

ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL

**EVOLUTIONARY MECHANISMS OF IMPRINTING IN BUSINESS
CLUSTERS**



Ph.D. THESIS

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Department of Management Engineering

Management Engineering Programme

MARCH 2021

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İSTANBUL TEKNİK ÜNİVERSİTESİ ★ LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ

**İŞ KÜMELERİNDE ÖRGÜTSEL DAMGALAMANIN EVRİMSEL
MEKANİZMALARI**

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Date of Defense : 10 March 2021





To my family,



FOREWORD

The idea for this work originated from curiosity to explore massive intellectual opportunity in historical organizational studies. It has been a great challenge not only to understand breadth of the chasm but also to develop a theoretical lens to bridge this gap. This study attempts to understand evolution in complex firm populations by utilizing carefully derived arguments from broader evolutionary principles.

As a matter of fact, it would not be possible to achieve this success without support of many people. I am grateful to all of them for their help and encouragement.

First of all, I would like to express my gratitude to my advisor Assoc. Prof. Dr. Mehmet ERÇEK who not only inspired and guided me with his extensive academic experience in this newly emerging subject, but also supported and motivated me even in the most difficult times during my entire journey

I gratefully express my sincere appreciation to the members of the thesis monitoring committee, Prof. Dr. Beyza OBA and Prof. Dr. Fatma KÜSKÜ AKDOĞAN for their precious suggestions and support. I am also grateful to my former thesis monitoring committee member Assoc. Prof. Dr. Sabriye Saime KAYAM, who had to hand over my thesis consultancy due to her retirement.

I gratefully acknowledge guidance and assistance of Mahmut BEKEREÇİ who helped me to collect data of this research

Lastly, I owe my sincerest thanks to my dear wife Ahi EKŞİ, who gave me unmatched support in my thesis journey, showed incredible patience and encouraged me at every stage, to our sons Demir and Kerem who witnessed this long and difficult period, to my deceased mother İlknur EKŞİ who devoted herself to education as a teacher and to my family who supported me through all of my endeavors.

January 2021

Emre EKŞİ



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ABBREVIATIONS

AMFI	: American Mutual Fund Industry
APPICAPS	: Associação Portuguesa Ind. Calçado, Componentes Artigos Pele Sucedaneos (Portuguese Footwear, Components, Leather Goods Manufacturers' Association)
ATSO	: Antalya Ticaret ve Sanayi Odası (Antalya Chamber of Commerce and Industry)
BMSI	: British Motor Sport Industry
CEECs	: Central and Eastern European Countries
DP	: Demokrat Parti (Democrat Party)
EEG	: Evolutionary Economic Geography
GD	: General Darwinism
GDP	: Gross Domestic Product
GDR	: The German Democratic Republic
GTIP	: Gümrük Tarife İstatistik Pozisyon (Customs Tariff Statistical Position)
HCA	: Historical Comparative Analysis
LMC	: Leipzig Media Cluster Istanbul Textile and Apparel Exporters (ITKIB)
IFC	: Institutions for Collaboration
ITKIB	: İstanbul Tekstil ve Konfeksiyon İhracatçı Birlikleri (Istanbul Textile and Apparel Exporters Associations)
IZTO	: Izmir Ticaret Odası (Izmir Chamber of Commerce)
KTO	: Konya Ticaret Odası (Konya Chamber of Commerce)
MDR	: Mitteldeutscher Rundfunk (Middle German Broadcasting Service)
MLIT	: Multi Level Imprinting Theory
MST	: Multilevel Selection Theory
NEG	: New Economic Geography
NGO	: Non-Governmental Organization
NY	: New York
OECD	: Organization for Economic Cooperation and Development
R&D	: Research and Development

SME	: Small to Medium Enterprise
TASD	: Türkiye Ayakkabı Sanayicileri Derneği (Footwear Industrialists Association of Turkey) TUIK
TCE	: Transaction Cost Economics
TOBB	: Türkiye Odalar ve Borsalar Birliği (The Union of Chambers and Commodity Exchanges of Turkey)
TUIK	: Türkiye İstatistik Kurumu (Turkish Statistical Institute)
UR-GE	: Uluslararası Rekabetçiliğin Geliştirilmesinin Desteklenmesi (Supporting The Development of International Competitiveness)
VSR	: Variation, Selection and Retention
WLO	: Window of Locational Opportunity
WOI	: Window of Imprintability
WTO	: World Trade Organization
WWII	: World War Two

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EVOLUTIONARY MECHANISMS OF IMPRINTING IN BUSINESS CLUSTERS

SUMMARY

Discussions on regional economic development, specifically on industrial districts and business clusters, since Marshall's (1920) seminal work has surged in numbers, especially after the popularization of cluster studies with Porter (1990), who assigns a prominent role to clusters in microeconomics of competition and competitive advantage of regions and nations. On the other hand, the geographic distribution of resources and potentials for development are shaped by historical factors and regions can be understood through the mechanisms by which geographical landscape evolves over time. In this sense 'Evolutionary turn' is both promising as a new way of thinking about uneven geographical development and presenting an opportunity for linking different concepts and theoretical approaches from different schools of thoughts.

Aim of this thesis is to reveal how clusters evolve and in which conditions environmental forces leave their mark on the evolution pattern of business clusters. Instead of employing a nurturist view, this study explores how nature of the cluster firms and nurturing of the environment interact during the variations observed in environments and tries to explain the dynamics of the imprinting processes. Even though spatial evolution of business clusters has been studied in business history and economic geography domains, coherent and holistic view of the phenomenon is still far from formulation. Contribution of this study is to bring an evolutionary model by extending multi-level imprinting theory (MLIT) with a selectionist view and to explain how particular features of business clusters are acquired under the influences of environmental forces. The study, in so doing, synthesizes MLIT and General Darwinism, which are built over analogies between evolutionary biology and evolutionary economic geography and lay the foundation of the basic evolutionary engine as variation, selection and retention processes.

The thesis consists of seven sections. In the first section, aim and scope of the thesis is presented, and the flow of the thesis is framed. In the second section, theoretical perspectives on location, regional growth and local development are discussed, theoretical background of business clusters is summarized. In the third section the importance of 'Evolutionary turn' is highlighted, the concepts of evolutionary analysis within the economic landscape are discussed and imprinting theory is presented. In the fourth section, the conceptual model, explaining evolutionary mechanisms of imprinting and how environmental influencers work with evolutionary engine is described, evidences from the empirical literature are presented. In the fifth section, research design is explained, selection of sites and how data are collected and analyzed is justified. In the sixth section, findings related to footwear industry and footwear production clusters in Izmir and Konya are presented. In the last section findings are discussed in the light of conceptual model, how evolutionary mechanisms and engine

explain the imprinting success or failure is presented, and new research opportunities for developing the model are offered.

The proposed conceptual model aims to contribute to the evolutionary economic geography by extending MLIT in many ways; (i) exploring influence of heredity factors governing access to resources and legitimization forces, (ii) defining how “window of imprintability” works through evolutionary mechanisms, (iii) explaining emulation of imprints through retention process and the role of secondhand imprinting, (iv) describing the role of pioneering firms in the creating founder effect and lastly, (v) clarifying the role of institutional order within group of firms as a constraining factor with its implications on the imprinting process.

This study follows a historical case study research which is suitable for exploring the cluster as a contextually bounded system over time. The research setting planned for this study is footwear clusters which is a traditional industry, geographically agglomerated and based on apprenticeship. Before preparing the research questions a preliminary site research is conducted and discussions with highly experienced professionals are made. This also enabled the researcher to be more informed about the research sites in Konya and Izmir. Interview questions were determined after the preliminary site research and compiled in accordance with the conceptual model and its constructs. Data collected by open-ended interviews are triangulated with other secondary data sources like sectoral reports, journals, academic papers and studies, archival records, photograph archives, direct observation and physical artifacts.

In the study, data analysis is conducted in four stages. In the first stage background of shoe production in Turkey is explained and current context is clarified with historical facts and figures. In the second stage, sensitive periods related to major economical, technological and institutional changes are investigated. In the third stage, selected areas to be analyzed are justified. In the last stage, imprinting process and their action mechanisms are deeply investigated. Possible imprints on specialization, division of work and cooperation are analyzed, and findings are interpreted according to the conceptual approach.

Findings towards specialization showed that the specialization of Izmir footwear cluster in women shoes was affiliated with Westernization efforts in which shoe consumption habits were shaped by liberalized clothing, social life and attendance of women in work life. On the other hand, this WOI did not turn automatically into an imprint. The environmental fit of producers shaped by the local demand enabled them to seize this opportunity and retention was mainly characterized by apprenticeship and spin-offs, which pushed the imprints to stamp a critical mass of the population.

Findings in division of work uncovered three cases for deeper analysis. In the case of stitcheries, small stitching workshops found to be sustained since the traditional production era despite the change in the economic conditions. These workshops persisted and attempts to replace this model failed due to unregistered work practices and traditionalization forces of within group fitness, characterized by irregular working hours, seasonality and underdeveloped managerial capacities. These findings showed the importance of both environmental fitness and within group fitness in the imprinting process. The case of Sumerbank was an example of Wrightian-drift. During state led industrialization period, Turkish Republic founded Sumerbank and consolidated all state production facilities including the shoe factory in Beykoz, which was a vertical production giant of its time. The favorable selection niche created by

the government did not breed into new mass production facilities and transform into a successful imprint on the industry.

The barriers blocking diffusion of vertical production model seems not only to indicate the lack of capital accumulation of producers but also presence of a parallel fit in the crossing niche and lack of physical proximity disabling knowledge dissemination. Moreover, the sensitive period characterized by state led development logic closed in less than two decades. Therefore, retention mechanism did not work, and imprinting attempt was failed. On the contrary, the socialist imprint in Timișoara footwear cluster which was coeval with the Sumerbank initiative had successfully persisted even after the firms were privatized. This points attention to the importance of retention mechanism and reaching a critical threshold for solidification and persistence of the imprint.

Lastly, findings on the Ottoman guilds and their *Akhsim* roots, which are mostly referred in the discussions of collaboration efforts in Konya, showed that both functions and values possessed by the ancestor of modern collaboration institutions have been mostly vanished. In this sense three sensitive periods are analyzed, foundation period, industrialization and mechanization with liberalization. The evidence supports the view that with the upsurge in competition, individualistic behavior has intensified, and individual fit became more important than group fit after the liberalization and mechanization period. Our conceptual model supports us to propose that liberalization changed the course of social norms and relations and this may lead to an imprint in the future.

These findings contributed to the imprinting theory by highlighting the importance of the nature of business clusters, incorporation of a selectionist view and evolutionary mechanisms. The accumulated heredity factors and window of imprintability operating in the imprinting process are both conceptually and empirically explained. Sensitive periods do not automatically result in the evolution of a cluster. Instead, the model affirms that during a sensitive period, the operations in the variation-selection-retention engine, overcoming the pressures of within group fitness and reaching a critical mass in the local populations are prerequisites for successful imprinting.



İŞ KÜMELERİNDE ÖRGÜTSEL DAMGALAMANIN EVRİMSEL MEKANİZMALARI

ÖZET

Marshall'ın (1920) ufuk açan çalışmasından bu yana, sanayi bölgeleri ve iş kümelenmeleri başta olmak üzere bölgesel ekonomik kalkınma üzerine yapılan tartışmalar nicel olarak artmış, özellikle de rekabet ekonomisinde ve bölgesel rekabet avantajında kümelere önemli bir rol biçilmiştir. Öte yandan, kaynakların coğrafi dağılımı ve kalkınma potansiyelleri tarihsel faktörlere bağlı olarak şekillenmekte ve ekonomik bölgeler, çevresel faktörlerin tarihsel izdüşümlerini yansıtmaktadır. Bu anlamda 'evrimsel yaklaşım', hem tarihsel coğrafi gelişim hakkında yeni bir düşünme yolu vaat etmekte, hem de farklı düşünce okullarından farklı kavramları ve teorik yaklaşımları birbirine bağlamak için bir fırsat sunmaktadır.

Bu tezin amacı, iş kümelerinin nasıl evrimleştiğini ve bu evrim sürecinde çevresel güçlerin nasıl ve hangi koşullarda etkin olduğunu ortaya koymaktır. Tam bir çevreci eğitsel bakış açısı kullanmak yerine, bu çalışma, kümelenme firmalarının doğası ve çevresel faktörlerin nasıl etkileşime girdiğini araştırmakta ve damgalama sürecinin dinamiklerini açıklamaya çalışmaktadır. İş kümelerinin mekânsal evrimi iş tarihi ve ekonomik coğrafya yazını içerisinde incelenmiş olmasına karşın, bu olgu hala biçimlenmeye devam etmektedir. Bu çalışmanın katkısı, çok seviyeli damgalama teorisinden (MLIT) yola çıkarak seçimci bir bakış açısıyla daha kapsamlı bir evrimsel modele ulaşmak ve iş kümelerinin belirli özelliklerinin çevresel güçlerin etkisi altında nasıl elde edildiğini açıklamaktır. Çalışma, evrimsel biyoloji ile evrimsel ekonomik coğrafya arasındaki analogiler üzerine inşa edilmekte, MLIT ve Genel Darwinizm'i sentezleyerek; evrimsel motorun çeşitlenme, seçim ve tutulum süreçlerini temel olarak almaktadır.

Tez yedi bölümden oluşmaktadır. Birinci bölümde tezin amacı ve kapsamı sunulmuş, tezin akışı çerçevelenmiştir. İkinci bölümde mekân, bölgesel büyüme ve yerel kalkınmaya ilişkin teorik perspektifler tartışılmış, iş kümelerinin teorik arka planı özetlenmiştir. Üçüncü bölümde, evrimsel bakışın önemi vurgulanmış, ekonomik bölge içindeki evrimsel analiz kavramları tartışılmış ve damgalama teorisi sunulmuştur. Dördüncü bölümde, damgalamanın evrimsel mekanizmaları ve çevresel etkileyicilerin evrimsel süreç üzerinde nasıl çalıştığını açıklayan kavramsal model izah edilmiş, görgül literatürden örnekler verilmiştir. Beşinci bölümde, araştırma tasarımı açıklanmış, araştırma sahalarının seçimi ve verilerin nasıl toplanıp analiz edileceği gerekçelendirilmiştir. Altıncı bölümde, İzmir ve Konya'daki ayakkabı endüstrisi ve ayakkabı üretim kümelerine ilişkin bulgular sunulmaktadır. Son bölümde bulgular kavramsal model ışığında tartışılmış, evrimsel mekanizmaların damgalama başarısını veya başarısızlığını nasıl açıkladığı ve modeli geliştirmek için yeni araştırma fırsatlarının neler olabileceği tartışılmıştır.

Önerilen kavramsal model, MLIT'i birçok yönden genişleterek evrimsel ekonomik coğrafya yazınına katkı sağlamayı amaçlamaktadır. Bunlar, ilk olarak, kaynaklara erişim ve meşrulaştırma güçleri üzerinde kalıtsal faktörlerin etkisini araştırmak, ikincisi, evrimsel mekanizmalar yoluyla "damgalama penceresinin" nasıl çalıştığını tanımlamak, üçüncüsü, tutulum sürecinin nasıl çalıştığını ve bu süreç içerisinde ikinci el damgalamanın rolünü açıklamak, dördüncüsü, "kurucu etkisi" yaratan öncü firmaların rolünü araştırmak ve son olarak, damgalama sürecinde bir kısıtlayıcı faktör olarak kurumsal düzenin rolünü netleştirmektir.

Bu çalışma, iş kümesini zaman boyutunu dikkate alarak keşfetmek için uygun bir yöntem olan tarihsel vaka çalışması yöntemini uygulamaktadır. Bu çalışma için planlanan araştırma ortamı, geleneksel, bölgesel olarak kümelenmiş ve çıraklığa dayalı bir endüstri olan ayakkabı kümeleridir. Araştırma sorularını hazırlamadan önce hem bir ön saha araştırması düzenlenmiş hem de sektörde deneyimli profesyonellerle tartışmalar yapılmıştır. Bu da aynı zamanda Konya ve İzmir araştırma sahaları hakkında daha fazla bilgi sahibi olunmasını sağlamıştır. Görüşme soruları ön saha araştırması sonrasında belirlenmiş ve kavramsal modele ve yapısına uygun olarak derlenmiştir. İkinci aşamada, açık uçlu görüşmelerle toplanan veriler, sektörel raporlar, dergiler, akademik makaleler ve araştırmalar, arşiv kayıtları, fotoğraf arşivleri, doğrudan gözlem ve fiziksel eserler gibi diğer ikincil veri kaynakları ile beraber değerlendirilmiştir.

Toplanan veriler dört aşamada analiz edilerek derlenmiştir. İlk aşamada Türkiye'de ayakkabı üretiminin arka planı, güncel durum, tarihsel gerçekler ve rakamlarla sunulmuştur. İkinci aşamada, büyük ekonomik, teknolojik ve kurumsal değişikliklerle ilgili hassas dönemler aktarılmıştır. Üçüncü aşamada, analiz edilecek konular gerekçelendirilmiş ve son aşamada, damgalama süreci ve sürecin etkin mekanizmaları incelenmiş; uzmanlaşma, iş bölümü ve iş birliği üzerine olası damgalama girişimleri analiz edilerek, bulgular kavramsal yaklaşıma göre yorumlanmıştır.

Uzmanlaşmaya yönelik bulgular, İzmir ayakkabı kümesinin kadın ayakkabısında uzmanlaşmasının, ayakkabı tüketim alışkanlıklarındaki değişim ve kadınların sosyal hayattaki rolü ile bağlantılı olduğunu göstermiştir. Öte yandan, bu konudaki damgalama penceresinin otomatik olarak damgaya dönüşmediği, üreticilerin yerel talep ve geçmişten gelen birikimleri ile bu fırsatı yakaladıkları görülmüştür. Usta-çırak ilişkisi ve yeni şirket kurulumu, tutulum sürecini güçlendirmiş, kritik eşiği aşacak şekilde damganın yayılmasını sağlamıştır.

İş bölümüne yönelik bulgular ise daha derin analiz gerektiren üç vakaya işaret etmiştir. Öncelikle, sayacılar ile ilgili vakada, ekonomik koşullardaki değişime rağmen geleneksel üretim döneminden bu yana küçük saya atölyelerinin devam ettiği görülmüştür.

Bu küçük atölyelerin devamlılığı ve bu modeli değiştirme girişimlerinin başarısız kalmasının, kayıt dışı çalışmanın yanında düzensiz çalışma saatleri, mevsimsellik, az gelişmiş yönetim kapasiteleri ile karakterize olan gelenekselleştirme güçleri nedeniyle olduğu anlaşılmıştır. Bu bulgular, damgalama sürecinde hem çevresel uygunluğun hem de grup içi uygunluğun önemine işaret etmektedir. Sümerbank olayı ise Wright'cı bir sürüklenmenin bir örneği olarak öne çıkmaktadır. Devlet öncülüğündeki sanayileşme döneminde, Türkiye Cumhuriyeti, Sümerbank'ı kurmuş ve dönemin dikey üretim devi Beykoz'daki ayakkabı fabrikası dahil tüm devlet üretim tesislerini Sümerbank altında birleştirmiştir. Lakin, hükümet tarafından yaratılan bu elverişli seçim ortamı, seri üretim tesislerine dönüşmemiş ve sektörde başarılı bir iz (damga) bırakmamıştır. Sümerbank da 1990'ların sonunda kapanmıştır. Dikey üretim modelinin yayılmasını engelleyen bariyerler, üreticilerin sermaye birikiminden yoksun olmasının yanında, kesişen niş içerisinde paralel bir çevresel uyumun varlığı ve emme kapasitesindeki düşüklük ile bilginin yayılamaması olarak bulunmuştur. Dahası, devlet öncülüğündeki kalkınma mantığıyla karakterize edilen bu hassas dönem, yirmi yıldan daha kısa bir süre sonra kapanmış, bu nedenle, tutulum mekanizması işlevini görememiş ve damgalama girişiminin başarısız olduğu görülmüştür. Aksine, Sümerbank girişi ile benzer dönemde kurulan Timişoara ayakkabı kümesi üreticilerindeki sosyalist damgalama, firmalar özelleştirildikten sonra bile başarılı bir şekilde devam etmiş, bu da tutulum mekanizmasının önemini ve damgalamanın sağlamlığı ve kalıcılığı için kritik eşiğin önemini göstermiştir.

Son olarak, Konya'daki iş birliği çabaları tartışmalarında daha çok atıfta bulunulan Osmanlı loncaları ve onların Ahilik kökenlerine ilişkin bulgular, modern iş birliği kurumlarının atalarının sahip olduğu hem işlevlerin hem de değerlerin büyük ölçüde ortadan kalktığını göstermiştir. Bu anlamda üç hassas dönem; sırasıyla, kuruluş dönemi, sanayileşme dönemi, serbestleşme ile makineleşme dönemi incelenmiştir. Kanıtlar, rekabetin, bireysel davranışların yoğunlaştığı ve bireysel uyumun liberalleşme ve makineleşme döneminden sonra grup uyumundan daha önemli hale geldiği görüşünü desteklemektedir. Kavramsal model de liberalleşmenin, sosyal normlara ilişkin seyri değiştirdiğini ve bunun bir damgalamaya yol açabileceği hususunu desteklemektedir.

Bu bulgular, iş kümelerinin doğasının, seçimci görüşün ve evrimsel mekanizmaların önemini vurgulayarak damgalama teorisine katkıda bulunmaktadır. Damgalama sürecinde rol oynayan birikimli kalıtsal faktörler ve damgalama penceresi hem kavramsal hem de görgül olarak açıklanmıştır. Hassas dönemlerin otomatik olarak bir kümenin evrimine yol açmadığı, hassas dönem boyunca çeşitlenme-seçilim-tutulum sürecinin yanında, grup içi uyum bariyerini aşmanın ve kritik kütleye ulaşmanın başarılı bir damgalamanın ön koşulu olduğu gösterilmiştir.

1. INTRODUCTION

How do business clusters evolve? Over the past three decades, key theoretical developments have pushed the analysis of regional economic change and evolution to the center stage in the field of economic geography (Martin and Sunley, 2015). Particularly, economic geographers have moved away from the static interpretation of locational economic analysis and discovered insights from more dynamic forms outside the mainstream economics (Martin and Sunley, 2001, 2017; Bathelt and Glückler, 2003).

Since Alfred Marshall (1890) economic geographers explore how space and location play in economic development, and how the economic landscape changes over time. The most popular theories of agglomerations are based on increasing returns on scale. Krugman (1991a) explain the formation of a large variety of economic agglomeration in geographical space through the presence of a range of scale economies not only internal but also external to the firm. These economies either arising from such external factors as knowledge spillovers and the utilization of specialized skill market and machinery or internal factors as increased subdivision of labor, increased specialization of the managerial function, increased creativeness in the organizational and mechanical aspects of production and it is expected that firms in agglomerated areas operate at the minimum point of an average cost curve (Hart, 1996). Despite the incentive to locate close to each other as a consequence of lowering costs, empirical literature shows some opposite results. In the analysis of factors affecting evolution of the geographic structure of the Television Receiver and Automobile Industries, Klepper (2003) showed that television receiver industry which was initially concentrated regionally became more scattered over time and contrarily the automobile industry was dispersed initially but became heavily concentrated around one city Detroit. These examples show that initial conditions matter on economic agglomeration.

Since the early- to mid-1990s well known economist Paul Krugman and his followers formalized elegant economic growth models and labelled them as 'New Economic

Geography’, which explains the location choices of firms through dynamics and competitiveness of the economy. At the same time, as an influential business economist, Michael Porter, manifested his well-known ‘diamond model’ to capture the impact of spatial facets on the productivity of firms in order to explain the competitive dynamics of the economy. Since their interest has been on the process of spatial agglomeration of economic activities as a source of increasing returns, they both neglect the importance of history in the economic landscape. On the contrary, the geographic distribution of resources and potentials for development are shaped by historical factors (Capello, 2011), concentrating the research attention on the mechanisms by which geographical landscape evolves over time.

Moreover, neither local development theories like ‘The growth pole theory’ (Perroux, 1955); ‘Milieux innovateurs’ (Camagni, 1991; Maillat et al., 1993), Learning region (Lundvall, 1992) nor growth theories like ‘New economic geography’ (Krugman, 1991), ‘Endogenous growth model’ (Lucas, 1988; Romer, 1986) suffice to represent complex evolutionary dynamics of regional clusters. Until last decades scholars did not show much attention to the evolution of regions through time and numerous studies have been criticized as being ahistorical in character (Üsdiken and Kieser, 2004).

Since then, the field of evolutionary studies has been developing and establishing its basic principles. ‘Evolutionary turn’ is both promising a new way of thinking about uneven geographical development and presenting an opportunity for linking different concepts and theoretical approaches from different school of thoughts. As a consequence of ‘evolutionary turn’, evolutionary approaches in economic geography have gathered increasing support and evolutionary concepts such as path-dependence, imprinting, variety/selection and complexity theory have become increasingly popular among economic geographers (Boschma and Van der Knaap, 1997; Rigby and Essletzbichler, 1997, 2006; Storper, 1997; Amin, 1999; Essletzbichler and Rigby, 2005a, 2005b; Martin and Sunley, 2006; Boschma and Frenken, 2006; Marquis and Tilcsik, 2013).

Evolutionary economic geography not only complements neoclassical and institutional works of analysis in the economic geography but also explains the spatial evolution of firms, industries and regions through a variety of approaches (Boschma and Frenken, 2006). Boschma and Martin (2010) identify Generalized Darwinism, complexity theory and path dependence as main approaches of the EEG. Most of the

EEG literature use ideas and concepts taken from biology, physics, ecology and other such fields of enquiry. Although, path dependency is the most referred concept in the evolutionary economic geography field, it does not incorporate an equilibrium framework. For path dependency geographical economic landscape is an open system, which evolves in paths rather than moving towards an equilibrium state. Even though the initial events triggering the path formation is mostly characterized as “small” (Arthur, 1994), triggering events are not likely to be not so random, or “small” (Pinch & Henry, 1999; Bathelt and Boggs, 2003). Furthermore, even in path dependence, the very point of early path developments is acknowledged as contingent in character (Sydow et al., 2009). On the other hand, the use of the nurturing view to understand this early period is very fruitful. In his work titled “Social Structure and Organizations” Stinchcombe (1965) explained external environmental forces in shaping firms’ initial structures and the persistence of these patterns over time.

In the existing work in EEG while some studies highlight the endogenous factors of evolution (i.e. building organizational routines, endogenous creation of novelty) (Nelson and Winter, 1982), some claim that novelty can only be triggered by exogenous environmental shocks (Foster, 2000). Controversially, Vromen (2001) claims that evolutionary theory does not preclude the endogenous creation of novelty. There is a need of theoretical approach that can bring these two strains of view together to understand the interaction between individual firms and their ‘environment’ within which they evolve. For example, what evolutionary processes enable environment to shape emergent properties of organizational collectives and what mechanism allow these properties to persist and how they dissolve?

In this context, there is a great considerable scope and potential for combining elements of multi-level imprinting theory and general Darwinism to model how hereditary factors and environmental influencers interact to render regional evolution patterns. This might be the reason why in spite of the surge in the number of studies in economic geography, which take an evolutionary perspective, researchers are still far from formulating a coherent and holistic view of the phenomenon (Essletzbichler and Rigby, 2007).

1.1 Aim and the Scope of Thesis

This study aims to contribute to the debate on the evolution of regional clusters by advancing ecological frameworks, which build over analogies between evolutionary biology and evolutionary economics. In this vein, the study not only extends the main debates offered by multi-level imprinting theory (MLIT) to model how regional clusters emerge, establish and perish based on environmental changes occurred in historical time (Marquis and Tilcsik, 2013), but also contributes to the drawing of an evolutionary model of economic dynamics. The convergence of MLIT and other evolutionary concepts, which are clearly defined in evolutionary biology, may significantly enhance our theoretical lenses to address the extant gaps in existing theoretical arguments.

Much of the distinctiveness of the approach derives not just from giving primary emphasis to the ‘historical unfolding’ of the economic landscape, but also from the deliberate exploration and use of explicitly evolutionary concepts, analogies and metaphors inspired by evolutionary ideas, developed in biology, physics, ecology and related fields of enquiry.

Accordingly, the study focuses on clarifying mechanisms that mediate the success of imprinting process, thereby opening up the black box of how clusters of firms become receptive or immune to certain variations in their environments. In the vicinity of the nature versus nurture debate, the study reveals how heredity factors (nature) incorporate with environmental influencers (nurture) and introduces the main concepts and mechanisms of General Darwinism (GD) to lay out the foundation of the basic evolutionary engine: variation, selection and retention processes.

The study, in so doing, presents MLIT and its proposed stamping mechanisms to introduce the dynamics of discontinuous change processes built over sensitive periods. The extensions to the MLIT, mainly, explains how the logic of MLIT incorporates with evolutionary mechanisms to stamp clusters of firms and retention mechanisms, which enable perpetuation of the imprints. To substantiate its theoretical arguments, the study also references other case studies (Pinch and Henry, 1999; Bathelt and Boggs, 2003; Lounsbury, 2007) to help readers digest how environmental triggers affect or fail to affect clusters, and how changes in each cluster are reproduced or dropped.

The study continues with historical case study of two shoe clusters in Turkey. As one of the most traditional industries of Turkey, the footwear industry, represents a historical co-localized formation and possess knowledge through apprenticeship and learning from master. Moreover, literature on regional studies provides highly cited empirical researches on footwear clusters, therefore the research setting planned for this study was selected as footwear clusters. Clusters located in Izmir and Konya are selected for the case study. These two clusters are specialized in different ways, have different histories of formation, represent different capital-space dialectics and provide different insights on evolutionary mechanisms.

1.2 Methodology and Flow of the Thesis

In the study our main concern is not to reach an independent and generalized outcome through statistical analysis but reach a deep understanding of the phenomena on few cases, therefore a qualitative inquiry approach is followed. In order to make comparisons between cases to demonstrate the trajectory of the cluster and the causality between changes in economic and social landscape over time, historical-comparative analysis is used. To understand the spatial behavior of clusters through the lenses of the conceptual model, multiple sources, mostly secondary, but also, primary ones are collected and analyzed. Along with the documents published by governmental bodies, cluster associations, archival records, previous literature on shoe production and footwear clusters, on-site interviews are conducted in both regions, through incorporating multiple data sources, validity of the study is increased.

The paper is organized as follows. The following section provides the literature review on location, regional growth and development theories, presents cluster definition, dimensions, externalities related to being a cluster and highlights the importance of the historical analysis on clusters. In the third section, the concept of ‘Evolutionary turn’ is introduced, contribution of the evolutionary concepts within the evolutionary economic geography (EEG) is unveiled and research opportunities related to the imprinting theory are summarized. Fourth section begins with discussing the link between environmental influencers and the evolutionary process, after that, a conceptual model explaining evolutionary mechanisms is described. In the following subsections, three cases from the empirical literature are revisited and evidence from the cases is used to identify evolutionary mechanisms. Results of the secondary

analysis are discussed, and conclusion is presented for applicability of the conceptual model at the end of the section. In the fifth section research design is defined, selection of the research type and research sites are justified, data collection and analysis steps are explained. In sixth section findings are presented in three subsections, starting with describing the shoe production in Turkey, continuing with the analysis of historical influencers, then making preliminary assessment of cases and lastly deeper analysis of possible imprints on Izmir and Konya.

The study concludes by discussing the contributions made to the evolutionary economic geography approach to clusters through its dialogue with evolutionary theories developed in biology with reference to the MLIT framework.



2. LITERATURE REVIEW

2.1 Location, Regional Growth and Local Development Theories

“How do regions develop, prosper, decline or change?” “Why do some regions grow more rapidly than others?” “Why are differences in directions of specialization, levels of social welfare between regions occur and why are these persistent?” Many scholars have been trying to find answers to these questions for more than fifty years. These issues not only attracted attention of economists or geographers, but also many researchers from other social science disciplines like sociologists, business historians, political scientist etc. These questions are fundamental to the regional economic activity and received a great interest from scholars in the field due to the recognition that national economic growth is fundamentally spatial in nature, shortly “space matters” (Dawkins, 2003).

As economic activity arises, grows and develops in space, space influences the way an economic system works. It could be either a source of economic advantage or disadvantage, space enhance or diminish returns on production factors by determining accessibility of markets, information, endowment of raw materials or generates economies that reduce transaction costs. In this sense the problem of factor allocation appears to be a complex phenomenon and requires a dynamic approach rather than a static and purely allocative approach which is capable of linking allocative decisions to processes of development (Capello, 2011).

Regional economics as a branch of economics, embodies the dimension ‘space’ into analysis of the workings of the market by including space in logical schemes, laws and models which regulate the formation of prices, demand, productive capacity, levels of output and development, growth rates, and the distribution of factor conditions etc. and emerged from several different intellectual traditions (Capello, 2011).

According to Capello (2011) there are two large groups of theories, which make up regional economics: (1) Location theories, the oldest branch which was first developed in the early 20th century and involves the investigation of location choices of firms

and households and spatial distribution of activities; (2) Regional growth (and development) theories, which focuses on spatial aspects of economic growth and deals with territorial micro-foundations of macroeconomics. However, Capello (2011) identifies two major branches of regional economics, she recognizes cross-fertilizations between branches and divides theories of regional economics in four groups, presented in the table 2.1, considering different conceptual approaches used for space and growth / development

Table 2.1 : Theories of regional economics (Capello, 2011).

	Location theories	Regional growth theories	Local development theories	Local growth theories
Conception of space	Physical-metric	Uniform- abstract	Diversified-relational	Diversified-stylized
Conception of growth / development	N/A	Growth as increased employment and wellbeing	Development as increased territorial competitiveness	Growth as increased territorial competitiveness
Aim of the theories	Identification of demand and production areas	Identification of regional growth determinants	Identification of local development determinants	Identification of local growth determinants
Major theories and main authors	Industrial location choice theories (Weber, 1929; Hoover, 1933; Lösch, 1954) Industrial and residential location choice theories (von Thünen, 1826; Alonso, 1960; Fujita, 1989) Urban hierarchy (Christaller, 1933; Lösch, 1954)	Keynesian regional growth theories (North, 1955) Neoclassical regional growth theories (Borts and Stein, 1960)	Exogenous theories The growth pole theory (Perroux, 1955); the role of multinationals (Lipietz, 1980; Blomstrom and Kokko, 1988) innovation diffusion (Hägerstrand, 1952) Endogenous theories Industrial district theories (Becattini, 1979) Milieux innovateurs (Camagni, 1991; Maillat et al., 1993) Learning region (Lundvall, 1992)	Cumulative causation model (Myrdal, 1955 and Kaldor, 1970) New economic geography (Krugman, 1991) Endogenous growth model (Lucas, 1988; Romer, 1986)

2.1.1 Location theories

One of the oldest disciplines trying to explain the concept of space in spatial economics is accepted as the theory of location. Location theory; having great attention since 19th century constituted the foundations of the economic geography. The theory explains firms' location decision process and distribution of economic activities in general perspective. It deals mainly with distance and space. Location theory addresses the questions of what economic activities are located where and why. The theory began

with studying spatial aspects of economy with reference to market, production and distance where the transport costs representing the role of the distance affect both the market prices and the location of the production units (Blaug, 1985). In these models all geographical features that might be related to the territorial concentration of activities are removed, space is deemed to be perfectly homogenous infrastructural endowment. These models explain existence of agglomerations just by calculation of transportation costs and agglomeration economies. The models differ according to their assumptions on demand and supply, for example if final and raw materials markets are points on the space then choice of location is calculated transportation cost minimization (minimum-cost location), main reference for these models are Alfred Weber and Melvin Greenhut. If the demand is assumed evenly distributed across the territory then location problem is turned to be a profit maximization whereby each producer controls its own market area (profit-maximizing location); the main reference for market area models are August Lösch and Harold Hotelling (Hotelling, 1929; Lösch, 1954).

Von Thünen was a Prussian landowner and he studied the agricultural landscape to understand relationships between markets, production, and distance. In his analysis, Von Thünen aimed to explain the structure of agricultural activities around many cities in Germany before industrialization in the early 19th century where railroad was not developed. He suggested that the relative costs of transporting different agricultural commodities to the central market determined the land use around a city. He envisioned a single market surrounded by farmland, situated on homogenous space so called isolated town. Von Thünen tried to explain the characteristics of agricultural land use around a central town, taking into account geographical distance, transportation costs and land prices. His model has some basic assumptions which reflects conditions around a city of its time. His model suggests that accessibility to the market (town) can create a complete system of agricultural land use. In the 1960s studies of Walter Isard, Martin Beckmann and Lowdon Wingo staged the ground for Alonso's formulation of von Thünen's historical model applied to an urban context (Isard, 1956, Beckmann, 1969; Wingo, 1961). Alonso's (1964) model focuses on size and density of cities and identification of the particular pattern of land costs at differing distances from the city that guarantees achievement of a location equilibrium rather than decisions by individual firms or households (Capello, 2011). By their work, the

model of the monocentric city soon became a free-standing school of thought and labelled as ‘new urban economics’ and location problem replaced by size and density calculations.

However, these models resolve the competition among activities on the basis of a strict economic principle of rents and assume a single city center by which rents are calculated. Moreover, they are unable to explain the location choices of economic activities among alternative urban centers and why there are cities of different sizes and performing different functions. The diversity of city sizes are explained under the “central place theory” founded by geographer Walter Christaller and the economist August Lösch. These studies were the first attempts to formulate models in order to explain the urban hierarchy not only by the size and frequency of urban centers but also geographical distribution of all the urban centers (Capello, 2011).

2.1.2 Regional growth theories

Regional growth studies have been dominated by two major and contrasting group of theories: ‘neoclassical regional growth theory’ and ‘Keynesian regional growth theories’. Both theories conceptualize growth as a region’s output or per capita income. The previous conceptualization enables building mathematical models, but requires some assumptions of uniform-abstract spaces where factor endowments and demand conditions are uniform and can be expressed with vectors (Capello, 2011). According to the neoclassical approach, market forces will lead to a pattern general convergence towards a unique level of per-capita incomes across space and time, thus models predict that disparities in per-capita incomes across regions are unlikely to occur. On the contrary, ‘Keynesian approach’ suggests that regional disparities in per-capita incomes are permanent and self-perpetuating and most likely outcomes of the models show a divergence in per-capita.

Keynesian models accept demand as external to the space and the engine of growth, as regions are small geographical areas, in most cases those goods that are produced frequently exceed local demand and are sold to other regions or international markets (i.e. automobile clusters, furniture clusters etc.). Therefore, the growth of a region depends on the extent to which its productive structure specializes in goods demanded by consumers where it can reach. This approach lacks a long period view, because it

assumes the competitiveness of only current production system which is sustainable only in the short period (Capello, 2011).

On the other hand, neoclassical group of theories focus on factor components to explain long-period regional dynamics. These theories do not only view exports as the engine of growth but also elaborate it by determining the factors responsible for the greater export capacity, and therefore the competitiveness, of a regional economic system. Moreover, the neoclassical theories on interregional trade apply the comparative advantage to determine the specialization of the region. These models suggest that products that has a cost advantage (is gained through different levels of productivities of the factors) among other products are exported by the region and determines the specialization.

