from 2007 until 2010 (the decline after 2011 can be understood by considering the tighter enforcement of sanctions since 2011, especially by Japan).
Figure 6.7  Takeover of the Japanese market by Iranian firms from 1988 to 2011

Note: Data collected from UN Commodity Trade Statistics Database (see appendix B); * this year was exceptionally high due to an 18 ton import of saffron from China. This product was priced much lower than saffron coming from Spain or Iran in the same year and other years. I considered it a mistake (this is another product that is named saffron but the value is much lower). I removed it and counted Japan's imports for this year as the number reported for the world minus the exports from China.

One of the modern style leaders hints in his interview that part of the reason for enhanced saffron exports from Iran to Japan was due to Iran's taking over of Spain’s share (INTV X). The chart in figure 6.8 indicates that the Japanese market did not actually grow much but that Iranians were, in fact, taking over the Spanish share.

Figure 6.8  Japan’s unexpanded saffron market: net weight of imports; 2000-2011

Note: net weight is in Kilograms; data collected from UN Commodity Trade Statistics Database (see appendix B); see note on figure 6.7
On the other hand, Hong Kong is a case of considerable market penetration and market creation. As can be seen in the charts in figures 6.9 and 6.10, Iranian exporters have not only overcome Spanish exporters, but have also had a central role in the threefold increase of saffron imports to Hong Kong; although, for this market, the stronger presence of the cluster network should also be considered. This will be explained later in the study.

**Figure 6.9  Iran’s takeover of the Hong Kong market; 2003-2011**

![Graph showing Iran's takeover of the Hong Kong market](image)

Note: data collected from UN Commodity Trade Statistics Database (see appendix B)

Bringing the NGF experience into the learning framework, it can be argued that for traditional style firms with stable mental models that ‘no new market creation is possible’, government support did not trigger change towards market development. Even their reaction to the establishment of the NGF by others could be seen as a reactive approach to prevent the future success of modern style firms, or as an attempt to receive their share of generous government funding (INTV M; INTV K). In contrast, the modern style firms were justified in their belief about the possibility of achieving higher profits in new market development. The support they received in establishing the NGF and future support of its activities strengthened the objective possibility of entering new markets. Figure 6.11 illustrates the positive mechanism very roughly.
Here, it is important to note that this policy was not the driver of change in mental models, as was the case with previous policies. Prior to the intervention, the modern style firms had adopted a new mental model (although with low confidence) that they should move towards new markets and new products. In fact, their emphasis on this mental model had an important role in the design of the NGF policy and other policies. In chapter eight I will review how the mental models changed for this group of firms and how practices of identity building, trust building and social learning have been part of this process that emerged from the establishment of the NGF.

A final initiative for developing the national saffron industry remains to be discussed. In the next section, I will explain the establishment of the National Council for Saffron.
6.5. The National Council for Saffron

Tensions were on the rise between the NGF and particularly its leader (with his very strong lobbying in Tehran) and the Union and its leaders desperate to take over the NGF. In June of 2009, Iran’s Chamber of Commerce, Industries, Mines and Agriculture and the Agricultural Commission of Iran’s parliament (to which the modern style leader is an advisor) initiated the National Council for Saffron (NC4S) to overcome this conflict. According to its official notice of establishment, the NC4S was established for the purpose of:

“organizing the supply chain of saffron – including its production, processing, packaging, distribution and trade – including the trade of saffron’s by-products; maintaining balance, order and the possibility of higher productivity from the investment that has been made in the production, manufacturing and trade of saffron and its by-products; utilization, transfer and upgrading of scientific and professional expertise of the actors; achieving legal developmental targets; and, defending the rights of the members of the National Council for Saffron.” (Iran official newsletter, 2009)
NC4S members included a wide range of actors including representatives from many governmental organizations and private sector associations (such as the union, the NGF and the Khorasan Razavi and South Khorasan chambers of commerce).

This ultra-exclusive ‘national’ council struggled to become established in the first year of its existence, as it was seen as a threat to the union. Due to its lack of executive powers, it has since put aside its wide range of intended missions and refocused on informal activities related to policymaking and macro level planning for saffron. Since 2010, it has claimed to have played an advisory role for ministries and organizations, particularly the agriculture ministry and TPO (Khorasan newspaper, 2010).

Traditional style leaders in the union claim that they agreed to cooperate with the council based on two promises made by the council: 1- extending support from the government towards all saffron traders (not the modern style leaders) and re-organizing the NGF so that it included all saffron actors; and 2- removing the fines for bulk export of saffron. Among all of the interviews conducted for this research, I did not hear of any successful actions by this institution (INTV A; INTV C; INTV D; INTV E; INTV F; INTV G; INTV H; INTV I; INTV L; INTV M; INTV O). Neither the council president nor its secretary agreed to formal interviews, though the secretary informed me about a quality improvement program they had implemented in three villages as a pilot attempt. I have so far, been unable to make any links between this action and the council’s espoused mandate of policymaking and macro level planning for the saffron industry. Other interviewees (INTV L) mentioned an unsuccessful and abandoned attempt of the NC4S to conduct a group trip to Spain, as well as a trip to Japan that involved many unrelated actors and produced no outcomes (INTV G). The composition of the council has been widely criticized for having only 6 out of about 20 members from the actual saffron industry (the rest being people without direct understanding of the industry) (INTV G; INTV L; INTV C).

Some interviewees argue that the NC4S could have played a useful role in distributing revenue from fines towards enhancement of international marketing (INTV K; INTV N). However, many others argue that because of the wide range of interests, ideas and people represented in the council and its formal climate, it was incapable of producing any outcomes (INTV A; INTV C).
Putting this intervention into the learning framework it can be argued that policy makers, informed by the experience of previous policies, came to the understanding that increasing Iran’s captured value from the saffron industry could only be achieved by consensus and common action among the major players in the industry. The ‘holes’ could only be covered when all major players were involved. The experience of the NGF had proved this. At least this is my positive interpretation of the proposed plan and its intentions. One could argue that by creating an institution above the union (which, through the modern leader’s own efforts, was now seen as the voice of saffron) a forum was created for assisting the modern style leaders to regain strength in the industry. It could also be seen as a damper on the existing conflict and the continuous complaints coming from both sides through different lobbying and media channels.

Understanding this initiative from a positive learning perspective, it can be argued that an already existing mental model that was strengthened by recent industry policies needed to be addressed: trust for collaboration between saffron actors. In this regard, the idea embedded in the NC4S was that by providing a place for dialogue, trust between leaders could be increased. However, the space provided by the NC4S facilitated “shallow contact” (Storper, 1997; 2002) that failed to produce experiments and did not bring any success. I will come back to this, discussing the ontological assumptions behind this policy in the final chapter.
7. A regional intervention in the saffron industry: the cluster development project

Unlike the policies reviewed in the previous chapter that had no specific geographic dimension other than the national institutional and regulatory setting within Iran\textsuperscript{36}, the cluster development policy had a specific spatial dimension. In this section I will review the activities of the cluster development process in five sections: first, the initial steps, including initiation of the project and the diagnostic study phase; second, the sensitization activities and also challenges the project faced in funding its activities; third, marketing activities and particularly actions towards creating a network of firms in the cluster for international marketing based on the Malaysia market research project; fourth, activities relating to international market development that can be assessed as unsuccessful in comparison to the cluster network activities; and fifth, the activities and procedures that have led to the initiation of the saffron complex. Finally, I will integrate the approach that this policy has taken towards learning into the learning framework – as was done earlier with respect to previous policies.

7.1. Initiation and the diagnostic study

In accordance with the customized UNIDO cluster development methodology for Iran by Iran Small Industries and Industrial Parks Organization (ISIPO), the Khorasan branch of ISIPO carried out feasibility studies (or cluster identification studies) in the Khorasan region in 2007. Out of these initial studies, the saffron cluster was identified and selected among the concentration of industries in the region for cluster development.

\textsuperscript{36} In the case of the saffron industry the design and implementation of these policies became very specific because of the high concentration of the industry in the Khorasan region. This was a very special case. For instance, in the case of the NGFs, all other NGFs (i.e. Gold industry, petrochemical and oil industry) did not have any specific geographic concentration and thus most were established in Tehran.
development. In October 2007, Mr. Reza Taziki was selected and trained as the cluster development agent based on his prior experience and education that fulfilled the conditions set by ISIPO. Mr. Taziki, who was born and raised in Mashhad, graduated from one of Iran’s leading universities in Tehran (Amirkabir – former polytechnic – University) and had a Master’s degree in industrial engineering and a concentration in socio-economic systems analysis. After graduation he returned to Mashhad and was recruited by the manufacturing industry and particularly, Dorika (a complex of several plastic products producers under one brand name), that was titled as a cluster to receive loans from the government.\footnote{37}

Despite ISIPO guidelines for a 3 year contract with cluster development agents for the whole project, the Khorasan ISIPO branch took a more conservative approach to cluster development and only signed a contract for a diagnostic study phase starting in February 2008 (due in part to past less successful experiences in developing a techno-park for SME development and also Dorika’s misleading experience). I was appointed as the cluster development technical advisor in March 2008 to supervise, guide, report and approve payment to the CDA in regard to the progress of the cluster development project.

\footnote{37} It should be noted here that Dorika was a top-down led investment by an entrepreneur in Mashhad in the plastic industry but because he had found that the government and particularly ISIPO had intentions for supporting groups of firms and especially clusters, he had named this network of firms as a cluster. The plastic industry in Mashhad includes more than 400 small and medium producers that only about 20 of them were concentrated in the Dorika complex. Many of these firms were established as independent firms but they were actually managed by the lead entrepreneur. Mr. Taziki was recruited by this entrepreneur for financial and management issues. The existence of this complex that was named a cluster has had a significant role in the understanding of clusters in Khorasan and it had an important role in shaping peoples image in the saffron industry about clusters as reflected afterwards in their intentions for the saffron complex. Mr. Taziki himself had an understanding of clusters shaped by this experience before coming to the UNIDO cluster development agents training programs; but he very soon understood the differences and became a proponent of the UNIDO approach. My understanding is that he has tried to use the Dorika example in the cluster development project as a case study for successful use of pecuniary effects of agglomeration to attract the saffron firms towards the cluster development project. This was inevitable because the cluster discourse was set in Khorasan based on Dorika and changing this discourse needed time. He has tried to expand the discourse towards non-pecuniary effects of cluster development after people have been attracted. The effect of this path dependency in the region should be considered in the initiation of the saffron complex.
Mr. Taziki’s initial understanding of the cluster was limited to the well known brands in Mashhad (both owned by traditional style and modern style leaders) and his informal knowledge about the saffron firms in the Toos industrial estate (he was a board member of the industrial estate) (INTV X). His conduct of the cluster development diagnostic study from February to June 2008, led him to an understanding about the saffron cluster that is reflected in the diagnostic study report (Taziki, 2008). According to his analysis of the industry’s evolution and turning points, business dynamics, competitive forces (Porter’s 5 force model), value chain analysis and analysis of social capital and institutions in the saffron cluster, the cluster’s pressure point was found to be ‘underdeveloped international markets’. He also found a minor pressure point in the organization of the saffron supply. These conclusions were reached based on interviews with firm owners, employees and governmental staff in all the related institutions, as well as from secondary data analysis of available resources about saffron both in Iran and abroad. His conclusions about industry pressure points came out of his discussions with cluster actors and were communicated with them at different stages before finalizing his report and proposing strategies and a vision for the cluster. The vision statement of the cluster was presented as follows:

“By 2013, the saffron cluster will be the global leader in the production, processing and export of saffron and its by-products, and it will achieve first rank in international markets through its celebrated common brands and an active presence in international markets” (Taziki, 2008, p.154).

According to this statement, three indicators of success for this vision would be (Taziki, 2008):

“1- Increasing exports to 300 million dollars by penetrating new markets, selling in international level retail markets, and eliminating intermediaries in international markets; 2- a 30% increase of the value added received by widespread sales of saffron at the international level; 3- presence of celebrated and common brands of saffron in the international market”

To realize this vision, the strategy of promoting international marketing was selected and the actions under the cluster development project action plan were focused
Based on this strategy, action plans were designed for implementation in the first year. The summary analysis, vision, strategies and first year action plan were compiled into an action plan document. This was presented to the cluster actors with whom the CDA had become familiar, as well as supporting institutions, including the Khorasan Trade Organization (the regional branch of the Trade Ministry and TPO).

### 7.2. Sensitization and funding challenges

Before the contract for the implementation phase was signed and officially put into action, the cluster development project had a period of five months stagnation. During this time the CDA initiated two actions aimed at trust building and introducing himself and his project to the cluster.

The first action was to prepare for participation in Tehran’s food industry expo. 27 firms had volunteered to have their products shown at this expo under the common name of the saffron cluster (Taziki, 2008a). Preparation included the creation of a cluster brochure that introduced 54 cluster firms (firms that the cluster development agent had contacted or was aware of). This activity, which was funded by the CDA and ISIPO (Taziki, 2008a) not only introduced the project and the CDA, but had a positive role in fostering trust between industry actors and the CDA. The modern leaders had participated in the expo for many years but had never involved other cluster actors. It is interesting to note that the brochure became a reliable contact list for cluster actors, as no reliable database had previously existed for the cluster (INTV D; Taziki, 2008a).

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38 It should be noted here that according to the cluster development approach in Iran, aside from the project itself that is funded by provincial ISIPOs (including payment of the CDA, his assistant or secretary, and office, travel and administrative costs), the activities in the annual action plans are funded by the initiating agency, that is ISIPO, the supporting institutions and the actors themselves. For the initial year the share of ISIPO is seen higher than others to attract both other institutions and the actors for investment in the activities. ISIPO Khorasan has tried to support the saffron cluster development project throughout the project but the support has been considerably low especially regarding the need for international trips for this project.

39 This was due to financial and administrative problems at ISIPO Khorasan. This had a negative effect on the project but the overall ISIPO Khorasan’s support and assistance to the project should not be judged based on this shortcoming.
The second action that actually built on the success of the first activity was participation in the Mashhad food expo in collaboration with the Union, which had a new group of directors (traditional style leaders). This action, funded partially by ISIPO Khorasan, had an important role in sensitizing the actors about their mutual and interdependent identity. Because the expo was held in Mashhad, it became a focal point for meetings of cluster actors for a week. Some of the actors became members of the union during the expo (INTV D).