2.1.3 Local development theories

Conception of space is different in local development theories. These theories identify space as diversified rather than homogenous and uniform, as assumed by growth theories. This approach enables to envisage a complex view of the region with a structure covering not only economic activities but also social relations and different sets of resources. These polarities, in turn, enable a cumulative process of territorial agglomeration and a development cycle (Capello, 2011).

Theories of local development focus on factor endowments and try to determine the factors which decrease the production costs. There are two group of factors: exogenous to local context which is transferred from outside of the local context (i.e. local presence of a multinational company, global pipelines etc.) and endogenous to local context which is drawn on local sources of development (i.e. local entrepreneurial ability, local resources for production such as labor and capital, collective decision-making capacity etc.). These factors, whether they are being assumed as exogenous or endogenous, explain regional organization of entities and strengthen local knowledge processes and learning, networks of economic and social relations which support more efficient and less costly transactions and foster proximity among economic actors (Capello, 2011).

The group of theories, which view development as endogenous in origin, define the success of the local economy through local factors, which enable regions to sustainably produce goods with a competitive advantage and maintain that over time by

innovating, and to attract new resources from outside (Capello, 2011). This group also has two distinct sub groups: neo-Marshallian notion and Neo-Schumpeterian notion. Neo-Marshallian inquiry views regional development as a consequence of externalities within the region enhancing efficiency of firms. The first systematic theory of neo-Marshallian notion was developed by Giacomo Becattini with his seminal study on the ‘Marshallian industrial district’ published in the mid-1970s. In this study Becattini not only conceptualizes external economies of agglomeration as sources of regional competitiveness, but also defines socio-cultural system as the driver of self-reinforcing mechanisms of development.

2.1.4 Local growth theories

During the 1980s, as a result of analytical inquiries in the qualitative behavior of non-linear dynamic systems (bifurcation, catastrophe, and chaos theory) and conditions of imperfect competition (i.e. Avinash Dixit and Joseph Stiglitz’s formalized model), increasing returns became the key component in determining the regional growth. The main theories of regional growth are referred as ‘new economic geography’ of Paul Krugman (Krugman, 1991; Krugman and Venables, 1996) and ‘endogenous growth theories’ (Romer 1986, 1987, 1990; Lucas, 1988; Barro, 1990; Rebelo, 1991). One of the most important features of these more formalized theories is that while they utilize traditional tools of economic theory, they introduce agglomeration economies, in the form of increasing returns, as determinants of regional growth.

Romer (1994) suggests that technology is product of intentional and deliberate activities of economic agents. Endogenous growth models present a traditional neoclassical production function in which production of knowledge is embodied in broad capital, and in this way, long term efficiency depends on decisions of firms rather than exogenous improvements in technology.

According to Arrow’s (1962) vintage model of capital, technological improvements are sequential periods and with each new period, new vintages are created via improved knowledge, thus technological progress is endogenized as ‘learning by doing’ and by knowledge spillovers. By this way technological progress becomes not only an outcome of the growth process but also diffuses through reinforcing activities. Additionally, Romer (1986) interprets these activities as investments in capital stock and treat them as endogenous factors in the growth process. Knowledge can be

transferred from old to new industries, for example, via spin-offs or mobility of qualified labor.

Moreover, these models also include uncertainty and multiple equilibriums. Models reach multiple equilibria associated with not only diverse initial conditions, but also with diverse values of the parameters of the structural relations of development, therefore different trajectories (convergent or divergent, explosive or implosive, stable or unstable) through both positive cumulativeness (agglomeration economies) and as well negative feedbacks become possible (Capello, 2011).

Krugman (1991a) argues that growth is endogenously determined due to the presence of a range of scale economies, internal and external to the firm. It is also demonstrated that in an economy with a backward and an advanced sector, characterized by substantial scale economies, two possible equilibria exist depending on the output concentration in each sector. Marshall (1890)'s forces of industrial agglomeration as vertical (input – output) linkages driving specialization and labor market pooling are reinterpreted by Krugman (1991) based on Dixit_Stiglitz (1977) modelling framework in which he focused on increasing returns, pecuniary externalities and transport costs. Krugman's model explain specialization and exhibits a general equilibrium depending on initial point of departure (McCann, 2005). This analysis suggest that regional economic activity depends on initial conditions which are results of historical accidents. For example, a region with a differentiated production structure with matching new demands of the market at point of time will be attractive for the new industry and therefore may reinforce its position.

Martin and Sunley (1998) describe this process as “Temporary conditions, and shocks, as well as historical ‘accidents’, may have permanent effects as patterns of specialization, of economic success or economic backwardness, become ‘locked in’ through external and self-reinforcing effects” (p. 211).

There are several studies in external economies indicating more than one long-run equilibria. Krugman (1991) discusses multiple equilibriums and their originating sources. Multiple equilibrium approach puts ‘history matters’ proposition front in economic analysis. When there are multiple equilibriums with equal factor returns are possible, then the outcome depends on initial conditions (tastes, technology, factor endowments etc.) (Krugman, 1991).

Not only economical but also institutional literature realize the plurality of equilibriums. Paleo-biologists Gould and Eldredge's (1972) landmark work on punctuated equilibrium (or 'homeostatic equilibria as they call it) shows that the evolution occurs in rapid steps in a short period rather than a slow transformation. In this periodical evolution process major external shocks forces system changes in a quick and dramatic way. From institutional perspective institutional change means going from one state of common parameter values (like salient patters of social interactions, shared beliefs) associated with a particular equilibrium to another equilibrium (Aoki, 2000).

2.1.5 Direction for new studies

New growth theories provide a valuable foundation for including space as a factor of economic model. On the other hand, the new economic geography still lacks appropriate microeconomic dynamics, which explain growth with space related endogenous factors that reflect the business environment. A synthesis representing cross-fertilization among regional theories can enhance our understanding towards regional success or failures, therefore, a convincing 'model' which explains the micro-territorial behaviors and intangible elements of the development process is needed (Capello, 2011).

A move to build this synthetic model needs to link endogenous factors, effects of cumulative spatial development patterns, self-reinforcing processes and collective behaviors associated with multiple equilibrium. The inevitable consequence of such an approach is to work on persistent local conditions which determine the competitiveness of a local production system over time and fuse theories of evolution in the field of regional science to build an exploratory conceptual model.

2.2 Clusters

2.2.1 Definition of cluster

There is a growing popularity of the cluster concept and intensifying efforts to forge a common definition of cluster to have a better understanding of the phenomena and drive a practical use out of it. While the field develops and re-structures itself, many definitions of clusters and similar concepts have emerged in the literature. Researchers and practitioners may utilize different definitions and elements of clusters depending

on their preferences and subject of research. Clustering is widely believed to be an important factor for economic development. For this reason, however, definitions are mostly context-based, and they are driven by the author's purpose, which are mainly from an economic point of view. The economic point of view of the clusters aims to better understand the drivers of competitiveness and growth. However, other definitions may be useful for providing a legal framework for funding or a reference model for statistical measurement. For example (Swan and Prezer, 1996) use a more location based definition as "Clusters are here defined as groups of firms within one industry based in one geographical area" to easily analyze the data in their study of computing and biotechnology. Some authors prefer to treat the concept of cluster and other related phenomena like agglomeration as similar from an economic point of view. Most popular definition of the concept is made by Michael Porter (1998):

Clusters are a geographically proximate group of interconnected companies and associated institutions in a particular field linked by commonalities and complementarities. Clusters encompass an array of linked industries and other entities important to competition . . . including governmental and other institutions – such as universities, standard setting agencies, think tanks, vocational training providers and trade associations (p. 4).

OECD (2002) defines clusters as "clusters are networks of production of strongly interdependent firms, knowledge producing agents (universities, research institutes, engineering companies) bringing institutions (brokers, consultants) and customers, linked to each other in a value adding production chain. Comparing Porter's definition with the OECD, it becomes clearer that his definition recognizes the operating space within localized geographical areas but does not stress the spatial proximity. It rather emphasizes frequently localized, but open nature of clusters and interaction with larger systems at the regional, national and international level. In this study, we will stick to the OECD's (2002) definition of clusters, since our empirical focus will be on shoe production clusters in different regions of Turkey.

2.2.2 Dimensions of cluster

Clusters are idiosyncratic in nature, and as mentioned above, scholars have not yet created a consensus over a single definition about them. Although, there are different factors that determine the growth and operation of clusters, the concept of cluster

generally comprises of four important dimensions: Geographical concentration, Specialization, Multiple actors and Competition with co-operation.

Firstly, geographical concentration has been the core of the concept since its emergence. Even though there is a growing body of literature against the importance of physical aspects of the phenomena, unique local assets, facilitation of labor, capital, or technology sources, opportunities for lowering transaction costs, are points that explain why geographical proximity remains at the core of the cluster concept.

Secondly, a cluster where participating actors are linked together via a core activity which provides direction towards emphasis on similar markets or processes is traditionally treated as a specialized entity. Individuals are also part of the specialization of cluster. Individuals with similar backgrounds and shared experiences with formal (professional) and informal bonds takes part in formal and informal exchanges, in some ways they mimic each other, and in turn, contribute to the specialization of clusters. Continuous multidimensional interactions and routine business activities potentially reinforce the processes of mutual learning, experimentation, and innovation. Since a cluster may not be limited to a given product or industry category, effective clusters are likely to possess a strong element of complementary specialization between actors who focus on core business coupled with formal and informal linkages, and capture synergies in learning processes with the interaction of multiple actors of the cluster (Audretsch, 1995; Dunning, 2000).

Thirdly, clusters are functional organizations that serve a range of different services by specific group of actors, such as the provision of infrastructure, specific business support services, training etc. Cluster organizations facilitate or provide access to these services or infrastructure. According to Sölvell (2008) there are six main actors of cluster exists:

- 1) **Upstream and downstream firms:** These are the firms on the value chain, competitors, suppliers of goods (e.g. machinery and input components) and services (e.g. consulting, legal and business services), buyers
- 2) **Financial institutions:** Banks, venture capital or private equity firms etc.
- 3) **Public actors:** National ministries, regional units of national bodies, involved
- 4) **Academic actors:** Universities, research institutes, technology offices

5) **Private and public-private organizations:** NGOs, chambers of commerce, formal networks, cluster organizations etc.

6) **Media:** Actors creating “stories” around the cluster and building a regional brand.

Lastly, clusters facilitate both intense competition and close cooperation. In a cluster competition and cooperation take place at the same time, the former mostly present in horizontal dimension where the latter is located generally in the vertical one. The logic behind competition is about rational self-interests which detains individuals not to participate in a collective action and individuals compete against each other to maximize their own self-interests (Bengtsson and Kock, 2000). On the other hand, cooperation is a much more complex action which is determined by social structure, creating a win-win relationship, that surrounds individuals (Axelrod, 1984). In cooperative relationship, maximization of total value created is the ultimate goal rather than value maximization of each individual. Actors involved in cooperative relationships all contribute to the total value created and are satisfied with a smaller share of the profit to maintain the relationship (Bengtsson and Kock, 2000). Clusters possess complex relationships and represent a combination of competition and cooperation. Nalebuff and Brandenburger (1996) even showed that cooperation and competition can be existed in the same relationship, and they also use the concept “coopetition” to describe such a relationship.

2.2.3 Externalities related to clusters

Agglomeration economies are economies resulting from the concentration of production at a given location, either on the part of the individual firm or by firms in general. Agglomeration economies could be seen as deriving from economies which are internal to the firm, as well as and from externalities (Parr, 2002). Besides, agglomeration economies could be classified in two folds as deriving from economies which are internal to the firm, as well as and from externalities (Parr, 2002). These externalities are beyond the control of the individual firm and typically result from the presence and/or collective action of other firms.

Agglomeration economies is one of the most studied subjects of urban, regional and international economics. Agglomeration economies related to location decision (Wheeler and Mody, 1992) are defined as the effects of individuals and firms, resulting

in aggregation of economic activities in a specific geographical area, and a reduction in costs (Nakamura, 1985).

Agglomeration economies reflect benefits that have been achieved by reducing costs as a result of increased production. In other words, agglomeration economies constitute the source of productivity gains that underpin long-running competitive capability in the clusters (Fagan, 2000).

Agglomeration economies differ from traditional trade theories. According to the Traditional Trade Theory, firms are established in places where production factors are abundant and holds competitive advantage through products produced with the said factors. On the contrary agglomeration economies are the result of that (Fagan, 2000), which causes the industry, or a particular region, to move beyond what it has.

According to Marshall's definition, in figure 2.1, agglomeration economies are based on monetary and non-monetary externalities. Monetary externalities include non-trade local inputs (distance sensitive inputs) and local qualification labor supply. The firm's expertise in input supply or proximity to specialized labor supply can ensure that inputs are obtained at a lower price. For this reason, the phenomena described are defined as monetary externality. On the other hand, the third source of positive effects from agglomerations is information spillovers which has a non-monetary nature. The presence of information at the time of accumulation brings unalterable gains at any price. This definition of Marshall has a fairly large set of theoretical points of the agglomeration economics. This definition provides an explanation for the origin of agglomeration economies within an individual industry (Karlsson et al., 2006).

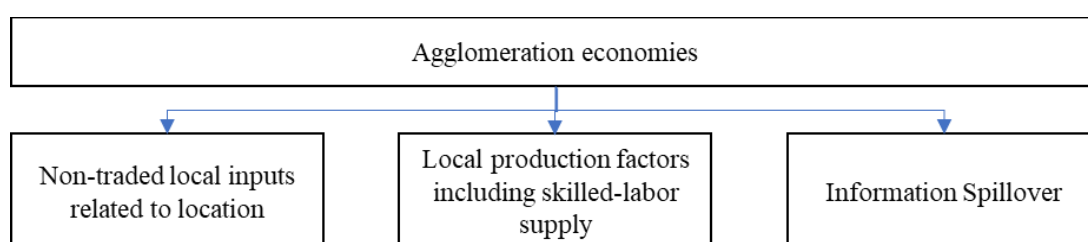


Figure 2.1 : Agglomeration economies in Marshallian framework.

2.2.4 Porter's diamond model

Porter (1990) formulated a microeconomic theory of regional, state, and local competition at the industrial level in the global economy in *The Competitive Advantage of Nations*. Clusters are the key of his theory as they are a representation

of the diamond framework; in fact, "clusters are one facet of the diamond (related and supporting industries), but they are better seen as with the diamond frame.

He sets that “much of competitive advantage lies outside a given company or even outside its industry, residing instead in the locations of its business units” (Porter, 1998, p. 198). Moreover, he also suggests that organizations, governments, and different establishments should take new steps to improve competitiveness.

Porter (1990) builds upon the four fundamental factors that he calls the "diamond model" when determining clustering and competition relations, as in figure 2.2. These factors include local-regional conditions of cluster actors. By developing this approach, Porter reveals the competitive advantage of countries, regions and sectors. Competitiveness of clusters depends on the interaction of these factors.

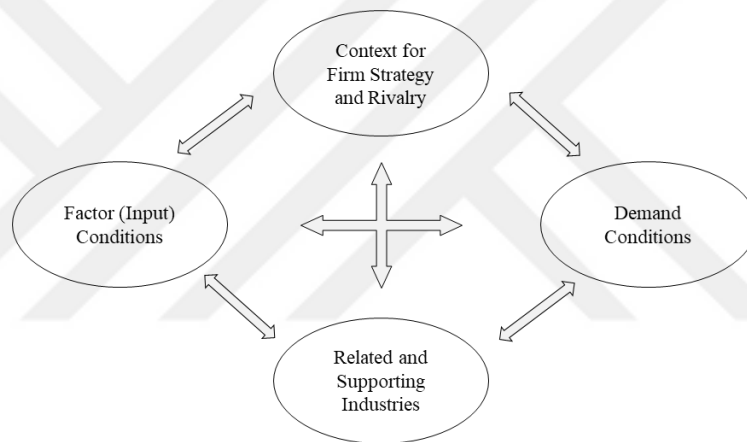


Figure 2.2 : Porter’s diamond model (Porter, 1990).

Factor Conditions: It refers to the high quality and specialized inputs that the country has (labor force, capital, physical infrastructure, information infrastructure, institutional infrastructure, science-technology infrastructure, suppliers, intermediate goods, raw materials, etc.)

Demand Conditions: The nature of main-market is determinant of competitive advantage (Porter, 1990). Porter asserted that the strength of demand condition should be seen as the size of the home market and the maturity level buyers. That is, if the scope of the home market is large, firms will invest to reap economies of scale. Sophistication in local customer will force firms to meet high standards and to upgrade to respond to severe challenges

Context for Firm Strategy and Rivalry: This dimension is the formation and management structure of companies and competition conditions. Porter suggests that

an advanced economy requires vigorous local rivalry which advocates total costs over low wages, differentiation over cost leadership, innovation over imitation, high investment over low investment with not only physical assets but also intangibles (e.g., skills, technology)

Relevant and supporting organizations: Contains the subsidiary industries and related sectors with international competitiveness. High competitive supplier and related industries are important for promoting innovation and upgrading technology. Moreover, intensive relation with related industries provides a faster adaptation to market changes (Singh et al., 2009).

Government and Chance: The contribution of government and chance events have been introduced as new determinants of Porter's diamond model. According to Porter, governments have new roles to play and clusters shall be integral part of their industry policy. Government should focus on competitive advantage and specialization of clusters. He added that sometimes a chance event creates some advantageous context that, in turn, fosters cluster development but he did not discuss when this new context fosters the new path

2.2.5 Birth, Evolution, and Decline of Clusters

In an example, new industries emerged in regions where other industries supplying related knowledge and skills necessary to develop a new technology enjoy this know-how through different channels of information replication and diffusion including labor mobility (e.g. coach building for car chassis design). In this sense knowledge spillover from an old industry increased fitness advantage of firms in the new industry.

The emergence of a cluster in a particular location may have different explanations. Although a group of explanation mostly depend on advantages related to local inputs or locational production factors another group refers to 'historical accidents' related to ruptures in environmental conditions or pioneering entrepreneurs who created a locational attraction. There are examples where prior existence of related industries acted as an incubator for the new industries. Car chassis production, for example, grew on the coach building industry, golf equipment cluster has roots in southern California's aerospace cluster. Clusters may also emerge through ruptures in local demand. As Porter (1998) gave the example, environmental cluster in Finland emerged after pollution problems were faced in the country and cluster of irrigation equipment in Israel arose as a result of weather conditions, which caused aridness and scarcity of

water. Successful entrepreneurs are also referred as a different type of explanation, Porter (1998) mentioned Medtronic for its leading role in creating Minneapolis medical devices cluster and America Online as an incubator for spin-off firms, which in turn, created the telecommunications cluster in the Washington, D.C.

Growth and prosperity of clusters depends on many factors including specialization, factor upgrading, competition and cooperation. In this sense Porter (1998) encapsulates all these factors as arrows or feedback loops of Dimond model. For example, he isolates how sophisticated the demand, how local institutions perform for cluster's mechanics or how related industries react to the opportunity seized by the cluster as key mechanisms. He emphasized the climate for rivalry, entrepreneurship and cooperation which are necessary for rapid development. For a prospering cluster achieving a critical mass is important for efficiency of self-reinforcing mechanism, when self-reinforcing works information accumulates, specialization increases and feeds back cluster development, signal opportunity and attract more firms and talents. Cluster's development is based on a functioning market and reinforcing mechanism. Spinoffs from existing companies also contribute to the cluster development through emergence of new suppliers or creating new bundles of accumulated knowledge and sparkling new businesses. As clusters scale-up, their influencing power on public and private institutions are expected to increase and they will be able to force government policies to facilitate cluster upgrading.

Failure to maintain its competitive edge is possible even for the most successful clusters. The explanations for cluster decline can be grouped in two folds, first, endogenous factors, related to the location or cluster and second, exogenous factors related to changes in environmental conditions. Internal causes are mostly referred as rigidities or inertia that blocks clusters seize new opportunities or adopt the changing conditions. Over consolidation created by vested interests or group thinking cause decline in innovation and dynamism. Moreover, changes in external conditions also threats cluster success. For example, technological ruptures can make cluster advantages, skills, expertise absolute unless new skills or technologies matching new conditions are provided by local institutions. Porter (1998) gives the example of the shift of golf equipment manufacturing from New England to California. The New England cluster was based on expertise in old material technologies of steel and wood, on the contrary the new Californian cluster was a pioneer in new materials; therefore,

some east coast firms joined the California cluster; others died or declined. Another environmental condition is related to demand. Changes in buyer needs are also considerable threat for clusters if clusters cannot adopt. A cluster that fails to reach critical mass in the new technology or meeting the new need will not be able to sustain its success (Porter, 1998). Detroit's attachment to gas-guzzling autos in the 1970s is an example for collective inertia, cluster firms facing this form of rigidity, make it harder to recognize changes in the conditions and embrace new ideas and need for adaptation.

2.2.6 Importance of historical analysis on clusters

One of the major obstacles of economic geography is that embeddedness of regions in their environmental landscape is often overlooked and clusters are modeled as isolated entities (Breschi and Malerba, 2001). Porter (1990) has acknowledged the role of historical events (like wars or natural disasters etc.) in his work on industrial clusters, but instead of opening the black box of such ruptures and explaining the casual mechanisms, he generalizes them as chance factors. On the other hand, there has been accumulating evidence suggesting that the existence and spatial behavior of regions can be understood through analyzing their dynamics over time (Audretsch and Feldman 1996; Pouder and St. John 1996; Menzel and Fornahl 2009; Ter Wal and Boschma 2011) and regions may be understood as products of history (Martin and Sunley 2006). 'Evolutionary turn' is both promising a new way of thinking about uneven geographical development and presenting an opportunity for linking different concepts and theoretical approaches from different schools of thoughts. In the next section historical approach for analyzing the local economic landscape is discussed.

3. EVOLUTIONARY ANALYSIS IN THE ECONOMIC LANDSCAPE

3.1 Evolution of Regions

Our analysis of regional economic change considers the evolution of a population of firms that compete with one another within a common environment, perhaps understood within a single region. Economic change within each region can be accomplished through an analysis of population dynamics in a uniform selection environment but for a multi-region setting regional business structure including the form and depth of institutions, organizational forms and other place-bound resources becomes important

Considering not only geographical distances but also social and economical ones between populations, we can expect independent evolution between distant economies. For an example, in their book Acemoglu and Robinson (2012), illustrated the irrelevance of geographical and ethnical proxies in regional development through evolution of a town along the border that separates the USA from Mexico called Nogales. One part of Nogales belongs to Mexico, while another part belongs to the USA, in terms of GDP per capita we see a significant difference: the American part is much richer than the Mexican part, while the geographical circumstances are the same.

When regions are conceived as selection environments, the spatial units that comprise economic agents (plants, workers, consumers) with their relations (social networks, input–output linkages, untraded interdependencies), all embedded within micro business environments (governance systems, business cultures etc.), then it is expected that the economic performance of regions will vary because of differences in their characteristics (Essletzbichler and Rigby, 2007).

We should also note that the regions are not static entities, they evolve over time as population of economic agents and their characteristics shift, moreover these agents deliberately try to influence the organizational and institutional environment within which they operate (Essletzbichler and Rigby, 2007). Technological dimension of the environment is also very important, new technologies may transform the selection

environment radically. In this way regions themselves might be considered as emergent properties of the process of competition (Essletzbichler and Rigby, 2007).

Environmental changes like technological progress and social change at the regional level create and destroy variation and that select certain characteristics (like techniques or organizational forms) over others. The performance of regions is more than the sole performance of the economic agents, the business relations with its social and institutional fabric should be considered in the assessment of the regional performance.

Distant populations of firms will tend to develop different characteristics and possess distinct histories of development. These histories will shape the selection process through characteristics of these populations that emerged from forces of competition and reproduction of routines. In this manner regions could be conceived as evolving bundles of place-specific characteristics reflecting economic agents with their relations (social networks, input–output linkages, untraded interdependencies).

Analysis of the history in the economic landscape is important to address the issues behind not only the differentiation of landscapes but also technological progress, competitive advantage and economic turns related to them. In this sense, evolutionary perspective is essential in the analysis of regional development.

In this context, there is thus considerable scope and potential for applying and extending the ideas and concepts from evolutionary economics to our analysis of regional development. However, it is not a simple effort of applying concepts, from other disciplines like biology, translation of them would provide new perspectives on these issues. Evolutionary economic geography shelters these concepts and methodologies and try to explain not only “how the economic landscape changes over historical time but also how geography matters in determining the nature and trajectory of the evolution of the economic system” (Boschma and Martin, 2010, p. 6).

3.2 Evolutionary Economic Geography (EEG)

The basic concern of evolutionary economic geography is about “the processes by which the economic landscape – the spatial organization of economic production, circulation, exchange, distribution and consumption - is transformed from within over time” (Boschma and Martin, 2010, p. 6).

Evolutionary economic geography (EEG) enhance our understanding towards development of clusters. Industries have roots in pre-existing economic and institutional structures, which orient the behavior of socio-economic actors in the present by specifying initial conditions of resources and interests (Martin and Sunley, 2006). Factors shaping cluster evolution are pre-existing industrial structures, technological conditions and institutional settings, which may be changed through external shocks such as new technologies or market shifts (Belussi and Oliver, 2016).

Modern evolutionary economic theory emerged in the 1970s based on the issues that is less addressed by the neoclassical economics (Nelson and Winter, 1974, 1982), includes technological change (Arthur, 1983), the role of institutions (Freeman, 1988), economic growth (Nelson, 1995) etc. The fundamental purpose of evolutionary economics is to understand the influencing mechanisms of firm behavior in a market environment in which they function (Nelson and Winter, 1982). There are three main approaches identified by Boschma and Martin (2010) for analyzing evolution: Generalised Darwinism, complexity theory and path dependence. Most of the literature use ideas and concepts taken from Generalised Darwinism, especially those of variety, selection, and retention, on the other hand complexity theory is less appreciated by the scholars, and the third approach, path dependence enhancing economics with historical dimension has been widely used in evolutionary economics (Boschma and Martin, 2010).

3.2.1 Path dependency

Perhaps the most often used notion used in economic geographic work that has sought to take history seriously in studies of regional development is that of path dependence. The idea of path dependence is that the economic landscape does not tend towards some (predefined) unique equilibrium state or configuration, but is an open system that evolves in ways. Path dependency does not seek to achieve equilibrium.

A path-dependent process is a loop with time dimension that has an outcome evolving as a consequence of its own history (Martin and Sunley, 2006). The concept is perhaps most often linked to David's (1985) work on 'QWERTY keyboard which emerged and persisted as the standard typewriter keyboard however widely recognized as a suboptimal alternative. Path dependence concept highlights that historical events or accidents can act to determine the future of economic technologies, organizations and

systems. Moreover, early decisions in the history close alternative paths and leave a particular path whether or not the outcome is the optimal choice. In this sense technologies, organizations or collectives are locked-in a particular suboptimal path even though better alternatives were possible.

Historical ‘triggering’ events based on ‘chance’ factor is a controversial notion of path dependency theory. Krugman (1991) also argued that small accidents yield to establishment of persistent centers of production under a cumulative causation affect. On the other hand, randomness of this event or ‘accidents’ suggest that there is no historical constraints of the act.

On the other hand, Martin and Sunley (2006) stresses the paradox of ‘historical accidents’ and ‘chance events’ as follow:

Most path dependent models explain the initiation of paths in terms of (small) events that are in some ways exogenous to, or orthogonal to, the key system properties. Typically, these events are described as being ‘chance’, ‘serendipitous’ or simply as ‘historical accidents’. This would seem to suggest that there are innumerable different possibilities and that the preceding sequence of events (past history) plays no role in determining what new ‘historical accident’ occurs or whether or not it initiates a new techno-economic path; that is, paths emerge from a chaotic swirl of random events. (p. 24)

The establishment of UK motor sport cluster cannot be fairly explained by Krugman’s ‘historical accident’ model but can be seen a set of local historical legacies (Pinch and Henry, 1999). Feldman’s (2005) study of crisis in public employment is a good example in showing how external shocks change factor conditions of industries. When performing a deeper analysis on the long-term effects of external events then chance factor fades away and it turns to explainable conditioning factors (Martin and Sunley, 2006).

Even before the path dependence theory, geographers acknowledged the importance of legacy of the past (in terms of industrial and institutional development) carried by economic landscape and influence of the history on future development and evolution. (Martin and Sunley, 2006). Path dependency is a complex process carrying different factors such as the economic, technological, institutional and socio-cultural especially

studying in a geographical context. According to some authors of economic geography, path dependence appears as a result of mutually reinforcing co-evolution of these multiple factors as in the study of Silicon Valley by Kenney and von Burg's (2001).

This interlinking path effect does not encompass only prementioned economic, technological, institutional and socio-cultural factors but also human agency (individuals). Martin and Sunley (2006) stress that entrepreneurship is not a random act of genius and entrepreneurs are able to mobilize necessary resources, ideas and people and trigger a collective creation process like in the Silicon Valley study of Kenney and von Burg (2001) where Shockley's move to Palo Alto and the founding of Fairchild was a factor triggering cluster emergence. Garud and Karnøe (2001) emphasize the strategic agency and the deliberate initiatives of entrepreneurs and suggest that agents always search for differentiators and experiment new technologies, processes or products.

For sure that some exogenous shocks, higher order events may stimulate inner or outer individuals to act upon new strategies or develop new 'windows of opportunity' (David, 2005; Sydow et al., 2002). From this perspective, path dependence cannot be treated as a one process realized at one level, rather it occurs at different levels with outcomes influencing each other. Martin and Sunley (2006) argued that the concept of regional path dependence need foundations stressing the modularity, openness and hierarchic depth. Beyond this, in the concept of path-dependence the process of path creation is still unclear, why certain alternative paths are chosen, while others disappear is not addressed.

3.2.2 Generalized Darwinism

Generalized Darwinism is the most appealing approach of evolutionary economics and its extension into economic geography. Generalized Darwinism asserts that the core principles of evolution provide a general theoretical framework for understanding evolutionary change in all domains (from physical to social systems), but that the meaning of those principles and the way that they operate is specific to each domain (Hodgson, 2002; Hodgson and Knudsen, 2006).

There are strong conceptual links between Generalized Darwinism and understanding organizational collectives from an evolutionary perspective. Darwin's evolutionary

theory explains how populations change over time. Here, the mechanism of variation, inheritance and selection produce the cycle of fit in the population. Akin to the idea, Darwinism makes comparisons between market competition and the struggle for survival based on natural selection which is present in the animal world.

Instead of assuming that the mechanisms of social and biological evolution are similar, General Darwinism suggest that there is a degree of ontological communality between them, based on the broad idea of a complex population system, arguing that the Darwinian principles apply both to biological and social systems (Hodgson and Knudsen, 2010). On this basis, the mechanisms of Darwinism (variation, selection and retention/inheritance) can help us to determine the sources of growth or survival of firm collectives from a historical perspective. Understanding economic evolution of regions from the approach of Generalized Darwinism requires understanding of how key concepts (variation, selection and inheritance) might be operated within a dynamic system of economic geographies.

3.2.2.1 Variation

The principle of variation implies that there is variation in a population of evolving entities. Variation is generated through transformation and emergence of new properties and provides fuel for evolutionary change and without variation, the population would be stuck in equilibrium (Hodgson 2001; Essletzbichler, 2012). This change could be result of random mutation, Schumpeterian entrepreneurial actions, recombination of existing characteristics, routines or import from other places etc. (Essletzbichler, 2012). In any manner variation is necessary for selection to occur.

The mechanisms and drivers for variation are addressed by comprehensive work of scholars. In an example creation of new technological destructions or self-organization principles explain causal drivers for the creation of variation. After variations are created selection process operates on the variations, in order to understand why certain varieties survive, we need to understand the selection mechanism

3.2.2.2 Selection

Selection entails that those interactors with traits that fit the locally and historically specific environmental context better are characterized by higher survival rates and in turn, higher rates of replicative success. Darwinism offers an algorithmic logic

predicated on a feedback loop between variety, inheritance and selection that can explain adaptive complexity.

A general description of the selection process is made by Hodgson and Knudsen (2010):

Selection involves an anterior set of entities that is somehow being transformed into a posterior set, where all members of the posterior set are sufficiently similar to some members of the anterior set, and where the resulting frequencies of posterior entities are correlated positively and causally with their fitness in the environmental context. The transformation from the anterior to the posterior set is caused by the entities' interaction within a particular environment. (p. 92)

Here, selection does not have to lead to most efficient outcomes. Beyond that cooperation is at least as important as competition considering multilevel (or group) selection processes (Sober and Wilson, 1998).

If the efficiency is not necessarily the selection attribute, we should explain why some variants are selected instead of others. Here Sober's (1984) classification of selection provides clarification on the process. Sober identifies two different types of selection, selection of interactors (phenotypes), e.g. Firms, regions) and the selection for replicators (genotypes, e.g. firm routines, traditions, conventions)

As stated by Price (1995) subset of elements from an anterior set is selected and this selection changes the composition of a population under. After an industrial crisis or shock a group of firms from anterior set are selected (selection of interactors) and this selection will result in not only elimination of some firms but also removal of their routines from the population (selection for replicators) because the selection process will not stop until variation disappears and changes in population are caused by a systematic interaction between fitness and survival (Essletzbichler, 2012).

Selection involves the selection of a subset of elements from an anterior set (e.g. selection of a subset of firms after an industry shakeout) where environmental interaction causes elimination to be differential (e.g. selection eliminates the firms and as a result, their routines are also removed from the population). There are two complexities related to selection process for firms or firm groups. First, selection as a result of changes in the environment could work on multiple traits of entities make the

selection process more complicated. Second, survival of firms also depends on their adaptability in response to changes in the environment. The environment is not totally exogenous to the firm and the interaction of firms or group of firms with their environment is a factor for the selection process, manipulation of environment with its constraints in the favor of firms can be assumed at least for some degree.

3.2.2.3 Group (multi-level) selection

The concept of selection cannot explain the whole range of altruistic behaviors observed in humans. On the other hand, there are many situations in which humans help each other.

Considering firms as the entity, they loan their production equipment each other, jointly search for new markets or supply together, thus, selection and the evolution of socially intelligent beings cannot be explained satisfactorily without group selection (Wilson, 2012). When interactions among firms are sufficiently strong so that their fate is tied up with the fate of the region, then regions may qualify as social interactors, then we can discuss selection process at the regional level. This approach to group selection is called *multilevel-selection theory* (MST). For MST, it is crucial to distinguish the competition between individuals within the same group and the competition between individuals in different groups, where within-group selection follows the generally accepted idea that individual organisms (or collections of replicators) are in direct selfish competition with each other. On the contrary group-level adaptations require perceiving groups as adaptive units in their own right (McAndrew, 2002). Here the important point is for group selection to operate, the advantages leading to differences between groups should be sufficiently strong to overcome selection forces on individuals or firms within a group.

In an example of two groups that are in direct competition with each other and have different concentrations of altruists and non-altruists. In the group with high concentration of altruists, the cooperation among them might increase the success of the group by allowing significant adaptive advantages on all the individuals within the group, on the other hand this altruism could be also a disadvantage because dominant altruist group would prosper at the expense of the selfish group and the number of altruists in the population would diminish the fitness of all the individuals in the less altruistic group. MST provides an explanation for how altruistic tendencies

would evolve in situations in which the selection forces of intense competition between two or more competing groups acts (McAndrew, 2002).

3.2.2.4 Retention / inheritance

Selection process is followed by the replication process, which creates the new path for subset survives. The inheritance refers to a different mechanism, including diffusion and other forms of replication, by which information concerning adaptations is passed on or copied through time (Hodgson and Knudsen, 2010).

The environment acts on interactors not replicators directly. On the other hand, role of replicators (e.g. routines) on social interactors (e.g. firms) under pressures of the particular environmental context in which the interactor operates is important for understanding retention process. A replicator is a structure hosted by the entity that is causally involved in the replication process. The frequency of similar replicators within the population is increased and the fitness in social evolution is achieved through either by diffusion of replicator to other interactors (e.g. knowledge spillovers, localized learning) or by making copies of the interactor (e.g. spin-offs), by this way the characteristics of the interactors are passed on by replicators (Essletzbichler, 2012).

As stressed by Essletzbichler (2012), replicated information by itself is inadequate to provide a complete description of the emerging interactor, the replicator does not replicate by itself but includes building instructions for the development of interactors that are stimulated by particular environmental conditions. The information that makes the copy entity similar to its source is obtained during its creation. As the environment does not act on (recognize) replicators directly, replicating entities are not manipulated directly by the environment and for this reason, information (adaptive experience) is able to accumulate over generations (Essletzbichler, 2012). The replicators related for each interactor are relatively durable compared to their host interactor, in an example, routines, apprenticeship are passed on other firms and continues even if individual firms hosting them do not survive.

Hodgson and Knudsen (2010) proposed a number of conditions that an interactor must qualify;

1. An interactor is a relatively *cohesive* entity with boundaries between itself and its surrounding environment, including other entities and the internal relations among

its component parts are generally more significant than the relations with its external environment.

2. When environmental conditions change, interactor *sustains integrity* owing to the components of the interactor and the internal relations between them
3. There is a *Shared dependence of component replicators on the interactor*
4. *Inclusion and shared organization of components*: every component replicator has to be within the boundary and part of the structure of the interactor.
5. *Replication dependent on the properties of the interactor and its environment*: Every set of properties of an interactor that, in interaction with the given environment must be a major factor in determining the (possible different) posterior set of replicators of the anterior set of replicators.

Applying GD to economic geography then requires an understanding how the abstract principles of variation, selection and inheritance can be operationalized to explain the historically specific, inconstant, uneven and differentiated geography of capitalism. GD is not contradicting but complementing existing work in EEG (Essletzbichler, 2012). Generalized Darwinism presents VSR (variation, selection and retention) as the central defining principles governing social and economic evolution.

How industries emerge and develop across space, how regional economies function as ‘selection’ environments, how far and in what ways various ‘retention’ mechanisms reinforce spatial patterns of economic activity requires compounding different approaches and interpreting related concepts. In the next section evolutionary perspective on the spatial economy will be constructed with the help of studies on spatial economic agglomeration and evolutionary economic geography.

3.3 A Promising Theoretical Framework for Evolutionary Economic Geography: Imprinting Theory

The main purpose of evolutionary perspective in economic geography is to link micro-economic behavior of agents (firms, individuals) to the macro outcomes of the economic landscape (Boschma, 2007). The core differentiator of specific concepts under Evolutionary Economic Geography is how change is portrayed. Both evolutionary biology and complexity theory have similar perspective of punctuated

equilibrium which explains shifts of the system to a new setting (relative stability or gradual process) initiated by major shocks (Boschma, 2007).

(Garretsen and Martin, 2010) defines punctuated equilibrium as: “..an historically contingent event triggers off the path dependent movement towards (selection of) one of a number of possible equilibria, in which, once reached, the system remains ‘locked’, until disrupted by an external shock.” (p. 31).

In this sense, how punctuated equilibrium theory can enhance our understanding towards economic landscape is developing. At this point utilization of the ‘Imprinting Theory’ is promising.

The concept of imprinting emerged in 19th century with studies of British biologist Douglas Spalding who reported common behavior of birds which are following the first-seen moving object in their early life. After that it was Stinchcombe’s (1965) seminal work which showed the implementation of the concept in organizational research, describing stamps of the environment present during its existence and how these stamps persist after this early phase in spite of subsequent environmental changes (Johnson, 2007; Marquis, 2003). The concept of imprint has been utilized in different branches of organizational research like organizational ecology, (Carroll and Hannan, 1989; Swaminathan, 1996), network analysis (McEvily et al., 2012) or institutional theory (Johnson, 2007; Marquis and Huang, 2010) since then and enhanced our understanding towards the phenomena.

Marquis (2013) describe imprinting as: “a process whereby, during a brief period of susceptibility, a focal entity develops characteristics that reflect prominent features of the environment, and these characteristics continue to persist despite significant environmental changes in subsequent periods” (p. 195)

As stated above there are three essentials features of imprinting, namely, presence of a sensitive period, a powerful impact of the environment and persistence of stamped characteristics beyond the sensitive period (Marquis, 2013). Sensitive periods are conceptualized as periods of transition and there is the possibility of multiple sensitive periods. Imprinting theory resembles to the punctuated equilibrium model in all of its features. Both refers to brief discontinuous periods of intense change and link them with the changes in environmental conditions.

The original model of multilevel imprinting in figure 3.1 represents multiple sensitive periods and defines environment as a homogeneous setting, but a varied, n-dimensional space with economic, technological, institutional conditions and individual influencers. The first block on the figure 3.1 presents the first sensitive period of cluster: foundation. During foundation the cluster is vulnerable to its environment and environmental forces naturally. Environmental forces stem from economical, technological and institutional landscape or they encompass influence of the individuals, who stamp their mark during the early years of cluster. Second part shows the imprint persistency. During the non-sensitive period the stamp of foundation is still carried by the cluster. Imprinting process might occur multiple times during a life course and the last section of the model illustrates other possible multiple sensitive periods.

During a new sensitive period, different forces play apart and lead either to a new imprint, modification, replacement, or decay of the existing imprint. As described in the multi-level imprinting theory, the factors that contribute to the persistence of an imprint over time is represented as limited learning in non-sensitive period, lack of competitive threat, taken for granted nature of status quo, inertial forces (e.g. vested interests) by Marquis and Tilcsik (2013). This section also emphasizes the possibility of secondhand imprinting.

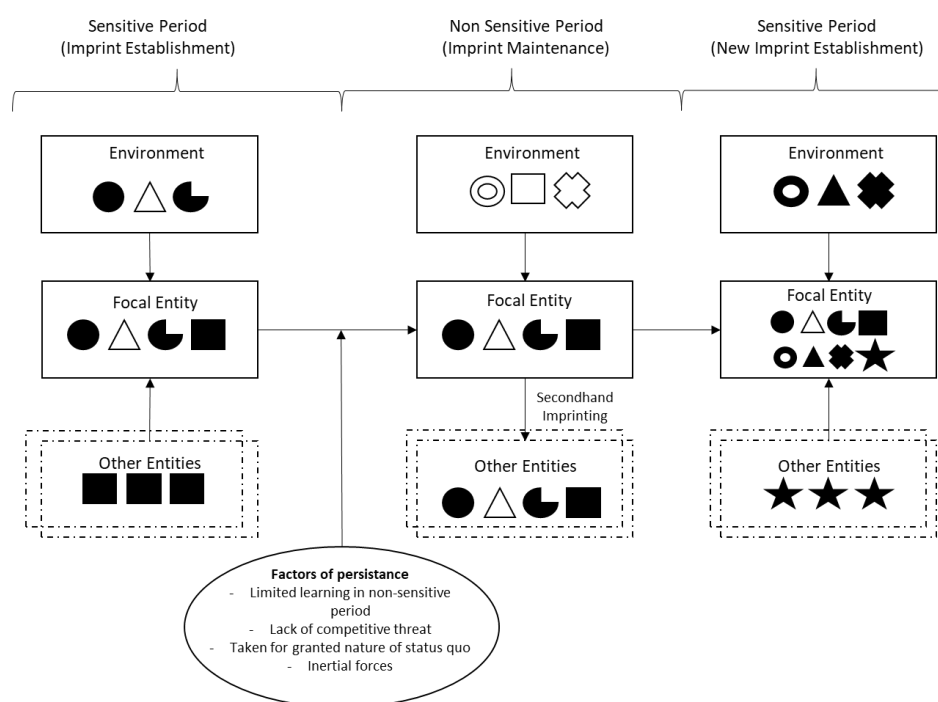


Figure 3.1 : General model of multilevel imprinting (Marquis and Tilcsik, 2013).

3.4 Research Opportunities Related to Imprinting Theory

The majority of the literature provides either a singular historical analysis or evaluation of the present microeconomic environment. But only recognizing that history matters does not help to understand how it matters (Jones and Khanna, 2006; North, 1990). To date, much research has focused on the features, sources of imprint and how they persist over time. Less attention has been paid to the explanation of imprinting process through evolutionary mechanisms. General model of imprinting is a promising and powerful approach to address how environment contributes to the evolution of focal entity in a multidimensional way, but it cannot explain why some imprinting attempts or environmental conditions fail to cast their mark on the focal entity in times when a sensitive period is present. Marquis and Tilcsik (2013) adverted some mechanisms like “window of imprintability” or emulation of imprint but these mechanisms are not explained in their model. There are four fundamental research opportunities, particularly with regard to the understudied dynamics and the process of imprinting

Firstly, if not every imprinting attempt by environment casts its mark, it is necessary to reveal how the characteristics of the environment pass to the focal entity explicitly. Thus, to locate an imprint, tracing the blueprints of focal entity is necessary. The imprinting process can be understood through explaining how hereditary factors that define all explicit and implicit characteristics of the focal entity, as it interacts with environmental variables that influences it. This way, we can reach a fuller understanding of the triggers, enablers, mechanisms of pattern formation, which are not described in the original model of the multilevel imprinting.

Secondly, in the original model, although the window of “imprintability” (WOI) is noticed, there is a gap in the model and how WOI works through evolutionary mechanisms is not addressed. Explaining WOI is necessary to capture the underlying causes in the particular case, where imprinting factors favor one region to another, and the elimination of firms and their routines previously sheltered from past conditions. Thus, an evolutionary type of explanation for why imprinting factors favoring one region but not the other is necessary.

Thirdly, features of the emulation mechanism and inheritance of imprints need further conceptualizing in the model. Marquis and Tilcsik (2013) explained that the patterns, which are established during the sensitive periods are then perpetuated by subsequent

organizations' emulation of the older members residing in that collective. This process is defined as the secondhand imprinting, but the sub-mechanisms of secondhand imprinting is not defined. The elements of the environment in which the focal firm resides, need to be reproduced so that we can recognize an imprint at the population level. Moreover, this process is also bounded by survival of the firm, which possesses the imprinted elements. In both senses an evolutionary approach is necessary to explain the diffusion of imprinted elements and how variation of few firms yield to an imprint at the population level.

Lastly, as aptly put by Marquis and Tilcsik (2013), another mechanism worthy of future investigation is the process whereby particular organizations become vehicles that facilitate the imprinting of organizational collectives by individuals. In the given case of Rockefeller (Chernow, 1998) and Carnegie (Nasaw, 2006), the role of powerful organizations that allowed them to leave their mark on their industries are important for explaining the imprinting process, thus it is necessary to clarify when and why these powerful vehicles are important for the sake of imprints.

In the next section, our aim is to conceptualize a model with the analytic lens of evolutionary perspective to further investigate these black spots. Distinguishing evolutionary mechanisms and how they operate in different scales will help us to understand a holistic picture of environment versus organizational collective interaction and resolve the issues mentioned above.

4. CONCEPTUAL MODEL FOR ANALYZING IMPRINTING IN BUSINESS CLUSTERS

The literature on how clusters emerge and evolve throughout the history of an industry is under development. A framework not only fixing the fundamental gaps in the imprinting model but also enhancing our evolutionary understanding with regard to the understudied dynamics is necessary. In this vein, the shortcomings of the multi-level imprinting framework will be complemented by the mechanisms of evolutionary theories, resulting in a much stronger theoretical framework for explaining the evolutionary dynamics of regional clusters.

A framework linking the evolution of cluster through evolutionary process and environmental underpinnings would enhance our understanding towards how imprinting theory works in organizational collectives. This evolutionary perspective is essential to understand the mechanisms fostering specialization, economic growth and technological progress.

There is considerable benefit for applying the concepts from evolutionary economics to the analysis of regional development. This study is one of the very few attempts not only addressing evolutionary mechanisms influencing clusters via integrating micro business environment with the environmental influencers, but also blending two different evolutionary approaches in a synthetic framework.

Exploring the relations between historical events within their contexts, including their long-term effects, increases the possibility of unpacking the black box with causal and preconditioning factors related to a particular location. Once the black box is opened, it is possible to see the triggers and causality with conditioning factors. Subsequently, we can also explain industrial paths with relation to their predecessors where location has an important incubation role.

Although, there are numerous case studies, the concept of ‘historical events’ or initial accidents that yields particular breaking points (or in other words patterns) in the temporal order is still under research and contains significant ambiguity. Even though

the imprinting theory enhances our understanding towards the role of the environment during the historical breaking points, the dynamics and success factors of this process remain unexplained and how preconditioning factors matter at different points in real history, what constitutes these factors and how these factors linked to a spatial pattern in regional economies largely remains to be systematized. From an evolutionary perspective, imprinting theory which origins from biological ecology leveraged our understanding towards how historical environmental influencers leave their mark on focal entities (e.g. organizational collectives) but biological ecology also tells us that nurturing factors (environment) is not the only influencer shaping entities, nature (genes and hereditary factors) is another influencer in the process. Hull, Langman and Glenn (2001) argued that both gene replication and interaction between the organism and its environment play their part in the evolutionary process and co-determine the outcome. Nature is also highly referred influencer in evolutionary economic geography under generalized Darwinism literature. As one most fertile approach to use ideas and concepts in evolutionary economic geography, variation, selection and retention can also highlight the causality and conditioning factors in the imprinting process. Moreover, the nature versus nurture debate is one of the oldest debates not within biology but also sociology:

- **Nature** refers to all of the genes and hereditary factors that defines all explicit and implicit characteristics of focal entity
- **Nurture** refers to all the environmental variables that impact focal entity, including early experiences

Although, the debates over the relative contributions of nature versus nurture were mostly focusing on only one-side, today, most scholars recognize that both factors play a critical role.

Some philosophers such as Plato and Descartes also discussed on the debate and suggested that certain characteristics are independent of environmental influences. On the extreme side of naturalism, nativists suggest that all or most behaviors and characteristics are the results of inheritance. On the opposite side like John Locke believed in tabula rasa, which suggests that the mind begins as a blank slate. According to this notion, everything that we are, and all of our knowledge is determined by our

experience. Empiricists suggest that all or most behaviors and characteristics result from learning.

Some characteristics are tied to environmental influences, for example parenting styles during a childhood may define how a person behaves when he/she become an adult. Bandura et al. (1961) demonstrated that children could learn aggressive behaviors simply by observing another person and Bandura (1977) explained how behavior is learned from the environment through the process of observational learning, where he highlighted the importance of the retention of behavior and mediating processes that occur between stimuli & response during the learning process.

Today most researchers acknowledge that the interaction between heredity and environment is often the most important factor of all and both nature and nurture influence behavior and development. It is still under discussion; how much heredity or environment influence a particular trait. Actually, there is not a simple way to disentangle the multitude of forces that exist, but it can be suggested that these influences include genetic factors and environmental factors. Many researchers today are interested in exploring how genes mediate environmental influences. If we accept the ontological communality of biological and social domains, then the application of it in the social domain should highlight how rules of nature (General Darwinism and others) work with rules of nurture (Imprinting). What constitutes suitable social interactors and replicators and how interaction with the environment results in selection should be carried to the domain of organizational collectives at multiple levels.

Our aim is to create a model to clarify the concept of imprinting with the help of evolutionary mechanisms. By enhancing imprinting theory with four evolutionary mechanisms through multiple scales (population, organization and genotypes) in the figure 4.1., the basis for analyzing the present situation for clusters with connection to their history is established. Beyond this, how these imprints persisted during non-sensitive periods has taken great attention from the scholars after Stinchcombe's findings towards the importance of tradition, interests, and ideologies in maintaining imprints and it is not an area to be explained in our conceptual model.

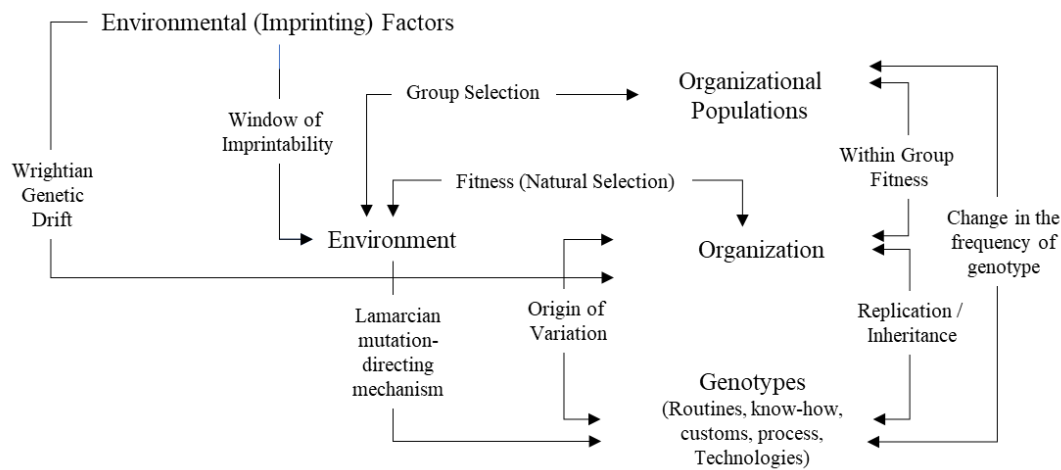


Figure 4.1 : Conceptual model for analyzing imprinting in business clusters.

The imprinting requires a sensitive period. Temporary conditions, shocks, as well as historical ‘accidents’ may create this sensitive period, but the main indicator to be classified as sensitive period is increased malleability of the focal entity by environmental conditions than in normal times. During foundation focal entity is vulnerable to its environment and environmental forces. Foundation period is not the only sensitive period for focal entity, it can occur at later stages of its life-cycle as well and the entity might experience multiple sensitive periods over time (Marquis and Tilcsik, 2013).

During this brief period of susceptibility, the focal entity is significantly more open to the lasting impact of environmental influencers and the window of “imprintability” is only open during this brief period of time. Building on this step, the impacting factors namely sources of imprints as put in the original model of Marquis and Tilcsik (2013) are economical, technological and institutional conditions and individuals. Environmental influencers map their features onto the focal entity but not every environmental influencer succeeds to put their stamp in this brief sensitive period. Natural factors play important role. Thus, understanding the mediation dynamics is important to locate success factors. The last step of the imprinting process is retention, without retention the impact cannot be fully formed. Retention mechanism carry the impact to the critical mass through replication and/or diffusion. During the retention step information (features) concerning adaptations is passed on or copied through time. Retention step leads imprint persistency through local spin-offs and localized learning. In the next section these complex mechanisms are mapped.

The original multilevel imprinting model explains the imprinting in only three steps, existence of brief sensitive period, imprinting with a powerful impact of the environment, persistence of the characteristics developed during the sensitive period. Beyond this the developed model opens the black box of imprinting process and explains it through evolutionary mechanisms.

4.1 Connected Levels in Evolution: Organizational Populations, Organizations and Genotypes

Evolutionary Economic Geography is a complex subject that requires not only the knowledge of basic biological concepts but also the ability to connect them across multiple levels of time and space. Evolution happens in populations as a result of the interaction between organizations and their environment. Individual organizations may differ from one another due to their differences in their routines, practices. As explained by Sober (1984) organizations are interactors which interact with the environment, but interactors also possess replicators which are also called genotypes (e.g. firm routines, traditions, conventions). In this sense differences that are observed at the population level linked to organizations as interactors and genotypes as replicators. Further, understanding the concept of “genotype” is necessary to draw a model and explain how evolution operates through different levels.

4.1.1 Genotypes (replicators)

Explaining how genetic factors play role in mediating environmental influences requires the description of genotypes in organizational theory. In biology, the genotype is the complete genetic coding of an organism, consisting of instructions to help guide its growth and development under environmental triggers or stimuli (Hodgson and Knudsen, 2010). These encoded generators contain ready-made solutions for firms to deal with frequently occurring problems. Regarding firms, genes are defined as encoded means of generating conditional dispositions (Hodgson and Knudsen, 2010).

Genes not only accommodate but also pass on information; by definition there are two main function of genes, first it holds guiding repertoires of instructions for behavior, and secondly, it has a replication ability. The information we discuss in a broader definition is stored in processes, technologies, firm routines, customs, conventions,

regional policies, institutions and procedural memory of individuals which are replicated overtime.

From organizational perspective, it is congruent to think of routines as replicators of organizations. A routine is a generative structure or capacity within an organization. Routines are organizational dispositions to energize conditional patterns of behavior within organizations, involving sequential responses to cues that are partly dependent on social positions in the organization (Hodgson and Knudsen, 2010). Routines depend on a structured group of habituated individuals, among whom many of these habits depend on procedural memory. The behavioral cues exhibited by some members of a structured assembly of habituated individuals trigger specific habits in other. (Hodgson and Knudsen, 2010)

These conditional, rule-like structures and algorithms are the key information mechanisms through which information is carried and processed. Rather than evaluating every possible outcome of an action, organizations follow rules-of-thumb that have proved useful adaptations in the wake of environmental change in the past. Routines are not behavior but mobilize behavioral responses if energized by environmental stimuli (e.g. “if profits drop below a certain threshold, then invest in R & D”). If the environmental stimulus disappears, the behavior disappears, but not the *underlying routine*.

In communities of practice agents are bound together through day-to-day interaction, based on the same expertise, a common set of knowledge and experience directed to a particular set of problem based on basic understandings and similar technological paradigms under a shared repertoire. This way distinct routines, conventions and other institutional arrangements are created (Bathelt et al., 2004). In the wood products cluster of Portugal sawmills mostly produce use low quality timbers as a result of the lack of investment in timber quality by landowners. To change this setup, several parts of the cluster have to be changed simultaneously in order to be classified as a genotype for this cluster.

Considering the genotypes of a regional industrial population, not only formal business routines but also informal routines embedded in social relations should be explained. An ideal-typical industrial district comparison between four footwear clusters located in Italy and Mexico carried out by Raboletti (1995) represented industrial atmosphere

(labor market, cultural and social background etc.) along with the formal business medium in which the routines, know how, way of doing business are embodied. As Gronovetter (1985) described, economic action is embedded within social relationships. Porter (1998a) also referred this view and explained social glue as a contributor to value creation process through flow of information, discovery of value-adding exchanges, willingness to align agendas and to work across organizations.

4.1.2 Origin of variation

Darwinian mechanism of VSR starts with variation, without variation there would be nothing to select. Selection work under variation, scarcity and differential fitness. When a focal entity differentiates its activities under a nurturing force then VSR process is initiated. For example, Marquis and Huang (2010) argued that institutional conditions during the founding period not only affects organizational capabilities to make them more persistent but also differential under contingent factors in different historical periods. Firms that were founded when regulatory and political conditions promoted coordination between firms were more likely to acquire other organizations and this activity roots in the previously developed coordination experience (Marquis and Huang, 2010). Variations in terms of activities of focal entity are explained as adaptive information (genotypes), on which selection and replication acts. The success of imprint depends on its reproducibility of successful variations.

In the case written by Bathelt and Boggs (2003) the old book publishing cluster is examined and the reason behind unsuccessful initiative for re-development of the book publishing industry in Graphisches Viertel is explained through lack of sufficient variation, which is necessary for positive selection of pioneering firms.

In 1990, after German Reunification, the Förderverein Medienstadt Leipzig (Development Association of the Media City Leipzig), initiated a program for re-development of the Graphisches Viertel as a site of book publishing and affiliated industries (Schubert, 2000) and restore the city as a major center of book publishing in Germany.

The Förderverein's mission to position Leipzig as a media city with media-related businesses and institutions were failed. Neither Leipzig's book fair restored its importance nor publishing houses did flourish, instead the industry underwent massive de-industrialization (Volpers 1991; Lemke, 1992; Börsenblatt, 1993; Bach, 1995;

Denzer and Grundmann, 1999; Wittmann, 1999; Boggs, 2001; Berg et al., 2001). The political initiative didn't create any change in cluster dimensions.

WWII reduced the skilled labor and infrastructure of the industry and the efforts during GDR was poor to relocate lacking capabilities. The book publishers in Leipzig become technologically underdeveloped and poorly equipped compared to Western competitors during GDR. As Arthur (1994) eloquently indicated paths could be dissolved through exogenous forces, such as shocks, catastrophes or crises. These forces are likely to shake the system, thereby cause to break away from the path. In the case of Leipzig technical capabilities were dissolved. Reunification of Germany revealed that these capabilities were not there to compete with their peers. Their capabilities were neither natural nor were they refined with interaction with nature, but rather they were gained through a synthetic process lead by the government. Accordingly, the misfit with the environment could have been realized only after the exposure to open market conditions.

It is also well known that organizations take on elements of their founding environment through individual founders and different founders' decisions to incorporate certain environmental elements, but not others, can lead to variation in imprints even across organizations that are established at the same time (Johnson, 2007). Moreover, Lamarck's hypothetical mechanism suggest that if adaptive (beneficial, useful), power of environment over genotypes creates mutations and these acquired characters are inherited. In this sense source of variation on genotypes will be directly the environment itself. The history of motor racing examined by Pinch and Henry (1999) also provides a good example of how variations on the technology usage are originated as suggested in Lamarck's hypothetical mechanism.

Development of Britain aerospace industry can be traced back to governmental support for aircraft manufacture in the 1920s and 1930s under military race. After WWII British aerospace industry remained massive in relation to the size of country (Hebb, 1993). The table 4.1 below shows the main aerospace-derived influences on technological innovation in motor sport. As a result of this technological shift, the locus of the industry shifted very rapidly from northern Italy to southern Britain

Table 4.1 : Key innovations in Formula One racing (Pinch and Henry, 1999).

Innovation	Aviation Use	Formula One use
Active suspension	Computer based control	Improved handling (banned in 1993)
Aerodynamics	Efficiency in the air, fuel economy, speed etc.	Speed but also downforce
Aero engines	Combination of light weight with high power output	Combination of light weight with high power output
Aluminum	Used in aircraft structures	Widely used in early chassis / cockpit design
Carbon composites	Used in aircraft structures	Used in monocoque construction
Carbon disc brakes	High efficiency and light weight braking	High efficiency and light weight braking
Carbon fiber clutch	Not directly used but aviation inspired	Light weight and strength
Computer based telemetry	Rapid communication of technical data	Rapid communication of technical data
Fly-by-wire	Weight saving electronic control	Weight saving throttle-by-wire control
Turbo charging	Extra performance at high altitude	High power output (banned)
Wind Tunnels	Testing aerodynamics	Testing aerodynamics
Wings/ winglets	Support in the air	Downforce for grip

Highly skilled workers were pivotal in transferring the necessary knowledge from aerospace industry. By the 1950s, over 16% of Britain's qualified scientists and engineers were engaged in research and development in the aviation and despite the Italian industry, many of the leading designers and engineers in motor sport were originally trained in aeronautical engineering. (Pinch and Henry, 1999).

4.2 Environmental (Impacting) Factors

In the multilevel view of imprinting (Marquis, 2013) suggests four sources of imprinting mechanisms that causes formation of the pattern during the sensitive periods, namely, economic conditions, technological conditions, institutional factors and individuals. The environment is conceptualized by Marquis and Tilcsik, 2013) is rich, modular with a hierarchic depth and satisfy apprehension of Martin and Sunley (2006) in their view of regional path dependence. There are several studies showing that organizational collectives faced with imprinting mechanisms carry imprints of their founding environment rooted in economical, technological and institutional conditions or stamp of an entrepreneur. Table 4.2 below shows sources of imprinting mechanisms with given examples.

Table 4.2 : Source of the imprints on organizational collectives (Marquis, 2013).

Source of imprint	Mechanisms & Examples on Organizational Collectives
Economic and technological conditions	1. Mechanism: External economic and technological conditions serve as a constraint on new organizations, and the initial patterns are maintained by subsequently founded organizations imitating prior organizations. Example: Stinchcombe (1965) on employment structure of different industries; Marquis (2003) on travel technology influencing the density of local inter-corporate networks
Institutional factors	2. Mechanism: Collectives have different standards of legitimacy that not only shape initial organizations, but also continue to influence more recent entrants. Example: Lounsbury (2007) on different corporate strategies of investment firms across US cities; Dobbin (1994) on different organizational types of railroad firms across countries.
Individuals	3. Mechanism: Political leaders and influential founders create powerful policies or organizations that define the arrangements and templates of a field or industry in an enduring way. Example: Mao Zedong's ideology of self-reliance having a lasting influence on industrial structure in China (Raynard et al., 2013); Rockefeller developing the vertically integrated oil industry through Standard Oil (Chernow, 1998)

4.2.1 Economical & technological conditions

There are several examples of the economic and technological founding conditions shaping cluster structures and activities. One of the most relevant examples is the study of Stinchcombe (1965) in which economic and technological conditions at the time of founding influence the initial form of employment and these forms are preserved despite environmental changes in the later periods. Another example is on the emergence of new organizational forms by Clemens (2002). This research shows that organizational forms that arise in a given period are shaped by economic and technological conditions and continue to carry the stamp of first emergence period. Marquis (2003) also showed a similar pattern in establishment of community-based intercorporate networks, constrained by the transportation technology during the birth of community. In the case of BMSI, Pinch and Henry (1999) linked the origins and development of motorsport industrial cluster to the technological shift originated from aerospace industry. In their article Bathelt and Boggs (2003) argued on technological development in book manufacturing that rupture regional development paths. Gutenberg's invention of moveable-type printing press not only integrated traditional suppliers like paper manufacturers, rag millers, page illustrators and book binders to the new industry but also created new type of suppliers as type-casters and press

manufacturers, thus revolutionized the structure of the industry and the division of work (Bathelt and Boggs, 2003).

4.2.2 Institutional Factors

There are variety of studies on how institutional conditions influence collective behavior of the clusters with or without referring imprinting theory. The influence could be at regional level or even country level. For example, Inglehart and Baker's (2000) work on national culture and traditions shows how distinctive cultural values persist against modernization affects.

Dobbin's (1994) study of railroad policy in different counties namely USA, France and Great Britain shows key role of cultural and political differences during the establishment of the industry. Different patterns of the countries still exist despite the change of the environment.

Establishment of trustee logic differed between Boston and New York funds depending on the historical cultural imprint showed by Lounsbury (2007). Boston based funds are conservative with a long-term focus opposite to the New York's aggressive funds.

4.2.3 Individuals

There is not much empirical study analyzing human agency influencing clusters as whole present in the field. However, Mao's role on Chinese industrial locations (Raynard et al., 2013) or Louis XIV's efforts on French art and science organizations (Johnson, 2008) are such examples of individual imprints by political leaders. Another branch of influencers is entrepreneurs. How Rockefeller pioneered oil industry with vertical integration (Chernow, 1998) or Carnegie's efforts during the early years of the steel industry (Nasaw, 2006) are well known examples. Thus, the power of individuals and transformational leadership of them should not be ignored during imprinting analyzes.

4.3 Window of Imprintability

Porter, like Krugman (1991, 2001) considered historical events as randomized ruptures or just initial 'accidents', typically the random decision of one firm to set up in a particular region. Arthur (1994) also explain initiation of paths in terms of small

accidental events. At the beginning of path creation there are numerous possibilities and there is no linkage to history. On the other hand, these 'historical accidents' and 'chance events' are not very clearly examined, they are 'non-contextualized' events and treated as 'black box'. Beyond this, like in the case of the UK motor sport cluster, root of clustering cannot be explained in terms of 'historical accident' model but can be explained through local historical legacies.

Another account of literature suggests a mixture of limiting conditions and chance events and conceptualized these conditions as 'window of locational opportunity' (WLO). The Window of Locational Opportunity approach was introduced by the Californian School of Economic Geography in the late 1980s (Scott and Storper, 1987; Storper and Walker, 1989). WLO concept argues that new technologies begin as generic assets and new technologically based sectors (new industries) establish their own supply chain with an enhanced locational freedom (Storper, 1997). Later the concept has been extended and refined by Boschma (1997), Boschma and Van der Knaap (1997), and Boschma and Lambooy (1999). One extension concerns that it is not realistic to assume a total freedom, new industries might be linked to older industries as in the case of British automobile industry. Boschma and Wenting (2007) showed in their research on survival rates of automobile firms in the British automobile industry during the birth of this new industry in the period between 1895 and 1968. New start-ups performed better in a region which was well equipped with related industries like coach and cycle making. The entrepreneurs who had work experience in those related industries demonstrated a higher performance than other firms who lacked experience in these related industries which suggested that factor conditions could act in the transfer of knowledge through entrepreneurial dynamics between related industries.

WLO model not only incorporates the Darwinian trinity of variety, selection and retention but also it allows for endogenous dynamics and selection. The WLO concept acknowledges that firms spatially accumulate different routines and competences over time (Boschma, 2007). As illustrated in the new British automobile industry case study entrepreneurs with related industry knowledge not only act as information carriers but also important conditioning factor for regional performance. Thus, we should note that local context-specific factors are important influencers in the creation of new ruptures and the reason why these factors are activated in some places and not others should be

addressed. It is important to separate triggers and conditioning factors by which selection works.

According to Boschma and Frenken (2003), selection pressure of existing spatial structures is weak when new industries emerge, locational features do not affect determination of the location of new sectors. On the other hand, certain critical junctures, historical shocks or environmental conditions may also initiate a new path and create a new window of opportunity. The ‘economic miracles’ of Ireland and Finland have demonstrated that national policy-makers as an environmental condition may provide ‘windows of opportunity’ for certain regions and should be considered while explaining regional path creation (Martin and Sunley, 2006). Feldman’s (2005) study of public employment in the case of Washington DC showed the effect of crisis related to downsizing of Federal employment resulted in large supply of skilled labor and provided a favorable factor condition for industrial uprise. Another good example for showing selection pressure of existing spatial structures is also important for emerging new technology industries. Zook’s (2005) study on internet industry in San Francisco Bay region showed that pre-existing venture capital industry was crucial to the development of the internet industry in the location, and that the other initial locations of internet production which lacked an experienced risk capital system underwent relative decline.

These examples show that there are triggers that opens windows and create a permitting or limiting situation in a selection environment and how these factors are activated in some cases can be explained by selection process. Based on WLO concept figure 4.2 illustrates how the emergence of spatial pattern should be explained through not only environmental conditions but also selection.

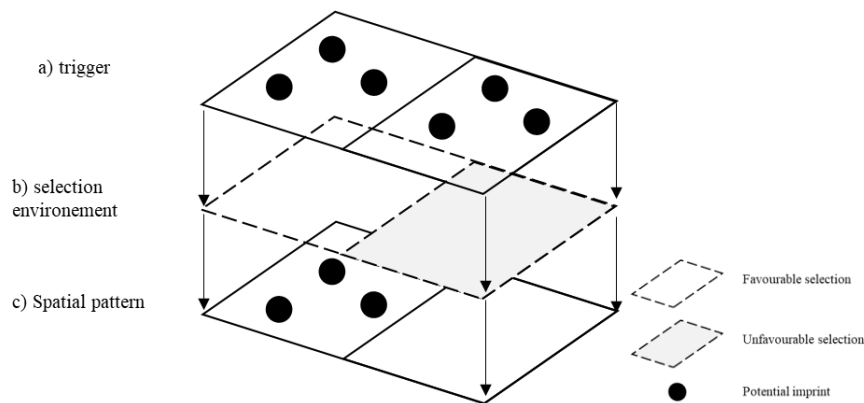


Figure 4.2 : An illustration of triggers and selection environment, adopted from Boshma (2007).

In the figure 4.2 the spatial system is divided in two regions. However, triggers open a window for both systems, as shown at the intermediate level, selection environment only permits one of them to establish the spatial pattern. Spicer et al. (2000) demonstrated how major ruptures (e.g. the collapse of communist regimes) can change the selection environment of firms resulting in the elimination of firms and their routines previously sheltered from international competition. In this sense we need in addition a more dynamic, evolutionary type of explanation for why it happened in the first region, not in the other. To provide comprehensive explanation, the importance of selection should be clarified. As illustrated in figure XXI after triggers impact on selection environment, not only environmental conditions but also heredity factors impact on the selection environment. As the selection environment changes, new form(s) of regional industry get(s) selected. It is important to highlight that selection refers to survival of some variations and correlated positively and causally with their fitness in organic selection.

4.4 Evolutionary Mechanisms of the Model

4.4.1 Natural selection mechanism

Changes in the regional environment setting may result in increased fitness for some firms and decrease for others, ruptures in environmental conditions may not only favor some regions (e.g. Californian oil refineries which favored local lower emission targets over their Texan competitors) but may also change selection environment dynamics comprehensively (e.g. the collapse of communist regimes) and may cause elimination of firms and their past routines sheltered by previous selection environment. Thus, in order to understand why some regional industries selected over another selection

mechanism should be exemplified but before opening up this process it is necessary to discuss how two forces environment (nurture) vs endogenous factors (nature) interact.

Selection mechanism acts on interactors (firms) with traits that fit the specific environmental context and change in the environment fosters the selection process. As a recursive process, not only industrial dynamics predefine the selection environment, but selection forces also shape industry structures and change the features of populations of firms through elimination. In this recursive process also powerful (groups of) entities can sometimes change the selection rules. In an example, firms can stimulate consumer demand, lobby governments, thus selection of firms is a complicated process.

Selection refers to the mechanisms that bring about the survival of some variations rather than others, often reducing variety (Hodgson and Knudsen, 2010). However, variety is created endogenously; selection is about how those variations are tested in the real world. Moreover, there is no requirement that outcomes of a selection process are necessarily optimal, it is fitness relative to the given environment that runs the selection process (Hodgson and Knudsen, 2010). Darwinism does not assume that selection brings about globally efficient or (near) optimal outcomes and may even lead to systematic errors (Hodgson, 1993).

Environmental interaction and variation in fitness result in elimination (e.g. death of organisms, exit of firms). From biology a simple example is the selection of a subset of faster chickens that survive an attack by a fox and the selection of a subset of firms that survive an industry shakeout. Many biological and social processes involve subset selection. *Subset selection* is defined as selection through cycles of environmental interaction and elimination of entities in some variations. Each cycle of subset selection posterior set is established with fewer elements than are in the anterior set, if it continues, subset selection may eventually run dry of variation.

Industry dynamics is a subset selection process where entry and exit of firms change the distribution of properties of firms, including product technology, efficiency, and size. Industry entry and exit patterns point to subset selection as a major force in industry evolution. There are number of scholars as Klepper and Graddy (1990), Geroski (1995) who have provided comprehensive findings on subset selection. In an example, Dunne et al. (1988) examined patterns of firm entry and exit in U.S.

manufacturing industries and showed that selection forces as major driver of industry evolution shape industry structures and change the features of populations of firms, they also reported fitness advantage of multi plant over single-plant firms.

Even though, variation is created through emergence of new traits, the information about traits of successful adaptations is passed on from the anterior set to the posterior set over time by genotypes (replicators). As a result, information is accumulated over generations and help interactor to adapt to different environment settings.

In an example, new industries emerged in regions where other industries supplying related knowledge and skills necessary to develop a new technology enjoy this know-how through different channels of information replication and diffusion, including labor mobility (e.g. coach building for car chassis design). In this sense, knowledge spillovers from an old industry increased fitness advantage of firms in new industry.

Fitness advantage due to technological shift in motor sports industry is well portrayed in the case of BSMI (Pinch and Henry, 1999). The withdrawal of Mercedes have provided a WOI for all manufacturers in motor sports industry, but British manufacturers exploited this gap more than their competitors in Italy due to their superiority. This superiority was possible through lightweight aluminum configurations and weight reduction know-how, which were acquired from aerospace connections. Contrarily, Italian Industry did not have the same amount of aircraft-inspired know-how, and as a result, powerhouse of the industry shifted from northern Italy to southern Britain (Pinch and Henry, 1999). In this sense natural selection worked in favor of BSMI after withdrawal of Mercedes, which enjoyed technological supremacy gained through skilled workers recruited from aerospace industry.

Boschma and Knaap (1999) examined whether regional labor markets and knowledge institutions may facilitate the ability of regions to generate new high-tech industries. In their research they analyzed how new clusters of innovative industries emerged in Great Britain and Belgium during different industrial development phases (industrial revolutions) and presented some evidence that existing labor markets and knowledge institutions had acted as facilitators where new clusters emerged and developed. In an example during the first industrial revolution presence of a domestic putting-out system (or proto-industrialization) led to an accumulation of general skills and experience in textile and metal working and facilitated the transition process through

specific skills in factory-based systems of production (Marshall, 1987). The related variety achieved in the information transfer can be beneficial for firms and industries but at the very end the determinant in the selection is presence of required information rather in all tangible and intangible factor conditions or related industries, because it is necessary interactor to adapt to different environment settings.

The case of Leipzig book publishing industry showed that Leipzig enjoyed the window of opportunity rather than Frankfurt. Possessing cultural proximity to protestant reformation helped for publishers in Leipzig to capture this opportunity, and the local industry become a major location for reformist printing during early 16th century. On the other hand, Frankfurt's book fair was mostly dominated by Latin texts with International participants. This variation worked in the advantage of Leipzig as the demand for Latin texts declined and demand for German texts surged during the next few centuries. Leipzig was attracting foreign publishers but published increasingly more German dialect texts (Bathelt and Boggs, 2003). This example portrays a typical natural selection mechanism, change in the conditions of environment, which is invention of the moveable-type printing press opened a window for both clusters but favors the Leipzig book publishers in terms of fitness.

4.4.2 Group selection mechanism

Fisher (1930) suggested that aggregate fitness in a population is determined by the variance of fitness across the individuals but this logic lacks population thinking and altruistic behavior.

Indeed, the idea that natural selection could operate not only on individuals but also groups was suggested originally by Charles Darwin (1871) and famously promoted much later by the biologist Vero C. Wynne-Edwards (1962). As an example, Wynne-Edwards argued that the alarm cry of a bird, telling others in its group of the presence of a predator, would give its group a selection advantage. Therefore, from economical perspective Fisher's (1930) theory may only provide understanding of evolution within the region but not the evolution of regions. A broader view on alteration within the region including cooperation on reaching supply or demand side resources is necessary. The focus shift from single region to different regions which compete each other requires analysis of territory specific characteristics in the micro business environment. In an example, firms loan their production equipment each other, jointly

search for new markets or supply together, cooperate on different phase of production, therefore, selection and the evolution of socially intelligent beings cannot be explained satisfactorily without group selection (Wilson, 2012).

When interactions among firms are sufficiently strong so that their fate is tied up with the fate of the region, then regions may qualify as social interactors, then we can discuss selection process at the regional level. The division of work represent a characteristics (genotype) of the cluster and considering an exemplary setup with division of work in footwear manufacturing, which enables the production of a wide variety of products with short delivery times, allows the shoe producers to postpone their purchase of inputs to the last moment, and this not only increases their capital efficiency but also it expands the capacity of shoe producers to diversify their products and to satisfy market demand (Raboletti, 1995). The crucial point is, only selection (environmental conditions) determines if this trait is valuable to reach more resources.