In the diagnostic study period and also in this five month period, the CDA also had the opportunity to have conversations with leaders of the saffron industry. The modern style leader who had pursued his own interventionist programs and sought an export clusters fund from TPO to be allocated to the NGF in this period, suggested cooperation with the CDA on some specific issues. The positive collaboration extended to inclusion of the CDA in the NGF visit to Japan (INTV K; INTV O; INTC D). At the core of the modern style leader’s suggestion was collaboration between the cluster development project and his own company to develop a complex for saffron traders on his land so that they could organize supply and packaging and he could go after international marketing (INTV D). The irrelevance and inappropriateness of this for the cluster development project, along with the lobbying to direct TPO export cluster funds towards the NGF, led to a suspension of relations between the cluster development project and the modern style firm leaders and the NGF. The allocation of TPO export cluster funds to the NGF went completely against agreements between TPO and ISIPO, and against TPO internal regulations. As a result, the CDA, which faced funding shortages for the cluster development project, complained about the allocation of funds. The money (about 40,000 dollars at that time) did not come back to the cluster development project and was used by the NGF as described earlier (INTV D, INTV K).

While project support through TPO export clusters funding was unavailable in 2009, another major source of funding for cluster development became available through the “Iran Industries Renewal and Restructuring Program” (IIRRP). With support from this source, the saffron cluster development program defined market research projects for Malaysia, Venezuela, South Korea and Japan. It also undertook market development projects and joint actions by cluster actors, particularly in Malaysia.
Before the IIRRP projects started and while the project was not supported properly by ISIPO Khorasan and other regional and national governmental organizations, the CDA attempted to coordinate group trips to Persian Gulf country food expos with minimum available supports. While his attempt was not successful for Bahrain (which had good relations with Iran at that time), The CDA managed to organize a group trip to Dubai’s Gulfood (2009) for 12 actors. Among the initial 12 actors, 4 were invited by the union and 8 others were contacted directly by the CDA. Most of these individuals had no experience at expos outside of Iran and one of the new union directors even responded to the CDA’s invitation negatively. Mr. Taziki describes this below:

“...when I invited them to go to Gulfood in a group, none of them knew about it. I think that except for Novin [The modern leader], who had been going there almost every year, none of those who I talked with at that time had been there before. They didn’t know what Gulfood was! … One of the union directors did not know about Gulfood and when I said lets go to this expo he told me that it had no benefits and there are many Iranian firms in UAE and we cannot ‘sell there’…” (INTV X).

Because the promised funding was not provided and the CDA only managed to obtain partial assistance from ISIPO, only two of the 12 actors that had made an initial commitment went to Gulfood with the CDA: Mr. Farshbaf and Mr. Haghshenas (both from the traditional style category, with some collaboration with the modern style firms for the former). According to Mr. Taziki, this was a good experience for him and the two actors in terms of understanding the processes and pitfalls of participation in expos, understanding the broad presence of Spanish firms (eight Spanish firms vs. Iran’s single booth), and understanding the traditional firms’ weaknesses on the international stage, especially in regard to their English language capabilities (INTV X). Mr. Haghshenas describes his initial contact with the project as follows:

My initial introduction to the cluster idea was through Mr. Taziki himself. He came to me in 2008...I was attracted to his plans and I saw myself as one of the people [small firms in clusters] described in his booklets [cluster development booklets published by ISIPO (Mansouri, 2007)]…” (INTV I)

After these sensitization activities the CDA increased and focused his activities through the IIRRP funded market research projects. Four market research projects were initially defined and funded by IIRRP and put under ISIPO supervision. The idea behind
these projects was that the preparation of market research reports would stimulate development in new markets by highlighting the possibility of presence in new markets and the returns that could be achieved. Mr. Taziki awarded the research report contracts to two consultants with prior ties to ISIPO Khorasan. He chose them because he knew they had no intentions of remaining in the saffron industry. He justified it by saying that the nature of the industry is such that anyone who could make links with the saffron traders would circumvent them and go after another bulk producer (INTV D). He also asked Mr. Farshbaf to conduct the South Korean market research project as he had demonstrated interest, motivation and capabilities towards becoming a leader in international market development. (INTV D)

In the following discussion, I will first focus on the Malaysian market research that had a significant role in the creation of a network within the cluster. I will temporarily put the Venezuelan, South Korea and Japanese projects aside, as they have been sidelined by the Malaysia project. However, I will come back to these in the section after next.

7.3. The cluster network: initiation in Malaysia, evolution in Qatar, rebirth in Malaysia

7.3.1. Initiation in Malaysia

While only one of the consultants (Mr. Rasouli) was responsible for the Malaysia market research project, the other consultant, Mr. Farshbaf, and Mr. Taziki accompanied him so that all three (the 2 consultants and also Mr. Farshbaf) could learn different aspects of market research in action. Apart from conducting market research for the Southeast Asian market, they had the opportunity to go to the Halal expo (2009) and another expo for herbs.

After returning from this trip and disseminating a short report about the saffron cluster development project in Malaysia, saffron firm owners became interested in

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40 Both were trained as CDAs for two other cluster development projects in Khorasan (namely the Khorasan (Mashhad and Neyshabur) Turquoise cluster and Bayg village Silk cluster) but because of budget problems they were suspended.
approaching this market. ISIPO Khorasan was also inspired by the Malaysian report and asked Mr. Taziki about encouraging the cluster firms to participate in a small and medium enterprise expo in Malaysia - this time by preparing a common booth which was partially supported. Although this was put together on very short notice and the SME fair was not part of the marketing plan in Malaysia, Mr. Taziki decided to use this trip as a follow up to the market research done in Malaysia, using motivated actors, and experimenting with a common booth at the expo. It was also seen as a way of keeping ISIPO Khorasan happy and on track with the project. While his call for participation in the expo was supported by ISIPO Khorasan (which paid half the price of the booth), it was received less positively by Mr. Farshbaf. Three members of the NGF and three traditional style members responded positively. Mr. Farshbaf, who had been away from usual business for two weeks, did not agree to come again. Still, he was included in the Malaysia saffron exporters’ network after the group came back from their trip (Malaysia network, 2009).

Mr. Farshbaf explains the reason he did not attend in the second trip as follows:

“… There was a sense [that Mr. Taziki and the market research gave to me] about entering the Malaysian market that was confirmed when I went there and spoke with some of the older people in that market. I came to the conclusion that this was not the right way to enter the Malaysian market. What is the difference between renting a place and preparing a seminar, and going there and setting up sales like a hawker? A plan based on just 20 days of preparation will have limited success. When I want to go to a fair [in Iran, before the cluster development project] I inform my customers that I’m coming six months in advance. We do a lot of preparation. Some people who went there went for the temporary sales.” (INTV L)

Contrary to Mr. Farshbaf’s negative judgment about the cluster development program for penetration of the Malaysian market, the 2nd trip to Malaysia was not a failure. In fact, the trip by a group of saffron actors not only included selling saffron at the SME fair and after their return (INTV E; INTV G), but a very successful business negotiation with a company food consortia in Malaysia as well (Taziki, 2009). The consortia arranged for the group to visit one of their biscuit producing firms which, with

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41 Which I speculate is more a justification for not cooperating with the Malaysia network; because he had two more important projects for Japan and South Korea at work and he assessed the Malaysia market less attractive than them.
the saffron provided to the R&D department of that company at the expo, had developed a saffron flavored biscuit. During the successful negotiations in Malaysia it was agreed that the consortia representatives would be invited to visit Mashhad with a group from a Malaysian TV station. The purpose of the trip would be to prepare a documentary and report about saffron that would air on Malaysian TV.

Figure 7.1  **Malaysia networks booth on 2nd Malaysia trip**

The second trip was also successful in generating change for the traditional style traders, including Mr. Haghshenas. Mr. Haghshenas, who had been one of the most consistent participants in cluster development activities, faced a very difficult situation in Malaysia. Mr. Mohajeran, one of the NGF members on the trip, describes his situation:

“.. Mr. Haghshenas was one of those who at most, brought some of these very simple crystals from Mashhad bazaar and packaged saffron in them. But on the Malaysia trip [second trip] when Mr. Nahavandian [Iran’s president of the
Chamber of Commerce, Industries, Mines and Agriculture] visited our booth and we were showing our packages, he didn’t have anything to offer; Mr. Arefi was making fun of him in front of Mr. Nahavandian by offering him the opportunity to sell his products, but he didn’t have anything to offer. Based on this experience, he went and transformed his business. I think similar things happened for Mr. Kalantari and Mr. Safaee, who had not marketed outside of Iran before this."

Upon their return from the second trip, four saffron traders gathered at a meeting hosted by the CDA and the Malaysia consultant to create the Malaysia network (Mr. Farshbaf and 3 new people from the recent trip). They agreed to conduct their marketing activities in Malaysia, Singapore, Indonesia and Thailand (Southeast Asia market) through this network. The consultant was chosen as the network coordinator and the agreement document included details about how business was going to be done. Although signed and adopted by members, the agreement failed to generate actual business beyond the individual sales of some of the members. The Malaysia network was looking forward to receiving more support from the government for its market development activities in Malaysia, but this did not come until about eight months afterwards when ISIPO provided new funding through IIRRP; this time for market development in Malaysia. The eight month delay contributed to the loss of some Malaysian connections, inability to support the Malaysian TV trip to Iran, and important changes in the cluster and the network itself.

7.3.2. Evolution in Qatar

While this halting of activities in the Southeast Asia market was imposed on the project, the three other market research projects were carried out by the other consultants in Latin America, South Korea and Japan. Mr. Taziki accompanied each of the consultants on their trips. I will come to them in the following pages.

While the three projects were undertaken much more quietly, the news of successful engagement in the Malaysian market brought the cluster project a lot of respect and trust among saffron firms (particularly the traditional style firms). This is evident in Mr. Mokaram’s (one of the traditional style leaders) words:

42 I will come to the story of these projects and their analysis afterwards
“... I was not aware of the first trip [he means the second trip, when a group of cluster actors went to Malaysia] but when I found out I became sad. I do not remember whether they had told me or not, but I don’t think they had [Mr. Taziki had told him, as I checked with him afterwards]. When I saw the pictures of their activities I really felt a bit of sorrow. I decided to go to Qatar with them...” (INTV X).

Mr. Taziki decided to channel this momentum towards another opportunity that was provided by TPO: Iran’s expo in Qatar. At this expo the Malaysia network members took the lead and were joined by new actors in the saffron industry. Among the new participants was Mr. Mokaram. The Qatar trip was a great success for the cluster project. Mr. Taziki describes the trip’s success like this:

“...Our next program was participation in the Qatar expo. That was a great success in terms of exports and sales as well. Many companies came with us. For instance, Mr. Mokaram came. He was an exemplary exporter but he had not been to foreign expos like this. After the trip he told me ‘it was good, it was really good’. I took a video of his talks. He learned a lot and on the next trip to Malaysia [third trip] he had his own booth which he decorated himself. He had stands for his brand. He didn’t come to Qatar like this. He had made changes to his products when he came to Malaysia. He didn’t have anything in his basket except bulk saffron; ‘a lot of it’, of course, ... He didn’t feel like changing his product at all. He had come to sell at the Qatar expo and he went and talked with some Iranian traders there as well. He had good sales there.”

Other respondents did not provide such positive reviews of the Qatar expo. The number of exports sold or planned on this trip have been questioned by some of the interviewees (INTV G; INTV K; INTV L). Mr. Arefi, a core Malaysia network member, argues that it did not have anything for him:

“...In regard to Qatar there were 4-5 of us – saffron firms – that went to the Qatar market together. We tried to be allies in this. All of our catalogues were on the table and the customer selected for him/herself but we tried to give all of the catalogues. We all collected cards and gave them to Mr. Rasouli [the consultant] and Mr. Taziki. It was good until that point. But when we came back to Iran he [Mr. Taziki] did not come to report to us. To tell us what the outcomes were. He didn’t tell us who had contacted him and what email he had received. From here, it [the project] was lost. He did report orally in some instances, but no meeting or
detailed report. In regard to Qatar, I followed up afterwards myself. He should have reported even if there was no support for future activities..."43

My understanding is that while people agreed that the Qatar trip was good, they saw it as something really ordinary. For instance, Mr. Mokaram argues that:

“...Qatar was a good sale but I didn’t find a bulk buyer. They were selling to someone else and I thought to myself let them [other saffron exporters] sell to them. They were buying from Mr. Arefi…” (INTV M)

In response to these critics, Mr. Taziki argues that they still do not trust anyone and try to keep their sales confidential. This, he argues, is why they provide this negative impression44.

As noted earlier, the delay in funding the projects also had an important effect on the evolution of the Malaysia network. While Mr. Farshbaf quit because he was exploring the South Korean and Japanese markets (or, as he argues, because he did not receive Mr. Taziki’s report and disagreed with the methods pursued), and one other core member (Mr. Arefi) changed his relations with the CDA and ended his engagement in the cluster development project, new members started working with the network.

43 I think his arguments are not so valid because he denied any future exports to Qatar while Mr. Taziki and other people confirmed his sales and future presence in the Qatar market. I think this is a defensive attitude to protect his future uncollaborative manner with the project although the CDA had trusted him very much.

44 For instance he says: “...It is interesting that one of them that was with us there – Mr. Arefi – went and talked with one Iranian importer at Qatar but when we came back from Qatar, I asked him what was the result, he told me that it didn’t end in any success...”

And it seems that Mr. Taziki is correct that he was suspicious about his success because Mr. Ostadi had also found out that the bulk importer in Qatar was importing from Mr. Arefi. Mr. Taziki continues: “...But this time [in 2012] that I went to Qatar I saw his [Mr. Arefi’s] products being sold by that importer. This is how I say they do not tell me. After two years his products are still being sold; products with 2 month ago production dates…”

Without any directing from me in this interview he follows himself and brings to the table the case of Mr. Ostadi:

“...Mr. Ostadi was similar. He wasn’t in the Qatar market at all but after this trip and expo he exported to there. This time that I was in Qatar both stands for his brand and his products were there...After them [Mr. Arefi and Mr. Ostadi] others went there as well...Qatar became a very good market for all of them... right now if I tell them that we want to go for an expo to Qatar they will all come and they will even start negative competition with each other over there …"
7.3.3. **Rebirth in Malaysia**

With the new funding for market development in Malaysia under Mr. Taziki’s supervision, the consultant prepared a common booth at Malaysia’s Halal Food Expo for 2010. Arrangements were made to advertise Iranian saffron through Malaysian TV and print media. Additionally, an Iranian university faculty prepared a seminar for the Halal Expo about saffron’s therapeutic uses (Taziki, 2010; Taziki, 2011; INTV D). By this time, the influence of the previous two trips to Malaysia had extended far beyond the Malaysia network. With the call for participation in a common booth at the Malaysia 2010 Halal Food Expo (third trip), eight new actors announced their desire to participate. Moreover, three traditional style leaders (including Mr. Mokaram and the Union president) reserved independent booths without telling each other or the CDA. The CDA found out about their participation from the expo’s vendor map; hence, while the Malaysia network consultant had reserved a booth in another part of the facility, he relocated so that all the saffron booths were located near one another, creating a “saffron zone”. Overall, 20 individuals (3 independent traditional companies, 8 members of the Malaysia network and their companions, the consultant and the CDA) participated in the Malaysia 2010 Halal Food Expo.