This approach to group selection is called *multilevel-selection theory* (MST). For MST, it is crucial to distinguish the competition between individuals within the same group and the competition between individuals in different groups, where within-group selection follows the generally accepted idea that individual organisms (or collections of replicators) are in direct selfish competition with each other. On the contrary group-level adaptations require perceiving groups as adaptive units in their own right (McAndrew, 2002). Regional success is then more than the sum of the successes of the individual entities and if interregional differences in selection environments exist (Hall and Sorkin, 2001; Peck and Theodore, 2007). In this vein, different firms and organizations with different component replicators will be selected and only routines of selected organizations will replicate. Here the important point is for group selection to operate, the advantages leading to differences between groups should be sufficiently strong to overcome selection forces on individuals or firms within a group.

In an example is apt with two groups that are in direct competition with each other and have different concentrations of altruists and non-altruists. In the group with high concentration of altruists, the cooperation among them might increase the success of the group by allowing significant adaptive advantages on all the individuals within the group, on the other hand this altruism could be also a disadvantage because dominant altruist group would prosper at the expense of the selfish group and the number of

altruists in the population would increase causing diminishing of the fitness of all the individuals in the less altruistic group.

MST provides an explanation for how altruistic tendencies would evolve in situations in which the selection forces of intense competition between two or more competing groups acts (McAndrew, 2002).

The concept of group selection was later elaborated by the anthropologists Boyd and Richerson (1985) and developed by Wilson (2002) and Henrich (2004). The key point is that cultural transmission effects can generate high degrees of conformism within groups, increase group fitness through cooperation and overcome genetic mutations within group that tend to increase variation within.

The possibility of group selection depends on the existence of structures and mechanisms in the group that limit migration or promote conformism. When group selection occurs, the group functions as an interactor (Social organizations, including business firms are generally acknowledged as interactors). Conformist transmission is not the only process, also a second process, prestige-based transmission, involving copy of successful individuals may take place (Henrich and Gil-White 2001). Success of prestigious individuals may spread rapidly and both processes yield to positive feedback effects (Hodgson and Knudsen, 2010). The important consequence of both conformist and prestige-based process is that they reduce diversity within groups but increase variation between groups and establishes the conditions for strong between-group selection.

The firms that produce similar goods in a region compete with one another. As Porter (1990, 1998) has demonstrated that strong competition and rivalry between firms is an important incentive for innovation and product differentiation thus variation. Variation is necessary for selection process to operate. On the other hand, Multi-level (group) selection theory also suggest that the environmental pressures and competitions within group is different than competition between groups and 'altruism' increases the within group cooperation. Competition between groups added a new evolutionary dimension that would have changed the course of evolution for traits such as altruism within the group. However, cooperators lose opportunities for resources and allow others to use them, groups of such cooperators will gain access to greater amounts of resources. If accessing resources is critical to survival, then groups with more cooperators will have

higher average fitness. Neither competition nor cooperation is evitable in clusters. Porter advocates a right combination of competition nor cooperation and developing vigorous local rivalry within cluster. Here the important point is not the ability of clusters developing the right combination in local rivalry, but rather leaving it as one of the components of the selection environment.

The enactment of tacit knowledge depends crucially on the existence of a structured context in which individuals interact with each other (Essletzbichler, 2012). While regions with customs and institutions that facilitate fitness advantages on collectives are more likely to grow than others and certain social structures (e.g. habits, customs) may be favorable in one environment or time period, they may cause destruction in another (Mayr, 1963; Wilson, 2011).

Saxenian's (1994) work on Silicon Valley and Route 128 illustrates the differing organizational and adaptive capacities based on their local social and institutional structure, particularly explains why these two regions have responded so differently to the same economical ruptures like lowering of global trade barriers, intensification of international competition and cuts in the domestic military budget despite their similar origins and technologies. She asserted that agglomeration and external economies alone cannot explain industrial development in Silicon Valley and relative decline in Route 128 after these ruptures and indeed their social and institutional structure determined their adaptability.

System of Silicon Valley depends on regional networks and promotes learning and mutual cooperation among web of producers producing complex and related technologies. Furthermore, this dense social network promotes not only experimentation and learning but also entrepreneurship (Saxenian, 1994). This is akin to what Porter (1998) advocates, vigorous local rivalry within cluster. The permeable boundaries between firms and local institutions (i.e. trade associations and universities) enabled the loosely coupled team structures. On the contrary, the Route 128 region is dominated by vertically integrated (a firm-based system) and autarchic corporations where customers, suppliers and competitors corporate under the strict confidentiality and loyalty conditions and this situation reinforces a regional social structure that promotes stability and self-reliance (Saxenian, 1994). Thus, this hierarchical structure tends to maintain centralized authority and vertical information flows.

When environmental selection conditions changed, the corporations of Route 128 which invested heavily on specialized equipment and worker skills not only locked into incompatible technologies and markets, but also find themselves unable to cope with the new conditions due to their self-sufficient structures. On the contrary, firms in Silicon Valley became well adapted to conditions of technical and market uncertainty due to their specialized capabilities and network relations which encouraged process of reciprocal innovation that reduced the relational frictions between any size of firms and institutions (DeBresson and Walker, 1991).

4.4.3 Wrightian (genetic) drift

In drift, frequency outcomes are unrelated to fitness thus, replication that does not depend on fitness can be defined as drift. In drift, solutions that are passed on to the next generation constitute

a sample of the currently available solutions, which are uncorrelated with fitness or efficiency. In nature, genetic drift is defined as passing genotypes to next generation in an unsystematic or random way. In industry evolution, drift would govern the evolutionary process if investors invest in a solution without the intervention of environmental forces.

Genetic drift operates on interactor and changes the genotype pool unpredictably. It usually limits diversity because some genotypes become either eliminated or expressed too much. There are two forms of genetic drift; the bottleneck effect and the founder effect. When a small group of individuals breaks away from a larger population and creates its own population in a separate location, rare genotypes could be overrepresented in this newly "founded" population. If this new population is isolated and interbreeds, then the resulting population could have a high frequency of certain traits. For example, the Afrikaner (Dutch) population that settled in South Africa had an abnormally high count of Huntington's Disease, because the first Dutch settlers had a high frequency of the gene (compared to the original Dutch population). (URL-1). Rockefeller developing the vertically integrated oil industry through Standard Oil (Chernow, 1998) is a good example for the founder effect. Although, Rockefeller had the vision of vertically integrating the oil industry, the organization enabled this vision was the power of Standard Oil. As the practice was reproduced through Standard Oil he was able to accomplish his vision. In this sense Standard Oil

is the genetic drift for the industry by the effect of Rockefeller as the environmental (imprinting) factor.

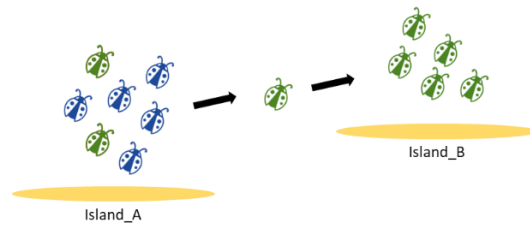


Figure 4.3 : Founder effect as a genetic drift.

The bottleneck effect occurs when a random event, such as a natural disaster, unselectively reduces the size of a population. The resulting population is much less genetically diverse than the original population. Some alleles may become entirely eliminated and some may become overrepresented.

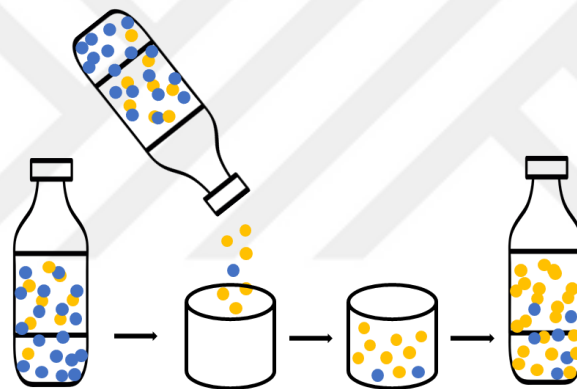


Figure 4.4 : Bottleneck effect as a genetic drift.

Example: After the northern elephant seal almost went extinct as a result of extensive hunting, the seal was placed under government protection. Since then, the population has grown, but all the descendants have little genetic variation since so few elephant seals remained (URL-1).

Evolutionary mechanism in Leipzig new media cluster explained by Bathelt and Boggs (2003) is a good example for Wrightian drift. In the case of Leipzig new media cluster, although, some of the local politicians and city planners interrelate birth of new media cluster with the pre-War traditional industry, book publishing, the birth and growth of the new media industry in Leipzig is more related to establishment of MDR (Mitteldeutscher Rundfunk; or Middle German Broadcasting Service), a public television and broadcasting network not the presence of former book publishing industry (Denzler and Grundmann, 1999). Moreover, Leipzig had never played an

important role in the television and film industry (Sagurna, 2000). Despite the lack of tradition in media industry, development of new media cluster is quite interesting. The new media industry developed around MDR, which became the anchor organization in the cluster (Sagurna 2000; Schubert 2000; Bathelt 2001). The cluster firms were deeply connected with MDR and with each other. Furthermore, they were also connected to other actors in the region like new Leipzig convention center, which indicated that there were strong vertical relations between the firms of the cluster. After its establishment, MDR rapidly became the anchor organization in TV and media industry in Leipzig, which was the one of the few economic sectors that grew in the post-Reunification period (Sagurna 2000; Schubert 2000; Bathelt 2001). Establishment of MDR worked as a drift and created a new population of firms through MDR, like in the example of Standard Oil.

4.4.4 Lamarckian mutation directing mechanism

Lamarck directly linked the 'use and disuse' to effects of the environment on the "habits" of an organism and, through the said habits, on the "shape and nature" of phenotypes (e.g. body parts) additionally he considered these environment- effected adaptive changes to be heritable (Koonin and Wolf, 2009).

As Lamarck said that "...nature shows us in innumerable...instances the power of environment over habit and of habit over the shape, arrangement and proportions of the parts of animals" (Lamarck, 1984). Lamarck's idea of heredity is based on the three phases starts with environmental impact, direct habitual change and lastly an inheritable change.

Koonin and Wolf (2009) explained Lamarck's scheme in terms compatible with modern genetics as;

- 1) environmental factors cause genomic (heritable) changes
- 2) the induced changes (mutations) are targeted to a specific gene(s)
- 3) the induced changes provide adaptation to the original causative factor

Obviously, the adaptive reaction to a specific environmental factor has to be mediated by a molecular mechanism that channels the genomic change. This point also requires attention while carrying the analogy to the organizational stream.

Lamarckian way of evolution is different than Darwinian. In the Darwinian, the environment is not the causative agent but a selective force that may promote fixation of variations that are adaptive under the given conditions, on the other hand in Lamarckian way environment directly creates variations.

Darwinian route is simpler and requires no specialized mechanisms to direct the specific modifications (mutations) providing the requisite adaptation.

Despite the substantial mechanistic differences, the Lamarckian and Darwinian schemes are similar in that both are essentially adaptive in the final outcome and they are radically different from random drift (which may be denoted the "Wrightian modality of evolution" (Wright, 1986).

Lamarckian evolution refers to the transmission of environmentally influenced acquired traits. A common example used to explain this phenomenon is the length of giraffe's necks. Giraffe's were originally short necked but each generation the adult giraffes would stretch their necks to reach higher leaves that were left behind. Stretching their necks resulted in the adult's neck being slightly longer (than if it had not stretched). Importantly, according to the theory, this trait, longer necks, was transmitted to the giraffe's offspring. Over many generations the necks grew increasingly longer. In Lamarck's evolutionary view interaction with the environment led to an inherited physical change in the organism. However, it has been a controversy, recent studies on epigenetic inheritance has been increasingly understood. With epigenetics there are not changes to a DNA sequence (mutations as we generally understand them) but "tags" are added to the DNA sequence that alters the expression of a gene. Importantly, factors in the environment the organism is exposed to change how these tags are added and this can be inherited across generations. So, there is a way for an organism's environment to influence inherited physical changes in an organism's future descendants.

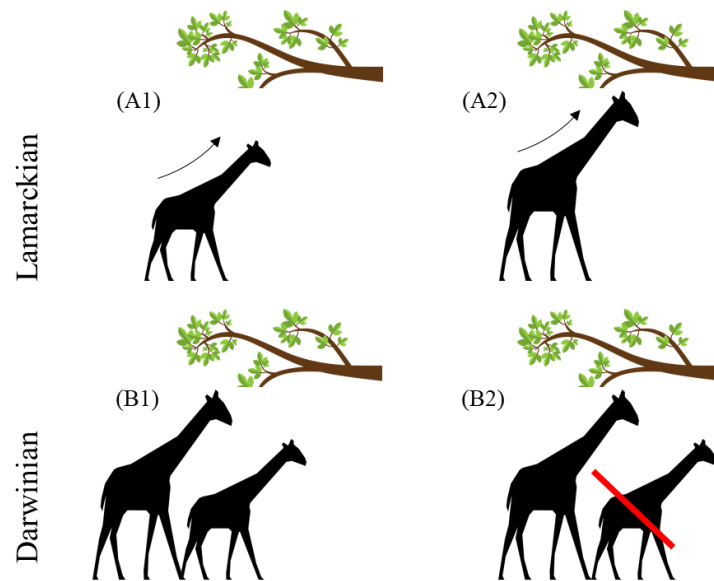


Figure 4.5: Lamarckian evolution vs Darwinian evolution.

As mentioned, the adaptive reaction to a specific environmental factor has to be mediated by a mechanism that channels the genomic change, heredity factors (presence or absence of routines, know how, customs, social structure etc.) may disable environmental conditions to work and may result in a disability to acquire the necessary habit. In order this mechanism to be successful environmental forces shall change the habits so that replication can work on that direction.

BSMI case of Pinch and Henry (1999) presents a good example of Lamarckian mutation direction mechanism. Although, there were powerful endogenous factors like the presence of local racing clubs and the tradition of engineering industries, the variation that led to the technological superiority was the intervention of aerospace industry through mobilization of its factor conditions. In the case, environmental impact of technological disruption acted as a causative agent rather than a selective force and directly changed genotypes of firms in BSMI therefore this causation is an example of Lamarckian evolutionary mechanism.

Similarly, the case of American Mutual Fund Industry Lounsbury highlighted influence of exogenous factor, professional money firms, as origins of variation. The "professionalization project" of money managers was born as a result of developments in portfolio management theory and financial economics (Whitley, 1986). This new class of professionals promoted the emergence of performance logic through more aggressive investing techniques in order to produce higher short-term annualized returns (Mayer, 1968). Ways of saving for the future was quite different in the early

post-World War II era in the American society. Most people used to deposit their savings in a commercial bank, but it has shifted, and the mutual fund organizational form has become a central financial institution in this shift (Lounsbury, 2002). The main environmental influencer on the evolution of fund industry was change in the economic domain after developments in portfolio management theory and financial economics, but as this new logic and practice diffused through professional money management firms. The performance logic (focus on short-term returns) was promoted by growth funds by 1950s and around 75 percent of the growth funds employed independent professional money management firms by 1960 (Burk, 1988). The mutual fund industry dominated by conservative investment strategies was replaced by aggressive strategies that promised more rapid growth. The environmental influencer acted as causative agent rather than just a selective force and showed a Lamarckian mutation direction behavior.

4.5 Within Group Fitness & Traditionalizing Forces

It is obvious that firms do not evolve in a vacuum but co-evolve with other economic agents under an institutional setting (Freeman, 1995; Nelson, 1995). Both Setterfield (1993) and David (1992) discuss how social norms emerge and regulate behaviors of economic agents maintain itself through sustained social interaction and positive feedback mechanisms. These institutional arrangements exist outside the boundaries of individual economic agents as an efficient solution to common economic problems and will emerge to co-ordinate economic activities (Granovetter, 1985; Essletzbichler and Rigby, 2007). As interactors are bounded by the territory, territory sets another selection environment for organizational interactors.

According to Hodgson and Knudsen (2010), “social structure refers to a set of significant social rules, social relations or social positions involving a multiplicity of individuals, with properties that are not properties of individuals taken alone” (p. 163). The group of firms, social as communities, are not reducible to individual memories because those individual memory fragments are not fully meaningful or effective except in the context provided by the fragments stored by other members (Winter, 1982).

Once social structure is established then it draws conformist actions not only normative but also informative, that relates individual behaviors to prominent conventions within

the group. Without such a social structure, conformist pressures would be less significant. Hodgson and Knudsen (2010) define three informative rationales related to conformist behavior

- 1) As Simon (1990) states individuals within group enjoy local information broadcasting, utilize possible capacity and acquire skills which are received through social channels and by this way achieve a fitness advantage
- 2) Baron et al. (1996) show that individuals increase their probability of imitating others when there is a lack of information under uncertainty and difficult conditions which is also consistent with Asch's seminal experiments in 1950s
- 3) Henrich and Gil-White (2001) suggest that successful individuals are copied among groups, actions of successful individuals may spread more rapidly than others, individuals avoid cost of learning by shortcutting the haphazard processes of trial-and-error learning

As organizational behavior is based on learning or adaptation based on organizational experience (March and Simon, 1958), this conformist approach reduces friction on diffusion of genotype and mediates retention. On the other hand, solidification of imprint will also bring what Stinchcombe (1965, p. 169) called “traditionalizing”. Stinchcombe (1965) defined traditionalizing forces as events subsequent to founding which solidify the imprinting effect. Imprinted behaviors follow a population level prescribed behavior that has been accepted as appropriate (Stinchcombe, 1965; Boeker, 1989). There are several major schools, theories and concepts that is related the phenomena, as institutionalization (Meyer and Rowan, 1977; DiMaggio and Powell, 1983) or inertia (Hannan and Freeman, 1977, 1984). The result of the process depends on the strength of traditionalizing forces, for example, Boeker (1989) showed that traditionalizing forces are weaker among younger firms and those with newer CEOs and divergence from an imprinted strategy was more likely. On the other hand, after solidification of imprint, the structure may turn to be conservative and unresponsive to change, that mean habits and customs of a population become resilient and may establish a barrier to social and environmental change (Hodgson and Knudsen, 2010). Lounsbury's (2007) study of mutual fund industry was a categorical example of the resilience of social structure. He showed that trustee logic rooted in financial culture of Boston and its Brahmin elites blocked the firms to adopt to shifted

industry attention toward short-term performance instead of long-term conservative approach. Understanding the tension requires a deep analysis of the roots of mutual funds. At the beginning, all mutual funds were organized and operated along the trustee logic and provided service to wealthy families focused on capital preservation and the intergenerational transfer of wealth, as opposed to short-term gain (Holbrook, 1937). Moreover, Boston's deep orientation on trustee logic has deep roots in the financial culture of Boston and its Brahmin elites which blocked them to acquire performance logic and new financial practices (DiMaggio, 1981, 1982). Actually, Bostonians were far from class mobility and opportunism that characterized Wall Street and see themselves less as capitalists and more as stewards of their descendants' wealth (Henriques, 1995). In the early years, the mutual funds were organized and operated along the lines of the trust business that provided fiduciary management services to wealthy families and was distinguished for its focus on capital preservation and the intergenerational transfer of wealth, as opposed to short-term gain (Holbrook, 1937). This financial culture of Boston and its Brahmin elites blocked the firms' attention to the transforming industry standards towards short-term performance instead of long-term conservative approach, exclusive upper-class clubs also mediated the persistence in the main logic. Creation of this persistence shows a good example of strong within group fitness forces.

Another example is work on directorship networks (Marquis, 2003). He identified three social institutions that may contribute to the persistence in local network connections: exclusive upper-class clubs (Kono et al., 1998), banks (Mintz and Schwartz, 1985), and local arts and culture organizations (Ostrower, 2002). His study showed that directorships established prior to the advent of air travel technology have preserved locally focused networks different than more recently established communities, which is a pattern maintained by emulation of locally legitimate templates of action (Marquis, 2003). This research enables us to theorize inhibitory function of social forms on new variations.

4.6 Retention mechanism

Successful genotypes not only increase survival rates for an organization but also its spin-offs. Through rounds of selection (Porter, 1990) the spin-offs help create stable clusters with firms that through generations can dominate an industry nationally or

even globally (Boschma and Wenting, 2007; Buenstorf and Klepper 2005; Thompson and Klepper, 2005; Dahl et al., 2003, 2005).

Although punctuated equilibrium change can be observed smoothly at higher levels of aggregation its installation takes place at micro levels between individuals or firms in local territories or networks (Rafiqui, 2009). Network interactions reproduced over time and across a number of actors (Ahuja et al., 2012). According Marquis (2003) new entrants follow existing structural patterns of prominent network members and such reinforcing mechanism creates an enduring variation in the network and probably mediating knowledge flows or access to information. Therefore, it is important to address the reinforcing mechanisms of economic evolution at the level of collectives.

Organizations can be characterized by emergent properties and capacities that are not possessed by individuals taken separately but that stem from the structured relations and causal interactions between the individuals involved.

“The replication of routines includes the replication of organizational dispositions to activate cue-triggered patterns of behavior within the organization as well as the replication of social positions that define roles associated with individual interactions and the performance of routines” (Hodgson and Knudsen, 2010, p. 142). Replication can mean copying routines among plants of companies or the imitation of routines that work well elsewhere. The movement of workers between organizations or the hiring of consultants to transfer knowledge are mechanisms for routine replication.

In the case of British motor sport industry, need for knowledge supremacy creates a frictionless reinforcement process through diffusion of aviation-inspired technologies.

Knowledge about design, production and operation of racing cars are mostly possessed by designers, engineers, fitters and mechanics and carried by them, the main knowledge dissemination processes are listed as (Pinch and Henry, 1999).

- 1) High staff turnover
- 2) Information leakage through component suppliers
- 3) High rate of new firm formation after failures
- 4) Informal collaborations
- 5) Information gained through personal contacts

6) Observations during races

At the end of each season there is usually high staff exchange occurs between companies, some of them move with drivers and even some firms employ specialist on short terms just to gain knowledge about other teams (Pinch and Henry, 1999). Staff exchange act as carriers of crucial information between companies and it is quite often in BMSI, analysis of professional career histories showed that the average move during the career is eight which equals to 3,7 years between companies (Pinch and Henry, 1999).

On the contrary, the acquisition of routines involves new conditional mechanisms that enable new responses to new types of information inputs rather than merely new information inputs to address existing challenges. Because routines need to be implemented in different organizational contexts and copying is imperfect, the number of potential responses to information input expands. Routine acquisition requires absorptive capacity and will induce copying errors and modification to fit with existing routines and cultures. If absorptive capacity is lacking or existing routines are too dissimilar to allow copying, the process may fail. Habits and routines are replicators at different levels of analysis, with habits attaching to individuals and routines to organizations

Learning activities in a region is accomplished through mobility of human capital, as a side effect of routine business activities and transfer of information via informal local networks in which trust among agents facilitates diffusion of knowledge at the region (Boschma, 2004). Hence, like in the example of Third Italy a large stock of social capital favors interactive learning and knowledge spill-over, which allow many low-tech firms to survive and prosper (Morgan 1997; Asheim, 1999). The role of social conditions (e.g., mutual trust) is critical for learning mechanisms in the region.

Knowledge diffusion mechanism in Leipzig book publishing is a good example for retention. The process, which was used to cast movable metal type mill was complex. In order to produce the suitable metal type, printers needed a type of alloy which was strong and ductile; hard and nonporous; non-corrosive and maintained the plane-parallel shape of the castings when cooled (Dittmar, 2011). This know-how was a trade secret and the printers, who established presses in cities across Europe were almost exclusively Germans. Most of them had been apprentices of Gutenberg and his

business partners in Mainz, or had learned from former apprentices (Dittmar, 2011). As these apprentices looked for new urban markets, the geography of production and local economies had changed dramatically. The demand for new suppliers as type casters, press manufacturers etc. put its stamp on urban division of labor, and as a result, Leipzig not only became an important trade center but also one of the Central Europe's earliest book publishing sites (Bathelt and Boggs, 2003).

Organizational background of founders in a geographical setting is studied widely in the literature. One of the pioneers highlighted the economic importance of the entrepreneurs based on technical innovation was Schumpeter (1934). The skills and routines of the specific industry that are carried by the founders will be likely to influence the new firm's future development and success (Dahl et al, 2003). In most of the cases of clusters, founders of new firms have an occupational history within the same industry, this type of entry is labeled as spinoffs. Klepper (2001) has identified three sources of spin-off motivation. The first one is agency costs in which employees that find a novel idea or make an innovation initiate their own firms. The second source is organizational, organizational problems or inertia faced by the employee, in this case employee is likely to address missed opportunities or overcome organizational difficulties by founding a new firm. The third source is employee learning which is more common example for old industries. The entrepreneurs may be motivated to found a competing firm, when the parent company enjoys a growth of demand for its products and services, employees are motivated to open up their business in order to meet the increasing demand. Growth, especially fast growth of industrial cluster in a certain product group, indicates the market opportunities for additional competitors (Romanelli and Schoonhoven, 2001). It is expected that entrepreneurs will probably not only replicate the primary product or service of the parent but also count on the daily business routines and organizational structure of the parent company they are familiar with to reduce the risk of failure (Dahl et al, 2003) by this way legacy of parent company is imprinted on the new firm and organizational routines are reproduced. In this sense capabilities of new firms are shaped by the experiences of the founders (Helfat and Lieberman, 2002).

There are several examples showing the spin-off effects of geographical industry evolution. An example is study of US automobile industry by Carroll et al (1996). The automobile industry hosting more than 500 firms in the early years consolidated to

only 9 firms in 1941. Today, four large producers of US are located in Detroit and they can be traced back to the very successful early entrants that are established in Detroit (Klepper, 2002). Another example is well known case of Silicon Valley that spun off from Fairchild Semiconductor which was a spinoff of Shockley Transistor (Dahl et al, 2003).

The phenomenon indicating that the founding of a new firm is related to the founder's past experience also has a spatial aspect. Most of the entrepreneurs tend to establish their new firms in the same territorial area where their parent company is located (Sorenson, 2003). At this point role of social network relations are vital for founding firms. Social relations are facilitators of Marshallian agglomeration externalities and decrease the cost of acquiring of industry-specific knowledge, human capital or even financial capital and increase the access to customers (Sorenson, 2003)

It could be expected that social relations facilitate the diffusion of organizational routines or increasing the supply of demanding products through spin-offs, thus entrepreneurs will be produced within the region by parent organizations. This means that a region's future will be closely determined by the spin-offs.

Klepper (2007), Boschma and Wenting (2007) provide empirical evidence that information can be replicated through spin-offs by this channel information stored in products, processes and firm routines can be transferred. Spin-off is one way to transfer information, other ways could be labor mobility (Boschma et al. 2009), input-output relations, localized learning activities or knowledge spillovers (Maskell, 2001).

The new media industry was born through re-organization of Leipzig's local assets and interactive learning and became the one of few economic sectors helped Leipzig's economic growth after reunification, the education institutes supporting local learning listed below (Bathelt, 2002).

- The University of Leipzig (Institute for Communications and Media Studies)
- *Hochschule für Technik, Wirtschaft und Kultur* (HTWK—College for Technical, Economic and Cultural Studies)
- *Hochschule für Graphik und Buchkunst* (College for Book and Graphic Arts),
- *Fachschule der Deutschen Telekom* (German Telecom Training Centre),
- *Fernsehakademie Mitteldeutschland* (Middle German TV Academy),

- *Medienakademie Leipzig* (Media Academy Leipzig)
- *Sächsische Akademie der Werbung* (Saxon Marketing Academy)

The higher education institutes and special training programs not only supported creation of specialized knowledge base in media but also practical experience through joint research projects with media firms from TV and film production, multimedia and internet applications (Bathelt, 2002).

The graduates from these institutions create a specialized knowledge base in a wide variety of media-related fields. The students were able to gather practical experience during their studies and conduct research projects together with local media firms, especially in the area of TV and film activities and multimedia and internet applications, moreover another way to gain practical experience for many students was having part-time jobs or work during semester breaks which in turn was also beneficial to local media firms in terms of knowledge acquisition (Bathelt, 2002).

In 1998, a joint bureau for start-up consulting and finance (ugb- the Unternehmensgründerbüro) established by the Leipziger Sparkasse (an important local bank), the City and County of Leipzig and an industry association, the state programs such as Saxony's Filmförderung provided financial support for film festivals, furthermore European Social Fund of the European Union provided financial support for start-ups (Bathelt, 2002). These initiatives served to establish an attractive environment for new entrants and spinoffs and played an important role to reinforce the imprint of MDR. Bathelt (2002) classifies start-up activities in 6 segments listed in the table 4.3.

Table 4.3 : Segmentation of start-up activities in Leipzig (Bathelt, 2002).

No	Segment	Definition	Utility for knowledge dissemination
1	Euphoric local start-ups	Optimistic local entrepreneurs who wanted to realize market opportunities within their local environment, having strong community spirit,	Low
2	Local university spin-offs	Founders have an applied product-related know-how in which Start-up idea was directly related	High
3	Forced entrepreneurs from Leipzig	Non-visionary entrepreneurs, they enter areas which does not require technical knowledge, high entry costs	Low
4	Split-offs of former State-directed firms	The founders had been in the film and TV business for a long time and had acquired experience during the DDR. With the re-unification, they preferred to establish their own business	High
5	MDR-related establishments from West Germany	They were established as subsidiaries of existing firms from West Germany to acquire contracts from or offer services to the MDR	High
6	Other branch establishments from West Germany	other media firms establishing branches in Leipzig which are not directly related to the MDR and its TV and film activities.	High

In 2000, the Media City Leipzig was established as an incubator and technology center with 36,000 m² of office space, workshop and studio space for TV and film-related firms (Schubert, 1999; Media City Leipzig, 2000). The facilities provided not only working areas for firms but opportunities for interfirm communication, knowledge transfer and interactive problem solving, furthermore MDR also forced its his subcontractors and suppliers to establish their business in the Media City (Bathelt, 2002). Addition to Media City Leipzig, the media center called The Medienhof Leipzig-Stötteritz housed 20 firms, Business & Innovation Centre Leipzig (BIC Leipzig) in Leipzig-Plagwitz provided workspace for mostly for start-ups (Schubert, 1999, 2000).

In the private media clubs, which primarily limits participation to media people, professionals from media industry gather after work and share their ideas, discuss on project Bathelt (2002). This business circles most probably act as an incubator for new knowledge creation and new start-ups.

The cluster literature provides either a singular historical analysis or evaluation of the present microeconomic environment. But only recognizing that history matters does not help to understand how it matters (Jones and Khanna, 2006; North, 1990). On the contrary making ahistorical analysis of microeconomic environment of the cluster also

exclude the historical influences and detain us to reach a full understanding of the present situation. The aim of the thesis is to conceptualize a model integrating microeconomic environment with the history through imprinting theory. This model contributes to the existing body of research by providing an insight into how and why the history influences the present functioning of the microeconomic environment of clusters via integration of the ecological mechanisms.





5. RESEARCH DESIGN

As discussed in the earlier chapters, understanding the economic and social setting of clusters requires revealing historical underpinnings which does not only encompass initial conditions but also include conditions in sensitive periods. The body of literature dealing with the question of how shifts in economical, technological and institutional conditions leave their marks on clusters is still developing. Moreover, this subject appears to be in the chasm among organization theorists and business historians, thus bridging the gap requires an interdisciplinary view of both organization theory and history. The theory of imprinting has a disparate literature and the model presented by Tilcsik (2013) bring this literature to guide toward a multilevel theory of imprinting. In this sense model presented in this study aimed to examine the phenomenon, develop new ideas on the theory and move toward refined research questions with creation of a mental picture of model constructs. Moreover, after concluding on refined research questions our aim is to enrich the theory's explanation.

Suddaby (2016), while conceptualizing "historic turn" in management theory, notes the importance of capturing historical fact and social fact together and creating a mutual understanding of how each faction contributes to knowledge about the world. He also identifies bridging constructs within the existing works of historians and organizational theorists as rhetorical history, organizational legacy, and ANTi-History. Here organization legacy studies are important to understand the endurance in a changing environment. Legacy studies provide explanations towards unique elements of today's economic regions that were carried overtime.

Organizational legacy studies with linkages to spatial and historical factors of an economic region provide explanations for competitive behavior (Suddaby, 2016). Porter's (1998) study on competitive advantage of Dutch sea transportation, which is explained through maritime history or Saxenian (1996), comparative analysis of the local histories of Silicon Valley and Boston while explaining technological outputs are good examples of establishing local competitive structure and their roots to history.

From this perspective we explain historical triggers shaping the spatial setting of the cluster in our study while considering that the setting of the cluster including production specialty, division of work, social norms etc. are themselves products of the local interactions taking place under technological, economical and institutional conditions.

5.1 Defining Type of Research: Qualitative vs Quantitative

The main assumption on social life is also important to define the type of research process. Quantitative research principles more rely on positivist principles and mostly utilized for explanatory studies which employ variables and hypotheses. On the other hand, qualitative analysis are based on principles from interpretive or critical social science, where “cases and contexts” in the natural flow of social life are emphasized (Neuman, 2014).

In both research types we collect empirical data and reveal patterns to reach a better understanding of social life, but our research on historical imprints does not follow a path containing validation of separate data with the theory but explore the theory to enhance it with the empirical findings. In this path, main concern is not reaching independent and generalized outcome through statistical analysis but reaching a deep understanding of the phenomena on few cases with a thematic analysis. The main differences between two approaches are summarized in table 5.1. We focus on local interactions, events and try to bring social facts and historical facts together in a meaningful way. Since our intention is to reach a deep understanding of the phenomena, qualitative inquiry becomes more suitable with the aim of the study.

Table 5.1 : Quantitative approach vs qualitative approach (Creswell, 2007).

Quantitative Approach	Qualitative Approach
Measure object facts	Construct social reality
Focus on variables	Focus on events
Reliability is the key factor	Authenticity is the key factor
Value free	Values present and explicit
Separate theory and data	Theory and data fused
Independent context	Situationally constrained
Many cases	Few cases
Statistical analysis	Thematic analysis
Researchers detached	Researchers involved

Denzin and Lincoln (2005) define qualitative inquiry as follow:

Qualitative research is situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into series of representations, including fieldnotes, interviews, conversations, photographs, recordings, memos to the self. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret, phenomena in terms of meanings people bring to them. (p.3)

In qualitative studies there are several approaches classified by different authors as presented in table 5.2. For example, Denzin and Lincoln (2005) organized approaches into eight categories: Ethnography, case study, grounded theory, life history, narrative approaches, action research and clinical research. Examples of classifications are listed via table 5.2.

Table 5.2 : Classification of qualitative studies.

Author	Classification
Miles & Humberman (1994)	Interpretivism
	Social Anthropology
	Collaborative Social Research
	Performance, Critical and Public Ethnography
	Interpretive Practices
Denzin & Lincoln (2005)	Case Studies
	Grounded Theory
	Life History
	Narrative Authority
	Participatory Action Research
	Clinical Research
Creswell, 2007	Narrative Research
	Phenomenology
	Grounded Theory
	Ethnography
	Case Study

According to Creswell (2007), these are pure approaches and researcher may choose to integrate more than one approach within a single study. As Yin (2003) commented, the case study can be utilized if the researcher deliberately wants to uncover the relevance of contextual conditions alongside with the phenomenon of the study. From the perspectives of focus, type of problem, unit of analysis and data collection procedures, a historical case study research becomes the most convenient approach for the thesis.

In our study we try to enhance our understanding of the spatial behaviors formed within a cluster with its historical roots (imprints). This effort needs exploring the cluster as a contextually bounded system over time. Moreover, the enhanced framework established to develop the imprinting phenomena requires a deep understanding of the mechanism with its mediators and necessitates using multiple sources, mostly secondary, but also, primary. Comparisons between clusters is necessary to demonstrate the causality between changes in economic and social landscape over historical time and the trajectory of different clusters. From this perspective, historical-comparative analysis would help us to enhance our insight about this diverse social phenomenon. Making comparisons to clarify whether evidence is idiosyncratic or consistently replicated is strength of multiple case experiments (Eisenhardt, 1991). It is also possible to provide definitions and appropriate levels of construct abstraction from multiple cases (Eisenhardt and Graebner, 2007).

Historical-comparative analysis is an important research approach in the social sciences, especially in political science and sociology which, works at the meso- or macro-level and employs variety of comparative and within-case methods provides great contributions to our understanding of the social world (Lange, 2013).

5.2 Historical Comparative Analysis (HCA)

Comparative-historical methods have been applied for a long time, among the pioneers of which Adam Smith came forth. Weber and other classical theorists influenced comparative-historical researchers, analyzing social phenomena such as scientific revolutions, social change, and democratic movements during the nineteenth century and by this way, comparative-historical analysis emerged as a new research tradition (Lange, 2013). Types of comparison in comparative-historical analysis are presented in figure 5.1.

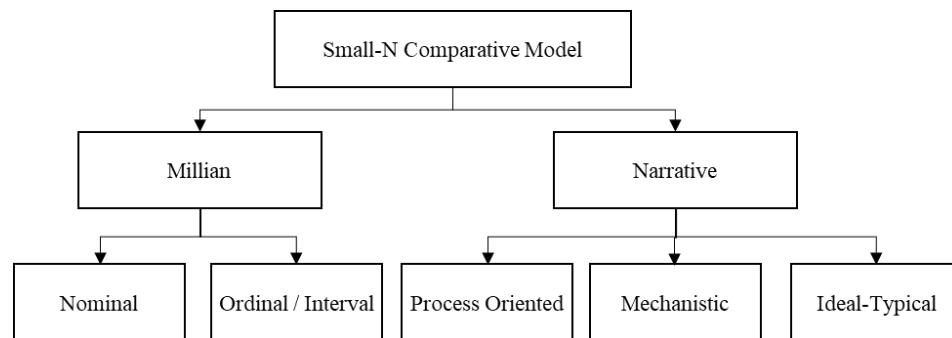


Figure 5.1 : Types of comparison in comparative-historical analysis (Lange, 2013:86).

The main type Large-N and Millian the subtype of Small-N are based on statistical analysis, they operationalize and test relations between independent and dependent variables, on the other hand they provide little insight about mechanisms (Lange, 2014).

Even though narrative studies have a disadvantage in generalizing causal arguments, they possess several advantages (Abbott, 1995; Mahoney 2000; Rueschemeyer and Stephens, 1997):

- Comparing a holistic phenomenon
- In-dept understanding of actual path leading to the results
- Highlighting influence of past events
- Analyzing mechanisms

Interpreting major changes and founding conditions in economical, technological and institutional landscape and revealing how these changes influence spatial evolution requires exploration of actual causal mechanisms and highlighting the most influential mediators. Following the exploratory study approach, a narrative type of a historical comparison analysis will allow us to understand the mechanisms by which historical imprints influence the current attributes of clusters. For example, in Dobbin's (1994) analysis of railroad policy we can trace the results of policy decisions reflected in deeper cultural traditions and corresponding political structures during the formation period in three different countries France, USA and Great Britain. Comparisons provide explanations for the country-specific patterns, which are remained largely intact, despite subsequent changes observed in the environment. Another good example of showing appropriateness of historical comparative analysis is Lounsbury's (2007) study on mutual funds. His study showed how the strategies of mutual funds

differed between Boston and New York depending on the historical cultural imprint in those cities. Gorski (2003) used narrative comparisons in study of religious doctrines and he explained how three events (the Papal Schism, the Protestant Reformation, and precisionist revolutions) affected state bureaucratization (institutional structure and organizational capacity). Such a comparison of different mechanisms and revealing the causally relevant factors cannot be conducted with numbers, contrarily a greater attention to the descriptive details of the mechanism must be identified.