Mr. Safaee describes his impression of the 2nd and 3rd trips to Malaysia:

“…I went on two of the Malaysia trips with them … But when they went to Qatar, I was at another expo … after my two trips with the cluster45 I went to two other food expos in Malaysia by myself. This resulted in a contract in Malaysia for our company and Malaysia became a base for our exports. Now, we [his company] send maybe 200 to 300 kilos annually to Malaysia. This is not a large amount. We also have some saffron by-products that we send to Malaysia. We have a representative in Malaysia now… We didn’t go after the Malaysia market because we didn’t know about it [before]. Because the cluster wanted to go there and penetrate that market, we went with them. Actually, the expo that we went to with the cluster was not good at all; but our future activities were very successful…” (INTV E)

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45 This is how many of them refer to the cluster development project, programs that were related to Mr. Taziki in one way or another, and also to the group and identity that was built. This will be discussed afterwards.
Mr. Jahangir, one of the modern style newcomers to the cluster network, argues that penetration of this market was successful\(^{46}\):

“On our visit [the third trip] 60-70 percent of people that we talked with knew about saffron or at least they had heard of it. A percentage was using it as well. I think this was a direct effect of the cluster’s previous presence in the market…” (INTV C)

On this trip, negotiations were conducted with three firms to become representatives of the network in Southeast Asia. Finally, an agreement was reached, resulting in a memorandum of understanding between the saffron cluster (the CDA and the network consultant) and the Malaysian Iranian Corporation (MIC), a successful importer of food products from Iran to Malaysia and neighbouring countries (MIC & Saffron cluster, 2010). This part of the third visit failed to produce successful outcomes because it had become clear for many cluster actors that the Southeast Asian market needed considerable investment beyond what they were willing to risk. Mr. Arefi – with his generally negative attitude towards the cluster development project – after describing his initial sales (after the second trip to Malaysia) explains this issue:

“…Malaysia was not a good market for saffron after all; because they do not know saffron and it takes a lot of investment to make it known. If you invest in it, you do not know if it will work or not. If you want to introduce saffron to a market it will cost 100 to 200 thousand dollars and it is impossible to predict success. On the contrary, if you go to a country familiar with saffron in order to brand it, there is an 80 percent chance that you’ll be successful. Even if you aren’t successful, you will sell at least enough to recover your costs. There was this plan to have an advertising budget from ISIPO. There was supposed to be a budget and we were supposed to participate. But no budget came so it was put aside. I think that without this, neither Malaysia nor Qatar can be seen as a success…” (INTV G)

Proponents of the cluster project have argued this as well. For instance, Mr. Haghshenas describes his impression of the Malaysia activities as follows:

“…I went to Malaysia with the cluster [project] and I should tell you that they misguided us. Malaysia is a very large country. This country and its neighbors are completely alien to saffron so the outcome of our work was nothing. Many people asked us ‘what is saffron?’ We gave the saffron that we had with us to companies in Malaysia and they made biscuits with it. They were very happy and

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\(^{46}\) I was not able to do similar graphs for the Malaysia market because data was not reported by neither side (Iran or Malaysia) properly for analysis
they were particularly impressed by the efficiency of small amounts of saffron. But that was when saffron’s price had reached 4.5 million tomans and the biscuit maker told us that he was selling the biscuit for one ringgit and adding saffron would increase the price by 50%. The customers did not know what saffron was [and the price was impossible to overcome]. So this needed a lot of work beyond the capacity of small businesses like us. For instance, renting a billboard in Malaysia costs about 100,000 dollars. If you wanted to have ten, it would be one million dollars and none us has this money for investment. And then the next issue comes up: would it work or not? Even if it was successful, wouldn’t it become another Dubai market that was taken from us [by price breakers and cheaters as described earlier]. They wouldn’t let us see the outcome of our work. This is why government support is needed…” (INTV I)

Despite this clearly negative perspective on the Malaysia project, Mr. Haghshenas talks afterwards about the success he had in exporting to Singapore through his own efforts and the cluster’s guidance. As he describes, Singapore has become a regular customer. Also, positive outcomes were reflected earlier in Mr. Safaee’s claim that he exports 200 to 300 kilograms annually through his own work following the cluster activities in Malaysia.

Mr. Taziki summarizes this very well:

“…An opportunity that had two steps to a complete achievement was lost. If support had come from TPO we could have reached complete achievement; but it didn’t come and the opportunity was lost. It was a great opportunity for them to develop together. After this the firms had relations for themselves and they had sales, but the main plan was ruined. In Malaysia, Mr. Arefi and Mr. Safaee sold saffron as far as I know. But that opportunity to work with the consortia that had great capabilities in R&D and Marketing went away. Those ideas that they [the Malaysians] had our firms could not have moved forward because they were really good in this industry and knew how to do it. At the end it could be said that there was a $200,000 sale of Saffron in Malaysia as the outcome of our work and it is counting but the main program was stopped. Although this should be assessed based on the support that was available…” (INTV X)

All of this said, the most important project outcome, according to Mr. Taziki and other ‘cluster network’ actors, went beyond these pecuniary effects. A new group was born in the saffron cluster that organized a fourth trip to Malaysia in April 2011. Aside from participating in an expo, the visitors engaged in business negotiations concerning export to China. I will come to this facet of the network building process in the next chapter. I will also review the activities that assisted this birth in the saffron complex
7.4. The failures in Venezuela, South Korea and Japan

As discussed earlier, three other market research projects were funded by IIRRP for promoting the international marketing of saffron. While the Malaysia project became the focus of the cluster development project activities, the other three became marginal and gradually faded away. One important difference between the three unsuccessful projects and the Malaysia case relates to the ease of travelling to Malaysia. Travel to Malaysia was far less costly and time consuming, particularly in regard to receiving visas. So, besides the presence of a large Iranian community in Malaysia and good relations between the two countries, ease of travel should be considered in understanding the decision making process that led to different outcomes for Malaysia and the other market research locations. Malaysia’s advantages aside, differences in process among the other three countries had an important role in the ultimate failure of marketing attempts within them.

7.4.1. Venezuela: a complete failure

Mostly owing to the cost of travel, only the cluster development agent accompanied the market research consultant on his trip to Venezuela in August 2009. According to the report and my interview and corresponding emails with the CDA, this project had the following problems:

1- The structure of the IIRRP projects made it very difficult for this project to succeed. It was anticipated that the market research would result in at least some initial agreements with customers in the target market (an unrealistic goal for market research). While for the Malaysia project this requirement was fulfilled on the second trip (due to lower costs and the extra support from ISIPO Khorasan) and in South Korea with

47 I did not have the chance to interview the consultant due to scheduling problems. I met him very shortly on one of my trips to Mashhad, but he was on his way to a nearby city.
unanticipated initial success, this target was not achieved in Venezuela and Japan. As a result, payment for the project was slow and incomplete, which discouraged the consultant and actors from future follow-up.

2- The consultant was ill-equipped for the project (particularly in terms of the actual marketing requirement) and was uninterested in continuing the project with incomplete payment. This can be partially seen as a consequence of the CDA’s decision to select consultants who did not want to stay in the market after market research completion.

3- Contacts were made in Venezuela and these contacts followed up with potential business. Unfortunately, because future funding support was not available and the actors were dissatisfied with the consultant (who had an intermediary role) and his report, they refused to invest (even a small amount of product to fill initial orders) and the contacts were lost.

4- After seeing the report, at least one trader (Mr. Arefi) declared his interest in exporting to Venezuela. However, he was ultimately discouraged by administrative problems and delays.

“The Venezuela case was a complete failure” argues Mr. Taziki. As time passed and the sanctions on Iran became tighter, the cluster development project let go of the possibility of reviving efforts in the Venezuelan market (INTV X).

7.4.2. South Korea: obstacles to success

Unlike Venezuela, the South Korean market research project met with unexpected initial success in June 2010. Considering the experience gained in Malaysia by Mr. Taziki and Mr. Farshbaf, this project was planned and implemented efficiently. Mr. Farshbaf describes his experience:

“The Korea experience was much better than Malaysia. Learning from the Malaysia experience, we went and talked with [food processing] companies. We gained a very good understanding of their food consumption culture... This changed my perspective to some extent. I came to the conclusion that presence in a market is not to go there and say ‘here I am and I have saffron’; we had to show them how it could be used in food. A good example was Mr. Taziki taking
by-products of saffron like jelly and puddings to Malaysia on his other trips. I think the most important lesson for me was that physical presence in new markets is the most influential thing. When you are sitting far away from the market you have one perspective, but when you go experience it, and see how they eat and how it fits into their culture, you gain another perspective.”

Aside from the market research in South Korea, Mr. Farshbaf and Mr. Taziki had the opportunity to meet and make business agreements with an established Iranian trader in South Korea. He advised them to register saffron as an additive in South Korea and made good contacts for them that led to an initial agreement for exporting saffron flavored tea to South Korea. This order was never completed because as they finalized the agreement, the only Iranian bank in South Korea was closed due to the sanctions. This is how Mr. Farshbaf describes this failure:

“… The customer wanted some things from us. The first was to know how long we could guarantee to provide the product and also what kind of price guarantee we could offer? These are the basic things they wanted to know. With regard to price, in a best case scenario, you might be able to control the price with the help of the union; but can you guarantee the production? You have to have long term relations. I have a foreign customer from 1.5 years before and I can show you my colleague’s correspondence. They [the foreign customer] say we cannot take the risk. He says the money [transfer] is a problem. I tell them that I will introduce you to someone in your own country to give the money and I will receive from him [but they do not agree]. If this obstacle was not in the way we would have worked with the foreigners for sure - 100%; because now things have changed, our perception has changed, our experience has changed.” (INTV X)

While the quote above is a great illustration of the success the cluster development project has had in changing the individual mental models of the traditional saffron traders, Mr. Farshbaf’s experience is a good example of how this change does not last. This is further explained in the following paragraphs.

7.4.3. Japan: a showcase of underachievement in individual, partial learning

Simultaneous with the South Korea market research trip, another consultant worked on the Japan market research project with the assistance of Mr. Taziki. Similar to the Venezuela and South Korea projects, this attempt did not include a group visit to the market, as the Malaysia project had. Market research in Japan (April, 2010) led to a connection with the Japan External Trade Organization (JETRO). The organization
became interested in the saffron industry and agreed to support export of the product to Japan. JETRO staff visited Mashhad and Mr. Farshbaf’s facilities and made arrangements for Mr. Farshbaf to participate in a Japanese expo at a subsidized cost.

Mr. Farshbaf did not talk about this project at all in his interview with me; probably because of the shame and impossibility of justifying his decisions in regard to this issue. Mr. Taziki told the story as follows:

“…He [Mr. Farshbaf] didn’t have a link to Japan. After the market research was finished in Japan, I followed up with the contacts and brought the Japanese to visit his facilities… They agreed to give him a booth for only 1 million tomans [about $700] and it was agreed that each of us would pay our own way to go there. As the expo approached and we had registered and paid the money and everything was proceeding as planned, he refused to provide the documents needed to receive a visa from the Japanese embassy. He started making the excuse that ‘my mother-in-law is sick and I have to be here’. I gave up.”

But this was not the end, as an incident that Mr. Taziki could not have imagined revealed other aspects of Mr. Farshbaf’s character. Mr. Taziki found him at the Dubai airport. Mr. Taziki claims that he saw his ticket to Japan and asked for the reason of his actions. Taziki continues:

“…He was stuck and said: ‘it worked out very fast; I received the visa a few days ago.’ I said: you mean that you went there [the Japanese embassy] in the last few days and they gave you a visa? [An impossibility] I asked him: ‘shouldn’t you have informed me about this?’ He didn’t have an answer and left.”

Mr. Taziki argues that Mr. Farshbaf’s behaviour ruined the success that could have been achieved in Japan because he was not prepared to go on his own. While he was in Japan, the earthquake occurred, playing a considerable role in halting business. Then sanctions tightened and all that could have been achieved was lost. In his interview Mr. Taziki reflects on this issue, arguing that Mr. Farshbaf’s ties with his family (traditional and conservative shareholders and employees in his company) influenced his decision-making; in particular, he indicated suspicion that they pressured him in regard to the Japan project and in circumventing Mr. Taziki.