Lange (2013) identifies three main subtypes of narrative comparison as process-oriented, mechanistic and ideal-typical according to the object of comparison and provided information about their analytic benefits. In process-oriented comparison the focus is on exploring wide array of potential causes, whereas mechanistic comparison aims to understand mechanisms and the contextual factors affecting these mechanisms, lastly, ideal-typical comparison combines elements of the previous two, as it can be used to explore similarities and differences, but focuses on particular factors (Lange, 2013).

HCA mostly utilize secondary data sources like written historical books, articles, eyewitness accounts, life stories but also may need primary sources like interviews or observations.

5.3 Reliability and Validity of the Study

Neuman (2014) considers reliability and validity as notions that are desirable aspects of measurement and used for establishing the truthfulness, credibility, or believability of research findings.

Reliability is much more about consistency. From quantitative perspective it suggests the replicability of the same outcome under same conditions. On the other hand, from qualitative perspective consistency is much more related to how observations made without being discursive or fluctuating. Qualitative inquiry accept that data collection process is interactive and unique and different researchers or researchers who use alternative measures may find distinctive results, which can reveal different perspectives of a subject matter (Neuman, 2014).

Validity in quantitative studies is about the truth, correct fit of empirical indicator to its corresponding conceptual definition. For qualitative researchers, validity is *authenticity*, Neuman (2014:218) defines *authenticity* as follow:

“Authenticity means offering a fair, honest, and balanced account of social life from the viewpoint of the people who live it every day.

Therefore, a detailed view from people’s life and how they interpret the events become more important. For historical comparative researchers, utilization of both internal and external criticisms is important to show whether the evidence is real.

Neuman (2014) defines features of a measurement process for validity as being plausible, good enough, understandable by many other people and this process should be supported by diverse pieces of empirical data. At this point, triangulation which was originally conceptualized by Webb et al. (1966) is a promising approach to capture the validity issues. The concept is adopted from sailors who measure distances between objects by taking observations from multiple positions. Analogous to them social researchers use the same principle by observing from multiple perspectives rather than looking from a single perspective (Neuman, 2014). Similarly, Bryman (2012) defines triangulation as using more than one method or source of data in the study of social phenomena.

In our study, utilization of all sources are important for reliability and validity of the study. Reports of government agencies, journals of cluster associations, historical books on regions, literature on cultural, technological and economical change are all incorporated with on-site interviews and triangulated to reach a fair, honest, and balanced interpretations.

5.4 Research Path

A linear research path is common for quantitative studies. By contrast, for qualitative research studies a nonlinear research path is often necessary. But, before the assessment of the research path, it should be acknowledged that in the case-oriented approach cases are placed at the center rather than variables. Thus, we examine many aspects and acquire in-depth knowledge of a few cases instead of precise measures of a huge number of cases. We should also emphasize two challenges, first, “messy”

natural settings of cases and second, utilization of diverse materials and methods (bricolage) to provide understanding towards the imprinting phenomena.

In a nonlinear path, backward and forward steps are necessary to advance in the research topic, which does not mean moving disorganized, but being naturally creative and spontaneous (Neuman, 2014). A typical sequence of a qualitative inquiry process is visualized in figure 5.2. As the study will follow historical comparative analysis with a qualitative approach and will try to explain the phenomena with a model, we will start with broader perspective and specify during the research, we will interpret the data and search for adjustment of the conceptual work, thus the research path described by Braynman's (2012) has been followed in the empirical part of the thesis.

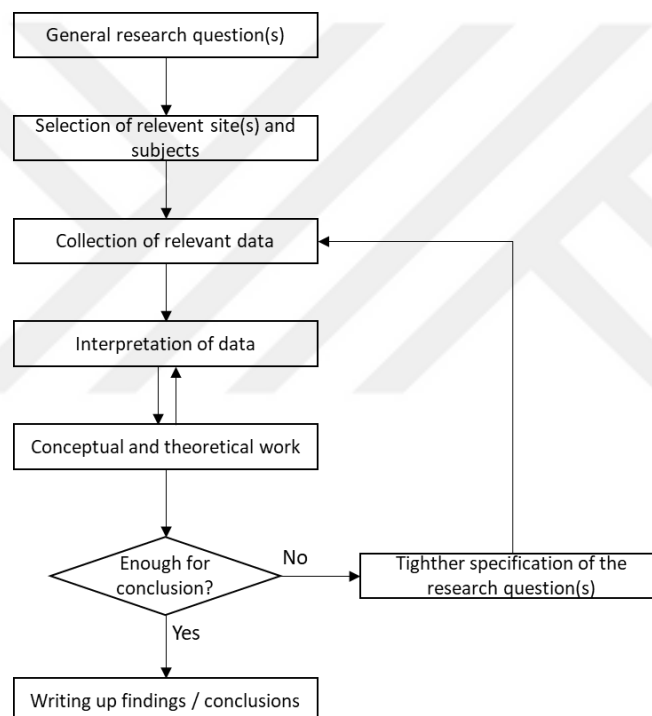


Figure 5.2 : Research path adopted from Braynman (2012).

5.5 Selection of Research Sites

The qualitative researches have specific aim on the selection of samples rather than having a random sample as it is often the case in most quantitative studies. The logic of the qualitative sample is generally deepening the understanding about a larger process, relationship, and provide valuable information or new aspects on the subject. The central concern is on the subject rather than the representativeness of samples. This is a theoretical sampling method without a representative strategy and the aim is

to refine ideas and extend emergent theoretical frameworks. Therefore, the selection of research sites depends on our research topic.

Pettigrew (1990) discussed practical solutions in carrying out longitudinal field research on change in organizational settings and suggested four guiding decision rules to help choice of research sites:

- 1) Choosing polar types
- 2) Looking for extreme situations, critical incidents and social dramas
- 3) Including high experience
- 4) Being more informed on research sites.

In our study as our interest is in enhancing our understanding towards historical imprints, by which we will try to reach a fuller picture on organizational collectives by connecting different time periods.

First guiding principle is choosing polar types. Pettigrew (1990) asserted that conducting longitudinal studies on change is not a straightforward matter, rather it is a multilevel and dynamic phenomenon, as polarity would help to understand the phenomenon more clearly. In our study, we have chosen Izmir and Konya footwear clusters. Firstly, both regions possess not only different geographical conditions but also economic and social conditions and followed different developmental patterns. These differences are explained in detail within the cases.

Second guiding principle is suggesting going for extreme situations, critical incidents and social dramas. Pettigrew (1990) noted that these points of ruptures provide a transparent look at the growth, evolution, transformation, and conceivably decay of an organization over time. In our study, the first step is to identify main environmental influencers, in other words, incidents and dramas. Moreover, these incidents not only provide information about the social system but also contextual backdrop in which we can enhance our understanding of the relative routines.

Third guiding principle is including experience in study. The research settings planned for this study is footwear clusters, As the shoe production industry is mostly a traditional industry and found as geographical clusters, we can trace structure of clusters in history. The reasons behind selection of this research settings are:

- Shoe making industry is very traditional and one of the oldest industries

- Shoe making industry is based on co-localized apprenticeship and learning from master, we can expect to find some features of business environment, institutional setting and apprenticeship relations as imprints
- Shoe industry is generally organized as clusters
- Literature provide several references for studies on footwear clusters, some of which are highly cited

The last guiding principle, being more informed on research sites, is much more a suggestion rather than decision rule in order to have a more efficient data collection process and increase the success rate of study. Pettigrew (1990) suggests a low-cost pre-survey to have wider view on problems and experiences in the research setting, to establish a network of relationships and to increase empirical information prior to selection. In our study before data collection, a preliminary survey and site visit was conducted. Before the visit Gaziantep was a potential research site, but after the site visit concerns arise regarding its practicality. Firstly, it was observed that the local cluster is not well organized, and it was hard to find interlocutors to conduct interview on cluster organization. Secondly secondary analysis showed little or none evidence towards historical development of region. Lastly development of the clusters is relatively new and would not provide enough comparable evidence towards historical ruptures.

5.6 Data Collection and Analysis

In this study, data collection and analysis will be conducted in 4 stages presented in the figure 5.3. Findings are presented in the next section.

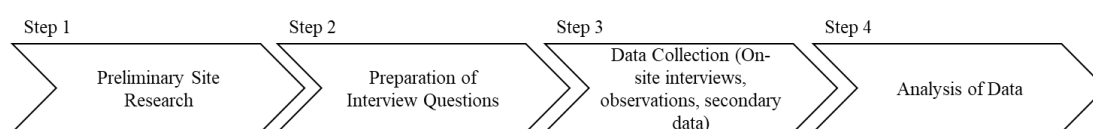


Figure 5.3 : Data collection and analysis process.

5.6.1 Preliminary site research

The first step is to conduct a preliminary analysis. The aim of conducting a preliminary site research is to be more informed about research sites as suggested by Pettigrew (1990). This phase is designed to offer a comparable understanding of the problems,

prospects and a range of experiences along with historical reflections of environmental features. In the preparation of question list, Porter's Diamond model of spatial clustering and Malmberg & Maskell's localized learning framework are also utilized. The first discussions were made with two professionals, who had a total of 80 years of shoe production experience. After these discussions, three site visits were conducted to Konya, Izmir and Gaziantep. The preliminary site research questions are presented in the appendix A.

5.6.2 Preparation of interview questions

First phase served to define the scope of a more extensive study. Interview questions were determined after the analysis of first phase results and in accordance with research questions. In this study, aim is to extend main debates on evolutionary economic geography with a synthetic model of geographic evolution. In this vein, multiple concepts from evolutionary biology and evolutionary economics brought together in this exploratory study. Interview questions shaped according to main debates offered by multi-level imprinting theory (MLIT) and evolutionary model of economic dynamics. In order to increase the relevancy and appropriateness of preliminary questions, a group discussion was conducted with two academicians and a professional with experience of more than 40 years in shoe production and question list was refined accordingly. Interview questions are presented in the appendix B.

5.6.3 Data collection

According to Creswell (2007) all forms of data could be grouped into four basic types of information: observations (ranging from nonparticipant to participant), interviews (ranging from close-ended to open-ended), documents (private or public), and audiovisual materials (including materials such as photographs, videotapes etc.). Yin also refers to six forms: documents, archival records, interviews, direct observation, participant observation, and physical artifacts.

In our study on site visits to producers, chambers or associations provided valuable nonparticipant observations, moreover published documents and audiovisual materials are also heavily utilized along with open-ended interviews.

Interviewees are selected purposefully according to their experience in the industry, their participation in cluster initiatives and position in cluster organization. During the

preparation of list of interviewees, purposive sampling method is utilized, this method is used in cases where reaching subjects with the target characteristics is important. The first list is developed before the site visit, interviewees are informed, later, the list is elaborated on-site according to feedbacks of the most recommended interviewees and availability of respondents in order to reach a convenient sample. On-site visit dates and interviewees are presented in the table 5.3.

Table 5.3 : List of interviewees.

Interviewee No	Site	Name	Title
IN01	Konya	Faruk Ambar	Company Owner
IN02	Konya	Ali Osman Avşar	Company Owner
IN03	Konya	Hüseyin Ata	Company Owner
IN04	Konya	Yavuz Karadayı	Company Owner / President of Stitcheries Association
IN05	Konya	Ali Deresoy	Company Owner / Trade Chamber and Industry Chamber Comitee Member
IN06	Konya	Selman Eryılmaz	Company Owner / Industry Chamber Comitee Member
IN07	Konya	Mustafa Eryılmaz	Company Owner
IN08	Konya	Erdoğan Süner	Company Owner
IN09	Konya	Rıza Ata	Company Owner
IN10	Konya	Hasan Uzman	Company Owner / Former President of Shoe Producers Association
IN11	Izmir	Selim Sıradağlı	Company Owner
IN12	Izmir	Faruk Hanoğlu	Company Owner / Former President of Aegean Shoe Industrialists Association
IN13	Izmir	Hakan Öztürk	Company Owner
IN14	Izmir	Tamer Tarcan	Company Owner
IN15	Izmir	Ayhan Yalın	Company Owner
IN16	Izmir	Hüseyin Akpınar	Quality Controller of FLO / former company owner
IN17	Izmir	Levent Çevikel	Company Owner

5.6.4 Analysis of data

To reach a comparable understanding of historical reflections of environmental features and localized routines among cluster firms, we will utilize the conceptual model presented in the section 4 and operate the analysis in both region and organizational levels. In the presentation of findings, the process in the figure 5.4 will be followed.

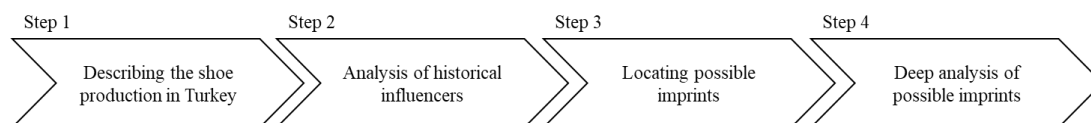


Figure 5.4 : Process for data analysis and presentation of findings.

In the data analysis, first step is to picturize the background of shoe production in Turkey to enhance our understanding towards context. Facts and figures presented in the first step will be providing insights towards performance of the industry in time and space. Secondly, major changes and founding conditions in economical, technological and institutional domains (sensitive periods) will be analyzed to reach a comparable understanding of historical reflections of environmental features and localized routines and locate possible sources of imprints. As it is not feasible to analyze all imprints, most promising options will be selected. Interpreting the changes and their reflections will allow us to follow deeper analysis of possible imprints and their mechanisms which are conducive in the attributions of success or failure. Following the exploratory study approach, findings will be presented in a narrative type of a historical comparison. In this comparison we will enhance our understanding with secondary analysis of other case studies in footwear and fill the knowledge gaps if necessary.



6. FINDINGS

6.1 Shoe Production in Turkey

Due to its qualifications as a compulsory and semi-durable consumer product, footwear is a highly tradeable product. Quality, brand, color, model, which are among the main features that consumers attach importance to their purchasing preferences, make shoes an integral part of fashion. In Turkey shoemaking was born as a craft branch and maintained this feature until the beginning of the 20th century (Özçörekçi and Öngüt, 2005). According to the State Planning Organization Leather and Leather Products Industry Commission Report, 15% of the shoes produced by fully mechanized enterprises, 70% by semi-mechanized enterprises and 15% by enterprises without any machinery. In order to maintain the development in leather and leather products industry, there is a need to increase exports and production more in comparison to other sub-sectors in the leather industry (Özçörekçi and Öngüt, 2005).

The shoe industry has a total (domestic and foreign) trade volume of 2.3 billion dollars and creates employment for 400 thousand people. Although there are nine shoe standards prepared by the Turkish Standards Institute, these standards are not mandatory. Classification in the shoe industry is generally slippers, boots (industrial, security and military), children's shoes, women's shoes and sports shoes. Shoe producers which are at the heart of shoe industry are mainly an assembly industry, linked to them there are sub-industry enterprises and companies that provide services to the main enterprises producing shoes (Ulusoy, 2002).

According to the Ministry of Development sector classification, the footwear industry includes production of all kinds of footwear worn to the foot, including those made from rubber and / or plastic raw materials (Genç 2005). According to the United Nations ISIC Rev.3 classification, parts and parts of shoes, such as soles, heels and uppers, are included in the shoe industry. See table 6.1 Apart from these parts, a large number of products are used in the production of shoes such as ties, clasps, zippers, glues, heels, nails, cutting tools, molds, and textile, wood, metal, chemical, machinery

and so on classified under other industries. Actually with regard to consumer preferences the industry is subject to various classifications using different criteria. For example, footwear can be divided into five classes as women, men, girls and young men, children and baby footwear in terms of gender and age of the users, it can be also classified according to the usage and/or occasion like dress, comfort, casual, sport, outdoor etc.

Table 6.1 : Classification of footwear according to GTIP harmonized system codes.

Harmonized System Codes	Explanation
6401	Footwear; waterproof, with outer soles and uppers of rubber or plastics, (uppers not fixed to the sole nor assembled by stitch, rivet, nail, screw, plug or similar)
6402	Footwear; with outer soles and uppers of rubber or plastics (excluding waterproof footwear)
6403	Footwear; with outer soles of rubber, plastics, leather or composition leather and uppers of leather
6404	Footwear; with outer soles of rubber, plastics, leather or composition leather and uppers of textile materials
6405	Footwear; other footwear n.e.c. in chapter 64
6406	Footwear; parts of footwear; removable in-soles, heel cushions and similar articles; gaiters, e.g.ings and similar articles, and parts thereof

Turkey, which has significant experience in shoe manufacturing, produce 188 million pairs of shoes, equals to 1.3% of the world's total production and ranks as 7th biggest manufacturer in terms of pairs according to APPICAPS report 2018. Footwear Manufacturing Sector Structural Analysis and Performance Assessment study of the Development Bank of Turkey stated that footwear industry performance rank is 57th among 110 sectors, moreover the share of the footwear industry within the total investments of Turkey is 2% (KTO, 2007).

Having a production capacity of 590 million pairs per year in 2015, the sector cannot utilize most of its capacity (TASD, 2017). Annual production is around 400 million pairs and in the last decade, the highest capacity increase has been in slippers and polyurethane based products.

125 out of 325 medium and high capacity production facilities in Turkey are members of Footwear Industrialists Association of Turkey (TASD) and the production capacity of these facilities varies between 1,300 and 36,000 pairs a day, the total capacity of TASD member shoe factories is 316,000 pairs / day and constitutes 54% of the sector

(TASD, 2017). Besides, the sector has a large number of small and medium scale factories, the number of them is more than 10.000 as of year 2017 (TASD, 2017).

The enterprises in the sector are mostly composed of 3rd generation family-owned enterprises. According to the report of “Leather and Leather Products, Footwear, Footwear Sub-Industry and Artificial Leather Sector 2004” prepared by Istanbul Chamber of Industry in 2004, enterprises have the flexibility to meet small scale orders repeated in the season with a capacity average of 500-800 pairs / day.

Shoe machinery and sub-industry production has developed in terms of capacity and technology. The share of shoe sub-industry production in total shoe industry production is around 5%. Production is rich in diversity, the shoe supplier industry is concentrated mainly in Istanbul, Izmir and Aegean Region, Konya and Gaziantep. In Turkey, two methods are used in shoe production mainly, namely *monta* and injection, *monta* method much more preferred. In this method, the upper and sole are produced in different phases and assembled together by means of gluing or stitching.

6.2 Shoe Export of Turkey

Structural deficiencies as the dominance of the small workshop type of production, unqualified workers, the lack of standard and quality of sub-industry inputs, and competition in external markets are said to be affecting export potential negatively (Onur, 2008). Exports during 1990s, (based on the Russian market, if any) increased and exceeded 200 million dollars by 1997. However, in the crisis in Russia in the following years deeply affected the Turkish shoe industry and exports decreased.

When we look at Turkey's exports between 2002 and 2018 figure 6.1 indicates an, trend of a steady increase in exports in terms of value except the impact of the global crisis in 2009 (the only the decline in Turkey's footwear exports). Shoe exports were 131,9 million dollars in 2002 and increased to 887,7 million dollars in 2018.

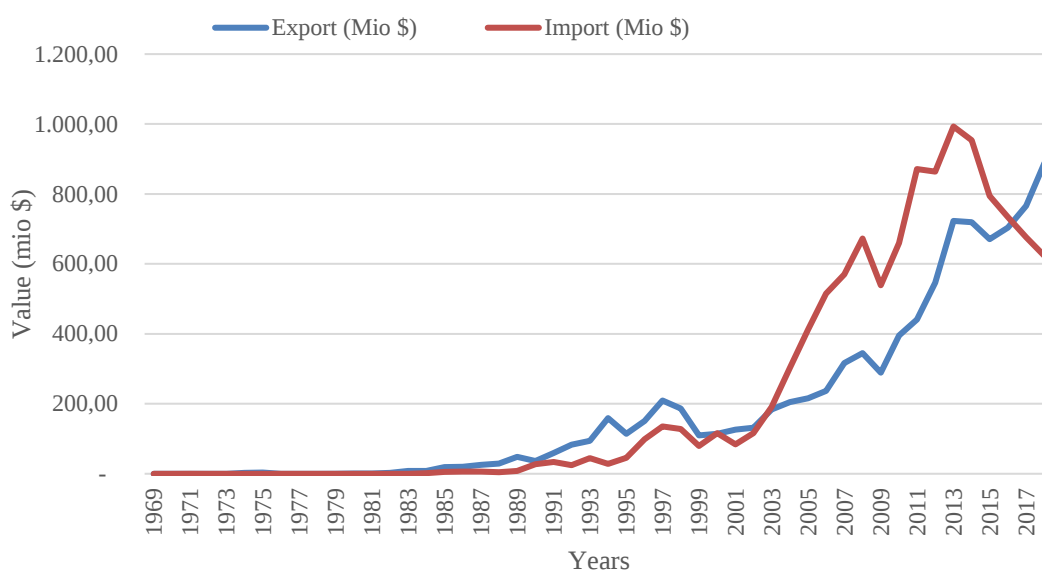


Figure 6.1 : Footwear exports and imports from 1969 to 2018 in terms of value (Mio \$) (TUIK, 2019).

When we look at the distribution of the exports of the footwear sector according to product groups, presented in the table 6.2, it is seen that as of 2018, 45% of the shoes are those which have leather vamps, this ratio was 38.8% in 2002, which means, there is no major structural change in the type of product produced.

Table 6.2 : Exports in 2002 and 2018 according to HS4 codes (TUIK, 2019).

HS4 Code	Explanation	Export in 2002 (\$)	Export in 2018 (\$)	Change (%)
6401	Footwear; waterproof, with outer soles and uppers of rubber or plastics, (uppers not fixed to the sole nor assembled by stitch, rivet, nail, screw, plug or similar)	1.371.230	14.618.609	966%
6402	Footwear; with outer soles and uppers of rubber or plastics (excluding waterproof footwear)	33.699.249	196.897.457	484%
6403	Footwear; with outer soles of rubber, plastics, leather or composition leather and uppers of leather	51.137.620	405.008.620	692%
6404	Footwear; with outer soles of rubber, plastics, leather or composition leather and uppers of textile materials	22.425.504	163.898.337	631%
6405	Footwear; other footwear n.e.c. in chapter 64	9.405.193	67.182.263	614%
6406	Footwear; parts of footwear; removable in-soles, heel cushions and similar articles	13.844.883	40.070.111	189%
Total		131.883.679	887.675.397	573%

Despite the indicated increase in exports, share of Turkey in world footwear exports in 2017 (in terms of dollars) is 0.6% and ranked as 11th country as indicated in the table 6.3. On the other hand, in terms of volume pairs, Turkey rank as the 5th biggest exporter with 222 million pairs in 2017 (APPICAPS, 2018). There is a large supply

potential that can compete with European producers, especially Spain, Portugal and Italy, but it seems this potential has not yet been fully exploited.

Table 6.3 : List of biggest exporters in 2017 (APPICAPS, 2018).

Ranking	Country	% World Exports (\$)
1	China	34,90%
2	Vietnam	13,70%
3	Italy	7,90%
4	Indonesia	3,60%
5	Spain	2,30%
6	Portugal	1,70%
7	India	1,40%
8	Cambodia	1,30%
9	Brazil	0,80%
10	Bangladesh	0,60%
11	Turkey	0,60%

According to the export data of 2018 presented in table 6.4, the Russian Federation, Iraq, Germany are the leading export markets of Turkey. It is obvious that exports are mainly realized in neighboring countries and European countries.

Table 6.4 : List of ten biggest footwear export markets of Turkey and export values (\$) in 2018 (TUIK, 2019).

Ranking	Country	Export Value (\$)
1	Russian Federation	131.782.321
2	Iraq	83.009.675
3	Germany	61.019.692
4	Romania	33.109.145
5	Suudi Arabia	32.140.292
6	Spain	28.675.009
7	Italy	23.871.738
8	Bulgaria	22.988.211
9	Libya	22.953.309
10	United Kingdom	21.376.138

6.3 Shoe Import of Turkey

When we look at Turkey's imports between 2002 and 2018, figure 6.1 indicates a trend of a steady increase in exports in terms of value, which was accelerated after 2001 until the governmental interventions in 2012 and in 2014. As a result of these interventions external trade deficit began to decline and a trade surplus has been enjoyed after 2016.

Shoe industry did not develop as fast as the other leather clothing industry in the post-1980 period and the necessary structural transformation was not fully achieved

(Özçörekçi and Öngüt, 2005). At that time, the insufficiency of the shoe industry in the country and the low quality of the produced shoes led to an increase in shoe imports. But the main increase in imports was observed after 2001 due to aggressive efforts of China to dominate international markets.

6.4 Shoe Production Regions of Turkey

There are 13 provinces in Turkey where significant shoe production take place, but 91% of the total production capacity is located in the first 6 centers.

These 6 main production regions of footwear industry are Istanbul, Izmir, Gaziantep, Konya, Adana, and Manisa. Each province is usually more specialized in a particular type of shoe. For example, generally women's and children's shoes in Izmir, Konya and Gaziantep are more oriented towards the production of men's shoes (Özçörekçi and Öngüt, 2005). Istanbul is the biggest production province and production is concentrated in Ikitelli. However, increasing wages and land prices have directed manufacturers to subcontracting, and most of the shoe vamps have been sent to Anatolia for processing (ATSO, 1999:34). Despite the high production costs, 50% of the manufacturing companies operate in Istanbul. Average Capacity utilization rate in Turkey is 58% (TASD, 2017).

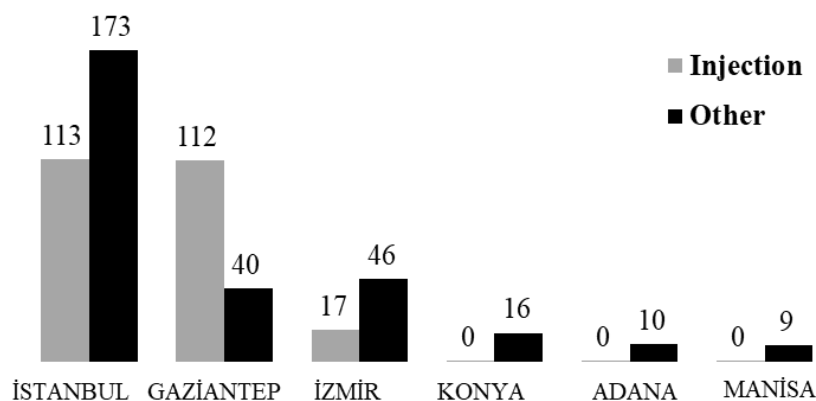


Figure 6.2 : Established annual shoe production capacity (pairs) per region in Turkey (2015) (TASD, 2017).

6.5 Brief History of Turkish Shoe Industry

Leather and shoe making is a craft that has been maintained in all Turkish tribes (Yelmen, 2007). According to Yelmen's (2007) research on leather making, the Hun Turks knew how to process leather 2400 years ago, producing leather boots, shoes,

trousers and clothing. Moreover, from Ibn Batuta's Travel Book, we learn in detail that leather was made in many parts of Anatolia and various shoes are made in the meantime (Yelmen, 2007). Turks brought their clothing and footwear choices of their steppe-style lifestyle with them as revealed in written sources. Archaeologist S.I. Rudenko was excavated in Pazirik Kurgan (5 - 3rd century BC, Proto - Turk or Hun); two pairs of boots belonging to the woman lying in the grave (Coruhlu, 2007). Historical documents show that Seljuks in Anatolia are advanced especially in agriculture, animal husbandry and leather processing. Since animal husbandry is so widespread and leather products are used for different purposes (clothes, shoes, belts), it can easily be said that leather processing is well developed (Dağtaş, 2007). One of the most important details proving the advanced level of leather and fur processing in the Seljuk period is the documents related to the mastery of the Seljuks in making boots and shoes.

Bahaeddin Ögel's book of Introduction to the History of Turkish Culture gives information about the shoes and boots worn during Seljuks. The Ottomans dignified leathermaking as an advanced ancestor craft inherited with the establishment of the Ottoman State. Footwear was a strategic product for Ottoman military and production of footwear was strictly controlled until the end of the 18th century. Moreover, it was a sign of social status, to differentiate the look between not only Muslims and non-Muslims, but also ranks, thus shoes are expected to be in decisive colors and types. After Ottoman Reform Edict of 1856, restrictions on clothing was lifted and Westernization of clothing was accelerated.

6.6 Main Environmental Influencers in Shoe Production History

As described in the MLIT, stamp of the environment placed on the focal entity during a sensitive period by economical, technological, institutional and individual influencers. Here the environment is conceptualized as a richly textured, multifaceted space, rather than a homogeneous, one-dimensional force (Marquis and Tilcsik, 2013). Building on this definition, before locating an imprint, the understanding of the environment is vital.

Moreover, as we have located another source of imprint, namely political influencers, during the secondary analysis of the case of Leipzig Book Publishing, this source shall be included in the environmental analysis. The Leipzig media cluster case showed that

the political decisions has intended, or unintended consequences and political interferences may yield to new imprints.

In this section changes in these environmental influencers will be described in order to build a preliminary understanding about the context in which shoe production in Turkey has evolved. The influencers explained here are determined through initial interviews with producers, preliminary literature review and discussions with the industry leaders.

6.6.1 Technological influencers

Shoe production technology is very related to variety of shoes worn, therefore developments in preferences of demand shall be also considered in the discussion of technological influencers. The literature survey coupled with interviews showed that there are two main ruptures in the technological development of shoe production in Turkey: Mechanization after industrial revolution and initiation of the ready-made sole. In the former, mechanization and changes in the footwear types went hand-in-hand and they were both imported from the Western world, to which shoe producers had to adopt both. In the latter, the ready-made sole was a game changer, this new type of sole was introduced by an Istanbul firm called Ziylan and was rapidly adopted by producers. The ready-made-sole was simplifying the production process, not only reducing some intermediate phases, but also abandoning related expertise and transforming the materials used. In both cases, technological ruptures not only decreased the cost of production but also increased the pairs of shoes supplied to the market.

6.6.1.1 Mechanization after industrial evolution

During the Seljuk and Ottoman periods, the shoe types increased and shoe-making developed to meet the needs of the army, ruling classes and urban people. During the Ottoman Empire production standards emerged (Gargı, 2000). Footwear production in Turkey until the end of the 19th century, was based entirely on manual labor, shoes worn by the people in the Ottomans were shaped by local craftsmen until the 19th century (Özdemir, 2012). Beginning with the second half of the 19th century, new shoe machines were introduced. Five of the shoe machines had a significant impact on the production process and led to mass production. The first one is the upright sewing machine. Sewing machine was started to be used in 1852 for sewing up the shoe (upper

part of shoe). The second important invention was another type of sewing machine which is used to attach the vamp and the sole. This machine was invented in the mid-1800s by the American Lyman Reed Blake, subsequently improved by Gordon McKay and launched in Massachusetts. Between 1864 and 1892, Charles Goodyear co-invented the *patuma & kazuma* machines with his friends Auguste Destouy of France and Christian Dancel of Germany. Double stitched soles were able to be produced with these machines (Rydberg, 1965). The fifth important invention was mounting machine. This machine gives the form to the last. The prototype of the first assembly machine was produced in Massachusetts by Jan Earnst Matzeliger. This machine has reduced shoe production costs by 50% (Lienhard, 2014). The industrial revolution that started in the West increased the efficiency of fabrication production in every branch. Shoes, which are among the cheaper industrial products, have taken place in Anatolian markets starting from the port cities. This mechanization led to the disappearance of the handmade shoes or at least a significant decrease in their production. Most of the shoe variety, namely, *çarık, yemeni, çedik, mest, başmak* was replaced by new forms like *iskarpin, kaloş, kundura, terlik, sandal, bot, mokasen, espadril, sabo* etc. (Kırtunç, 1989:69).

6.6.1.2 Introduction of ready-made sole

Before the ready-made soles, the sole production was made entirely by hand, it was made totally from leather (*kösele*), both the sole and the sole lining were made from leather sheets. The leather sole manufacturing consisted of seven stages, as indicated in figure 6.3, A. Yıldız described this production method when he started to work in the industry as of 1966:

We used to take a leather plate and cut the plate according to patterns, then put the cut pieces into the water for hydration and let the leather be tempered so that it could work, then we scythe the bottom, stick together and gash an edge for stitching, the last is removed for stitching, after stitching, we put last again and we close this gash with a paste. (A.Yıldız, interview, March 11, 2020).

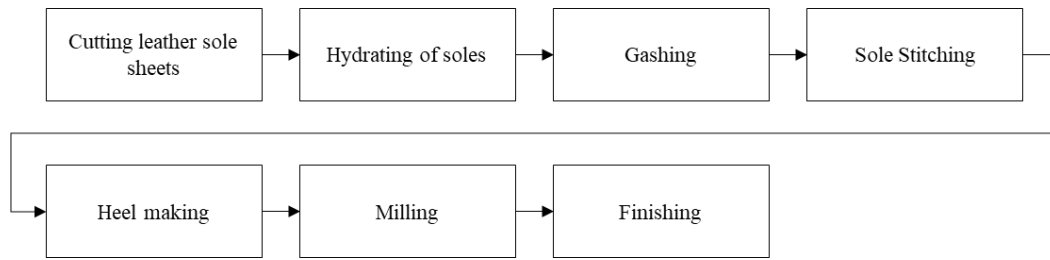


Figure 6.3 : Phases of leather sole production (A. Yıldız, interview, March 11, 2020).

The production of hand-made leather sole continued until the 1970s, and during the 1970s Neolithic soles were introduced. These soles partially shortened the process and were much more affordable. They were also called Japanese sole, the neolith soles adhered with a yellow solution (*ballı-sarı*), this development reduced the need for stitching (R. Ata, interview, May 17, 2019).

Moreover, the major disruption occurred with the emergence of the ready-made soles in the 1980s. The production of hand-made soles was significantly reduced with the ready-made soles, as there was no more the need for sole stitching and milling workshops. The witnesses of this period described their experiences as follows:

Introduction of the ready-made sole had a negative effect at first, because the production of shoes accelerated suddenly. Actually, the sole production determines the production speed, it was bad for those who did not recognize the change but very well for those who discovered the opportunity ready-made sole presented. After everyone discovered this, milling work survived for a while, but now everything is made from ready-made sole. (Sıradağlı, interview, May 23, 2019).

“There was an abundance in the supply balance after the ready-made sole was introduced,..., it diffused and was adopted very quickly. Because of the progress towards technology, the craft went extinct” (Hanoğlu, interview, May 23, 2019).

... When I entered the industry (1978), I started with classical hand-made sole production with stitching. Afterwards a new ready-made sole called Uludağ was introduced by Ziylan, then I felt that the future would be on the ready-made sole, not on the leather soles, the production was easier and faster. (Avsar, interview, May 16, 2019).

As stated in the interviews that the transition to the ready-made base is a shocking change for the industry, this technological change not only shortened the production processes and brought a significant supply surplus, but also eliminated some phases in the value chain.

6.6.2 Economical influencers

Economical influencers are related to the changes in the market or production factor conditions which restrict, cultivate or shape production in a direction. Economical ruptures cannot be evaluated apart from the national macro-economical conjectures. For example, studies show how socialist regime leaves a strong mark in which an organization is founded (Marquis and Tilcsik, 2013). When economical ruptures are analyzed from this perspective, there are three major economic changes that seem to influence the shoe production.

6.6.2.1 Urbanization

Liberal economy politics, started by the beginning of the Republic, changed into Statism from 1933 with the impact of 1929 World Economy Crisis and world conjuncture (Şener, 2005). On the other hand, liberal policies accelerated with the anti-statist policies of Democrat Party (DP) in 1950s. During the DP period, the aim was rapid growth; this was a period in which the state's position in the economy is reduced, public investments were increased, and private enterprises were developed (Kongar, 1998:60). However, the period of 1955-1960 was a period in which large differences in income distribution emerged and economic disturbances turned to socio-political problems (Taş, 2004). Another major reflection of economic policies was on urbanization. Yurtoğlu (2014) defined major influencers as:

- Labor force remaining idle in agriculture through mechanization incentives in agriculture
- High increase in the birth rate in the rural areas after the Second World War
- Developments in transportation
- Investment of capital surplus in cities earned through agricultural incentives

While the rate of urban population was 16.4% in 1927, it was 18.5 in 1950; in 1960 it increased to 25.1%. Careful examination of the urbanization movement in Turkey,

demonstrates the determination of the two properties. First, urbanization was in the direction of big cities (mainly Ankara, İstanbul and İzmir), and the second is targeting only some geographical regions (mainly Marmara, South Anatolia, Central Anatolia) (Yurtoğlu, 2014). While the general population growth rate was 17.5% and the urban population growth rate was 20.1% in the 1940-1950 period, the general population growth rate increased to 32.8% in the 1950-1960 period and the city population growth rate increased to 80.2%. (Keleş, 1970).

Since 1950s, shoe production has started to become an industry, which was seen by many as a handcraft passed from father to son (Genç, 2005). As the main market for the modern shoes were urban areas, changes in the urban population were directly related to this process.

6.6.2.2 1980s, liberalization policies

The liberalization process in Turkey has by and large started by the decisions of January 24th 1980. The stabilization program, which was put into practice that day, had short- and long-term goals aimed at eliminating the inflation and foreign exchange bottleneck problems. The stabilization program included primarily economic, political and administrative measures and aimed to minimize the state intervention and switch the industrialization logic from domestic market orientation to export- orientation. Decisions of January 24, which were considered the beginning of the liberalization of Turkey, included 32.7% of TL devaluation, determination of daily exchange rates, reduction of the state's share in the economy, limitation on incentives towards agricultural production, liberalization of foreign trade, easing of foreign capital investments and facilitation of profit transfers. Imports were gradually liberalized; tax refund, low interest rate credits, customs exemptions and new incentive system were initiated. Foreign exchange trading was released, controls on the foreign exchange market were abolished, interest rates were liberalized, new real interest policy was followed, and price controls and restrictions were abolished.

As result of the export-led growth model of Turkey and increases of the investment in the industry, the share of agricultural sector in total exports decreased after 1980. The share of industrial sector was increased, compared to 1950, as significant progress was observed across all divisions of the industry.

Although some efforts were made, the industrialization of the shoe production could not be completed in real terms until 1980s. The liberalization of imports in the mid-1980s helped the development of the shoe industry in terms of machinery, as well as the ability of companies in the sector to easily obtain some inputs which they had difficulty in sourcing. In the 1980s, especially the private sector made considerable investments in the machinery park, and 15 % of the footwear sector completed its industrialization (Genç, 2005).

In the 1980s as a requirement of the export-based industrialization strategy, devaluations and intensive export incentives were applied (Kazgan, 1999:305). In the shoe sector, both the investment and export increases were experienced simultaneously in this period.

...the shoe industry has always had troubled, economic strictures, crises, dependence on the merchant, modeler, to the wholesaler. We have always collapsed at the end. I was about to exit industry totally during the 2000 crisis, during 1994-1998 we were producing for Laleli market, mechanization and export orientation towards Russia was together, then it collapsed. When Russian exports were finished, we sold the machines to pay the debt, and most of the mechanized companies experienced this. The recovery was again with the remaining companies, (Avsar, interview, May 16, 2019).

6.6.2.3 2000s, Chinese shock

China's accession to the World Trade Organization (WTO) on December 11, 2001 was a turning point both for the WTO members and China. With its accession to the WTO, China became one of the major trading nations with its production and export led growth model and become an important player in the global economy. WTO membership fostered China to expand its trade, attract foreign investment and improve the rule of law. In the meantime, share of agriculture in GDP declined from a 28.4 % in 1985 to 13.1 % in 2004 and share of industry expanded its share of 43.1 % in GDP in 1985 to 46.2 % in 2004 (Worldbank, 2006).

However, the upsurge of labor-intensive Chinese industry goods at the global markets had begun to create a threat for developing countries including Turkey. According to 2012 World Footwear Yearbook, China is the biggest shoe producers with 12,89 billion pairs annually which accounted for 60,5% of the global production.

Moreover, real effective currency exchange based on production prices (ÜFE) index show that between 2001-2005 Turkish TL had been valuated from 98,3 in 2001 and to 143,6 in 2005 and it is obvious that this change made import more favorable. Local producers applied to the undersecretary of Trade Ministry to an activate import protection act on 02/11/2005 with application no:70913. In this application it was expected by the producers that if the quotas applied to China are abolished, the import from China would accelerate and total import would have a negative effect on local production.

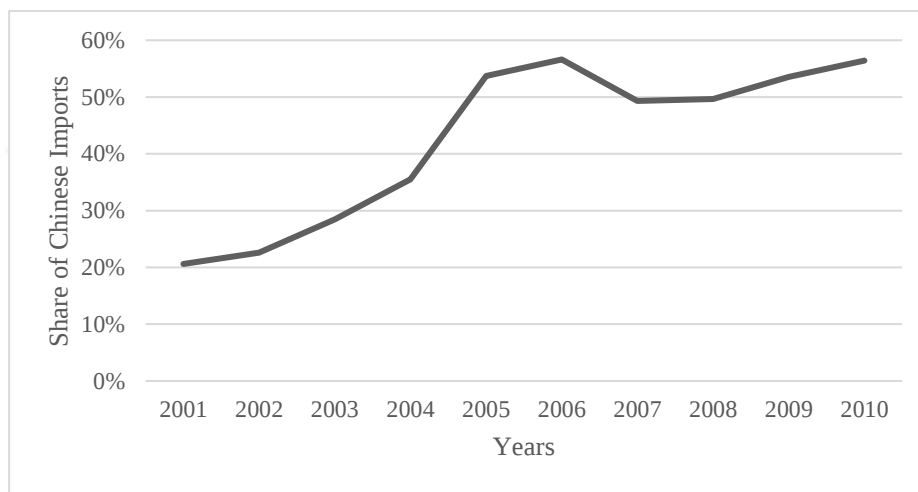


Figure 6.4 : Share of China in total imports in value (TUIK, 2019).

With the abolition of quotas in 2005, shoe imports from this country increased significantly, and this increase affected the overall shoe import growth rates as the country was the largest supplier. Later, Union of Istanbul Textile and Apparel Exporters (ITKIB) in coordination with Istanbul Leather and Leather Products Exporters Union, Aegean Leather and Leather Products Exporters Union, Turkey Association of Shoe Manufacturers, Turkey Footwear Industry Research Development and Education Foundation, Association of Footwear Industry appealed to the trade ministry to increase import taxes. As a result of their applications, the first action no. 26225 dated 11 July 2006 2006/10618 had been taken with the decree of council of ministers with regard to import prevention measures. Two years later, the supplementary decision on the import regime (No. 2014/6692) was published in the official gazette dated August 2, 2014, and with this decision, it was determined that additional customs duties would be charged on the importation of 64 coded shoe products and this issue was determined by our Customs Circular No. 2014/12. The products related to protection measures in imports covered plastic, rubber, natural /

artificial leather and textile materials; plastic, rubber, natural leather footwear products.

6.6.3 Institutional influencers

National cultures and traditions may leave their mark on geographic community or even on entire nation-states (Marquis and Tilcsik, 2013). Inglehart and Baker's (2000) study showed that broad cultural heritage of a society may retain its basic characteristics despite modernization movements. After research on secondary resources and interviews, two major institutional influencers are identified, namely, *Akhism* and Westernization movement, which might be a significant source of possible imprints.

6.6.3.1 Ahisim and craft guilds

Ahi organization was associations of artisans organized as guilds in Anatolia starting in the thirteenth and fourteenth centuries which followed a moral code based on the rules of pudency, renunciation and self-control (Gölpınarlı, 1952). Ahism evolved as a type of socio-economic ethic based on religious rules and practices of *fütüvet* tradition in late-and post Saljuk Anatolia (Oncar, 2016).

Fütüvism, which is the basis of *Akhism*, started to be organized starting from X. Century (Çağatay, 1997). Founder of *Fütüvism* is Abbasid Caliph Nassir Lidînillâh. *Fütüvet* is an Arabic word derived from the word Feta which means generous, valiant. This term is associated with one who complies with the requirements of virtue and law, carry moral and superior human virtues and keep his soul in the way of Allah. Feta is the ideal human type with these high merits (Bayram, 1991). There are various claims as to the origins of *Akhism*. Most common claim is that *Akhism* was first established by the Turkish scholar, merchant and craftsman Ahi Evran.

Ahi Evran, known as the founder of Anatolian *Akhism*, was born in 1171 in the village of Hoy in the West Azerbaijan side of Iran. In 1206, Ahi Evran came to Anatolia with his father-in-law Evhaudhin Kirmani, settled in Kayseri and started to practice tanning and related branches of this craft, after 15-20 years. Following the Mongolian conquest, he united the tradesmen and craftsmen, who came to Anatolia, under a larger organization ruled through *fütüvetnames* (Temel, 2007). He has also led 32 craftsmen from different branches in addition to his own profession, tanning (Aslan, 2013).

Following the Mongol conquest, *Akhism* spread rapidly to all cities and the Anatolian countryside as a social, political, religious and military movement, the socio-economic, political and even administrative activities of the Ahis continued in sixteenth century under a strong centralization policy by the Ottoman Sultanate. Ahis gradually increased their political significance in Anatolia and transformed into guilds (Harris, 1968).

Ottoman guilds were derived from the *Akhi-Füttüvet* tradition had a multi-functional character in nature, as they played important roles in terms of economic development of labor market, product-marketing, and social control of professions (Durgun, 2009).

There are several studies on *Akhism* (Yucel and Durak, 2010; Malkoc, 2016) and its reflections on modern organizational collectives, at the collective level. *Akhism* may provide evidence to enhance our understanding towards collaborative efficiency and group selection characteristics.

6.6.3.2 Westernization reforms

Reforms of Mahmut II which were towards military when first created, had a significant impact in clothing of men's dress and expanded to civil life. The evolution process of women's dress was shaped in post-Tanzimat period depending on the new way of life. Moreover, this tendency towards western clothing continued during the early years of Turkish Republic as a state policy.

The changes in clothing determined the demand of footwear and therefore the types of shoes produced.

6.6.4 Summary of environmental influencers

The MLIT proposes four sources of imprinting mechanisms that causes formation of the imprint during the sensitive periods, namely, economic conditions, technological conditions, institutional factors and individuals. (Marquis and Tilcsik, 2013) and there are several studies showing that organizational collectives faced with imprinting mechanisms may carry imprints of more than one environmental influencer affecting in more than one sensitive period. Therefore, it is important to locate possible influencers in the history As summarized in the table 6.5. There are 7 possible influencers are determined under 3 domains. In the next sections, these findings will be setting the environmental frame for deeper imprinting analysis.

Table 6.5 : Environmental Influencers impacting shoe production in Turkey.

Domain	Influencer	Impact on Shoe Production	Period
Technological	Mechanization after Industrial Evolution	Enabled production of different types	mid-1800s
Technological	Introduction of ready-made sole	Some production phases are removed, specialization changed, supply capacity increased dramatically	early 1980s
Economical	Urbanization	Demand to shoe in big cities increased, new immigrants changed the composition of local labor force	1950s
Economical	Liberalization policies	Liberalization of imports helped the development of the shoe industry in terms of machinery, fairs and export orientation increased	mid 1980s to mid-1990s
Economical	Chinese Shock	After China's accession to WTO, Chinese products started to seize global markets	2000s
Institutional	<i>Akhisim</i> and Craft Guilds	<i>Akhisim</i> and early crafts guild determined the organization of shoe producers	Founding (13th c.)
Institutional	Westernization Reforms	After clothing reforms, demand on shoes differed, fashion entered into daily life	Late 19th to Early 20th c.

6.7 Shoe Production in Konya and Izmir

Clusters located in Izmir and Konya are selected for case study. These two clusters have different histories of formation and provide different narratives.

Understanding the economic and social environment of clusters is important to interpret the development of clusters, in this sense the historical-institutional factors played a role in capital-space dialectic of Izmir and Konya are examined before review of structural differences of these industrial clusters.

6.8 Case of Konya

Today, Konya carries its tradition in production as one of Turkey's leading commercial and industrial centers with a significant industrial potential.

According to the data of the Konya Chamber of Industry, there are 12 sectors that stand out in Konya. The most developed ones are food, textile, automotive supply industry,

machinery and equipment, leather and leather products (especially shoes), paper industry and agricultural machinery sectors.

The political and cultural dimensions behind the Konya's economic development in the past 20 years are worth of investigation. Besides being known as a conservative city, Konya has made significant jump in term of industrialization during the 1980s compared to other cities. It should be highlighted that Konya has a good level of urban planning and a civil society network.

Three historical-institutional factors play a role in the analysis of capital-space dialectic (Lorasdağı and Keyman, 2010):

- A strong tradition of urbanism since *Çatalhöyük*
- *Akhisim* tradition and cultural structure woven with Islamic values
- Self-contained developing city, producing with its own resources.

Relatedly, a strong civil society tradition stood out in Konya, as it represents one of the cities that accommodate highest number of civil society organizations compared to other cities of Turkey. There are 2000 NGOs present in Konya. 1577 social service foundations, 177 cultural institutions, 161 sports groups are recorded among these NGOs (Aktay and Toçuoğlu, 2007).

However, Konya has difficulty in reflecting its economic dynamism and vibrant civil society development into cultural diversity. Like Kayseri, cultural activities are limited in Konya. For this reason, it cannot take the forefront in the index of livable cities in Turkey.

Kutlu (2007) emphasizes that Konya has shown a successful example of municipal administration regarding the local government model and claims that there is a historical accumulation behind it.

Competitiveness is one of the important issues in terms of capital-space dialectics and Konya is an Anatolian city which has accelerated its economic development especially after 1980 with the emergence of individual entrepreneurship. Konya's geographic advantage seems to be of crucial importance in its developmental pattern, epitomized by the presence of open terrain and large hinterland, which provides advantages not only for agricultural production, but also in terms of urbanism, factory installation and ease of transportation.

In the Ottoman period, tradesmen from almost every branch of business were active in the bazaar and the marketplace in Konya, and economic vigor is known to be high in this period. Also, having a separate street, square or marketplace for every artisan group in the same period is important in terms of showing that clustering of trade in Konya was also present at that time. Moreover, as a reflection of the entrepreneurial spirit in Konya, the first national bank initiative was carried out in Konya. In 1909 a bank established by the notables of Konya, under the name of *Şirket-i İktisadiye-i Milliye*. Furthermore, we see that the number of joint stock companies increased rapidly in Anatolia after 1908 and in 1920, 19 of 76 joint stock companies were founded in Konya. These examples undoubtedly give us clues about the origins of the dynamism of trade and entrepreneurship of Konya today. Today, there are 32 thousand SMEs in Konya and 99% of the Konya industry is composed of SMEs.

Konya is located on the important trade routes of Anatolia during the Ottoman period and is known to be a rich city in terms of merchant population. The railway which was established in Konya at the end of the 19th century has contributed to the development and commercial dynamism of the city.

Industrialization in the city accelerated after 1960. Sumerbank Pamuklu industrial enterprise was established in 1937 and Sugar Factory started its production in 1954. These were recorded as pioneers except for some flour mills in Konya. With the development of agriculture in the 1950s, entrepreneurs of Konya have begun to produce agricultural machinery locally. The development of industry in Konya accelerated with the establishment of the organized industrial zone in 1967. Then, the second organized industrial zone was established in 1976 and the third was founded in 1995.

6.8.1 Shoe cluster in Konya

Footwear Sector has been an important industry for the Konya city. Even though the footwear production has continued to evolve and adopted new technologies, the industry can be described as semi-mechanized. The industry employs about 10 thousand people and provides a living for 60 thousand people. The place of the cluster is called AYKENT Shoe Manufacturers Industrial District.

Industrialization of the shoe industry of Konya started in the 1970s. Konya Footwear Sector, which continues its activities in AYKENT Shoes Industrial Site, has made an

important progress towards industrialization. In 1993, the Konya Shoemaker's Association launched an initiative to set up a new site for the producers. The AYKENT Shoe Manufacturers Industrial District was established in 2003 with pure internal resources of the manufacturers without any support from the government. The zone started with 1,040 workplaces, but the number of manufacturers, traders and sub-industrial firms has reached to 1,350 by 2014.

6.8.1.1 Physical structure of the AYKENT industrial site

Industrial Site consists of three floors of independent buildings. There are eight different sized businesses on site. These; 25 m² (usage area 75 m² + terrace), 50 m² (usage area 150 m² + terrace), 100 m² (use area 300 m² + terrace), 200 m² (use area 600 m² + terrace) Terrace), additional new workplaces, 150 m² (usage area 450 m² + terrace), 300 m² (usage area 900 m² + terrace), 400 m² (usage area 1.200 m² + terrace). In the present case - as a result of the growth of enterprises - it is stated that the physical capacity of the site is not enough and there are efforts to create a new Shoe Specialty Organized Industrial Zone.

In Aykent industrial district, shoes manufacturers, outsole stitcheries, wholesalers and various sub-industry businesses coexist. In this sense, the industrial site of Aykent Ayakkabıcılar is a suitable place for clustering. The annual capacity of the Konya shoe sector is on average 30 million pairs. However, as the capacity utilization rate is around 50%, annual capacity drops to 15 million pairs. Firm types and numbers located in Konya are listed in table 6.6 below.

Table 6.6 : Firm types and numbers located in Konya Aykent (KSMA, 2015).

Firm Types	Number of Firms
Large (Factory) Enterprises	50
Mid-Size Shoe Manufacturers	200
Small Manufacturers	1000
Stitching, repair, retail firms	550
Total	1800

There are more than 50 companies that are fully industrialized in Konya. One example is company called Atiker which has a mass production capability, works outside of the district with a 8.000 m² close production area.

6.8.1.2 Specialization in Konya

Considering the diversity and distribution of production in the Konya Shoe Sector, it is observed that production is 70% Men shoes, 20% Women and kids, 5% leather sole soft shoe (*mest*) and 5% rubber shoe (KSMA, 2015).

When analyzing the variety of products produced in Konya, as mentioned above Konya have been specialized in men shoes with leather outsoles. According to industry facts published by TOBB, Turkey has a total production capacity of 600 million pairs. This data only provides leather footwear production capacity of Konya and in this category, Konya provides 7.5% of the total capacity.

6.8.1.3 Market linkages of Konya

Konya shoe makers are mostly contracted manufacturer for the top brands such as Beta, Derimod, Desa, Flo, Hotic, Pearl, Kemal Tanca and Tergan but also limitedly produce under their own brands.

Turkish footwear market is very fragmented, there are very few national store chains and ~70% of the market consist of traditional stores (Euromonitor, 2018). In the local market trade between producer and retailer is mostly carried through non-exclusive agents (wholesalers). These agents visit producers regularly and place their order on seasonal basis, common practice is twice a year for Fall Winter and for Spring Summer. Producers do not need to make any marketing effort. For this reason, Turkish shoe manufacturers don't have proactive commercialization practices. Report of Mevlana Kalkınma Ajansı (2012) indicates that marketing is perceived as the least important determinant (among cost, quality, novelty and marketing) for the industry, although the industry has reached certain standards for workforce, raw material, production and quality. Most of surveyed manufacturers perceive the quality of their products purely from manufacturing perspective and are rarely aware of the importance of other factors like "branding" or "promotion".

However interviewed companies complain about not getting satisfactory market information through their agents. According to Report of Mevlana Kalkınma Ajansı (2012) almost half of the firms choose to work with non-exclusive agents. It is obvious that economies of scale is important for a shoe manufacturer to internalize marketing activities and a few of them have the financial capability to invest in advertising, market research or employ own sales agents.

6.9 Case of Izmir

Izmir via its historical identity, geographic location and human capital possesses a high potential of development. The historical, socio-spatial, and economic structure of Izmir sets an example for a different form of capital-spatial dialectics. Izmir, different than cities like Kayseri or Konya, possesses cultural, urban-historical-institutional features that supports city during the globalization.

Izmir is a basin city, positioned as the capital of the Aegean region with its free zone, organized industrial zones and ports. Izmir province, in terms of its the socio-economic development, is ranked among Turkey's first three provinces. It is known that Izmir has the potential for development of the food and agricultural products sector due to fertile agricultural areas in its hinterland. These two sectors are followed by textile and apparel.

In Izmir, we encounter quite a different portrait from other Anatolian cities in terms of city identity, urban structure, urban culture and urban transformation. Izmir was one of the elite cities of the Roman world and one of the most important port cities of the Mediterranean world. From the beginning of the 17th century, Izmir became the gate of the Ottoman Empire to the world. Izmir, which welcomes the merchant colonies of European countries and has intense commercial relations, is still an important center of trade as a port city and a gate opening to Europe (Lorasdağı and Keyman, 2010).

Izmir came to the fore after 17th century with its geographical position, at the end of a long gulf on the coast of Anatolia. The gulf accommodates one of the finest natural ports on the coast and can harbor even the largest ships. Therefore, Izmir enjoyed a second golden age, as the pearl of the Levant and the eye of Asia. After the Ottoman government's decision on customs dues and price restrictions. merchants who wanted to evade them made Izmir rich.

Moreover, with the arrival of consuls Izmir became international, by 1630 it had Venetian, Dutch, English and French consuls. The French consul lived like a king, with his own Janissary guards, keeping an open house for visiting Frenchmen. In the 1670s Evliya Celebi was impressed by the wealth of the Franks and the power of the consuls: he wrote that the ships of the Franks come so often that half of the city of Izmir is like *Firengistan* (Ünal, 2013). As a result of the capitulations during the

Ottoman Empire, the number of foreign consulates steadily increased. Undoubtedly, these features underlie the reasons behind the cosmopolitan structure of Izmir.

As Izmir became richer and larger in the 19th century, the city began to regard itself as the lighthouse of the Ottoman empire. Against British opposition, a new quay and port were built by the great French firm of Dussaud Frères during the years between 1869 and 1875 the biggest project undertaken in the Ottoman history. Soon the Cordon was lined with warehouses, offices and elegant hotels, cafés and theatres. At the same time, with the opening of the railway between Izmir and Aydın in 1866, the urban space became a place where the social and economic values of the European capitalist system were implemented. These also contributed to the above mentioned cosmopolitan urban features of Izmir.

Izmir had the Ottoman empire's first local newspaper, first American schools, first racecourse, first railway, first football team, first motor car and first cinema. We know that Izmir had entered a different economic trajectory with the construction of railways. Izmir-Aydın and Izmir-Turgutlu rail links were Turkey's first railway lines and helped to transport agricultural products of province to the port and connect the inner land which was extremely fertile.

Izmir is historically known as the city of fairs and hosts many activities, both commercially and culturally. Being extrovert is among the distinctive urban features of Izmir. This situation undoubtedly determines the dynamics of the urban space produced in Izmir (Lorasdağı and Keyman, 2010).

After declaration of the Republic, Izmir Trade Union was established in 1924, and this organization has been working to make efforts to nationalize economic activities, to create new enterprises and merchants. In other words, this project was a reflection of the national economic policies. In this context, in 1928, the Izmir Tradesmen and Community bank was established with national capital. This bank, which is unique as an organization model, helped Izmir in order to maintain its position as a trade center. On the other hand, the exhibition sector was born during the early Republican period.

Izmir since the 1950s, like other big cities in Turkey faced a fast-paced migration. During the migration Izmir was a preferred city due to the opportunities it could provide. The urban profile had changed, and new young, unqualified population emerged within the province. (Peker, 1993)

Another economic progress period began with the Marshall Aids after 1950, which provided mechanization in agriculture. In this period, orientation of the city economy slightly shifted from agricultural trade to industrial production. In the continuation of this path, in the 1970s, Izmir industry continued to diversify. During these developmental phases Izmir became one of the major migration poles and attracted immigrants from many different regions of Turkey. From the 1980s onwards, we should also note that Izmir benefited less infrastructural investments compared to other regions.

Another important point in terms of the development of Izmir is the cooperative ability of institutions. Joint initiative of Aegean Region Chamber of Commerce, Chamber of Commerce and universities to create technology development zone is a good example of the coordination of these socio-economic institutions.

The institutionalization of commercial actors in the city dates back to the 19th century. Since the 1850s, British traders have established a chamber of commerce in Izmir. Then the Italian and the Dutch had the same initiative. After these initiatives, the establishment of a chambers of commerce to cover all the merchants in Izmir came to the agenda in 1880 and the establishment of the chamber was completed in 1885. Another commercial organization, the Commodity Exchange, a modern stock exchange was completed in 1892.

6.9.1 Shoe cluster in Izmir

The number of shoe factories at the beginning of 1990 in Izmir was quite a few and production was mostly unbranded. On the contrary today Izmir has shoe companies that own nationwide brands and market their products to many countries abroad. The shoe industry in Izmir has achieved rapid development in recent years. Izmir Footwear Sector accomplished this success by combining accumulated knowledge and skills based on many years of history with the innovations brought by today's technologies.

Having features of effective contracted manufacturing, quality workmanship, extroversion, fashion orientation, flexible manufacturing and cluster potential, today Izmir has a powerful position in the shoe industry of Turkey.

Especially after the foundation of new industrial zone İŞIKKENT, the development of the shoe industry in Izmir has accelerated. İŞIKKENT Shoe Makers Industrial District, which is one of the biggest industrial zone of Izmir, is built on an area of 380,000 m².

The district was founded by a cooperation established in 1985 under the name of ‘Yapı Kooperatifi’. This cooperative built the districts without using any credit facilities. The first phase of the district is activated in 1994 with three-story workplaces for shoe makers. In the second stage, 1121 wholesale shoe sales points were completed and opened to service in 1999. Nearly 10,000 jobs are provided in the workplace of 2000, and the district is very important in terms of output for the national footwear and the Izmir city industry. The technology of the industry can be described as semi-mechanized. Business owners formed the Shoemaker's Site Management in June 1998. Today, seven bank branches, Telecom and cargo companies are located on the site, holding a wide business potential. In 2000, the founder organization of the district Yapı Kooperatifi transformed into the site management cooperative. There are 3 managerial organization possessing different responsible areas of the district, Shoemaker's Site Management, Multi-Story Workplace Management and site management cooperative. Representing various interests, these three bodies are managed in harmony with a single board of directors under the same roof, under separate directorships.

730 of the shoe makers located in Izmir are registered in the Shoe and Travel Accessories Profession Group of Izmir Chamber of Commerce. In addition, there are 800 companies registered in Izmir Shoemaker's Association. The official data on the number of companies operating in the footwear sector in Izmir could not be reached. However, when retailers and repairers are included, it is stated that the number of companies operating in the footwear sector in Izmir is around 2000.

There are almost 100 companies that have completed mechanization of their production. Izmir shoemakers are producing both under their own brands in the domestic market as well as for the top brands such as Beta, Derimod, Desa, Flo, Hotic, Pearl, Kemal Tanca and Tergan as a contracted supplier.

6.9.1.1 Specialization in Izmir

When we look at the product types produced in Izmir, it is seen that it specializes in the branch of women's and children's shoes with leather. (IZTO, 2015)

6.9.1.2 Market linkages of Izmir

According to shoe exports data; it is seen that Izmir's shoe exports are ranked 4th in the country exports, Izmir's exports have increased successively over the last five

years. Although Turkey's exports indicated a 1.2% decline in 2014, Izmir's exports continued to soar. Import figures of Izmir are decreasing in recent years. Import/export balance of footwear Izmir is deviating positively unlike the rest of the provinces reaching two and a half times. Moreover, it is known that some products produced in Izmir are exported through firms in Istanbul.

Firms in Izmir export their products to many markets. Despite the relative success of Izmir, Turkey's share in total exports often remain at low levels. This ratio was below 5% in 2014. Izmir, compared to the data of Turkey's leading footwear export markets, seemed to earn significant market shares in Italy, England and Germany (Izmir's share in these countries total exports in 2014 is about 22%, 13.3%, and is 8.9% respectively). The Russian Federation is in the 3rd place in Izmir's shoe exports, but its share in total exports to this country is only 3.5%. Other noteworthy markets in which Izmir has a significant share are Australia, South Africa, the Netherlands, the United States and New Zealand. Izmir's share is over 20% in country exports made to USA which is the most important shoe importer of the world. Besides, the share of exports made by Izmir to New Zealand, Australia and South Africa is very high in the country's total exports (45.4%, 33.1%, 31% respectively).

6.10 Assessment of cases and direction towards deep analysis

The background information is important in interpreting possible imprints on the regional shoe production. In the table 6.7 major differences on habitus, urban development and space-capital dialectic are presented. Firstly, understanding the economic and social environment of clusters is important to interpret the development of clusters, in this sense factors played a role in economic and social environment of Izmir and Konya are examined before the review of structural differences between these industrial clusters.

Table 6.7 : Comparison of Konya vs Izmir.

Economic and Social Factors	Konya	Izmir
Habitus	Being known as a conservative city, cultural structure woven with Islamic values, a strong civil society tradition stand out, Konya today is one of the cities with the largest numbers of civil society organizations including social service foundations, cultural institutions, on the other hand modern cultural activities are limited	Being known as a modern city, unique example of western, cosmopolitan exhibition of the urban population since late Ottoman period with high portion of non-Muslim Ottoman citizens and foreign nationals residing changed the social life with social freedoms
Economic Development	The railway which was established in Konya at the end of the 19th century has contributed to the development and commercial dynamism of the city. Industrialization in the city was accelerated after 1960 with governmental enterprises like Sumerbank. Konya has made significant jump in term of industrialization during the 1980s.	Izmir-Aydın and Izmir-Turgutlu rail links were Turkey's first railway lines and helped Izmir to prosper by connecting the fertile inner land with the port. After declaration of the Republic, Izmir Trade Union was established in 1924 as a reflection of the national economic policies, Izmir Tradesmen and Community bank was established to maintain its position as a trade center. The exhibition sector was born during the early Republican period.
Prominent Industries	Most developed industries are food, textile, automotive supply industry, machinery and equipment, leather and leather products, paper industry and agricultural machinery.	Textile, apparel and garment, food, drink, tobacco, petrochemical, furniture, plastic, medical equipment, automotive, iron and steel, shoe production are among the important industries.
Space-capital dialectic	Has geographic advantage as the presence of open terrain and large hinterland, which provides advantages not only for agricultural production but also in terms of urbanism, factory installation and ease of transportation. Konya is located on the important trade routes of Anatolia during the Ottoman period and is known to be a rich city in terms of merchant population.	From the beginning of the 17th century, Izmir became the gate of the Ottoman Empire to the western world with intense commercial relations and developed as a port city, with foreign merchants the urban space became a place where the social and economic values of the European capitalist system are implemented

Secondly, shoe production in Izmir and Konya have own distinctive features which are summarized in the table 6.8 below.

Table 6.8 : Shoe production in Konya and Izmir.

Features	Konya	Izmir
# of firms in shoe industry	1.800	2.000
Capacity (exl. injection)	16 million pairs	47 million pairs
Specialization	Mostly men shoes, leather and comfort	Mostly women and children shoes with leather
Market linkages	Low export ratio, mostly through national chains and local traders, has its own local fair	High export ratio also works with national chains and local traders, used to have its own fair
Cooperation	One UR-GE project was initiated but not utilized	Two UR-GE projects were completed, one is still active
Division of work	No fully integrated facility, but has 100 mechanized large-scale factory	No fully integrated facility, but has 50 mechanized large-scale factory

According to preliminary findings, three possible imprints are located, imprint on specialization in different product types, division of work and cooperation dynamics.

6.10.1 Specialization

First, there are several examples of imprints related to the specialization of agglomerations especially regarding shoe producers. For example, the work of Fontana (2008) shows two major imprints of two individuals, Voltan and Luigino Rossi on Brenta footwear cluster in the Northern Italy. Although, for the Riviera del Brenta, the role of incubator company in transforming the future footwear district belongs to Voltan, the main imprint of the transition from the production of medium quality to the luxury one belongs to Luigino Rossi, the owner of the Rossimoda family company in the 60s . Another example is Montebelluna footwear cluster in Italy, which is more related to certain technological ruptures. Upgrading the technical knowledge in Montebelluna dated back to 1937 with the invention of Vibram sole (a waterproof material, particularly suited to walking in the mountains) by Vitaliano Bramani, which in turn transformed the local industry. Studying specialization requires tracking changes in the timeline, where specialization started, therefore we can locate when variation starts, and which circumstances let evolutionary mechanisms work. Moreover, specialization represent a blueprint of company and very much fits to genotypical variation-selection-replication model of General Darwinism. These reasons encourage us to deepen our analysis on possible occurrences of specialization.

6.10.2 Division of Work

In the original formulation of Marshallian district, the district is based on integrated small firms, where scale economies are relatively low, and the agglomeration is mostly influenced by external economies.

In most of the cases of shoe manufacturing, we see a division of labor, as shoe production has several stages. Therefore, it is important to distinguish in general which stages are carried out internally which are externally by the firms, enabling us to classify outsourcing and external dependence. First, the operations requiring highly specialized equipment or technical knowledge like model, pattern creation or last making deserve attention. Second, there are other operations that are relatively labor intensive, for example the stitching of uppers or hand-weaving. Via the outsourcing of such work, producers decrease their costs on rent, equipment and particularly labor.

In order to be effective in the spatial agglomeration, the market-based relationships among firms located in clusters are important. In this sense co-operative nature of vertical relationships between independent agents are necessary for lowering transactions costs. Especially the neo-Marshallian (new) industrial district tradition (Becattini, 2004; Brusco, 1990; Piore and Sabel, 1984) explained the successful performance of sectoral groups of SMEs in the northeastern and central part of the Italian Peninsula – the so-called “Third Italy” – after the 1970s through strongly specialized and extremely fragmented in a large number of SMEs. Here the external economies of scale from which these firms could benefit is highlighted, moreover common socio-institutional tissue enabled lowering of transaction costs even more. This fact resulted in low levels of vertical integration and a strong division of labor among district firms (Cainelli and Iacobucci, 2009).

Another point drawn in the literature is the relationship between vertical integration and technology intensity in the producing and supplying industries. There are several theories about the effect of technology and technological change on the internal organization of firms (Acemoglu et al., 2005).

But changes in organizations in the districts can be witnessed in different time periods. Christopherson and Storper's (1986) work on the film industry in Los Angeles, Scott (1986) and Scott and Paul's work on Orange County (1990), and Saxenian's work on Silicon Valley (1990, 1991a, 1991b, 1994) showed us that changes in technologies or

markets may trigger different forms of district organization. Some authors refer exogenous conditions such as market turbulence (Balloni and Iacobucci, 1997) while some others emphasize endogenous conditions (Bianchi, 1992), such as the decrease of mutual trust (Coro` and Grandinetti, 1999) as the triggers of plausible organizational changes. In either case while seeking to account for the reorganization of industrial structure, historical analysis is crucial.

Both Izmir and Konya are good examples of clusters as defined by Porter and similar configurations of footwear clusters are present in Italy and Brazil. They all consist of interconnected companies with component suppliers, machinery and equipment providers and specialized infrastructure. Porter (1998) promotes the idea of clusters and suggest it as a good way of how companies should be configured. Although Porter represented clusters as a new kind of spatial organizational form, similar archetypes exist beginning with the very first formation of local guilds. Thus, it can be argued that such division of work, in other words, types of specialization have persisted since then. On the contrary a different type of configuration in footwear manufacturing is witnessed in some part of the World. For example, Chinese sports shoe cluster in Jinjiang is the biggest sports shoe production region, established in 1986, which was awarded with the title of "China Shoes Capital" in December 2007. It was also declared as the "national sports industry base" by the State General Administration of Sports and consists of vertically integrated factories. Other examples of vertically integrated agglomerations are found in old Soviet countries. This variation from cluster thinking reflects the dominant logic of its founding conditions. Therefore, comparison of a footwear agglomeration outside Turkey would provide additional insights, in this sense Romanian footwear cluster will also be analyzed. Moreover, a similar attempt during state-controlled economic development period in the early foundation of Turkish Republic will be analyzed and the rationale behind the failure of this attempt will be questioned in the light of our conceptual evolutionary model.

6.10.3 Collaboration

Population of small firms in a district cannot be classified only as agglomerated entities that produce certain things separately, as the economic and social links and their specific organization make them more than that. In that sense not only division of work but also business environment plays an important part. As asserted by Becattini (1990)

industrial district is featured by both a community and population of firms in one naturally and historically bounded area. Italian school on industrial districts has viewed rise of Third Italy as an endogenous process based on interaction and cooperation. Firms in the district not only enjoy external scale economies due to their co-existence and enhanced flexibility but also minimize uncertainty and opportunism (Bertini, 1994; Piore and Sabel 1984; Fabiani et al. 1998). As Putnam (1993) asserted social trust and cooperation which are built on norms and civic engagement reduce reasons to defect and enhance future cooperation.

On the other hand, the social settings that condition the operation evolve through history and historical ruptures and have extremely long-lived consequences which do not necessarily yield a social setting of total reciprocity/trust, but also to a dependence/exploitation (Putnam, 1993). The importance of historical institutions in the long run is illustrated by Douglass North's (1990) study on different development paths of North and South America depending on their colonial legacies even though both possess similar constitutional forms, resources and similar international opportunities. In order to understand different social capital formations in time, not only historical legacies but also changing environmental factors should be analyzed. While districts evolve and vary in time, different periods may reflect different levels of social capital and observed implications may then depend on the particular characteristics of the context and temporal period (Becattini 1990). Therefore, analyses towards historical legacies should be coupled with environmental factors affecting them.

As explained under the conceptual evolutionary framework, group selection theory suggests that group of companies may be exposed to different levels of environmental selection forces per their collective ability to cope with environmental forces. As Izmir has illustrated a better example of cooperation on UR-GE project unlike Konya, a possible imprint on collaborative capability will be analyzed and if found, the interplay between heredity and environmental influencers, which might potentially play a role in the formation of imprints, will be presented.

6.11 Imprinting on Specialization

As mentioned above, each province is usually more specialized in a particular type of shoe. Konya and Gaziantep are more oriented towards the production of men's shoes,

but Izmir specializes in the branch of women's and children's shoes with leather (Özçörekçi and Öngüt, 2005). The interviews in Konya supported that production of women shoes were not very common during pre-industrialization (*Arasta*) period but existed.

“There were few people who made women's shoes (*zenne*) in 1965, the black rubber shoe (*kara lastik*) was made in Antep” (Ambar, interview, May 16, 2019).

“Konya was always ahead in men's shoes” (Deresoy, interview, May 16, 2019).

“In the *Arasta*, there were people who made women shoes (*zenne*) like Albanian Zekai (Cyprus immigrant), there were also few during the second industrial site” (Ata, interview, May 17, 2019).

On the other hand, interviewees in Izmir mostly stated that Izmir has been well known for its women shoes since early *Arasta* times. Sıradağlı (interview, May 23, 2019) mentions the company roots as 100 years of making women shoes in Izmir.

Levent Çevikel owner of Koç Kundura, established in 1965, narrates: “We were producing women shoes (*zenne*), in Izmir mostly women shoes were made, men shoes were fewer and some production of kids shoes were taking place” (Çevikel, interview, May 24, 2019).

On the other hand, Faruk Hanoğlu who has almost a half century work experience in the industry stated that:

I have been a shoemaker for 46 years, I have been at all stages of production and marketing. I started with my father, we were producing men's shoes, more than half of Izmir was producing men's shoes, the production turned to woman shoes later. In the past, women consumers did not have a lot of shoes, it developed with fashion. (Hanoğlu, interview, May 23, 2019)

Although these statements do not provide the precise level of specialization in women shoes during *Arasta* times, it is evident that know-how of women shoes existed to some extent and developed as the demand grew.

Those who keep up with the change only remain in the market, which leads to the specialization of the workshops in particular types of shoes. The oldest masters in shoemaking are those who produce men's shoes, some of the people working in this

field have developed the production of women's shoes in order to respond to the new demand over time (Akkayan, 2007).

Numerous examples including the case of Leipzig book publishing industry show that sources of specialization of an industry could be both exogenous and endogenous. But the important commonality is the effect on demand conditions. No matter the origin of the influencer we can track the change in demand condition for the focal collective to locate the influencer. In the next section how demand conditions changed, how new opportunities arise related to this change will be showed for Turkish footwear industry.

6.11.1 Change in demand conditions

6.11.1.1 Footwear demand in pre-Tanzimat period

During the Ottoman period, the people who produced shoes and sellers were called '*kavaf*'. This term is still used in some regions. According to the shoe types they were made with different names, they were called *çizmeci*, *nalıncı*, *yemenici*, *terlikçi* and *pabuççu*. Therefore, it is understood that the expertise of the shoe type has existed even in that period. We should also note that the shoes which were worn inside and outside the house in the Ottoman period differed from each other. As mentioned before, footwear is a cultural product and had functions more than preserving or comforting foot. Shoes, as in every geography in Anatolia, soldier, peasant or palace people showed differences according to the clothing style. As in every part of the world, it had been a status indicator in Anatolia.

From the records, it is understood that the production of footwear was strictly controlled until the end of the 18th century. For example, the decree issued in 1788 did not allow shoemakers to use of expensive fabrics (e.g. the use of fine silk), these attempts of the Ottoman Empire was aiming to prevent social differentiation and the fall of the hierarchy (Goody, 1980). Moreover, according to the position and occupation of the person in society, clothing was differentiated by the state. Sultan Selim II. On 1 August 1568, published an edict and described the details of non-Muslim clothing pertaining to certain rules.

In order to differentiate the look between not only Muslims and non-Muslims, but also ranks, shoes were expected to be in decisive colors and types. In the Ottoman archives, the edicts, provisions and regulations related to the clothing of non-Muslims who lived

in the territory were strict. For example, while ulema (Muslim theolog) was wearing blue color shoes at the protocol gathering, the Muslim folk was wearing yellow shoes and quilted caps. Armenians used the purple color and the Greeks used the black color. The poor non-Muslims had to wear two-eared lining shoes, a qadi (muslim judge) had to wear different colors of shoes according to his marital status, yellow if single and red if married and green if widower. In this way, demand for different colors and different types of shoes were identified and produced in separate places. In a sense, the demand is controlled within the framework of the rules set by the state. Even 15 days after the announcement of the first edict II. Selim has declared that some raw material and shoe prices had increased unreasonably as a result of failure to comply with the decree and issued a new edict (Yılmaz, 2007).