48 He is one of the few traditional style firms that had gone after building new facilities before the saffron complex project and his factory was ready at that time.
7.5. The saffron complex project

While the cluster activities had been very successful in bringing the international marketing discourse into the mainstream of the cluster with the projects described above (particularly the Malaysia-Qatar case), it faced serious obstacles in regard to developing new markets. Firstly, entry into new markets required investment that was not achievable even by networking the small firms that trusted each other. The NGF had achieved success because of the more capable and resourceful firms that were included in the network. But among the smaller firms that could not afford large scale risks, putting together the investment without governmental support was impossible. Secondly, opportunities for governmental assistance were limited, especially after the crisis in Iran’s macro economy. The fact that the TPO was blocked by the lobbying of NGF and that Iran’s cluster development program was experiencing administrative problems, meant that neither could support the project anymore. The loss of Malaysian contacts because of inaccessibility to the even most limited funding produced a sense of lost hope among the CDA and the network. Thirdly, the macroeconomic downturn and the sanctions had started showing their effects on trade. Given the financial climate, investment in international marketing, which particularly included bank transactions, was not very wise. Fourthly, it had become clear that the market penetration idea could not be achieved without some sort of agreement between the leaders of the saffron industry. This is evident in the words of the actors as discussed earlier who worried about building a market in which others would take advantage of them. Mr. Taziki confirms this latter issue:

“…I put myself in their shoes and saw their decision as a correct decision. They should not invest in creating new markets for saffron because creating a new market is creating new competitors as well. If I, as a small firm, invest in a market, the next day, one of the big guys would come and take my market. He can provide a better price, he can provide a better package. They thought of this and refused to invest in creating new markets”. (INTV X)

On the other hand, a new discourse of hope had come into the industry and people were motivated to work together. They had found out that new markets could be very profitable and are not unachievable.
This situation led the CDA and the network to pursue two specific strategies, both deliberately and unintentionally. The first strategy involved redirecting market development activity towards markets that were less affected by sanctions and held higher potential for penetration (or even had established markets). In this regard, the network focused on China, Hong Kong, Malaysia and the Persian Gulf countries (UAE and Qatar). Secondly, and more importantly, the network (and, as will be discussed below, other actors of the cluster) decided to take advantage of an opportunity provided by ISIPO Khorasan for developing industrial facilities in Toos industrial estate. As Mr. Taziki puts it “it was a turning point for the cluster; you can’t say it was directly related to the goals of the cluster development project; but considering that other doors had closed it was a positive move”. (INTV X)

An ISIPO staff member who had been in contact with the cluster development project argued that people came together to develop the complex as a result of the experience they had gained through the international market development activities. He also expressed that because of the success of the cluster in promoting international marketing, “these companies are now investing in the complex; other industrial field companies are leaving the industrial estates [because of the economic crisis] but they have come to invest.” (INTV A)

In the next section I will describe the action that was taken towards this breakthrough activity in the saffron cluster and how it relates to my research question.

7.5.1. Initial endeavours for building a complex

As explained in chapter 5, there had been ideas for developing facilities – both individually and commonly – from at least two distinct perspectives. The modern leader wanted to develop a complex for small traders on his own land, so that the packaging of saffron could be done there (similar to the Dorika idea). The union had a different idea, which the union president explains:

“...in 2009 we went to ISIPO Khorasan and asked them if, due to issues we had with working in the city, they could provide us a lot in the industrial estate that we could move to. They showed us a property at the far end of the industrial estate but our colleagues argued that the location was insecure [for saffron]. Then they told us about another lot near the Mashhad international expo. We were waiting
for that, but didn’t really pursue it until we found out that the cluster [Mr. Taziki] had gone after getting a lot for the cluster and our members.” (INTV X)

But when I asked him why the first path was unsuccessful and the second was successful he did not give me an answer. He asked me to turn off the recorder and then said among other things: because the place they gave us was not what we desired.

Mr. Taziki tells the story more precisely. He argues that when the modern leader’s idea (building on his own land) was discussed with the head of ISIPO Khorasan, he (ISIPO Khorasan head) wondered why the modern leader should sell them parcels of land when they could provide better prices themselves. So ISIPO Khorasan made an offer to the union which they opposed. In fact, Mr. Taziki presented the offer to the union based on ISIPO Khorasan’s idea. As the union president described, the response from the union was negative, but not in the way he suggested. It seems that they were trying to circumvent Mr. Taziki at that point for the sake of some of the union board members. Mr. Taziki claims that they were looking for such a large property in such a good location that was not available in Toos industrial estate.

However, other interviews suggest that the union was convinced it could buy, prepare and sell the land to smaller union members (INTV I; INTV D). This type of activities by the Union board members exemplifies the type of reasons that made Mr. Kavakebi, like many other small firm leaders, very displeased with the new union leaders (pp. 63-64).

As described earlier, the stagnation of many international market development activities led Mr. Taziki and the cluster network towards reconsidering the complex idea provided by ISIPO Khorasan. With the rejection of the idea by the union’s board, Mr. Taziki approached the initial Malaysia network members and others who seemed to share common goals. Initially, eight firm owners expressed interest in a complex of workshops built by ISIPO Khorasan and subject to a loan offer from ISIPO Khorasan. This complex consisted of 18 parcels and Mr. Taziki managed to find four more people

49 It became clear to me while I was doing my interviews, that the union president had a conflict with the CDA; he insisted that the cluster development had done nothing for the union and hence, argued that the idea was from the union and not the CDA’s.
(including himself) to provide the deposit. Nevertheless, they were still six firms short of turning the property into a saffron-exclusive complex.

Mr Taziki described in detail his efforts in finding the 18 members, negotiating with the national ISIPO in Tehran and ISIPO Khorasan and finally, switching the lot that was provided (with pressure from the national ISIPO director) with a vacant lot. The new lot occupied one of the closest locations in the estate to the city and required re-zoning. While all this was happening, Mr. Taziki was supported by the cluster network. Many people entered and exited the project until finally, in 2011, an 18 parcel lot was offered to 17 saffron business owners, plus Mr. Taziki.

7.5.2. 18 firms in the saffron complex

While there are many details about who left and who entered the project, I will put these aside and focus instead on the final composition of the complex.

The final list of saffron complex members included: seven small traders close to the union leaders (without membership in the NGF); three non-core members of the NGF; one modern style leader; 2 traditional style leaders (the union president and the other member who complained that moving to the estate was unnecessary); five marginal saffron producers that had not participated in cluster development project activities before; and finally, Mr. Taziki.

Mr. Sufi is a member of the marginal group that I was able to interview. He argued that while he was informed about some activities of the cluster development project before the complex project, he didn’t participate in any of them. He decided to participate in the complex project thinking that it would include a common test laboratory and joint marketing activities. He was also looking forward to subcontracting activities, as his main focus had been tea and he had only entered the saffron industry for the purpose of producing saffron flavored tea. (INTV B)

One of the modern style leaders, who is also a very successful entrepreneur in South Khorasan, wished to be included in the complex in order to have a facility in Mashhad. He had become familiar with the cluster development project through
members of the cluster network with whom he had participated in the fourth Malaysia trip.

The two traditional leaders who dominated the union decided to participate in the complex project particularly after their individual experiences in Qatar and Malaysia (one had gone to Qatar and both had participated in the third Malaysia trip - though each had separate booths from the cluster network.

Of the three non-core members of the NGF, two had become core-members of the cluster network and important drivers of the project. Mr. Safaee (one of them) describes his participation in the complex like this:

“… My evaluation was that locating near one another might have some losses; but it would be 20% loss and 80% benefits. To have a place of agglomeration and participation is good for having a common laboratory (which is costly and not an option for everyone); we can also have shared commuting services for employees and a common price for subcontracting work. Also, it could become a center for saffron in the same way there are centers for selling textiles and clothes. In this complex there might be by-products that I do not produce and if my customer wants it and I have trust in my neighbour, I can introduce him/her to him for that product.” (INTV E)

Mr. Arefi, who had quit participating in the cluster development programs, was another potential member and was included in the initial list of eight people. In the end, he did not participate. He told me the following in his interview:

In regard to the workshops [another name for the complex] they told us that the government wanted to support us [to go there]. I had information that the lot they were providing was over-valued, but they told us they would sell it to us in a few years [it would have a loan]. They wanted to play some sort of land dealing games and I quit. I said, if I’m going to come there, they have to give me facilities. I can afford 100 thousand tomans per square meter myself, so why should I buy it from ISIPO Khorasan? I would set my own terms. Although, I think these common activities are good, especially considering the new standard tests that the National Standard Organization is presenting [for saffron].”

My understanding is that Mr. Arefi himself was unhappy about his exclusion and blamed Mr. Taziki for this in the interview. Mr. Taziki, on the other hand, was very unhappy with Mr. Arefi’s exclusion from the complex because he had counted on him to
encourage other cluster members to get involved; Mr. Arefi had let him down in this way and also in regard to marketing.\(^50\)

From the cluster network, Mr. Farshbaf (a traditional style trader with some relationship to the modern style firms), was also excluded from the project because he had his own facility and did not need another one. This, alongside his failures in the Japanese market research project, excluded him more and more from the core of the cluster network.

Despite these absences, other traditional style members (non-leaders) joined the project. Some of these had participated in the cluster development projects and some had not. For instance, Mr. Haghshenas, who had been involved in many of the projects talks about the saffron complex investment like this:

“…Another change that we have had is the investment that we have made in the saffron complex. The idea to make that investment came from the fact that the facilities that we have here are insufficient and don’t show well to our foreign customers. We don’t have anything to show to our foreign customers now. With the opportunity created by the cluster to receive governmental loans to build our workshop, we decided to participate in the project. This project is going to be profitable given the country’s economic circumstances [the asset is going to be profitable]. But profits aside, making our company more competent and attractive has been very important for us. Appearance is important to everyone, but this look can make a profit for us as well”. (INTV E)

For participation in the project, each member deposited 18 million tomans ($15000) into the ISIPO Khorasan account. Everyone also attended a meeting in February 2011 to establish a cooperative for building the new facilities. There was a mission of cooperation between members, for exporting saffron and other common issues in the cluster. They selected board members for the complex which included Mr. Taziki, a representative from ISIPO Khorasan, and 4 members from the cluster actors. Interestingly, in voting for the board members, the union president was not selected as a board member. At this meeting, people’s locations in the complex were chosen by draw.

\(^50\) One other thing that should be considered is that Mr. Arefi complained that people had learned his tricks in marketing when they went to common trips to Malaysia and Qatar but they did not have much for him. While this is true, other people that had been more givers than takers in regard to international market knowledge or other related knowledge did not express such feeling and talked about their experience as a give and take.
and the board members began the process of designing a concept plan to be advertised in newspapers.

7.5.3. **Challenges of the underdeveloped but institutionalized network**

Nothing went forward as smoothly as it seemed to be going in February 2011. Upon the initial agreement and start of the building phase, many cluster actors who had been left out of the complex (particularly those who had been included on the initial list) began lobbying to join the complex. Because Mr. Taziki and some other members of the complex were not longstanding members at the core of the industry, lobbying was done by insiders with ISIPO Khorasan against them and in favor of friends that had been left out. This was rejected by ISIPO Khorasan.

The big problem came when a member of the complex with a construction business submitted a proposal for the building of the complex. This triggered a series of conflicts and disagreements that finally led to the dissolution of the initial common agreement for building the complex together. At the time of my interviews, this conflict had not yet been solved.

Many members of the complex expressed disappointment (INTV M; INTV H; INTV B). Most of the events described here were explained to me by Mr. Taziki, but bits and pieces came from others. My understanding is that neither the problem of the marginal saffron traders nor the conflict that emerged in the process of construction were the main reason for this long stagnation and disappointment. From the perspective of the social learning model, I believe that the push towards reaching the critical mass of

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51 The involvement of the CDA as a member of the complex was not according to the guidelines provided by ISIPO and UNIDO. But because the cluster development project was at its last months the CDA took advantage and when he had no more obligations for the project the complex project had reached a phase that there were no restrictions on him. Mr. Taziki argues that his involvement in the complex project has assisted in moving it forward particularly for himself it has provided him the motivation to go after the project and stick with the industry. I do not see this discussion valid because it has provided the union leaders a very good means for lobbying against him and has degraded his situation as a middle person or facilitator in the cluster. Although it must be considered that ISIPO Khorasan had offered him no incentive for not being involved; no extension of the project was offered; nor another cluster development or similar project.
18 members needed for securing the complex led to people coming together with a low level of common understanding (shared mental models), common identity and trust. This, I believe, led to the disappointing situation they have reached now. I will come to this in the next chapter but for now, I will review the learning mechanism at work as the cluster development project aimed to bring about change in the cluster.

7.6. The learning mechanisms in cluster development

To bring the cluster development policy into the learning framework, it must be considered that the cluster development project – according to its diagnostic study – understood that at least two styles of firms existed in the cluster: The modern style and the traditional style. As explained earlier, the cluster development project did not find a way to bring in the leaders of either group in the early stages of the project and both groups rejected the initiatives of the CDA. But for those whom the CDA was able to work with (based on rejections from the leaders and limitations on funding), the embedded learning is provided below.

For traditional style firms with the stable mental model that profit can be achieved in high volumes in available markets, the cluster development project aimed at changing this mental model through common small experiments. In this regard, the market research and cluster tours were conducted to provide the opportunity for sensitization and dissemination of the new mental model, so that with the assistance provided by the government through the cluster development project, the traditional style firm owners would consider examining entry into new markets. But this was only one facet of the project. This is the mechanism shown with the arrow on the left side of ‘cluster tours and market research’ in figure 7.2.
The other facet was to provide assistance in their experiments by subsidizing their ‘planning’ through the market research projects. This allowed them to try active marketing and to observe the outcomes so that they could compete in markets with less price pressure and new customers. The goal was thus to shift from only trying to capture as much market share as possible for survival towards considering investment in new markets and new marketing techniques. Mr. Haghshenas provides a good example of this abstraction. He argues that before the cluster development program, he did not feel the necessity of active marketing activities. His problems were in production; to fulfil the orders coming from customers. But after participation in the KSCDP activities, he argues that:

“... [The Malaysia trip] was good for me as well. I learned to go after new markets - although, not markets that do not know saffron at all [like Malaysia]. I decided to go to markets where saffron is known - like China. So overall, I started penetrating new markets. For instance, in Singapore I found a customer for 3 kilos, then for 10; after that, it increased much more each month and he is buying from me now.” (INTV I)
This was not a direct outcome of KSCDP, but as he explains below, the effect of the development project is revealed:

“I found this [customer] through my own marketing (e-marketing). I started e-marketing 3 years ago ... This was independent from the cluster and based on my own endeavors. The cluster motivated us and its activities were complementary to ours. We participated in expos and had cluster support there as well. I had started the website and the Singaporean found us that way. There have been many similar cases from India, Italy and the USA...I also went to Gulfood with Mr. Taziki afterwards. It is a very strong expo and I was successful there as well. That is an expo only for showing and we didn't have a booth, but I was able to get a customer...after that I participated in an expo in Hong Kong as the representative of the cluster, but I was alone. Hong Kong doesn't have a big market but it’s an important entry point for the Chinese market......It has now been three consecutive years that we've participated in Gulfood and also, I went to an expo in Lahore in Pakistan - again as the representative of the cluster. I have plans for Hong Kong in the coming months...” (INTV I)

He makes it clear that this habit of going to expos is completely new for him:

“...I didn't go to expos before starting to go with the cluster because of the language problem and also because of not being familiar with and informed about them... but since then, by dealing with the emails and some experience, I have overcome the language problem a bit and I have learned something. But still the language problem is there; I have learned to use translators. I haven’t learned enough with all the busy work...” (INTV I)

And he makes a great link between the marketing and the decision to transform his company below:

“...The consequence of this for the company has been that with our increasing number of new customers, we have changed the structure. New tasks have been defined. We didn’t have the site before; we now have it and it gets updated and we have employed a person to look after this and our entire internet issues. We have employed commissioners. They make the initial contacts, but I follow-up. This has all happened in the last two years. We have employed (part time) two people for this. One English language teacher and another that works in the stock market ...” (INTV I)

While Mr. Haghshenas is a very distinctive example of a traditional firm that had not thought of entering new markets and has now changed its mental models, Mr. Safaei, Mr. Kalantari and Mr. Farshbaf have had similar experiences. High-volume, traditional style exporters like Mr. Mokaram and Mr. Javadi, who had not pursued marketing activities at expos, are other examples of this learning mechanism.
Another group of firm actors who, at the beginning of the cluster development project, had a mental model that profit could be achieved in new markets with new products (including with small packages), also came to participate in the cluster development project activities. This group included Mr. Arefi and Mr. Mohajeran. While these firms were excluded from the core of the NGF and did not benefit from the establishment of the NGF and its activities, the cluster development project also failed to benefit them in many ways. While in the case of the NGF, the big players did not let them become insiders (as will be discussed in the next chapter), the cluster development project was a place of teaching rather than learning for them. The cluster development project did not provide the type of incentives they were looking for in order to penetrate new markets. Mr. Arefi’s case (described on pages 105 and 115) provides a good example of this type of experience.