It is evident in the edicts issued later that the control over non-Muslims was continued. For example, in the edict issued in 1577, Murat the III stated that those who did not comply with the rules of clothing would be punished by death. On the other hand, records also show that the Ottoman state gave some concessions to some non-muslims in some periods and they could wear clothes and shoes belonging to Muslims (Yılmaz, 2007).

The Janissaries used to wear *yemeni* (a flat shoe) at city centers, but a lace-up postal during campaigns. Officers wore yellow, and regular soldiers wore a red buskin. Palace shoes were not very different from other shoes, high and short-cropped boots, slippers, leathery-based cavalry shoes and horseshoes were preferred types of shoes. The shoes worn by the public is called *başmak*, *çarık* and *yemeni*. This practice continued until 1839 Tanzimat Edict.

Collections exhibited at the Vehbi Koç Foundation Museum, Sadberg Hanım Museum and Topkapı Palace Museum include shoes worn from the 16th century to the 19th century. 16th century shoe models were more traditional, while by the 17th century the Western influence is observed. Western style shoes and clothing orientation began in 1826 with the removal of the janissaries and the dressing of the army with a western style.

6.11.1.2 Footwear demand in post-Tanzimat period

In the 18th and 19th centuries, with the influence of European fashion trends, shoes called buskin (*fotin*) began to be worn. Buskin were long, sturdy, showy leather shoes

with cones. Reforms of Mahmut II had created a significant difference in clothing. On the other hand, while the reforms of Mahmud II created a new look in men's dress, the evolution process of women's dress was shaped in post-Tanzimat period depending on the new way of life.

This evolution process, which was rather understood as the moving away of urban women from their traditional look, especially became an intense struggle area after 1908. The perception of women as one of the objects of modernization, influenced the positions of Western-oriented or conservative writers vis-à-vis this subject. Transformation of Ottoman traditional society in the Tanzimat period was not a spontaneous process led by the internal dynamics, rather it coincided with a reform period which became inevitable with the European supremacy and which was initiated and directed by the state and participation of women in working life was limited (Avcı, 2007)

Ottoman Empire's efforts towards westernization started in the 18th century by Selim III and Mahmut II especially in the social realm and continued with the reforms during the early republic period lead by M.Kemal Atatürk. As a result large majority of the urban society dressed up as their western counterparts.

Women's entry into the work life accelerated after the declaration of republic and this led to various changes in shoes (Kuru and Paksoy, 2008). This change is explained in the '*Yarım Ay*' Magazine in 1935:

Since the day when women started to work, we can say that a big change even a new revolution in the fashion of shoes was achieved. Even the Chinese have abandoned the small-foot fashion, which has been customary for centuries. Now the feet are not made according to the shoes, but the shoes are made according to the feet. During the period when the woman was ornamental, her shoes were worn to make her feet look small and elegant. However, now that women, like men working in business and doing sports, walking, running, tight-fitting shoes are no longer in the past. Every woman wears shoes. The most necessary feature is to be comfortable for the foot. For this, the more comfortable the street shoes are, the more comfortable, simple and open the special day shoes are. In fact, the backless slippers we wear at home, they put on the street wearing fashion in Europe. (p. 24-25)

In the 1930s, models for shoes production were brought from abroad. At that time, there were no designers drawing shoes. In order to overcome this shortage, the first shoe model book Turkish Shoemaking No: 1 prepared by the painter Cemil was published in 1936 by the Istanbul General Shoemakers Association (Kuru and Paksoy, 2008).



Figure 6.5 : Turkish shoemaking book no:1, model book, General Shoemakers Association, İstanbul, 1936 (anonymous).

Ismail Kemal Güzelaydın was one of the well-known shoemakers for well-educated people in the 1930s, he stated that:

There are two fundamental changes in the 1936 summer women's shoes, one of which is the heels and the second one is the noses of the shoes. The backs of the thickened heels have two corners and are slightly shortened, while the noses have a round shape in proportion. In the same year, four corner noses which were fashionable in Europe did not receive the same reaction from consumers in Turkey, actually Turkish women's feet are small, fleshy and shaped, but most of them are combed. (Kuru and Paksoy, 2008)

Between 1938 and 1939, the *iskarpın* shoes were sportier and simpler, but they were very stylish with the details on them. Heels were short for daily shoes. The high heels of the night shoes are very detailed and detailed. Between 1938 and 1939, the changes in the fashion of the shoes were followed and presented to the customers by shoemakers.



Figure 6.6 : Fashion album, 1938 Oxford shoe fashion, İsmail Kemal Güzelaydın.

In the 1940s, although comfort was still the prominent feature for the shoe models, not only European fashion but also in American fashion were reflected in shoe models (Kuru and Paksoy, 2008). Since the 1950s, the increase in population has started due to urbanization and income, and the demand for footwear has started to increase and shoe manufacturing has turned towards mechanization (Kuru and Paksoy, 2008).

Increase in women shoe demand with western styles is not addressed equally by all footwear production clusters. It is seen that this window of opportunity related to new clothing and western style shoes was enjoyed by producers in Izmir, in the next section, the circumstances that let footwear producers in Izmir to enjoy changing demand conditions will be discussed.

6.11.2 Variation and selection of Izmir footwear producers

Izmir was one of the cities that benefited the most from the increasing trade relations triggered by the Industrial Revolution throughout the 19th century. Its port allowed the products produced in fertile agricultural areas located in the city's sub-region to be exported to world countries. With the Balta Harbor Trade Agreement signed with Britain in 1838, the Ottoman administration removed many obstacles in front of foreign merchants and the right of foreigners to buy real estate in the Ottoman country. These decisions increased the attractiveness of the most commercially lucrative region of the Ottoman country, Izmir and contributed to the creation of new business areas and an upsurge in the population of the city (Kerimoğlu, 2013).

In the years 1890-1913, Izmir was one of the first ports in Europe, where the wealth of the people was increasing, and big trade houses were established in Izmir (Gursoy, 1993). The transformation of Izmir into the one of the most important port city of the Eastern Mediterranean attracted the international traders and the number of foreigners in the city increased. In 1847 the population of foreigners was estimated 15,000 and increased to 50,000 in the 1880s and the population of Izmir, which was reached 154,000 in 1885 exceeded 200,000 in the beginning of 20th century (Kerimoğlu, 2013). One of the most interesting features of Izmir's population structure was the cosmopolitan exhibition of the urban population. In the population composition of the city, non-Muslim Ottoman citizens and foreign nationals residing in Izmir had an important position in commercial activities of Izmir. Of course, this originality was

reflected in the social life. Innovations and freedoms that could not be imagined in many parts of the Empire were experienced in this city (Yakar, 2004).

The city, which attracted increasing attention both from the capitalist Western world and from the Ottoman administration, began to reform itself by adopting Western practices. As the traditional production relations were replaced by capitalist ones, Izmir began to enter into a rapid integration with the capitalist world economy (Kerimoğlu, 2013). In the Frenkian neighborhood, stores brought Western products, and created a center of attraction for those who were Western lifestyle wannabes. (Kerimoğlu, 2013).

Moreover, westerners, who lack knowledge in the market and the producers of the region, established commercial relations with the producers using the Greek, Armenian and Jewish Ottoman citizens as intermediaries and directed them to the production of certain products. In the late 19th century, western-style shoe manufacturing was started by Rum craftsmen and most of the masters of Turkish producers were Greek.

Our first place of work was in the area where the old Greek houses were located, our grandfather came to Izmir from Manisa, the masters of their masters were all Greek, Armenian, Jewish. The production area was near the Jewish synagogue, most of the terms used in shoemaking are of Greek origin. They were good masters and the new masters they trained (my father and his friends) were among the few masters of Izmir. (Çevikel, interview, May 24, 2019).

There are some Greek origin words in the discourse of shoemaking like; limaki (Emery), mastalya (wooden bucket), danalya (asting pincers) (Akpınar, interview, May 24, 2019).

Shoes have been directly related to requirements of cultural and social life, as Bourdieu has asserted that crucial consumption patterns are linked to the development of socio-cultural identities (Bocok, 1995). The field shapes the individuals' preferences and logic of the practice of consumption. The sense of women's wears primarily began in large residential centers such as Istanbul and Izmir in the 19th century and as women gradually began to participate in the social life, along with the westernization movement (Sancaktar, 2006).

Considering the fact that shoes had been mostly custom-made until 1960s, shaping of the local demand could be analyzed through examination of the social structure of Izmir. As mentioned, together with the first design of the Republic, a new habitus was developed in urban women's clothing and in the continuum, it has become normal, immanent and ordinary. From the years of the Ottoman period until the 1960s, urban women gained a new habit parallel to political, economic and cultural transformation and internalized this habit over time (Yılmaz, 2010).

Regarding fashion, developments during the late Ottoman period continued during Republic period through reforms. Modernization and westernization policy by the state speeded up western lifestyle and the reforms of state directed to clothing influenced this transition. New modern women were idealized and promoted in the magazines of the period (Kaya, 2014).

As women played an important role in the process of internalizing the Republican revolutions in Turkish society, the integration of women into urban social life by adopting revolutions regarded as success of revolutions and the new state (Çakır, 1998). For this reason, women's pursuit of fashion and a modern appearance were supported and encouraged by the government (Kandiyoti, 2007).

The status of women clothing in Izmir in the 1950s has shown in the *Yeni Asır* newspaper dated April 4, 1950: “You can see the reflection of all international fashion magazines in Izmir, clothing is very important in this city, presentable clothing is a social norm” (Gedikler, 2006).

In the 1950s, ready-to-wear was not widespread among the inhabitants of Izmir, it was mostly preferred by the rural people, while the wealthier families had their clothes sewed to private tailors. Besides, there was much interest in art schools and institutes among women, there were also people in middle-class families who knew and practiced sewing at home or in the immediate vicinity (Gedikler, 2006). Women of both wealthy and middle-class families did not fall short to follow fashion within their budget limits in those years as changes in clothing fashion could be observed both in women's and fashion pages of newspapers and in fashion magazines.

Another important institution in the change and transformation of clothing was “girls art schools and girls institutes” which were first founded in 1909 as *İttihad-i Osmanlı Mektebi*, teaching handicraft, sewing, gymnastics, cutting, lace, laundry, reorganized

in 1927 as “girls art institutes” (Barbarosoglu, 2009). In 1932, girls' art schools launched their evening classes. In 1938, mobile courses were organized for 7-9 months, which tried to reach peasant women (Caporal, 1982). Girls 'Institutes and Evening Girls' Art Schools were very important institutions for the spread of fashion. Aim of the institutes was to develop their knowledge and skills in Turkish clothing and handicrafts, however they became one of the most important tools of modernization in the field of clothing (Yılmaz, 2010). In the 1950s, women in modern districts such as Alsancak and Karşıyaka in Izmir were tracking fashion not only from newspapers, but also from fashion shows of girls' institutes, these shows were an important opportunity to monitor fashion (Gedikler, 2006). 1950s urban working women, distinguished women with a new habitus, which was affected by European and US fashion culture (Yılmaz, 2010). Women in Izmir seem to be in a better position than in other cities, in terms of clothing, social status, working and education opportunities (Gedikler, 2006). In figure 6.7, we see that Izmir Girls High School teachers wearing stylish, well-groomed clothes suitable for working conditions.

The process of the participation of women to the workforce, to the workshops and then to the factories started in the last period of the Ottoman Empire and continued during the Republican period. There was a continuity in terms of sectors and fields of activity of women for these consequent periods. The inclusion of women in the labor market in Turkey increased temporarily in order to replace the male labor force, which had decreased dramatically in 1915 due to the war. In the Republican period, as in the Empire, women workers mainly worked in the fields of weaving, food, drink and tobacco (Makal, 2001). Non-agricultural labor force participation of women in Turkey increased after 1950s, owing to the migration from the rural areas to the city centers, increasing adaptation to the characteristics of the urban life and changes in the family structure. Changes in the family labor relations caused alteration of the social position of women and their place in the working life (Berber and Eser, 2008). Figure 6.7 shows that Izmir Girls' High School teachers are wearing stylish, well-groomed clothes suitable for their working conditions.



Figure 6.7 : Izmir girls' high school teachers (Özden Yılmaz archives / 1.7.1960).

Moreover, magazines have been an important tool for urban women to internalize the process of modern clothing. In these magazines, issues indicating how urban women should behave were properly addressed (Hayat Magazine, 7 June 1957) and suggestions were listed.



Figure 6.8 : Hayat Magazine (Selim Sıradağlı archives / 7.6.1957).

Magazines were also information sources for shoemakers to follow trends and make new models. During the interview with Selim Sıradağlı who was the 3rd generation

owner of the company producing women shoes since foundation, showed magazines dated 1950s and 60s that were used for product development (Figure 6.9. and 6.10).



Figure 6.9 : Advertisement of DEB shoes in magazine (Selim Sıradağlı archives / 1960s).



Figure 6.10 : Advertisement of shoes in Vogue magazine (Selim Sıradağlı archives / 1.12.1950).

In order to respond local demand Izmir shoe firms continuously needed to reflect up to date fashion to their products. International fairs also presented opportunity for

producers to learn about not only new techniques and technologies but also fashion. These local information opportunities on new models or technologies were pumped to the internal networks. Faruk Hanoğlu explains Izmir firms' ability to capture new trends with fairs:

“It was very beneficial for Izmir to have a more educated generation who went to Europe, increased its product quality and improved itself at the Istanbul fair.” (Hanoğlu, interview, May 23, 2019).

Based on the data collected in Gedikpaşa and Çarşıkapı shoe makers for an anthropology study in 1979, Kırımlı (2007) asserted that the shoes masters became masters after doing a 9-year (median) journeyman, but those who produced women's shoes exceeded 10 years of craftsmanship due to the required aesthetic and artistic efforts compared with men's shoes.

One of the evidences about Izmir's ability to make good women shoes is also seen in the competition during Izmir International Fair. A news in a national newspaper dated August 26, 1968, referred Turkey Shoes contest (Figure 6.11). It also documents that prominent bureaucrats and artists (e.g. Zeki Müren) attended the ceremony. Beyond showing Izmir's success in women's shoes, the news shows the cozy artisanal environment necessary for a fashion culture.



Figure 6.11 : Turkey shoes contest in Hurriyet newspaper, (Selim Sıradağlı archives / 26.8.1968).

6.11.3 Retention

Retention mechanism requires the related replication of genotypes. As the know-how of women shoemaking is the genotype in this case, retention depends on the the replication of this know-how among the firms of population. As discussed before, the knowledge can be replicated through different ways e.g local networks, mobility of human capital, spin-offs, firm splits, most of them are observed for shoe clusters.

Traditional shoemaking learned within an apprenticeship system that includes ranks and degrees of qualification is very important. In the 1980s, the professional competence ranking in traditional shoe making workshops was not determined by a formal board or an authorized professional association, traditions and market functioning were decisive in this regard (Akkayan, 2007).

In traditional shoe production, newcomers to the profession (*Çırak*) learn to make shoes at work depending on the master. Starting with simple jobs, they develop professional skills and progress over time to become competent in certain jobs. They successfully complete the first stage of professional progress and move to a new intermediate status, which is called journeyman (*Kalfa*). On the other hand, raking of master (*Usta*) is only gained via opening a workshop (Akkayan, 2007). As we see, spin-off is natural result of the professional life of a shoemaker.

The profession requires not only learning technology but also discourse, tools, raw material and how to use them. While apprentices who are trained at work in traditional shoe making workshops, can move to the next stage also through opening their own workshop or evaluating the offers from other workshops (Akkayan, 2007). Hüseyin Ata, explains his professional development, which is a very common example in the industry, as follows:

“I entered the profession in 1982, with the advice of my brother, he advised me to become shoemaker or a stitcher, I became journeyman in 1987, then I founded my company in 2004” (H. Ata, interview, May 16, 2019).

On the other hand, the workshops which decide to learn new models or shoe types may hire masters and the mobility of masters accelerates the knowledge dissemination.

“Ready-made sole versions of women's shoes were close to men's shoes, a master was brought for it from the outside and he taught us something, companies learn from each other.” (Akpınar, interview, May 24, 2019).

Moreover, we also observe that family business enables knowledge dissemination over generations.

I have been a shoemaker for 46 years; I have been at all stages of production and marketing. I started working with my father (Hanoğlu, interview, May 23, 2019).

My father started to work in a producer making heels in 1967. Two years later he bought the shop in installments (Öztürk, interview, May 23, 2019).

The success of replication depends on enduring variation which leads to critical mass. Since the 1950s, the increase in population has started due to the intensification of urbanization and increases in income, as the demand for footwear has started to increase and shoe manufacturing began to adopt mechanization (Kuru and Paksoy, 2008). As demand continued to increase replication accelerated. Hakan Öztürk describes this threshold:

The main artisanship of Rums is making women and kids shoes, especially women shoes. The know-how in women shoes has been passed over generations through masters and firms. Today, sub-industry and masters are mostly originated from women shoe production. There are shoe last makers specialized in kids' shoes, they know the sizes and don't have difficulty in adopting to novel changes. For example, if someone from Antep wanted to get a specific women shoe last he had to come to Izmir and get the base structure of the shoe model. Afterwards some Izmir companies opened branches in Antep and Konya but having the base structure and the last was not enough, stitchery is very important for women shoes which require specialization. (Öztürk, interview, May 23, 2019)

Without retention the impact cannot be fully formed, and the impact reaches to the critical mass through replication and/or diffusion. Initiated with local demand, continuous knowledge dissemination among Izmir firms created vested interests in women shoe making, when women shoe demand expanded to the other regions of Turkey Izmir has already become the dominant producer after Istanbul.

6.12 Imprinting on the Division of Work

In the early Ottoman period, there was specialization rather than division of work among shoemakers. Shoemakers were working in small workshops with few people.

Record dated 1636 shows that shoemaking consisted of small workshops with 3-5 people working. At that time, shoes were totally handmade and did not require different types of machinery. For example; Faroqhi (2009) mentions four separate shoemaking crafts based on types of footwear: *başmakçılar*, *pabuççular*, *çizmeciler* and *saray pabuççuları* in sixteenth century who had their own guilds.

In a record dated 1651, the products in Cündi Ahmet Çelebi's shop were listed and there was only one type of shoe and the materials used to produce it. It is known that the disagreements regarding the who will produce what is predetermined and disputes are resolved by local judge (*kadı*).

The division of work increased after industrial revolution as well as the utilization of different machinery in shoe production. Last making, cutting and lathing were some of the special phases that were made by separate specialists. These special processes are carried by different workshops which were found near the shoe producers in *Bedesten* and these workshop agglomerations created a synergy and the structure of shoe production changed.

The structure of industrial organization of Turkish footwear production in pre and postindustrial periods shows us three imprinting attempts. First, the case of stitcheries, those have persisted in separate small workshops since early industrial period despite the increase in production in decades and become one of the major issues in front of the industry with unregistered, overloaded, fluctuating, unhealthy situation. Second, the case of Sumerbank, which was a government enterprise initiated in the early Republic period which was a unique example of a vertical production model but failed to survive and lastly the case of ready-made sole which caused milling and sole stitching workshops to become absolute changed the industry. Below sections, evolutionary mechanisms governing in these cases are presented.

6.12.1 Evolutionary Mechanisms In the Case of Upper-Stitchers

Sensitive Period and Environmental Influencer: Traditional shoe manufacturing, which dates back to ancient times, used to be made by hand. Shoes such as sandals, *yemeni*, *mest*, and slippers were hand made by a master. Here, the master is the one who cuts and sews leather, makes a sole lining and completes it. His assistants are journeymen and apprentices. While the master performed the important operations himself, he would leave the simpler operations to the journeymen and apprentices.

This work was done in small workshops. Today, specialization has started to increase the quality and quantity of production.

In the workshops, people can do certain and same jobs with better quality and faster. Cutting is done in the workshop, sewing is done in the same place or in another specialized unit. Throwing to the top, that is, the process of combining the upper and the base is done in the workshop. In this sense usage of sewing machine in the production process has increased the product durability significantly.

The First Successful Sewing Machine that used a hooked needle and one thread, creating a chain stitch was invented by Barthelemy Thimonnier in 1830. After that several inventions are created and patented by handful of other inventors and started the “Sewing Machine War”, they all claimed different key parts of the modern sewing machine. This war ended by the formation of the first patent pool and first successful commercial trust, known as the Sewing Machine Combination (Mossoff, 2009).

At the end, this war didn't hinder Singer from producing his own machine and he established his mass-production facility in New York, and by 1860 the company achieved the distinction of becoming the biggest sewing machine manufacturer worldwide. Singer sewing machines; first began to be sold in 1886 in Istanbul and Izmir in Turkey, and Singer, opened its first dealer shop in 1904 in Istiklal Street and become the first foreign company opening a dealer shop and issuing invoices in Turkey (“Singer”, n.d)

Variation: However, it is not possible to address the companies pioneered using sewing machine in upper stitching, it is most probably that Istanbul and Izmir were the places these companies located. Establishment statement of Izmir Shoemakers Society dated 1921-22 mentions the upper stitchers as separate profession along with shoe makers (Yılmaz, 2007).

Upper stitching has been dominantly outsourced since the *Bedesten/Arasta* times, Faruk Hanoğlu describes this division of work as: “The upper stitching has been separate, it was done in a different place, this was also the case in Çeşmelik, Mezerlıkbaşı Karabağlar, these has been different workshops” (Hanoğlu, interview, May 23, 2019), in Konya Rıza Ata, Ali Deresoy and Osman Avşar describes as follow:

We had a deceased master making mesh, the mesh stitching was very difficult, ..., when the master starts, he cannot stop until it is finished. Mesh, women and

men uppers were stitched by different masters, there was not as much production as today, I'm talking about the 1960s, the total number of shoes that were produced at the time in Konya was not more than production of an average factory today. (R. Ata, interview, May 17, 2019)

My father's grandfather was doing mesh stitching in Arasata, my grandfather was also doing mesh stitching, my father carries the profession he learned from his grandfather to his own business in 1955, his stitching business continued until 1972, afterwards he started selling shoe materials. (Deresoy, interview, May 16, 2019).

“At that time (1965), cutting was handmade, the cross (cut correction) was done by upper stitcher, they had the model pattern at their workshop, for example mesh, stitchers have the pattern, they cross and stitch” (Ambar, interview, May 16, 2019).

These narratives also support that upper stitching has been a separate profession in both clusters since artisan times. Moreover, we learn that upper stitching has also different specialists for different types of shoes like *mesh* and others.

Selection: Sewing machine used for upper is different than sole stitching machine and although it created a dramatic increase in productivity, it only accelerated one phase. The companies who bought this machine had to utilize it with all production orders of shoe makers around in the era of weak demand. Therefore, rationale behind having different workshops not only required specialization but also small batch sizes, during this period the quantity produced was very low which yields to consolidation of small batched orders and outsourcing. The rationale behind division of work continued to remain valid for next decades, Faruk Ambar recalls those days as:

The upper stitchers has been working in the same status. When I came back to the new industry in 1978, we enlarged our workshop from 20m² to 50m². When we put the bench, the shop remained empty. Then, we invited an upper stitcher, a friend, he not only worked for us but also for other producers. (Ambar, interview, May 16, 2019)

On the other hand, as shoe consumption has increased steadily in the following years, the structure of upper stitching workshops should have been changed, but it is still observed that most of these workshops are consist of small teams, the structure has not

been changed so far. How this structure retained despite demand increase is explained below.

Retention: As stated in the conceptual model, successful practices not only increase survival rates but also its spin-offs. Through rounds of selection, the model of outsourcing upper stitching diffused and become a separate profession among shoemakers.

New apprentices in upper stitching not only specialize in a type of product (ex. men, women or kids) in these small workshops but also depart to open their own workshops when become experienced enough. Moreover, the decrease in the price of sewing machine along with the technological maturity enabled apprentices to open upper stitching workshops much easier than before. Although the main reproduction of this model is spin-offs within clusters, to an extent, we also observe labor mobility between clusters based on working conditions or social affiliations (e.g relatives).

The producers who witnessed Konya Bedesten and other industrial sites explained the division of work and how it continued as:

The work done was heavy, the manufacturer was many, but not many shoes could be made, the resulting number was small, ...there was a hand cut in the 1965s, it would be cut on the log, there were 2-3 patterns, stitchers would cross the uppers, ..., then they started to cut on glass between 1970 and 1975. When we came to the second industry for the first time, we increased our production area from 20m² to 50 m², when we put the work bench, the shop remained empty, we invited the stitcher, a friend, to produce both for us and others (F.Ambar, interview, May 16, 2019).

As shoe consumption increased along with the production with ready-made soles, capacity required for upper stitching was also increased but small workshops persisted. Interviewees explain current upper-stitching work as unregistered, overloaded, undersupplied, fluctuating, unhealthy and not suitable for the conditions of international chains. Persistence of small workshops despite the increase in industry output shows the strength of retention forces. Two factors enable this persistence, first; from transaction cost economies perspective the model of small workshops turns to be still superior and second traditionalization reinforces within group fitness through working habits.

There were failed attempts to replace this model, one example is from Konya, an entrepreneur opened an upper stitching factory with several production lines but failed, Hüseyin Ata narrates this initiative as:

A mass production line for upper stitching was set up in 1996. It had widened our horizons, then this facility changed into shoe assembly. then it was closed, the story ended in a 7-8 year period. Around 2003, the fabrication of the upper work continued for a while, but then it ended, as it relied on the demand from Istanbul. Besides, in those days, in general, the work was not formally registered, there were neither insurance nor overtime in place, upper stitching continued as unregistered, today 90% of the production is underground (H. Ata, interview, May 16, 2019).

As this profession is still unregistered, TCE do not allow to replace the current model. Hüseyin Ata explains the situation with upper stitcheries as:

The upper stitching teams in the industry do not exceed five workers, usually 3 to 5 people, and there are also ones whose on their own. There is no such thing as social security, it is very cheap to buy machinery today, stitching machine technology has almost not changed in upper stitching. It is very easy to open a stitching workshop, anyone is able to buy machinery with almost one week of income (H. Ata, interview, May 16, 2019).

Moreover, irregular working hours, seasonality, underdeveloped managerial capacities characterize the working environment of upper stitcheries and reinforcing the status quo.

For those who work for the domestic market, the fluctuation is too high, for example today they stitch for 4TL per pairs but in high seasons they won't do the same work for 6 TL. After a while they would stitch it for 3 TL if they can't find enough orders. We would be ruined if Syrians did not come to work, they balanced the shortage (H. Ata, interview, May 16, 2019).

No stitchery can quote a reasonable price when he is asked. He would ask the producer what price he would offer, generally they do not make calculations. there is no full disciplined work, they are not efficient, they come in the morning, work until the evening, but the work has to be finished, if they do not, they stay until 9-10 pm (H. Ata, interview, May 16, 2019).

You cannot create a competitive environment, example: I have machines, I can sew some designs cheaper, but when I say 5 liras and someone else says 7 liras, then I will be questioned for my price or vice versa. Therefore, sometimes stitchers don't give price if the work is different than they generally do, they have the lack of ability to calculate production cost per unit (Karadayı, interview, May 16, 2019).

There is not enough supply of upper stitching as required in the market right now, for example, today Deichmann produces 160 million pairs a year. If Deichmann wants to build production operations in Turkey, it is easy to establish assembly lines but they would face a serious supply shortage in sole stitching. Moreover, those companies require registered work and this can't be provided by current stitchers (H. Ata, interview, May 16, 2019).

From the interviews the working conditions of stitcheries are summarized at the table 6.9 below.

Table 6.9 : Working conditions of stitcheries expressed in interviews.

Working Condition	Founding Period	Today
Batch Size	Low	High
Type of work	More artisan	Optimal for mass production
Workshop Size (# of workers)	Small (less than 5)	Small (3-5 generally)
Technology Investment	Expensive	Cheap
Working flexibility	High	High
Legal Registration	N/A	Unregistered

As stated in the table, although the batch size has increased since the artisan times and the type of work departed from artisanry and became optimal for mass production, small stitchery workshops still remained. Moreover, the current status of stitcheries has become one of the main problematic issues in front of the whole industry.

In 2017 the stitchers initiated a riot and demanded a raise for the prices per pairs. Konya is one of the cities where the upper stitcheries leave their jobs went on strike like in many provinces due to low wages and poor working conditions. Workers, who work 14-15 hours a day and most of them uninsured, started a resistance by stopping work in front of Konya Aykent Site on September 18. The group of about 600 people says that the factories they produce for them at low wages and that they cannot seek their rights because they work unregistered (Turgut, 2017).



Figure 6.12 : Stitchers on riot in Konya (Turgut, 2017).

In the past, when the minimum wage was 1000 TL and we were earning 1500 TL, we were considering that, at least we get insurance money upfront. But now stitchers work far below the minimum wage. Moreover, they also invest in the machine and undergo a risk for the penalty of being working unregistered,..., a stitcher has 10 weeks of holiday per year. If a stitching master can earn 52 thousand TL per year, it equals to the same money as the minimum wage, considering insurance, daily meal and transportation. You need to earn 1200-1300 lira per week for 42 weeks without any holiday. (Karadayı, interview, May 16, 2019)

The situation becomes gangrened, the division of work which fitted the conditions of artisan times persisted and yielded an unhealthy setup today. This situation is not created by the act of any actor nor is a result of imported learning, it is formed and sustained naturally. On the other hand, there is an example of government imitative towards vertical integration. In the next section, this initiative will be discussed.

6.12.2 Evolutionary Mechanisms in the Case of Sumerbank

Parallel to the industrial revolution in Europe, the 19th century was a period of transformation for the Ottoman Empire. Many of the traditional production methods started to be implemented in industrial scales. During this period, the factories established by the palace were pioneers, one of which was the Beykoz Leather and Shoe factory, where the first mechanized shoe production was made. It was first founded in 1810-1812 by the palace under the name of *Debbağhane-i Amire* in Beykoz in the time of Mahmut II and was obliged to make military shoes. In the second constitutional period, it was renamed *Beykoz Teçhizat-I Askeriye*.

The military shoes, boots and harnesses produced were exhibited at the International Paris Fair in 1856. Thus, it is an indication that the quality of the product produced by the factory is trusted, in terms of quality, European standards have been reached and Beykoz Leather and Shoe Factory has proven to be a leading factory (Yerlitaş, 2013). Additionally, shoes produced by Beykoz Factory won the gold medal at the International Vienna Fair (Kayabal, 1999).

During early 1900s, there was no shoe factory other than the Beykoz Leather Shoe Factory, shoemaking exists in the form of small workshops. Handmade shoes were sold in stores and according to the estimates about 3,000 shoemakers worked for the big stores in Istanbul (Küçükerman, 1988).

During the Republican period, this factory had an important place. Sumerbank was established with its headquarters in Ankara under law no. 2262 issued on June 3, 1933, this bank was in charge of operating the factories, including Beykoz Leather and Shoe Factory to be taken over from the State Industrial Office, preparing and managing the studies and projects of all industrial enterprises to be established with state capital. In addition to meeting the military needs, the production of quality shoes suitable for the purchasing power of the people has been its mission under the statism approach. (Küçükerman, 1988).

On the other hand, only the ones with better income in cities and towns could order shoes from the craftsmen. In this period the number of craftsmen who could meet the comfort and elegance standards was very few. Shoe models were brought from Paris or Istanbul, and they were produced by a small number of masters per order of the customers.

The mechanization process in the shoe production was appreciated in Turkey towards the end of the 1950s. Due to the lack of external competition in a closed market, most of the private sector, which operates comfortably, could not realize its significance. Those who did realize were not able to implement it in their production due to the lack of capital, lack of experience, lack of scale, lack of infrastructure in transportation and communication (Kuru and Paksoy, 2008).

When I went to Istanbul to buy a new model, I was told that models are no longer sold to Anatolian producers, due to the collective usage by 5 different producers. 3-4 workshops were using the same cutting molds. In the end they

didn't give me the model, and then I realized that the work started from the model. (Avsar, interview, May 16, 2019)

The public tried to play a leading role in this area through Sumerbank. In addition to the Sumerbank Beykoz Shoe Factory in Istanbul, construction of 7 facilities commenced through underdeveloped regions of the country in the second half of the 1970s, however, in the first half of the 1980s, 3 of them were able to start its operation (Özçörekçi and Öngüt, 2005).

Yener Kaya narrates that:

Eight new shoe factory planned to be built with profits made by Beykoz Leather Shoe Factory Turkey between 1978-1979, but then the coup occurred, and these projects stopped. Even the machines of Van, Tercan and Sarıkamış Factories had been bought and delivered to us at that time. We put these machines into operation, and Beykoz Leather Shoe Factory provided the training of labor force for the new factories. (Yerlitaş, 2013, p. 94)

In 1987, Sumerbank was transferred to the Public Partnership Administration in order to be privatized and in 1999 its production was stopped. In 2004, it was purchased by Yildirim Group as a real estate development, restoration and renovation project within the scope of privatization. Today it hosts series / film shootings and events as a nostalgic place.

Sensitive Period and Environmental Influencer: Although foundation of Beykoz Leather and Shoe factory was dated back to early 19th century, the sensitive period for this case started during the early Republic period when state planning was first initiated and Sumerbank was established in 1933. This period had its dominant logic of state industrialization based on raw materials, state primarily focuses on agriculture-based industries and this logic reflected in the establishment Sumerbank. In line with the conditions at the time; the main policy of the new Republic of Turkey was to achieve development through rapid industrialization (Koksall and İlkin, 1973). The negative economic situation inherited from the Ottoman Empire forced the state to intervene, and the state took the duty of operating the basic industries by establishing itself and taking on the duty to meet the required capital accumulation, technical infrastructure and personnel need (Başol, 1983).

The approach of industrialization based on the raw material, which has been expressed since the 1920s, has its place in the foundation of Sumerbank. In this manner the state economy politics establishes the sensitive period and state acted as the main environmental influencer in this period.

On the other hand, the state economy policies did not last for many decades. During post WWII period state economy policies started to dissolve (Boratav, 2006). Therefore, it can be asserted that the window of imprintability created by the sensitive period started to close in this period.

Variation: The first variation of fully integrated facility was Beykoz Leather and Shoe factory, later called Sumerbank. It was basically established to meet the needs of the military. On the other hand, since the second half of the 19th century, the Ottoman Empire remained behind the technological developments within capitalist economies and the decline in revenues forced the state to transform in the production process, in the mean time a major revolution occurred in the leather manufacturing industry with the introduction of chromium compounds until the last quarter of the 19th century, and Beykoz the first steam machines in its factory were installed in 1827 and the production was increased drastically (Yerlitaş, 2013).

Due to poor development performance of liberal policies during 1920s and stagnation felt in the Turkish economy in parallel with the 1929 World economic crisis, state led development model gained attraction and, in this period, the most important example of state business was Sumerbank that established as a development conglomerate after first five-year industrial plan prepared by the government (Sağlam, 1980). This variation was a result of direct intervention of government at organization level therefore the variation can be determined a result of Wrigtian drift.

Selection: In Wrigtian drift, the evolutionary mechanisms determine new fit conditions by breaking the focal entity away from a larger population and the selection of newly founded organization depends on these conditions. Considering selection forces acting on Sumerbank, protectionist acts of the state should be highlighted. As mentioned by Yener Kaya, public institutions (i.e Military and State Railways) used to purchase shoes directly from Sumerbank Beykoz Shoe Factory without a tender before the procurement law came into effect in the 1980s (Yerlitaş, 2013). Secondly, Sumerbank was also selling its shoes directly to the consumers, in 1972 and in 1984 number of

stores of Sumerbank reached to 228 and 468 respectively, and it is said to be the largest marketing organization of its time (Danacı, 1996). Lack of another national brand was strength of Sumerbank. Organizations profitability and increase in the production also show the Sumerbank's fit in the market conditions. Production almost tripled between 1934 to 1940 and reached 902 thousand pairs (Tuna, 2002); 1940 prime ministry audit committee report shows that factory realized a profit of 391.885.09 TL. Moreover, interview with Yener Kaya also support this argument, Mr. Kaya narrates that factory sustained its high profitability until 1980s, the Factory was in the top four as a taxpayer between 1970-1980 and its profitability was almost 50% (Yerlitaş, 2013). All evidences support that Sumerbank Shoe Factory has an environmental fit but whether or nor this fit results in a successful imprint also depends on reproductivity of the interactor (Sumerbank Shoe Factory in this case) and diffusion of replicators.

Retention: As mentioned before population level fitness in an evolution is achieved through either by diffusion of replicators to other interactors or through new off-springs.

In the case of Sumerbank, although there is no evidence found that vertical manufacturing practices copied to other firms in the industry, there are three main barriers found blocking possible diffusion of replicators to other existing manufacturers:

First, when absorptive capacity is low or existing routines are too dissimilar to allow copying, the replication through diffusion may fail. The vertically integrated manufacturing is much more complex than traditional manufacturing practices of shoes and require not only utilization of different type machines but also industrial planning and management practices. Traditional manufacturers' knowledge bases are far from this technological and managerial practices. Moreover, traditional manufacturing firms are generally characterized as weak knowledge bases with limited in-house knowledge generation. In the report of the commission of the leather and leather products sector, prepared within the framework of the sixth five-year development plan of 1991, highlights the presence of dwarf companies in the sector. It is seen that by 1991 85% of the shoes manufacturing is based on small enterprises and scattered throughout the country, but concentrated in Istanbul and all business functions of these small workshops are directed and managed by the business owner, on the other hand, the establishment of an effective organizational system requires a

certain size and the smallness of the units that make up the line of business does not allow the establishment and development of modern business functions in these units (DPT, 1991, p. 109). Secondly, persistence of small workshops with high division of work also represents existence of a parallel fit in the market. The DPT commission report indicates two million pairs export with much less import and assumes domestic consumption of shoes as 155 million pairs in 1987 (DPT, 1991). As huge portion of the production is made for domestic market, which is segregated and work through regional wholesalers. Moreover, considering the fact of shoes being a fashion object, it can be suggested that demand conditions do not necessitate a mass production. Thirdly, insufficient capital accumulation of the enterprises producing shoes also prevents making large volume of shoes. (DPT, 1991) Çevikel, a producer from Izmir also confirms that during the mechanization of industry in late 70s and 80s profit margin was almost 50% from a pair of shoes, which also support the view of environmental fit of the formation of the industry at the time (Çevikel, interview, May 24, 2019). Lastly, as far Sumerbank shoe factory is not located within a shoe district of Istanbul, lack of physical proximity disables establishing intra-cluster knowledge system.

6.12.3 State Initiative in Timisoara Footwear Cluster

Fully integrated type of manufacturing investments also seen in Soviet countries which were coeval with Sumerbank initiative. During the socialist era production plants were planned, designed and made by the central government. Footwear cluster in Timișoara / Romania, having socialist background, sets an example of state-planned production district and in contrast to Sumerbak case, Belussi (2010) showed a great example of successful stamp of state actions on footwear manufacturing in Timișoara. Therefore, the case of Timișoara represents a valuable comparison understanding the imprinting mechanism yielding to failure or success of state initiatives towards integrated manufacturing of shoe production since establishment of Soviet Union. After the fall of socialist system, Romania together with other Central and Eastern European countries (CEECs) initiated the international economic integration as a consequence of trade liberalization and privatization of state-owned production facilities. The process of liberalization was followed by international decentralization of production from developed countries especially from Italy. In this period, although some of the

agglomeration firms were privatized companies and their spin-offs most of them were FDIs with greenfield investment.