Bringing this to the learning mechanism framework, it can be seen that the cluster development project was successful in convincing people like Mr. Arefi and Mr. Mohajeran to network with Mr. Farshbaf and other traditional (but changing) firm owners in the initial stages of the Malaysia (afterwards, “cluster”) network. Yet, it was unsuccessful in providing the subsidies needed to motivate them to create new markets for saffron and saffron products. This was reviewed in the failure of the Malaysian food products consortia and TV crew visit to Iran; although, it is important to acknowledge the role of other structural problems, including sanctions. In learning mechanism language, the cluster development project was unsuccessful in providing the necessary incentives through governmental support for the Malaysia network, to invest in creating new markets for saffron and saffron products. This is illustrated in figure 7.3.

Having told the story of the interventions and placed them into the learning framework, I will now move on to provide an assessment of learning processes in the cluster development process, as well as other policies following the framework that I outlined in the third chapter.
Figure 7.3  The learning mechanism for modern style firms in the cluster development project

MMI Profit could be achieved in new markets/products + test making new markets based on network synergy and governmental assistance

Sensitization and synergy from networking

Plan: Market research + more market development activities but not enough subsidies

Act: New product development, advertisement, branding + no new advertisement and branding activities

Assess: Change amount of investment in new market development + continue previous marketing activities

Observe: Return on investment and sales in new markets + no return on building new markets

Env: Low barriers for competitors to imitate and use developed market + no incentives or plans for preventing this issue

Market research and networking
8. Assessing “learning” in the saffron industry

Returning to the framework that was introduced in chapter three, it can be argued that four distinct types of learning can be envisaged based on two dimensions: the individual-social axis and the adaptive-reflexive axis. Readers are reminded that the two dimensions should not be read as individual versus social, or adaptive versus reflexive; rather, they should be understood as individual versus individual-and-social for the former and adaptive versus adaptive-and-reflexivity for the latter. Figure 8.1 illustrates this categorization.

*Figure 8.1 Two dimensions for understanding four types of learning processes*

As described in my conceptual framework, these types of learning can be seen as steps and sub-processes of the overall social learning process. In this regard, the types of learning could be seen as different layers of the learning process; while, for instance, the adaptive individual learning process is the first layer and is included in all of
the four types, the socio-reflexive type of learning is the most inclusive and hence, includes all four types within it. In this chapter I will illustrate that different policies and initiatives have different embedded assumptions about how the recipients of the policy learn. I will show how these four learning types are embedded in the policies that have been described in the two previous chapters. While in the previous chapter I used some of the concepts introduced in my conceptual framework (particularly the concept of mental models and adaptive learning), I will now use the other concepts (like shared mental models, reflexive learning, identity, and trust) to elaborate the differences between these mechanisms of learning.

I will first start with the most inclusive type of learning – socio-reflexive learning – which has been the most successful in bringing change and has occurred in two situations in the cluster: firstly, in the cluster development process, based on the intervention of the CDA; and secondly, in the creation of a ‘modern’ identity for the progressive firms of the cluster in the NGF (not all members of the NGF), based on the initiations of the modern style leader. I will then review the other three types of learning that have occurred in the cluster and the failures within them.

8.1. Two socio-reflexive cases in the saffron cluster

‘Reflexive social learning’ (or socio-reflexive learning) is defined as the learning process of a social entity that includes a change of shared mental models of that social entity. This kind of learning was particularly illustrated in the previous chapter about the development of the cluster network. I described the process and attributes of this sort of learning in my conceptual framework and here, I will examine my field findings according to the framework. While this type of learning very clearly occurred in the development of the cluster development network, the pre-establishment phase of the NGF and the processes of learning between the core modern style firms in this organization (and beyond it). However, I also provide evidence that socio-reflexive learning occurred for another group of cluster actors, out of the facilitated practice of the cluster development process. I will review the socio-reflexive learning features of this developmental process in the second part of this section.
8.1.1. The cluster network

As explained in the previous chapter, the cluster network, or what the people in Mashhad’s saffron industry refer to as “The Cluster”, was originally created as the Malaysia network; it then evolved towards a network of people that aside from conducting common marketing activities, initiated and pushed forward the establishment of the saffron complex. Members of this network initially included Mr. Arefi and Mr. Farshbaf, but afterwards, members joined and left until the fourth Malaysia trip and the process of starting the complex. The complex was shaped with Mr. Haghshenas, Mr. Safaee, Mr. Jahangir and Mr. Kalantari at its core. Alongside them was Mr. Taziki, who had become a member of the industry through his engagement in the saffron complex. Following the seven points described in my conceptual framework in chapter 3, the following issues can be discussed regarding the socio-reflexive learning process and its attributes for this social entity:

1- Individual learning (adaptive and reflexive) is a necessary condition for change: As explained in my conceptual framework, the socio-reflexive learning process does not overlook the importance of individual learning (both adaptive and reflexive) in the learning process. Reflexive and adaptive learning of individuals begins the process of change, as illustrated in figures 3.3 and 3.4 in chapter 3. In regard to the cluster network, the change of individual members was at the core of the learning process. This included adaptive change that was imposed on the members by the environment – both the spontaneous order of the market and the policy driven impact – and also reflexive change created by the opportunity for self-reflection for participating members. Many quotes in the chapter seven illustrated this sort of change in the cluster actors, but the cases of Mr. Haghshenas, Mr. Safaee and Mr. Farshbaf are exemplary. A staff member of ISIPO Khorasan who was in contact with the cluster network members also describes these learning processes for individuals and evaluates their importance as follows:

“...I have been in the industry [in Mashhad] for my whole [professional] life and my impression was that among them [cluster actors], only a few were industrial firms and the rest were only traders. I never thought that they would change so much. In these three years, I think 70% of their nature has changed. They have changed in regard to personality and a new person is being shaped [for each of them]... My opinion is that those restrictions the government put on saffron trade could not have changed them [alone]...Their familiarization with new markets
and other issues was the reason they changed their activities. I can say that the latter had an 80% role and the former a 20% role.” (INTV F)

2- The social dimension has a positive effect in changing conventions: While in the case of Mr. Farshbaf, the change for the individual occurred in an isolated situation and not in a social entity, for other members of the cluster network, such as Mr. Haghshenas and Mr. Safaee, reflexive social learning happened amidst the creation of a social entity: the cluster network. As discussed earlier (section 3.3.3), when reflexive learning for the individual person happens, the individual actor faces a dilemma of changed or changing mental models that do not align with the conventions in his/her environment of action. When the learning of the individual happens in a social entity that ought to be the carrier of those conventions, this allows the actor and other actors in that social entity to work towards changing the conventions. This is clear in the case of Mr. Haghshenas, as described elsewhere. As a traditional style actor he started cautiously questioning his previous marketing activities during his first encounter with the cluster development program. Afterwards, as a member of the cluster network, he participated in joint activities in Malaysia, Dubai, Qatar and Hong Kong. Eventually his prior mental model – enforced as a convention in the industry – changed; now, he realized that profit could be achieved not only by gaining more customers, but also through international marketing. With similar experiences occurring for many members and non-members of the network, a path for changing conventions was created.

3-1- Identity building happens alongside, and is critical to, socio-reflexive learning52: Following Wenger (2010), I argued that the process of change in shared mental models is integrated into processes of identity building. This includes engagement, imagination and alignment. A shared identity has been built among members of the cluster network and is reflected in the way the industry refers to “The cluster” (a name that brings to mind a team or group of people). This identity was built first through “engagement” in cluster development activities, particularly the international market development activities and initiating the saffron complex. Secondly it was built

52 I have numbered 3-1 and not 3 so that it is easier to follow which note in my conceptual framework I’m referring to in this part. For note numbers 3, 4 & 6 I had two discussions so they I are numbered as 3-1 & 3-2 (referring to number 3), 4-1 & 4-2 (referring to number 4) and 6-1 & 6-2 (referring to number 6).
by “imagining” this identity in the “we” as expressed in Mr. Safaee’s quote below, and its relation with the cluster network and with the environment. Finally, its creation was continually “aligned” by the feedback it received from engaging, by changing members and changing strategies (as described in chapter 8).

Mr. Safaee: “...Now, everyone is not a member of the cluster, but those who are members became members because there was someone willing to take the risk to get these people together … When we came together, 10-12 of “us” had this feeling that “we” were much more sympathetic and “we” could work together. When “we” came together for a common task, “we” felt that “we” could do other common projects as well...

...the reason we did not come together before was that there was no one to try bringing us closer to each other. No one thought of this. But when “we” came together “we” saw that everyone wanted to work honestly. Maybe in the previous establishment before the cluster [the NGF] people who were ahead of us in regard to marketing did not want to turn back and take our hand [assist us]... but “we” [in the cluster network] were all willing to work together and [for some of us] to turn back in order to work together. Maybe 5-10 people like me in the cluster agreed to work together, but many might not be willing to wait for others.” (INTV E)

In contrast, Mr. Arefi had a negative feeling about the idea of working together and withdrew from the cluster network. He did not engage in the social entity that was being created:

“Going in a group had an important role. I had my own methods for marketing. We went there and I started to do my work (I had gone to 130 expos before) and the rest sat and watched what I was doing and the next day they were doing the same thing. They learned from me but they didn’t come to work with me afterwards. All of them went after their own expos. What did I learn from this? I learned that you should never tell anyone about the secrets of your work.” (INTV G)

The ISIPO Khorasan staff member describes how this lack of identity, or as he names it, “personality” (INTV F) had a negative effect on the ability to express needs to government officials regarding development of the industry. He argues that:

“... With the cluster program and the institution building that has been done they have achieved a bigger and stronger personality and this new personality has given them strength and has created opportunities for them. I think this personality that they achieved in the cluster development program is very important. This was the point when they felt they could do something because they had come together. It was their own will and we provided the facilities for its accomplishment.” (INTV F)
3-2 **The creation of a new identity demands conflicts at different levels in the cluster.** As illustrated throughout this thesis, within the saffron cluster two identities existed before the cluster development approach: firstly, the overall saffron traders’ identity, which as a response to the creation of the “modern” identity, had solidified around the leadership of the leading traditional traders; and secondly, the ‘modern’ identity that was created by the initiatives of the modern style leaders. The cluster development intervention brought about a new rival identity for these two identities. Analyzing holistically all the names that I came across in my field interviews (which included about 45 of the traders in the industry) and mapping them according to the positive and negative relations they have with each other (qualitatively and relatively), the cluster could be seen as a space (objective and subjective) of coalitions and conflicts; the latter between two rival groups before intervention as illustrated in figure 8.2. In this figure, the members of the NGF and a few other saffron traders that sympathized with the modern style leaders are put into the lighter purple circle, while the modern style leaders are put in the core darker purple circle to illustrate the ‘modern’ identity (this is discussed in the next section in detail). The opposing traders gradually, as Mr. Haghshenas put it in section 5.5, “teamed up” (INTV E) around the traditional style leaders who had assumed power in the union. While the central allies, all of whom are from Charmeh and most of whom have family ties, sit in the darker orange circle as the core of the ‘saffron traders’ – as they see themselves – and “Traditionals” – as the “Moderns” see them, most remaining traders that have more positive relations with this identity sit in the lighter orange.53

But as a result of the cluster development project, a new identity has emerged in the cluster (shown in figure 8.3). In this illustration, the core carriers of the ‘Cluster’ identity are shown in the darker red circle and the other actors that cooperate with them

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53 I had my judgments based on the interviews and other data that I had collected about each named actor in an initial version that was afterwards edited by the CDA. This could have become much valuable if edited by other members of the cluster as well. In Appendix C, I have provided other figures that show the differences of these actors in regard to export size, facilities, and overall turn-over. It should also be noted that in regard to actors that I did not have any mentioning of their names and relations I have not included them in the illustration. This includes at least 50 more actors that most – if not all – of them fit in the light orange category.
are shown in the lighter red circle. An asterisk (*) after of a name indicates a member of the saffron complex.

**Figure 8.2**  Two identities in the saffron cluster before the cluster development intervention (2009)

4-1- **Conventions change as an outcome of change in shared mental models:** As described in my conceptual framework, shared mental models provide a path for changing conventions. In the case of the cluster development project, although the mainstream actors faced successful individual examples of change (particularly the success of modern style leaders), with respect to international marketing and developing new facilities, it was socio-reflexive learning that changed the way the cluster conducted business. Nowadays, learning English, employing marketers with English and other language capabilities, recruiting translators, operating and updating websites, continuous participation in exhibitions, and approaching new markets have become conventional activities for mainstream actors in the saffron cluster.
Although one of the modern style leaders argues that environmental pressure and “compulsory change” have been the reasons for change of conventions in the industry (INTV K), my understanding of the cluster is that a combination of environmental pressures and socio-reflexive change have facilitated the shift. However, in line with the staff member of ISIPO quoted earlier, my opinion is that socio-reflexive change has played the most significant role. Those mechanisms of learning that came from regulations and competition in the industry, while important, were less effective in the paradigmatic change that happened for many actors (including some traditional style leaders like Mr. Mokaram) and the cluster network.

4-2- Emergence of new institutions as an outcome of change in conventions: Institutionalizing the changed conventions as the next phase of the process of change (not its final stage, as it is an ongoing process) includes a confrontation with existing institutions. This can be done more smoothly when the institutionalization involves fewer conflicting interests. For instance, when an individual firm reflects and understands the need for changing the material organization (not just
the conventions) in his company, he does not face many obstacles. But when institutionalization involves severe conflict between interests of different actors’ (i.e. when there is need for a regulatory body for standardization and certifying saffron that everyone agrees upon it) harsh conflict of interest and limitation of resources would lead to conflicts and institutionalization would become much more time-consuming, costly and difficult. In regard to international market development, while successful in institutionalizing change in individual firm members, success in institutionalizing change at the network or cluster level was not achieved due to: the critical mass (resources) necessary for change; the problem of “holes” in developing new markets; and the highly unfavourable trade situation over the past two years. Institutionalization of this change requires a larger coalition in the saffron cluster and a much more constructive business climate for international trade.

In regard to institutionalizing the changed production facilities, the saffron complex and the cooperative established for its construction and operation represent considerable institutionalization activity. This included forming a coalition with people who had not experienced similar conventional and mental model changes to reach the critical mass needed for pushing the project forward. Ultimately, this led to undesirable outcomes, such as the conflicts mentioned in chapter 7.

5- Partial learning can have durable effects but it will have consequences: Incomplete learning happens when one or more of the steps in the process of change are skipped. I will review examples of these partial and incomplete learning processes in the coming sections of this chapter. In regard to the cluster network, the inclusion of members without aligned mental models to fulfil the need for a critical mass in building the saffron complex is an instance of incomplete learning leading to undesirable outcomes (lagging of the project).

6-1- Trust building is part of the process of social learning: Unlike understandings which regard trust and social capital as deterministic of development outcomes, the cluster network case illustrates how trust building is a result of changing

54 As explained earlier this refers to the fact that investing in a market is investing in making rivals as well. These rivals would start providing lower prices in the market that has been built by investment and it would decrease the return so it is like having a “hole” in the market.
mental models and shared mental models of the people. Whatever input is provided by the environment – which was very undesirable in the case of the saffron industry – sets the initial level of trust at the starting point of the learning process (it is important to realize this so that proper strategies and experiments are pursued in the development process). The level of trust increases between actors of the social entity simultaneous with identity building and changing of shared mental models. Mr. Safaee describes his experience of relating with other members of the cluster network as follows:

“...My opinion was that if people became sympathetic in the cluster they could work with each other. And I saw this in the cluster [network] and this is why I participated more. This has not been done for saffron actors anywhere else except the cluster [network] and it has had really had good outcomes. For instance, in the cluster [network] I became familiar with a colleague who focused on medicinal herbs and when one of my customers asked for medicinal herbs I introduced him to this colleague. In another case in the cluster [network], one of my colleagues had received a huge order that he wanted to reject because he did not have relationships like me [in the saffron industry and particularly with the dealers]. I told him that I could provide 500 Kilos. We came to an agreement about the price and profits and we filled the order together... We talked with each other and explained our experiences to one another when we had the opportunity on the trips.” (INTV E)

Above, Mr. Safaee is describing the later climate of trust between actors inside the cluster network. This is considerably greater than the trust that existed between them at the beginning of the project and greater also than the level of trust that exists in the industry and region (the disputes in the union elections and the first confrontation of Mr. Mohajeran with Mr. Arefi on the second trip to Malaysia are great examples of this low-trust situation in the cluster). Mr. Safaee also mentions the trust between members of the cluster network more explicitly in the following quote:

“...Although I’m not part of the board of the complex I participate in the meetings - unlike the union meetings that I did not participate in; because with the cluster guys I feel a lot more sympathetic, “we”know each other a lot better and “we”do not cheat each other” (INTV E)

6-2- **Small experiments are essential for overcoming the ‘low identity-low trust’ situation, although they are costly:** The cluster network case shows that in a climate of low social capital and trust, small experiments could pave a way towards higher levels of trust and a higher level of common identity. Higher level of trust in this sense is not a product to be built somewhere (as “emotive trust” (Ettlinger, 2003)), to be
carried for “rational” (Ettlinger, 2003) utilization in another place; on the contrary, it is shaped based on the mental models of people and the understanding that emerges in the process of building shared mental models and the common identity. For instance, consider how Mr. Jahangir describes his experiments before understanding that Mr. Safaee would be a good match for his developmental activities and not Mr. Kalantari:

“...I have had a good experience in exports in the past few years. I provided this experience to Mr. Kalantari as well as Mr. Safaee. But Mr. Kalantari actually circumvented me and started working with the people that I had introduced him to. He learned the nuts and bolts of working with customs and airmail. We went to Dubai four or five times, but he started exporting [to Dubai] without informing me...

...Today, although he is still connected to “us” you cannot count on him because he really wants everything for himself and is not willing to cooperate... He is always after his own profits. You cannot talk about teaming up with him. On the contrary, Mr. Safaee is a person that you can really trust and do common action with. (INTV C)

This explains why Mr. Issa Kalantari is now beyond the borders of the cluster network in figure 8.3 (but still considered an ally), while Mr. Safaee, Mr. Haghshenas and Mr. Taziki, along with Mr. Jahangir feel they are at the core of this network and social identity. Mr. Taziki argues that:

“I think the most important thing that happened is that in this process [trips and marketing projects] people became informed about each other. At first, we were eager to work with many people; afterwards, we understood that there were some, like Mr. Safaee and Mr. Jahangir, with whom we worked better.”

7- Creating the opportunity for talk as “intensive communicative interaction” is essential for socio-reflexive learning and change: As Storper (1997; 2002) argues, it is critical to provide an opportunity for talk as “intensive communicative action” and not only “shallow contact”. While the latter is best explored in the nature of the NC4S, the cluster network has provided opportunities for deep dialogue between its members on the expo trips and through many other common actions. While many of these dialogues resulted in success, many of them also led to an understanding that mutual understanding and shared mental models are not always possible. In an extreme case for providing such opportunity for talk, the cluster development program was able to provide a situation of dialogue (through the process of establishing the saffron complex) between a wide range of actors (with different objective capabilities and
subjective potentials). The cluster development project was successful in bringing together the traditional style leaders and one of the Modern style firms (see figure 8.3). Though this did not result in a successful outcome in regard to building the saffron complex, my opinion is that the experience will remain invaluable for future attempts in the industry.

8.1.2. The “Moderns” network

The cluster network has been the main focus of my research into the process of learning that has happened within the cluster development process. However, in my field study I found out that the modern style leaders also went through a process that exemplified the socio-reflexive learning process I have described. In this regard, the emergence and development of a “moderns network” (with a membership of three modern leaders and, in some instances, a few more) should not be confused with the establishment of the NGF; as it was only a means for the ends they had in mind. By way of analogy, the relation of the moderns network to the NGF could be compared to the relationship between the cluster network and the saffron complex. In both cases, the former is a social entity that exhibited attributes of socio-reflexive learning. The Complex and the NGF were both means of institutionalizing these social entities. The point of difference between the cluster network and the moderns network lies in the facilitation process. While the former was facilitated by an outsider (the CDA), the latter was facilitated by an insider (the leading young entrepreneur of the 1990s and the modern style leader of the 2000s). While I would consider the NGF policy in the next section as a partial learning experience, below I have very briefly highlighted the social learning process and attributes for the moderns network according to my conceptual framework in the Chapter three.

At the heart of the change that has happened for the moderns network has been individual reflexive and adaptive learning. This is best reflected in the entrepreneurship that they have undertaken in regard to their own firms and in their coming together to push forward programs for the promotion of saffron. These programs include price setting, incentives and fines, and the establishment of the NGF (to move beyond the traditional style mental model). Most significantly, they realized that with cooperation among themselves – if not all the saffron traders – they could be much more successful
in promoting saffron and competing with the Spanish rivals. This called for reaching out to other actors that could be possible collaborators.

Alongside their joint actions, a common identity of being modern was built, trust was lifted to a higher level, and the shared mental models created between them started to change as a consequence of reflection.

Regarding the common identity, aside from the term ‘moderns’ that was used in many interviews by members of the moderns network and others (INTV A; INTV F; INTV D; INTV C; INTV O; INTV K), terms such as ‘his team’ (INTV L) were used to refer to this network in the cluster. Most interestingly, Mr. Asgari – one of the members of the moderns network – often used “us three” in referring to the new social entity. He also describes how they aligned their actions together (i.e. he describes how he convinced the modern style leader to not go too far with the fines).

In regard to trust, Mr. Asgari explains how he and Mr. Noori handled a gaffe by Mr. Hashemi, which would have been considered an intentional cheating act and could never have been solved if any of “them” (the traditional style firms) had been there. In their common participation in a Hong Kong expo, they found out that Mr. Hashemi, who had been responsible for preparing the packages under the name of the NGF, had mistakenly or intentionally put his own brand name inside the packages. He tells what happened when they confronted him:

“…He came to us and Mr. Noori asked him: ‘Is it possible that your employees made a mistake and put your own brand name inside the cover?’ He responded: ‘Why would they do that? There is no reason to do that for a few samples. I have my own marketing [and I wouldn’t do it under the name of the NGF].’ We showed him the opened package. He called his brother in his company and started shouting at him in front of us ‘you have embarrassed me!’ I do not think he would perform such an act in front of us. He asked his brother ‘you think you have served me with this act?’ This is how what could have turned into a serious conflict was resolved. But others fight about small things.” (INTV X)

Mr. Asgari also talks about how trust exists between the three men, but not between them and others in the cluster.

In regard to learning, Mr. Hashemi explains how he assisted Mr. Asgari in changing many aspects of his business. In return, Mr. Asgari praises what he has
learned from Mr. Hashemi in many instances in my interview with him (separate interviews):

“Mr. Hashemi: ...I had an experience that could be transferred to other people. For instance, the period of Mr. Asgari being together [with the moderns network] helped him to change the framework of his business. Their marketing became scientific. Their packaging became modern and they became established [as a factory]... This has happened for all of us, including myself. For instance, among our friends, I learned from Mr. Noori to enter social activities and to cooperate with the chambers of commerce and agricultural commissions. There was this other business he had started in printing which we joined him in”. (INTV X)

This ongoing relationship used the NGF as a means for bringing others to themselves, while maintaining dominance through the shares they owned.

8.2. Partial learning experiences

As described in my conceptual framework (see Section 3.3.3, point 5) according to March and Olsen (1975) and Kim (1993), incomplete learning cycles, or what I call partial learning, can happen in the development process. The two-dimensional framework introduced at the beginning of this chapter illustrates three types of partial learning processes that will be discussed in this section.

8.2.1. Individual adaptive learning: the regulation approach

The price setting, targeted incentives and fines policies (explained in sections 6.1, 6.2, and 6.3 respectively) have all had, embedded within them, an individual adaptive learning perspective about the actors of the saffron industry. For each of these policies I have shown that the policymaker’s central objective has been changing the decisions of industry actors by providing a positive or negative environmental response that motivates or forces the decision-making actor towards the decision that the policymaker finds appropriate. In this process the policymaker feels no need to change the mental models of the actor – if it even envisages any. At most, it can be speculated that the policymaker thinks that by forcing the actor to a new equilibrium, the experience of this new equilibrium will gradually change the actor’s decision-making process. The new equilibrium is seen as the outcome of this change.
In this type of policy setting the subjective dimension of the individual decision maker is reduced to a profit maximizing economic function that is similar among all actors. In other words, the actor is conceptualized as a bounded rational decision maker and is disembedded from the social context of decision making. Disembeddedness from the social context also suggests that trust between actors is a stable and unchangeable feature and is not included as a variable in the development process. This is also true with respect to the identities of the actors. In this regard, the possibility of combining the resources of different actors, which requires change in the level of trust between actors and a commonly forged identity, is in not included in policy making.

The outcomes of such an approach include: intensified cutthroat competition between actors; circumvention of incentives and fines by including them in the cost structure; and no change in the value captured by the regional industry. Aside from these undesirable economic outcomes, trust between actors decreases and the possibility of cooperation between them fades away; conflicts increase and the possibility of resolution becomes less likely.

8.2.2. Social adaptive learning: the NGF approach

The ontology embedded in the NGF approach as described in section 6.4 is a social adaptive learning approach. Assuming that the problem for development is a problem of critical mass of investment, this policy aims to utilize the pecuniary effects of agglomeration and networking, with assistance from government, to overcome the financial barriers for promotion of exports. Again, by neglecting the subjective dimension of human learning and focusing on the objective possibility of collaboration, processes of socio-reflexive learning, trust building and identity building are overlooked. In other words, in this ontological perspective, human beings are still viewed as rational profit maximizers. However, there is understanding that profit can be maximized when people come together.

The NGF in the saffron industry was fortunate to take advantage of the socio-reflexive learning, trust building and identity building that was already underway within the modern network. Aside from taking advantage of the existing situation, there was no plan for building trust between the members of the NGF and using it to overcome the
conflicts in the industry. In the absence of the processes already underway, this situation would have led the NGF to complete failure. Apart from the modern network, which was at the heart of the NGF, other members did not engage in the organization’s activities and did not imagine themselves part of the shared identity built by the Modern leaders. Furthermore, they found themselves left out of the strategic planning and collaborative work that the Moderns undertook. This caused a downward spiral of lessened trust and diminished sense of identity that caused several members to leave the organization quietly (i.e. Mr. Arefi, Mr. Mohajeran, Mr. Safae and Mr. Jahangir.).

The initiation of the saffron complex is another example of lack of trust, lack of common identity and partial formation of a social entity push towards institutionalization. Similar to the reasoning provided about the critical mass needed for overcoming the objective barriers of growth, one can imagine a critical level of trust and identity necessary for development. For both institutionalized cases in the saffron cluster – the NGF and the saffron complex – skipping this decisive criteria has led to undesirable outcomes, including operational inefficiencies, intensified conflicts and decreased trust.

8.2.3. Individual reflexive learning: the cluster failures

As explained previously, the saffron cluster development funding structure led to a disordered development process. The project was not provided with enough funding to stimulate initial trust building through experimentation. Consequently, the CDA jumped to fund market research projects without networks of actors in place to be their consumers. While Mr. Taziki took advantage of the Malaysia market research project and was able to align it towards a more balanced learning process, he was not able to do this in the other market research projects. While the Venezuela project was suspended and shelved, the Japan and South Korea projects created an individual reflexive learning situation for Mr. Farshbaf.

In fact, Mr. Farshbaf has a record of individual reflexive learning. He was one of the few traditional style firm owners who decided to establish his own factory before the saffron complex. He was also one of the few traditional style actors that cooperated with the modern network in the NGF, and was one of the first to step forward in working with the cluster development project. Finally, he is one of the best examples of the movement
towards international marketing, as explained in chapter seven. Although all these reflective actions have led his firm to become well-established, his endeavours have not been aimed at changing conventions in the industry. In this regard, he criticizes the pressure that was put on him and others to move out of the city while others stayed and are now taking advantage of the lower costs and other benefits of being in the city. Furthermore, he feels that his experience in international market development has been unsuccessful. The path he is moving along is the path the modern style leader took in the 1990s and early 2000s. In fact, Mr. Farshbaf, unlike other traditional style leaders, praises what the modern style leader has done.

In a broader framework, this path of learning could be seen as akin to the “picking winners” and “champions” industrial development policies that focus on the development of entrepreneurs. The Schumpeterian “entrepreneurship and innovation” framework that supports these policies provides an ontological framework that leads to similar conceptualizations of mental models (i.e. “action plans” introduced by Munoz et al. (2011)). What is missed in these conceptualizations is the inter-subjectivity that creates social entities and provides a much more realistic path towards changing conventions. The individual-reflexive ontology (best described in evolutionary economics and evolutionary economic geography) does not consider that the reflective learning of individual entrepreneurs and waiting for chance events to cause conventions to change is only one way that change happens (this would be very powerful in explaining the change that happened in the 1990s with the entry of the modern style leader as a young entrepreneur into the industry). The socio-reflexive ontology provides a more realistic understanding about the change of conventions after entrepreneurship, rather than just leaving it to chance. Thus, while individual reflection and identity making are considered in the individual-reflexive model, processes of common identity building, reflection on shared mental models, and trust are left out of understanding development.
9. Conclusion and future research

My conclusions and proposals for future research and practice are organized and presented for three different audiences: 1- saffron industry actors and policymakers in the Khorasan region; 2- development practitioners and policymakers at the municipal, regional (ISIPO Khorasan in the case of the saffron industry), national (such as TPO and ISIPO in the case of Iran) and international (i.e. UNIDO) levels; and 3- urban and economic geographers and other academics.

9.1. Conclusions for the Khorasan saffron industry

My analysis of the saffron industry reveals that top-down policy making and promotion of regulations and initiatives are incapable of bringing sustainable development for the industry; at least, they are not the core driver of change. This is to say nothing of the hardship they bring for future initiatives. A critical lesson can be learned through this analysis – especially in the current situation, where frustration with the chaotic state of the market and difficulties in trade have led business leaders and actors towards pricing strategies again – that reaching a common understanding about the problem and solving it through internal negotiations is the best way to step forward in the development of the industry. The collective experiences of the modern network and NGF, the market research and participation in expos initiated by the cluster development project, and many individual experiences, provide the best grounds for dialogue, discussion and strategic planning to bring wealth through this industry to its actors and the region. Particularly, the formation of new identities within the cluster has overcome some of the pre-existing divisions amongst traders. This is evidence of a potentially profound change.

Negotiations must be transparent, direct and aimed at fostering common understanding between industry leaders. In particular, transparent definition of fields of
competition and cooperation is possible based on the learning that has been achieved. I suggest that a focus on marketing negotiations in specific geographies and markets, is a way of overcoming the “holes” in the industry. A realistic agreement for dividing international and domestic markets is an important part of the negotiations between saffron leaders. Moving towards a national trademark signature of certification instead of a national brand, could be identified as another project for promoting Iranian saffron. Initial success in these undertakings could lead to a specific proposal of support from the government to promote the Iranian saffron trademark in different markets; this could be based on a 50-50 share between the government and the beneficiaries in each specific market.

Logistically, my suggestion is that the exporters union could be the location for these negotiations. The management of the union could turn from a direct vote electoral system to an OPEC-like system, rotating the presidency among the main industry leaders. Regulation could require a minimum percentage of saffron exports to become a member of the saffron union presidency council. For smaller firms, the possibility of coalitions for representation should be offered. The voting system should move towards 2/3 or ¾ votes needed for decision making.

The cluster development agent has lost his leadership role as a facilitator and middleman through his engagement in the saffron complex (as well as his conflicts with the traditional and modern style leaders). However, he could, and my suggestion is that should, have an important role in mobilizing the cluster network, acting through the saffron complex and leading new initiatives in alignment with the outcomes of the industry leaders’ negotiations for developing Khorasan’s saffron industry.

9.2. Conclusions for regional and international development practitioners

Development at all of its different levels has been occupied by mainstream economics theories and thus, policies emerging from this preoccupation have been overwhelmingly adaptive. The two-dimensional framework introduced in the previous chapter and the analysis done in this research provide a new direction for policy making
that includes reflection and subjectivity in planning and policy making, as well as the social dimension.

On the one hand, the development discourse is so obsessed with objective economic discourses that a large focus should be on bringing the subjective dimension into consideration, as I have done in this piece. This extreme focus on the objective makes the socio-reflexive learning process look overly subjective. This is not correct. Post-modern and anarchist discourses do argue for an overly subjective understanding of change that disintegrates action from subjectivity and leans towards subjective reflection. However, I recommend a pragmatic view that integrates reflection and adaptation and calls for balance between them.

On the other hand, following Michael Storper’s differentiation between community and society (2005), what I am advocating as a result of my analysis is a triple level individual-community-social understanding of human learning and not an exclusively societal understanding, as Marxist, Institutional and anarchist discourses propose. This addresses another simplification that ‘neo-classic economics-informed’ proponents of regional, urban, rural and international development academics and practitioners use to overrule any societal understanding of development. The socio-reflexive perspective does not argue for a “fully shared subjectivity of complete mutual understanding and reciprocity” (Green, 1999. P.5). Rather, in line with Green and “the classic pragmatism stream of Peirce, James, Royce, Mead and Dewey”, it calls for understanding “a diverse community, that includes multiple, partially overlapping, shared social identities that are also some of the constitutive elements of personal identities” (Green, 1999, p.6).

I have echoed these two decisive extensions of my two-dimensional model in figure 9.1. The neoclassic economic understanding of change is dependent on an adaptive-individual understanding of human learning (bottom left cell). Recent and longstanding breakthrough improvements in the economics discipline have taken two directions (although they are hardly accepted by mainstream economics). On one hand, the New Economic Geography stream has focused on the pecuniary effects of agglomeration, which provides a ‘network adaptive learning’ ontology for human change (bottom row, middle cell). On the other hand, as was explained in the last paragraphs of the previous chapter, the evolutionary and Schumpeterian stream have focused on
bringing in the creative destruction of entrepreneurs (individuals) into the broader picture about change thus moving upwards in the figure to the left column middle cell.

**Figure 9.1 The extended ontological framework of learning in development**

But theories about change are not only found in economics; social theorists have theories about change as well. Understanding these theories would help in making sense of the balance between reflection and adaptation, and the role of the community.

55 Actually mainstream economics only claims it has something to say about change; but when it is deconstructed to reach its heart it is not about change at all, it is about equilibrium.
level in development. In the bottom-right corner of the figure, Marxist theories argue for a social adaptive learning (historicism) detached from human agency. In this account, the subjectivity of actors is shaped by the society (production technology), with (in the most structuralist accounts) no feedback from action towards reflection on the cultural key scenarios and root metaphors (Ortner, 1973) of society. Hence, change happens as a result of dialectic and is predefined (moving towards the second commune). The institutionalist (now called “old-institutionalist”) thoughts can be interpreted as a move away from Marxist thought towards consideration of a societal level reflection to change the institutions that shape the mental models of the acting agents in society. This is seen in the works of Thorsten Veblen and his followers (i.e. Innis) and then reflected in Keynesian macro-economic instructions.

But theories about how humans learn and change are not limited to those that emphasize, or at least seriously consider, the objective dimension of human learning. Preoccupied by the idea of oppression, Post-modern and anarchist thought argue that change can be reached by reflection at the societal level in regard to the hegemonic culture and structure (state). These ultra-subjective, detached-from-action ideas take individual, communitarian and societal (cultural) forms as shown in the top row of figure 9.1.

My intention in introducing this extension to my model is to communicate the need for inclusion of reflexive and social dimensions in planning and policy making for development. While this framework sets the stage for comparing different views towards change, it proposes that a comprehensive developmental policy should address the middle row of the figure; that is human, community and societal (or cultural) development.

Such policy would be built on the socio-reflexive classic pragmatic understanding of learning because of the organic relationship that this level shares with identity and trust building. This level of learning constitutes the core of sustainable learning because it provides a way of changing conventions (and thus overcomes the shortcomings of

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56 I have suggested in an unpublished paper that Veblen’s call was beyond this and that the socio-reflexive model of change provides a much more comprehensive response to the issues he raised against mainstream economics.
individual-focused balance of reflection and adaptation). Moreover, it holds the possibility of common identity building between agents through trust building experiments that members could reflect on (hence overcoming the forgetting that happens at the aggregate cultural or national levels). These ideas of integrated trust building, identity building and learning are reflected in the conceptual framework I have built in chapter 3 and particularly relate to the social learning framework provided by Wenger (1998). This organic relationship between trust building, identity building and balancing reflection and adaptation at the social entity level is illustrated in figure 9.2 as a trust-learning-identity helix.

Figure 9.2 The trust-identity-learning Helix

I am proposing that development practitioners should be equipped with this understanding of development to prevent them from becoming too economistic (as in top-down privatization policies) or too political (as in social movements) in development practice. Murphy’s (2006) work in regard to trust building processes is a great contribution to understanding the role of trust in the development process.

In regard to cluster development my proposal is very clear and simple. Change the bible from Porter’s black book (1990), which is a cavalier and inconsistent fabrication
of divergent social and economic theories (with differing ontologies about development) (Martin and Sunley, 2003), to Storper’s (1997) deep, consistent, thorough and comprehensive masterpiece: *The Regional World*.

### 9.3. Conclusions for economic geographers

My conclusion for economic geographers is three fold in regard to theory, methodology and practice. Storper is correct that economic geographers need to move beyond mechanistic, and what I have framed as first order complexity, frameworks. But the move towards evolutionary and relational discourses, although informative, is misguided. A third and fourth order complexity ontology perspective would drive economic geographers to consider reflexivity (Archer, 2010) and morphogenesis (Archer, 1995) in the realist critical tradition and the pragmatist philosophy (Green, 1999) for reflection in action about unevenness in space. So far, there has been little done in this regard (Barnes, 2008; Sunley, 1996) and a move in this direction would provide common ground for dialogue among economic, social and political geographers.

Engaging with pragmatism philosophy and critical realism would call for, and lead to, a new understanding about methodology and practice. In regard to methodology, there is much to be learned from Archer (1995; 2010; 2012) and Midgley (2000) out of the economic geography discipline (that I know of). However, bringing Flyvbjerg’s (2001) directive to “[make] social science matter again” to the forefront of methodology courses and research would be a practical move. This is to suggest that pragmatic social science or phronetic research (Flyvbjerg, 2001; Flyvbjerg et al., 2012) become the mainstream methodology that economic geographers use in answering four questions posed by Flyvbjerg: “Where are we going?; Is this desirable?; What should be done?; and who gains and who loses?” (Flyvbjerg, 2001, p.60) In other words, instead of starting from questions like ‘why is space uneven?’ economic geographers should engage with a broader human geography that begins with concern about specific issues on the ground, but bounded by geography.

The two paragraphs above, relating to methodology and theory, illustrate my position regarding the relationship between practice and economic (human) geography.
If theory becomes pragmatic, and methodology so phronetic it would call for a full integration of practice into research. Human geography needs more student-practitioners, professor-practitioners, and researcher-practitioners to engage in action-research or semi-action research. Studies that move along actions and firstly, provide an understanding about the reflexivity that shapes cities and regions; Secondly, provide strategies for changing these dynamics; and finally, reflect on the transformed reflexivity, will provide much more insight than disintegrated and static descriptive cluster studies and interventions. Jones and Murphy’s (2010) conceptualization of practice in economic geography is a worthwhile contribution in this direction.
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Appendices
Appendix A.

Interview Questions

1- Group 1 (firm owners) questions:

Questions for firm owners, CEOs and higher level managers

1. Opening script
   This research will investigate the mechanism of learning that have been at work in the Saffron business to see what sort of learning (behavioral or cognitive) have worked in response to the environmental changes and also changes in policies.
   You can participate in this interview if you would like to and I must inform you that I cannot guarantee the confidentiality of this interview - but I can tell you that I will try my best in this regard. You are not required to answer any questions that you are not comfortable with.

2. Questions regarding history of firm and interviewee
   a. When was the company established? Who were the founding entrepreneurs?
      What role do they have now in the company?
   b. What is your role in the company and what has been your experience and education before entering the company and in the company?
   c. What has the business of the company been since its start? Has it changed?
      Please tell me the story of this change.
   d. What are the facilities of the company and how have the facilities evolved?
   e. Can you tell me about marketing in your company? Has it changed? Why?
   f. Can you tell me about accounting in your company? Has it changed? Why?
   g. Can you tell me about production processes in your company? Has it changed? Why?
   h. What is the organization (structure) of the firm and how has it evolved? (in terms of hierarchy, employment and categories of employment)
   i. In what associations are you involved? What role have you (or other members of the firm) had in these associations?
   j. What are your markets in regard to geography and products and how have they evolved? What is your understanding about the markets? Can you tell about how you started selling in each one?
   k. What have been the sources of funding for your developments or short term financial needs and how have they evolved?
   l. Do you work with any business service providers? Do you know any? How has their presence changed?
   m. As you think back over the past 5-10 years, can you tell me about the external and macroeconomic factors that have affected your firm? When and how?

3. Questions regarding awareness and reactions to policies
   a. What developmental initiatives and policies has the government (or associations) initiated and how have they affected you?
b. Do you know about the change in export incentives? How has that changed your business? What has been your reaction to the change? How have others adapted to this change?

c. Do you know about the National Saffron Council? How has that influenced your business? How has it influenced others? Is the council moving towards its goals? Why and why not?

d. Have you been involved in the Saffron export consortia or any of its projects? Why and why not?

e. What training sessions about development of your business have you participated? Were they subsidized? How did they affect your business?

4. Questions about involvement in cluster development project

a. What do you know about the cluster development project?

b. Have you been involved in the cluster development project programs? Since when? To what extent? In what programs?

c. What is your understanding about the cluster development project? Does it have similarities or differences with other policies? How do you evaluate it? In what issues has it been successful and in what has it failed? What was the reason of its failure and success?

d. What were your expectations from the cluster development project? Did other Saffron people have the same expectations? Has anyone benefited? How, why, who?

e. Have you been involved in the establishment of the Saffron complex? If yes, why did you participate? What was the difference between this initiative and other initiatives for improving your facilities? Why did or didn’t you participate in the prior projects? Do you consider this project successful? If yes, what were the reasons for its success? What was the process of participation in the establishment of the Complex? Why did people that did not participate together before come together in this project?

f. Did you participate in the international trips that the cluster development project led? Which ones? What subsidies did you receive? Had you been to international exhibitions before? What had changed that made you go to these trips? Have they been fruitful? Have you increased sales? Have the trips been followed by orders?

5. Questions regarding their involvement in groups (networks) and partnership

a. Had you been involved in associations before? What was your role? Why did or didn’t you take an active role? How has your role changed?

b. Can you tell me what have your experiences with partnership been? Has it changed in the last five years? Why?

c. What are the benefits of participation in groups? Have your experiences in this regard changed in the last 5 years? What was the reason for this change?

d. Have you seen any changes of others attitudes towards partnership in the cluster? Why has that changed?
6. Questions regarding their view on international trade and the share of their business in the spice and at a larger scale food industry

   a. What markets of Saffron or other spice have you seen in your career? Is this something regular among Saffron people?
   b. What was the turning point of visiting new markets?
   c. What effects have seeing new markets had on your business? For example, have you changed any products according to the new perspective you built based (at least partially) on these visits?
   d. If you have participated in group market visits and also other visits out of any group, do you think being in a group or not made a difference? How?
   e. Has your strategies changed based on new information from international markets? Why has this happened?
   f. Has these new information from international markets changed your perspective towards working with others? Why?
2- Group 2 (government staff and CDA) questions:

Interview questions – this is checklist for an unstructured interview

Questions for government staff, managers, and CDA

1. Opening script
   This research will investigate the mechanism of learning that have been at work in the Saffron business to see what sort of learning (behavioral or cognitive) have worked in response to the environmental changes and also changes in policies. You can participate in this interview if you like to and I must inform you that I cannot guarantee the confidentiality of this interview - but I can tell you that I will try my best in this regard. You are not required to answer any questions that you are not comfortable with.

2. Questions regarding history of organization and interviewee
   a. When was the organization established? What is its’ goal? What sort of services does it provide to businesses? What sort of businesses does it usually work with?
   b. What is your role in the organization and what has been your experience and education before entering the organization and in the organization?
   c. How has the organization been related to the Saffron industry? Since when have they been receiving services from your organization? What sort of services?
   d. How many Saffron Businesses have you been in contact with (organization and interviewee)? What has been the trend?

3. Questions regarding awareness and reactions to policies
   a. What developmental initiatives and policies has the government (or associations) initiated and how have they affected the Saffron industry?
   b. What policies has your organization had towards the Saffron industry? Why has these policies been selected?
   c. How do you evaluate the outcomes of the policies that your organization or other organizations have had towards the development of the Saffron industry?
   d. Do you know about the change in export incentives? How has that changed the Saffron business? What has their reaction been to the change?
   e. Do you know about the National Saffron Council? How has that influenced the Saffron business? Is the council moving towards its goals? Why and why not?
   f. Have you heard about the Saffron export consortia or any of its projects? How do you evaluate its success?
   g. What training sessions about development of the Saffron business have you heard of? Were they subsidized? How did they affect the business?
   h. How have external conditions and the overall macroeconomic policies affected the Saffron business? (exchange rates, subsidies, financial transaction problems, availability of funds etc)

4. Questions about involvement in cluster development project
   a. What do you know about the cluster development project?
b. Have your organization (and you specifically) been involved in the cluster development project programs? Since when? To what extent? In what programs?

c. What is your understanding about the cluster development project? Does it have similarities or differences with other policies? How do you evaluate it? In what issues has it been successful and in what has it failed? What was the reason of its failure and success?

d. What were your expectations from the cluster development project? What were the expectations of the Saffron people’s? Who has benefited from the project? Why?

e. Have you been involved in the establishment of the Saffron complex? If yes, how? What was the difference between this initiative and other initiatives for improving Saffron Business facilities? Why did or didn’t Saffron businesses participate in the prior projects? Do you consider this project successful? If yes, what were the reasons for its success? What was the process of participation in the establishment of the Complex? Why did people that did not participate together before come together in this project?

f. Did you participate in the international trips that the cluster development project led? Which ones? Had you been to international exhibitions before? How do you evaluate this initiative for the development of the Saffron business? Have they been fruitful? Have they increased sales?

5. Questions regarding their involvement in groups (networks) and partnership

a. What do you know about the associations for Saffron businesses? What did they do? What is your evaluation about their work? Has this changed? Why?

b. What sorts of partnerships have you seen between Saffron businesses and how has it changed? Why?

c. What are the benefits of participation in groups (networks) for businesses? Have your experiences in this regard changed in the last 5 years? What was the reason for this change?

d. Have you seen any changes of change in attitudes towards partnership in the cluster? Why has that changed?

e. Has your definition and perception about the saffron business people changed in the last few years? What has it been and what has it become?

6. Questions regarding their view on international trade and the share of their business in the spice and at a larger scale food industry

a. To what extent are you informed about the markets of Saffron or other spice?

b. What effects have entering new markets had on the Saffron business? Have they changed any products?

c. Does visiting markets in a group or individually differ? What are the cons and pro?
## Appendix B.

### Selective data for world saffron trade

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Source: United Nations Statistical Division (UNST, n.d.); Note: Based on Spain reported data.
### Spain saffron exports: selected destinations; 1990-2011 (4/4)

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<td>Netweight (kg)</td>
<td>Value ($)</td>
<td>% of world</td>
<td>Average price</td>
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### Table A.11 Japan saffron imports from world, Iran and Spain; 1988-2011

Source: United Nations Statistic Division (UNST, n.d.); Note: Based on Japan reported data

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<tr>
<td>1999</td>
<td>2369</td>
<td>1898769</td>
<td>801.5</td>
<td>1187</td>
<td>944987</td>
<td>796.1</td>
<td>50.1%</td>
<td>441</td>
<td>288266</td>
</tr>
<tr>
<td>2000*</td>
<td>2317</td>
<td>1470596</td>
<td>634.7</td>
<td>1287</td>
<td>861315</td>
<td>660.2</td>
<td>55.5%</td>
<td>721</td>
<td>382060</td>
</tr>
<tr>
<td>2001</td>
<td>4545</td>
<td>2805622</td>
<td>617.3</td>
<td>1937</td>
<td>1074973</td>
<td>555.0</td>
<td>42.6%</td>
<td>1625</td>
<td>788446</td>
</tr>
<tr>
<td>2002</td>
<td>2025</td>
<td>1452958</td>
<td>717.5</td>
<td>1187</td>
<td>799236</td>
<td>673.3</td>
<td>58.6%</td>
<td>250</td>
<td>134859</td>
</tr>
<tr>
<td>2003</td>
<td>2612</td>
<td>1910202</td>
<td>731.3</td>
<td>1500</td>
<td>1137139</td>
<td>758.1</td>
<td>57.4%</td>
<td>464</td>
<td>242161</td>
</tr>
<tr>
<td>2004</td>
<td>2608</td>
<td>1924191</td>
<td>737.8</td>
<td>1687</td>
<td>1358288</td>
<td>806.1</td>
<td>64.7%</td>
<td>528</td>
<td>238370</td>
</tr>
<tr>
<td>2005</td>
<td>2836</td>
<td>2047288</td>
<td>721.4</td>
<td>1908</td>
<td>1378234</td>
<td>722.3</td>
<td>67.3%</td>
<td>485</td>
<td>217219</td>
</tr>
<tr>
<td>2006</td>
<td>2896</td>
<td>2165840</td>
<td>747.9</td>
<td>2079</td>
<td>1590536</td>
<td>765.0</td>
<td>71.8%</td>
<td>511</td>
<td>243520</td>
</tr>
<tr>
<td>2007</td>
<td>2214</td>
<td>2917050</td>
<td>1317.5</td>
<td>1489</td>
<td>1915909</td>
<td>1286.7</td>
<td>67.3%</td>
<td>361</td>
<td>444792</td>
</tr>
<tr>
<td>2008</td>
<td>3253</td>
<td>7508011</td>
<td>2308.0</td>
<td>1457</td>
<td>3257548</td>
<td>2235.8</td>
<td>44.8%</td>
<td>1640</td>
<td>3848348</td>
</tr>
<tr>
<td>2009</td>
<td>1970</td>
<td>7807903</td>
<td>3963.4</td>
<td>654</td>
<td>2736548</td>
<td>4184.3</td>
<td>33.2%</td>
<td>1202</td>
<td>4630533</td>
</tr>
<tr>
<td>2010</td>
<td>2588</td>
<td>6961065</td>
<td>2689.7</td>
<td>1296</td>
<td>3546843</td>
<td>2736.5</td>
<td>50.1%</td>
<td>1204</td>
<td>3082086</td>
</tr>
<tr>
<td>2011</td>
<td>1980</td>
<td>3535331</td>
<td>1785.5</td>
<td>1293</td>
<td>2328827</td>
<td>1801.1</td>
<td>65.3%</td>
<td>670</td>
<td>139063</td>
</tr>
</tbody>
</table>

* This year was exceptionally very high due to a 18 ton import of Saffron from China. This was a product with a price very lower than saffron coming from Spain or Iran in the same year and also in other years. I considered it a mistake (this is another product that is named saffron but the value is much lower). I removed it and counted Japan's imports for this year for the number reported for the world minus the exports from China.
Table App B.12  Hong Kong saffron imports from world, Iran and Spain; 2003-11

<table>
<thead>
<tr>
<th>Year</th>
<th>World (kg)</th>
<th>Value ($)</th>
<th>Spain (kg)</th>
<th>Value ($)</th>
<th>Share</th>
<th>Iran (kg)</th>
<th>Value ($)</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2104</td>
<td>282996</td>
<td>1994</td>
<td>268975</td>
<td>94.8%</td>
<td>100</td>
<td>10015</td>
<td>4.8%</td>
</tr>
<tr>
<td>2004</td>
<td>1727</td>
<td>413585</td>
<td>1599</td>
<td>334487</td>
<td>92.6%</td>
<td>69</td>
<td>30196</td>
<td>4.0%</td>
</tr>
<tr>
<td>2005</td>
<td>2679</td>
<td>692640</td>
<td>2058</td>
<td>429373</td>
<td>76.8%</td>
<td>110</td>
<td>26150</td>
<td>4.1%</td>
</tr>
<tr>
<td>2006</td>
<td>1947</td>
<td>617769</td>
<td>1463</td>
<td>474659</td>
<td>75.1%</td>
<td>40</td>
<td>4017</td>
<td>2.1%</td>
</tr>
<tr>
<td>2007</td>
<td>1860</td>
<td>512799</td>
<td>753</td>
<td>211083</td>
<td>40.5%</td>
<td>22</td>
<td>1947</td>
<td>1.2%</td>
</tr>
<tr>
<td>2008</td>
<td>1240</td>
<td>1103843</td>
<td>821</td>
<td>569158</td>
<td>66.2%</td>
<td>308</td>
<td>493278</td>
<td>24.8%</td>
</tr>
<tr>
<td>2009</td>
<td>1687</td>
<td>777058</td>
<td>1425</td>
<td>550642</td>
<td>84.5%</td>
<td>22</td>
<td>37753</td>
<td>1.3%</td>
</tr>
<tr>
<td>2010</td>
<td>3789</td>
<td>2470562</td>
<td>1781</td>
<td>1302542</td>
<td>47.0%</td>
<td>1153</td>
<td>819762</td>
<td>30.4%</td>
</tr>
<tr>
<td>2011</td>
<td>6762</td>
<td>2127141</td>
<td>1311</td>
<td>1097498</td>
<td>19.4%</td>
<td>3358</td>
<td>871423</td>
<td>49.7%</td>
</tr>
</tbody>
</table>

Source: United Nations Statistic Division (UNST, n.d.); Note: Based on Japan reported data
Appendix C.

Saffron actors and identities

**Figure App C.1** Membership in Non Governmental Fund (NGF)

**Figure App C.2** 3 ranges of total (Saffron and other products) turn-over
Figure App C.3  3 ranges of production facility status

- M. Reza
- M. Bagher
- Shahab
- Masoud
- Sadegh
- Hossien
- Reza
- Ali
- Manouchehr
- Ali
- Ali
- Manouchehr
- Ali
- Ali
- Mohamad
- Reza
- Ali
- Sadegh
- G. Ali
- Saeed
- Aziz
- Alireza
- Ali
- Masoud
- Ali
- M. Reza
- Mohsen
- Hadid
- Saeid
- Hadi
- Kamal
- H. Reza
- Manouchehr
- M. Javad
- Mohammad
- Alireza
- Alireza
- Hossein
- Alireza

* Indicates that name is member of saffron complex

name Has independent industrial facility out of city
name Is building industrial facility in the Saffron complex
name Has in-city non-industrial facility only

Figure App C.4  3 ranges of saffron exports status

- M. Reza
- M. Bagher
- Shahab
- Masoud
- Sadegh
- Hossien
- Reza
- Ali
- Manouchehr
- Ali
- Mahamad
- Reza
- Ali
- Sadegh
- G. Ali
- Saeed
- Aziz
- Alireza
- Ali
- Masoud
- Ali
- M. Reza
- Mohsen
- Hadid
- Saeid
- Hadi
- Kamal
- H. Reza
- Manouchehr
- M. Javad
- Mohammad
- Alireza
- Alireza
- Hossein
- Alireza

name Very High amount of saffron exports
name High amount of saffron exports
name Small amount of saffron exports

* Indicates that name is member of saffron complex