Belussi (2010) found in their study that however Rumanian firms possess global ties to knowledgeable Italian firms, they are much treated as satellite production hubs and they continued to work in a closed system. However, the reorganization of state-owned enterprises determined the end of a vertically integrated productive cycle, the main logic of production did not evolve to a Marshallian district in Timișoara. Belussi (2010) explained the reasons behind not evolving to a more cooperative production model and maintaining the main logic as:

- The new owners of privatized production facilities were managers and employees of the old state-owned enterprises
- Factories carry out only the productive function and usually almost all phases of the productive cycle of the product, including the packaging phase but all raw materials and generally all the techno-productive characteristics are provided by mother company, thus blocking all relations with other enterprises representing a more closed system.
- All subcontractors of capacity have an executive role and none of them is involved in R&D activities;
- Not only machines but also most of the raw materials and many of the strategic components were imported and all Italian enterprises located in Timișoara have maintained, directly or indirectly, their own supply network in Italy or abroad.

Most of the Rumanian firms (83,3%) in Timișoara did not decentralize any activity to other firms and most of them were spin-offs from privatized old shoe production companies (Belussi, 2010). From this perspective it seems these companies inhere the production logic of historical vertical production model of Soviet Union. Moreover, the majority of firms act as dependent subcontractors of Italian firms. These buyer-driven firms of are focused on production costs and the autonomy of enterprises in terms of decision making are limited, inhibiting their capacity to develop their supplier structure and create networks, leading to a self-sustaining system (Belussi, 2010).

The sensitive period of liberalization did not automatically reformed, the old logic of closed system sustained. Moreover, lack of a variation of cooperative example that could be selected by the environmental conditions and reproduced successively turns

out to be the reason for persistence of socialist imprint. Compared with Sumerbak case, as only one possible type of formation existed during the liberalization environment did not have a choice, on the other side, for the Sumerbank case environment favored both type of replicators which was different than Timošara footwear cluster.

Therefore, it can be asserted that not only variation is the first step of imprinting but reaching a critical mass (or sometimes reaching to total of population as in the case of Timişoara) through reproduction is important for solidification of the imprint, and dominant logic of the sensitive period persists even during the coming sensitive periods.

6.12.4 Evolutionary Mechanisms In the Case of Ready-made Sole

Sensitive Period and Environmental Influencer: Initiation of ready-made sole during 1990s was a major interruption in the division of work among workshops. Faruk Hanoğlu, former president of Aegean Shoe Industrialists Association with 46 years' of experience explain what mechanization brought:

The production was more than craftsmanship rather than industry. There were not even press cutting, all phases were made by hand. It lasted until the 1990s. Mechanization brought easy production. There used to be different branches, such as milling machines, sole processing, painting. After mechanization of industry production became a lot easier, we faced supply-demand disbalance due to over supply. (Hanoğlu, interview, May 23, 2019)

Variation: Ali Deresoy defines the evolution of industry in three phases: before 1972, between 1972 to 1996 and after 1996. In 1972 producers moved to first organized industry site from city center and to the second organized site in 1998, he explains these periods as below:

During 1972-1996, we faced transition from craftsmanship to the industry, at the beginning of 90s, pioneer in this sense was Zirve Shoe Factory which first utilized mounting machines, İşbir Shoes and Model Shoes followed. Before that, the largest manufacturer could only produce 100 pairs a day, due to absence of ready-made sole at that time. At the first organized site; spaces were shared, sole stitchers and milling was separate, clustering increased our efficiency and number of customers, with the mechanization after 90s quality and quantity have also increased. (A. Deresoy, interview, May 16, 2019).

Initiation of ready-made sole opened a window of opportunity. First the variations like Zirve, İşbir and Model in Konya, which have enough financial resources invested in the new mounting machines and others followed. Not all of them were able to seize the opportunity, some of the firms in the cluster lacked related knowledge to operate these machines, Levent Çevikel who has been in footwear manufacturing since 1966 explains the mechanization as follows:

Production increased with new machines imported to Turkey. The way these machines entered in Turkey was not quite right. In this period profit margin was almost 50% from a pair of shoes. So many machines were sold to producers who were unfamiliar with them and they would not bring any value to the producer. Moreover, spare parts were not local, producers did not allocate their capital correctly on these machinery investments. They were just bought and were not used. I used to repair most of the machines in Izmir, oil and pneumatics were leaking, the seal ring was torn, you would either bring the ring from Italy or try to solve it by yourself in Izmir... (Çevikel, interview, May 24, 2019)

Selection: Ready-made sole enabled shortening some of the production processes, while reducing the need of others like sole stitching and milling. The output increased drastically. Interviewee Hüseyin Akpınar who used to be a milling worker explains that transition:

...I got my primary school diploma at the factory, I stood out in my work and my master rewarded me. It was upsetting that the milling was finished with the transition to the ready-made sole. But I developed myself in other areas of the shoe making. On the other hand, many other colleagues were forced to transfer to other businesses branches. (Akpınar, interview, May 24, 2019).

Retention: A rapid diffusion of new technology was welcomed by following producers (Hanoğlu, interview, May 23, 2019), today all of the industry uses ready-made soles with very few exceptions.

6.13 Imprinting on the Collaboration

6.13.1 Collaboration Efforts of Shoemakers

In both cases in Izmir and Konya several common professional organizations such as, shoemaker's chamber, chamber of commerce and chamber of industry are present. In both cases, production areas have been established by a construction cooperative, in Izmir it is IŞIK KENT, in Konya it is AYKENT. Both have links with local chamber of trade which facilitates administrative connection with government. Moreover, local associations for exploiting governmental incentives to some extent are also present, in Izmir it is EGEAYSAD, in KONYA it is ANAYDER.

Some guild functions are not required today, like the supply of services and some of them are administered by different institutions like arbitration or quality standardization. Rest is solved by market itself like wages, workforce supply and distribution of raw materials. On the other hand, today's problems are different and still require cooperation. In both URGE project need analysis reports, (IZTO 2015; ANAYDER, 2014) the common problems for both Konya and Izmir are listed as:

- International recognition of industry
- Lack of qualified workers
- Upper stitcheries
- Lack of R&D
- Under-scaled production
- Shrinkage in target markets

Especially the lack of qualified workforce and problems with upper stitcheries are mentioned by most of the interviewees. In addition to that interviewees also complained about long payment due dates and unfair competition caused by unregistered production. Some actions taken to tackle these obstacles, but significant progress has not been achieved yet.

Firstly, to supply sufficient qualified worker, both districts initiated technical high schools projects. In Izmir, EGEAYSAD, in cooperation with, Izmir Chamber of Shoemakers and Ministry of Education, Izmir Provincial Directorate, signed a protocol to establish "Işıkkent Shoemaking Anatolian Technical High School" within Işıkkent

Shoemakers Site Administration Complex in 2017 and the construction of the school for 12 classrooms started. In Konya there has been an Anatolian Technical High School since 2010, which was the second school supported by Turkish Footwear Industry Research, Development and Education Foundation (TASEV). However, interviewees in Konya did not seem to be satisfied with the qualifications of the alumnus and show little interest to recruit them. Hüseyin Ata highlighted the inadequateness as:

“Those who are graduated from technical high schools are weak in the technique of the work. They study to have diploma not to enter the profession. Moreover, there is a huge gap between universities and manufacturers, we do not speak the same language, the students are inadequate” (H. Ata, interview, May 16, 2019)

Another example of cooperation has been on the local fair organizations. Izmir Shoes and Bag Fair opened its doors for the 46th time on 23-25 October 2019. This fair has been arranged with contributions of EGEAYSAD, Izmir Shoemakers Chamber and Chamber of Trade. Konya also initiated a local shoe fair in collaboration with Konya Shoemakers Chamber and Chamber of Trade in 1996, it was the first trade fair organized for a specific profession. 29 fairs were held and the last fair was on 20~23 June 2013. Hasan Uzman claimed that after the outsource production for branded chains increased, making a fair to invite buyers has become unnecessary (H. Uzman, interview, May 17, 2019).

On the other hand, in both cases firms has joined URGE projects. URGE project is a national initiative to develop competitiveness of local firms through collaboration. The communiqué on “Supporting the Development of International Competitiveness Development” numbered 2010/8, allowed to integrate project-based needs analysis, training, consultancy, promotion, employment, foreign marketing or procurement committee and individual consultancy programs within the framework of cluster understanding, project approach and a support mechanism.

In 2013, a new association called ANAYDER was established in Konya to attend this initiative which required local firms to gather under a legal entity. ANAYDER has received a grant worth of 2.75 million TL (25% of the expenditures should be financed by attending firms), until today this grant was not utilized at all. In Izmir, chamber of

trade attended to the URGE project in collaboration with EGEAYSAD for shoe industry in 2015.

Since then firms attended several international fairs, the incentive is still active and being utilized by firms. EGEAYSAD's success was depend on interlinking different institutions:

All five institutions were poorly communicated, did not support each other. Moreover, they were competing, none of them like other institution nor what they do. We brought together the Chamber of Commerce, EGEAYSAD and AYKÜSAN at that time. We brought our friends to the management of these institutions, so we were able to connect these 3 institutions. The shoemakers chamber was not noteworthy, these three were sufficient for coordination. Before that, there was no inter-institutional cooperation, projects prepared by EGEAYSAD were not even discussed in the chamber (F. Hanoğlu, interview, May 23, 2019).

Nonetheless, the former president of EGEAYSAD Faruk Hanoğlu complains about the unwillingness of firms to participate, "For example we need ten attendees for the fair, it is 2.000 Euro all-inclusive, which is a fair price, but they refrain from attending, we had to persuade one by one, we try to help the sector" (F. Hanoğlu, interview, May 23, 2019). Although, there are some firms in Izmir participating in URGE incentives especially for international fairs, the collaboration opportunities are not used by majority of firms.

Hüseyin Akpınar as a controller visits quite many producers both inside and outside of the district, his observation on cooperation among industry members supports this view: "Firms are not very harmonious, there is sort of cooperation within the district but those who are located outside, they stood on their foot." (H. Akpınar, interview, May 24, 2019)

Selim Sıradağlı attributes cooperation to non-rivalry, "I see that there are maximum two big producers left in every branch. Therefore, it makes it easier to cooperate, he is not your rival" (S. Sıradağlı, interview, May 23, 2019).

There also some other examples of collaboration beside the URGE project in Konya. An example was the establishment of the sectoral foreign trade companies. It was a

structure that was encouraged by the ministry at that time, as Ali Deresoy explains this experience:

...so we tried this twice, the aim was to make investments that every company cannot effort on its own, such as attending abroad fairs, Russia, Italy. I think it was in 1998, the mechanization started, first company was founded by 12 firms. It was discontinued, our second experiment was a business partnership establishing a brand (FUBBY), in 2012. It was established with big companies such as Burçak Ltd, İkbal, As Zirve, Barboros. The aim was to ensure that the companies that competed with each other were acting together and become exporters. It was clear at the beginning that this cooperation would not be possible with competing companies in the long run. The products were very similar, but the prices were different. We aimed to create exporters out of them. One company was successful, even made a factory investment in Azerbaijan (A. Deresoy, interview, May 16, 2019).

Before ANAYDER, there were two more associations established in Konya, one of them was KONAYSAD (Konya Shoe Manufacturers and Sub-Industries Association), it was established by new generation businessmen in 2012 and other was KONAYDER established in 2010 by pioneer companies before the coming elections of chamber of commerce. Moreover, there was Konya Shoe Making Industry has been represented within different cooperation structures: Konya Shoe Makers Chamber, Konya Chamber of Commerce, Konya Chamber of Industry, Aykent Industrial District Management, which created problem regarding measures of responsibility. Thus a new association called KONAYDER is established, the mission of which was training of qualified work force, conserving business values, provide social aids to veteran artisans and their families, students, establishing export organization, informing its members about government grants and organize attendance to international trades (A. Deresoy, interview, May 16, 2019)

Another inventive towards collaboration was under a SME Networking Project, with its full name “Technical Assistance for Empowering SMEs for Networking and Inter-Regional Cooperation” Project, initiated on 22nd February 2011 by the Ministry of Economy. The project had a budget of 5 million Euros and was jointly financed by the European Union and the Republic of Turkey. It was planned that the project which was launched on 28th July 2011 by Zafer Çağlayan, the Minister of Economy will

continue for 30 months and be completed in August 2013. This project was a successor of “Development of a Clustering Policy in Turkey” Project (DCP Project). DCP Project set the basis for new and comprehensive activities that have helped to raise awareness in Turkey about clustering and to develop a capacity and that will be conducted in the field. In 2012, Konya Shoe Makers Chamber with the help of Mevlana Development Agency presented a “clustering center” report indicating that a shoe cluster center under the leadership of shoe makers chamber should be established and should carry functions as: training and project development, innovation and clustering, finance and marketing. Today, none of these functions have been established. Moreover, under this project they tried to make a collaboration with an Italian designer but the competition between participating firms towards designs hindered its progress and the project failed.

As seen from these experiences, the actions are more top down rather than bottom up, comments of interviewees also supporting this view:

In the district, chamber of commerce organizes conferences, the chamber of industry support through discounts on energy consumption, but they do not organize foreign customers and bring them. The chamber leads action, the offer comes from them, for example there is no inside request to arrange an international visit (F. Ambar, interview, May 16, 2019)

“After 2010, everyone has minded his/her own business only (he uses the expression *‘gemisini yüzdüren kaptan’*). The clustering has been gradually diminished. In the old days there was an internal demand for clustering, but currently cluster work is being only pushed through the governmental bodies” (A. Deresoy, interview, May 16, 2019)

Although there have been initiatives to increase collective efficiency like establishing technical schools, organizing local fairs, efforts of chambers were not sufficient to solve competitive problems like market expansion or product development. Moreover, the relationship between shoemaker’s and trade chambers was described as weak. Therefore, in both cases clusters established separate associations to reconnect these institutions by seizing the power in assemblies through member/president elections. In Konya, the last association established failed to unite local firms to utilize the government incentives. Although, firms in Izmir seems to be at a better position to

utilize these incentives, it is revealed that convincing local firms has not been an easy task for the association.

Moreover, the evolution of guilds to chambers show that only mutual help function continued until 1991 and governments tried several times to determine not only the status of these organizations but also the category of its members. On the other hand, both EGEAYSAD and ANAYDER (KONAYDER) are established with the efforts of local collaboration, aiming to increase the local output and present an example of local horizontal organization rather than vertical. Although these associations do not represent majority of firm populations, they are important examples of collaborations. On the contrary, chambers cannot be labelled as totally ineffective, for example shoemakers chamber in Konya tried to facilitate a project under the national clustering initiative. Yet, this project failed and the lack of participative behavior in the cluster was generally linked with individualistic behavior by the interviewees. Other examples of collaborations like establishing export consortia or building brands also showed very little or no success in Konya.

6.13.2 First Sensitive Period: Foundation of Guilds

The Ottoman Guild organization can also be considered as the continuation of *Akhism* at least in spirit (Durgun,2009), therefore before moving on to the guild organization, the *Akhism* and *füttüvet* which form the basis of *Akhism*, should be explained.

Ahi organization was associations of artisans organized as guilds in Anatolia starting in the thirteenth and fourteenth centuries which followed a moral code based on the rules of pudency, renunciation and self-control. (Gölpınarlı, 1952). *Ahism* evolved as a type of socio-economic ethic based on religious rules and practices of *füttüvet* tradition in late-and post Saljuk Anatolia. (Oncar, 2016)

As discussed in the section of institutional influencers (7.6.3.1) *Akhism* organization is based on the *füttüvet* creed. *Füttüvetname* contain the rules, purpose, principles, values, requirements regarding this structure and act as regulations for the members (Ülgener, 1981: 89). *Füttüvets*, which are formed by the effect of *sufism*, have characteristics that regulate both commercial and social life. In *füttüvet*, not only the rules that regulate social life, such as not lying and protecting trust, but also commercial principles to prevent attitudes that will harm buyers in trading transactions are presented. Therefore, the admission to the *Akhism* organization and the

arrangements within the organization are made according to some of the rules in the *fütüvetname* (Güvemli, 167 1995: 398-399). Although the organization of *Akhism* and the organization of *fütüvet* has great similarities and regarded as a continuation, both institutions differ from each other in terms of their functions (Çağatay, 1989: 21-24). The social content of *fütüvet* is more intense, *fütüvet* do not contain a professional qualification and there are very few sections that can regulate commercial relations. In the meantime, *fütüvet*s continued their influence in the period when the Ahi organizations lost their importance and replaced them with the Guilds (Güvemli, 1995: 399-400).

Ottoman guilds were derived from the *Akhi-Fütüvet* tradition had a multi-functional character in nature, as they played important roles in terms of economic development of labor market, product-marketing, and social control of professions (Durgun, 2009)

The tradition of *Akhism* in commercial life in the Ottoman Empire lasted for many years. As the accumulation of capital started to form with the changing economic structure in the Ottoman State, the expansion of the borders and the involvement of non-Muslim communities in the Ottoman trade, the *Akhi* Organization began to be controlled mostly by the Turkish members (Akbaş, Bozkurt and Yazıcı, 2018). Increasing demands of minority tradesmen caused the alteration of the *Akhi* Organization with the Guild Organization (Güvemli, 1998: 69). The turning point in the establishment of the Ottoman Guild organization was the conquest of Istanbul, the influence of the *Akhism* on the guilds lasted until the time of Fatih Sultan Mehmed. Guilds were continuation of *fütüvet* and *Akhism*, except that non-Muslim people could be members of the Guild Organization unlike the *Akhi* Organization (Kılınç, 2012: 70). However, after the conquest of Istanbul, guilds left their intense Sufism features in the past and became tradesmen organizations (Demirci, 2003: 140).

The Ottoman State economy allows private enterprise within the framework of statist policies. Policies in the Ottoman Empire was to prevent capital from accumulating in the hands of certain groups, thus it prohibited the import of any products that could compete with the domestic products produced by the Guilds. The reason behind this rationale was to avoid the unemployment within the state. Moreover, the supervision of the guild rents and granting privileges to the guilds under certain circumstances prevented unfair competition that might occur (Yazıcı, 1996: 162). Guilds were also a

means of social control, according to the information obtained from Evliya Çelebi, every man who was not included in any military unit had to be registered in a guild.

The management structure of the Guild Organization consisted of several jobs and titles as *kethüda*, *lonca ustası*, *yiğitbaşı*, *işçibaşı*, *ihtiyar ustalar ve idare heyeti*. In this organization *Kethüda* plays a very important role. The *Kethüdas*, also present in the *Akhism* tradition, continue the task of resolving disputes among the shopkeepers, but in Guilds the duty of *Kethüdas* is heavier. Guild *Kethüdas* are both the head of the artisan community and the state's representative. For this reason, guild *Kethüda* is chosen by tradesmen among reliable, skilled, knowledgeable, fair people. It is not possible for any tradesman to become *Kethüda* without permission of the artisan community (Bayram, 2012: 108; Güvemli, 1995: 69-70).

6.13.3.1 The Functions of Guilds

Baer (1970) summarize functions of guilds as: Administrative connection, control of quality and measures, control of prices, wages and workforce, supply of state services, distribution of raw materials, arbitration and mutual help.

According to Baer (1970) most important function of the guilds is their administrative duty. Guilds acted as a link between government and the urban population. Territory of the of the empire has reached to 6,5 million km² at the end of sixteenth century and the solution created by the government to manage this scale was establishing institutions necessary for reaching urban population. In Guilds *Kethüda/Kahya* of the guild was responsible for supervising the implementation of government regulations. This connection was two sided, *Kethüda* and officers of the guild also acted as a representative of the guild members to the authorities. The spokesmen of the guilds called *Kahyalarbaşı* submitted decisions of Grand *Kahya* Council and complaints to the government (Baer, 1970). At some sources, guilds were also reported as collectors of rent which was transmitted to Imperial foundations. (Pamuk, 2001: 96)

One of the main tasks of guilds was to control the quality of goods made by artisans. Although instructions were issued by government, Guild officers and *Kethüda* were in charge of implementing these instructions (Baer,1970). Guild's responsibility was limited to detecting and reporting fraudulent practices and not taking action unless it was told to do so by the government authorities (Baer,1970).

Although actual prices were fixed by the government and higher prices were punished by the government authorities, practically such controls were impossible without function of the guild itself (Baer,1970).

The determination of the number of master, journeyman and apprentices to be employed were also determined by the state, and the state's ability to make changes in the supply of workforce prevented the emergence of the unemployment problem. Therefore, it is possible to say that the guilds represent organizations that reduce unemployment (Yazıcı, 1996).

Guild organizations also provided service and labor resources to the state. Turkish guilds mainly recruited their members as civilian auxiliaries for the army in time of war, similarly, the supply and distribution of certain goods needed by state authorities were also provided by guild organizations (Baer, 1970).

Another function of the guilds was the distribution of raw materials needed by artisans and craftsmen. It was an important task of the guilds, in a document dated 21 Cemaziyelevvel 1180/25 October 1766, Istanbul, the leather brought by the tanners was assembled in the guild of the leather merchants and distributed by the *kethüda*, *yiğibaşı* and *ihtiyarlara* at current prices. (Baer, 1970)

Distribution of raw materials among guild members represented another aspect of the guilds' function, namely regulation of relations among artisans and merchants as well as arbitration of disputes among members.

Usually it was not the guilds or their officers who punished craftsmen but the government authority called *kadı* and *muhtesib*. But there were some important exceptions to this rule. First Evliya Çelebi tells us that guilds of shoemakers had its particular officers appointed by the Sultan Suleiman who exempted them from the jurisdiction of all other commanding officers. They punished culprits themselves, they had received this privilege as a reward for their support of Sultan Suleyman against janissaries. Another example was from Kırşehir, guild of tanners, according to an edict dated 1773 granted *Akhi Baba* of tanners of Kırşehir guild the right to punish its members.

In order for the Guild Organization to continue its activities, there are aid funds established for each tradesman guild named *Esnaf Sandığı*. The management of these charitable funds was an important place in the Guild activities (Akbaş, Bozkurt and

Yazıcı, 2018). Salaries, repair expenses, taxes and dues of the guilds were covered by these aid funds. The money donated to the aid funds was given to the tradesmen who wanted to grow their business or to the tradesmen in need. In this case, the received yield from such loans was used for charity activities (Baer, 1970). In addition, tradesmen who were not financially stable, unable to effort funerals or having health problems were also financed by these funds (Gürata, 1975: 108-109). In addition, people who are called *efrad-ı gayri-âmile* (who are not in the guild organization but who are affected for a reason) who cannot work due to reasons such as senility or disability can be helped by the fund and this is aimed to ensure the social security of tradesmen (Şen, 2002: 29- 30)

In addition to the administrative and economic functions described above, the guild organizations also played an important function as social institutions. Islam and the religious education had been a reference for artisans, Hacc was an important social activity for guilds, gatherings in countryside (*tenezzüh, teferrüc, sohbet*) were also important occasions for solidarity of guilds (Baer 1970).

Today, modern tradesman chambers and chamber of commerce do not carry any guild functions beside being an administrative link with the government.

6.13.3.2 Values Incorporated in Guilds

Newly established guilds apparently seem to maintain social traditions and commitments from old free associations based on *füttüva* principles and kept values such as modesty, self-abnegation (Yildirim, 2008). Baer (1970) mentioned that the shoemakers and tanners had a special relation with the administration among other guilds which helped them to enjoy judicial privileges and enabled to maintain their social traditions.

Baer (1970) stated that the functioning of guilds not only enhanced by religious affiliation and promote honesty, sobriety, righteousness and contentment but also required qualities of a master as: “faithfulness, integrity, respect to guild masters and members and to customers, honesty, consideration of other people's interests, obedience to the sovereign, veneration of the ulema, kindness to other people, love of children, helpfulness, and the consideration of apprentices and journeymen as the master's children”

6.13.3 Second Sensitive Period: Industrialization

In the commercial understanding of the Ottoman Empire, social solidarity and aiding were glorified instead of free competition and earning more than necessary. Over time, with the entry of the import products from Europe and capitulations the order of the Guild Organizations began to shake. After the 19th century, the economy of the Ottoman Empire, which could not compete with the products produced in large factories in Europe, started to suffer and this loss started to affect the tradesmen negatively. As a result, since the trust of the tradesmen to the guild sheikhs decreased, the sheikhs lost control on the moral and professional structure within the guilds. (Demirci, 2003: 142).

Later on, shopkeepers within the guilds were encouraged to transform into companies (Kal, 2003: 251). First, tradesmen monopolies, except for mandatory foodstuffs, were abolished by Selim III in 1764 (Bayram 2012: 110). After the declaration of the *Tanzimat* Edict and the trade agreements with foreign states, it was declared that the monopoly restraints will be reconsidered according to the development of industry and trade, declaring the decisive role of the state to abolish monopoly rights and *gedik* practices. Accordingly, on 17 June 1861, with the edict of the Ottoman sultan Abdulmecit, the *gedik* laws were completely repealed (Çağatay, 1989: 116).

With the emergence of new type of professional organizations in Europe, it should be expected that these developments would also affect the Ottoman State. In the last period of the Empire, during the transition to the chamber / association type professional organization (chambers of commerce and industry, chambers of agriculture, tradesmen associations) the *gediks* and guilds were gradually abolished based on the legal regulations. (Ogurlu, 2017)

New professional organizations were established in 1910 in accordance with the Tradesmen Societies Directive (*Esnaf Cemiyetleri Talimatnamesi*) and instead of the restrictive, and supervisory traditional "guild" structures, "craft" units, which were more integrated with the "markets" of small commodity production, have emerged. All kinds of employees included in these organizations and municipalities closely supervised these societies (Toprak, 2004).

In the transition from the Ottoman to the Republic new societies expanded, some of these societies provided social security for workers and acted as a pension fund. Until

the industrialization of Turkey, distinguishing between tradesmen vs workers has been difficult and artisan associations were not able to operate effectively in their fields (Toprak, 2004).

Yılmaz (2007) illustrates the establishment statement of Izmir Shoemakers Society dated 1921-22 (1340 in Islamic Calendar) and lists the purpose of the society as:

- To work for the comfort and relief of the tradesmen in moral and materially
- Finding jobs for the unemployed and helping those who cannot perform their art.
- To notify shoemakers on the orders declared by the government and to represent shopkeepers against the government
- Send a few qualified apprentices or apprentices to Europe
- To support children of shoemakers in their education
- Open a night class for those who desire

With the legislation of 1943, it was decided to establish new professional organizations for traders, industrialists and tradesmen groups. The small merchants and craftsmen were enrolled in the “tradesmen chambers” envisaged to be established by the Ministry of Commerce per economic needs required, and these chambers were considered as public institutions with legal entities. Then, the artisans' societies operating for each profession were removed and the chambers of tradesmen were established. On the other hand, the chambers of tradesmen did not show a development similar to the chambers of commerce and industry, for this reason, the “chambers regime” was removed in 1949 and the law on Union of Tradesmen Associations and Tradesmen Associations was enacted. With this last regulation, the concept of tradesmen was reinterpreted, and the "association" system was adopted in accordance with the rules of private law (Toprak, 2004).

The Law on Tradesmen and Artisans No. 507 was enacted on May 17, 1991 and the organizations of tradesmen and artisans were renamed "chambers" in their current sense. Hasan Uzman, who had been the president of shoemakers' chamber since 1999, stated that unlike the pre-1991 period, the donation function of the tradesmen chambers had disappeared.

It was an association in the 1950s, it was placed on a legal ground and become chamber in 1991. Before it was in an association status, when I looked at the

old records, the donations were collected to be given to those in need under the name of compulsory social assistance donation. However, under the status of the association, the general assembly is binding, if the general assembly decides to collect donations, the donation is collected, you cannot collect any aid even if you decide on the general assembly when the law numbered 507 and the law of being a room with 1991 is settled on the legal ground (H. Uzman, interview, May 17, 2019).

6.13.4 Third Sensitive Period: Trilogy of Liberalization, Mechanization and Economic Crisis

Interventions of local institutions to support the needs of local industries is not only way to maximize cooperation effects and external economies. Informal cooperation as a product of social capital which increase firm competitiveness and survival against market rules also very important (Rabellotti, 1995). Cooperation among firms includes exchange of technological information and also some machinery.

6.13.5 Selection vs Within Group Fitness Mechanisms

In this regard interviewees shared that their experience was different in the past. They were beyond cooperation, almost categorized as examples of altruistic behavior:

When it comes to cooperation, we are a company that works independently. There are no models shared with each other. There is a variety of products now. We had it in old times, of course, when the possibilities were much less, when production volumes were low. Now it is not possible, these are trade secret now, we do not have such a cooperation in the industry (F. Ambar, interview, May 16, 2019).

At that time (pre-mechanization), for example when we made a model, the neighbor may come took your cutter master, make the same model. The one gave the cutter in which he invested, let another one to use it, today it is like a dream, like giving a piece of your bread that you will eat (A. Deresoy, interview, May 16, 2019).

The industry used to have a feature of knowledge sharing before:

For example 20 people were going to the fair, after they returned, they would visit neighboring producers and shared the information acquired with them.

Also they would help to solve specific problems related to the production techniques, it was an example of clustering, Ahmet Yavuz, Mehmet Yavuz, Ali Rıza Ölmez, they all shared their knowledge, this was a situation that used to happen naturally (A. Deresoy, interview, May 16, 2019).

In the survey for clustering analysis in Konya shows that 75.8% of respondents have either none or very little relationship with a commercial cooperative or export union, this ratio climbs to 79.6% when it comes to non-commercial organizations. (Sezgin and Gümüş, 2012). This result also strengthens the view on disorganization of collaboration among firms.

As described above the pre-industrialized firm populations share a value system which is evolved from the Islamic moral codes of Akhism which born in the central Anatolia. Konya is not only located in central Asia but also has a long experience in artisanship, therefore in this section analysis will shed light on Konya and changes occurred in the common values of business community comparatively to the past.

Trust is necessary for execution of non-written contacts, not only it avoids opportunism but also cost of monitoring it. Although non-written agreement is the most used type in exchanges, interviewees' view of trust in the exchanges mostly show an erosion during the last couple of decades. Faruk Ambar attributes this change to the economic situation:

“It is economy, market shrinkage, deterioration of liquidity, then concordats occurred. We did not know such a thing before. For example, when a single cheque was protested, it would be heard by everyone, and now there is no such a month in which there is no protested cheque.” (F. Ambar, interview, May 16, 2019)

Hüseyin Ata and Ali Osman Avşar also recognize this erosion:

The meaning of the tradition of Akhism, as I understand, the shopkeepers' ethics, there is control. Now there is no such thing, you do not even lend money to each other. Even we cannot get the service you pay on time, you cannot pay your debt on time, even if you are in good faith,... In the past, the words used to have meaning, there was no cheques or notes, payables were paid on time (H. Ata, interview, May 16, 2019).

Maybe the European standard BSCI social compliance document that we are talking about and trying to get corresponds partially to Akhism. But Akhism is a broader concept and there is no such thing right now, whoever kills first wins right now (A.O. Avşar, interview, May 16, 2019).

Ali Deresoy narrates that the departure from ancient values are related to the changes in the economic order.

In our country, as in every capitalist system, the ties in the society are decreasing day by day, people are moving away. In our industry, the ones who are moving away want to get out of the district, they have more ambition to win. There is significant erosion of values and sincerity and this weakens the cluster (A. Deresoy, interview, May 16, 2019).

In Konya, firms, especially big firms, seem not only be risk averse, but also seem to internalize another value affiliated to religious qualities: contentment. Ali Deresoy explains it as:

Senior firms in Konya act in contentment, they do not like risky business. They don't leave their comfort zone after earning a certain income. They believe that having a car, a villa, some real estate for a fixed income will be enough. But in Istanbul and Izmir I observe ambition and perseverance towards their business and we have a tendency for contentment, which in turn curbing ambition and perseverance, it might be due to conservatism,..., This sector did not earn huge money until 1996, started to make money after 1996, but conservatism continues, they are still risk averse (A. Deresoy, interview, May 16, 2019).

Value system has also impacted apprenticeship in which master-journeyman-apprentice used to have a vertical and strict relationship. Rıza Ata and Hasan Uzman explain this change as:

In the old times, the life was different, the apprentice used to shy away from his journeymen, the journeymen shied away from his master. We could not have a cup of tea next to our master, we could not interrupt our master, we did not have the right to object while talking to the master. We could not even say the truth, this is not the case today (R. Ata, interview, May 17, 2019).

“In the old days, social life of an apprentice was controlled by their master. When they reached their marriage age, approval of the master was sought, now we are looking to twitter or facebook” (H. Uzman, interview, May 17, 2019).

Not every custom erodes, weddings and funerals are still crowded and important to show emotional support and social solidarity. This is mentioned by several interviewees in Konya.

“For example, we got out of mosque, we chat, we advise each other, we help. As Konya shoemakers, our weddings and funerals are crowded, we unite on good days and bad days” (F. Ambar, interview, May 16, 2019).

“Weddings and funerals of the Konya shoe industry are crowded, community gatherings also get crowded” (A. Deresoy, interview, May 16, 2019).

“The wedding of the shoemaker is always crowded, Konya also has a wedding pilaf, it is also famous at the wedding of the shoemakers” (H. Uzman, interview, May 17, 2019).

Lastly, as contribution of the political sub-cultures is important in the functioning of industrial district, the right-wing political stance of Konya should be highlighted:

In the 1950s, since the democratic party, someone from the shoe industry has always been in the politics of Konya. We had chamber presidents in the Democratic party and the Justice party, there was a head of province in this political parties from us. After 80s, activities in ANAP, DOĞRUYOL parties continued and I also have been in political movement. Our friends from the industry have also been involved in politics, shoemakers have been active in the city's cultural and political life (H. Uzman, interview, May 17, 2019).

As a result, it can be claimed that the individualistic (or selfish) behavior is associated with the erosion of trust by interviewees and stated several times that this was not the case before 1990s. Not only trust but most of the values were claimed to be eroded. In the table 6.10, values witnessed by interviewees in the cluster before 1990s are matched with the values during the guilds.

Table 6.10 : Enacted values of Ottoman guilds in Konya footwear cluster.

Values in Ottoman Guilds	Observations / Observant
Integrity & honesty	Cheque protests used to be unusual /F.Ambar The words used to have meaning, payables were paid on time /H.Ata
Self - abnegation	Model sharing was possible / F.Ambar Letting others to use cutters / A.Deresoy
Obedience	Not having even a cup of tea next to master / R.Ata
Contentment	Tendency for contentment especially for senior firms /A.Deresoy
Helpfulness	Helping each other to solve specific problems related to production techniques A.Deresoy
Master as a father figure	Social life of an apprentice was controlled by their master /H.Uzman



7. CONCLUSION

7.1 Final Comments

Since Marshall's (1920) seminal work, the studies on regional economic development specifically industrial districts and business clusters grew in number and created a significant body of work in the last decades of 20th century. Many scholars have tried to reveal not only antecedents but also mechanisms that play a role in developing, declining or changing regions. Although the focus has shifted from regional economies and labor market dynamics to the micro foundations of successful clusters, interfirm networks and knowledge creation, historical factors are generally overlooked (Essletzbichler and Rigby, 2007). Contrarily, the role played by historical factors on the formation of an industry in a region is still necessary to understand the spatial differences today. Moreover, regional development patterns are not homogeneous, but instead contain ruptures developed under different historical trajectories based on environmental factors and new opportunities or constraints may arise from these changes in economical, technological and social domains or political interventions. Industrial development paths arise when local assets of industries are matched with the unfolding conditions. In this vein, 'Evolutionary turn' presents a new way of conceptualizing the regional development phenomena (Boschma and Martin, 2010).

This thesis is among the few studies which try to bring the evolutionary frameworks into cluster and regional development literature and contribute to the debate on the evolution of regional clusters by emphasizing not only the effects of environmentally driven discontinuities but also the persistence of status-quo and unfolding mechanisms governing the interplay between exogenous and endogenous factors.

Population of firms within a region develop place-specific characteristics through their distinct histories. How some of the regional business practices are amplified and some others diminished are deeply interconnected with not only the initial conditions but also with the changes occurring in the place-bound context. Since the influential work of Hannan and Freeman (1977), how environment influences ecological dynamics of

firm populations are investigated by organizational theorists and core models and frameworks on organizational population ecology have been developed by Hannan and colleagues (Hannan and Freeman 1989; Hannan et al. 1995; Carroll and Hannan 2000). In this manner, conceptual foundations of evolutionary paradigms are also applied within Evolutionary Economic Geography (EEG) and how populational features change or persist under different conditions and how forces of competition and reproduction act simultaneously for firm populations are explored (Martin and Sunley, 2006). Concerning successful routines which are diffusing across firms and clusters spatially, imprinting theory provide a new perspective on the study of regional clusters. Imprinting Theory, rooted in the biological domain, also emphasizes the importance of external influencers in shaping the initial structures and the persistence of them over time. Stinchcombe's (1965) seminal work showed that the concept of imprinting is applicable in organizational studies and can explain why certain types of organizations which are founded in a common period become similar. Describing how marks of environment become established during the early stage and persist in the following periods despite the changes in the initial conditions is a significant contribution of these strand of studies. Later, the original imprinting theory is enhanced by Marquis and Tilcsik (2013) with their comprehensive conceptualization of environment, hierarchical depth and multiple sensitive periods. They discussed the possibility of multiple sensitive periods, presented dynamics under a framework and sparked unexplored research opportunities in the imprinting literature.

As a new strand of work, this new concept provides four promising research opportunities on the dynamics of imprinting and its implications on firm populations that require detailed study. Firstly, the conceptual model lacks the influence of heredity factors governing access to resources and legitimization forces and fails to explain the evolutionary mechanisms governing in pattern formation. Secondly, although the "window of imprintability" (WOI) is mentioned in the study, how WOI works through evolutionary mechanisms is not clearly defined. Incorporating WOI in the imprinting framework is necessary, as imprinting factors may favor one population over another through a certain niche-width and for a limited period of time. Thirdly, emulation of imprints among firm populations should be highlighted and the role of secondhand imprinting in this process needs further conceptualization. Although MLIT suggest that imprinting takes place in multiple levels, it does not fully address how residing

effects of the environment at firm level turns into population level imprints. In the fourth place, the role of powerful vehicles (i.e pioneering firms) creating founder effect should be clarified and lastly, role of institutional order within group of firms as a constraining factor and how it affects imprinting mechanism with all other factors remains to be clarified.

7.2 Empirical Fieldwork

The conceptualized model of imprinting is presented with a comprehensive evolutionary perspective to address the research opportunities summarized above, thereby opening up the black box of how clusters of firms become receptive or immune to certain variations in their environments. The model not only distinguishes evolutionary mechanisms but also tries to explain how they operate together. The conceptual model is synthesized by enhancing the imprinting framework with General Darwinism and its variation, selection, retention mechanism at the core. Generalized Darwinism offers a solid approach for studying evolutionary economic geography and both concepts not only rooted in same domain but also complement each other by acknowledging the influences of both nature and nurture on the developmental patterns. (Hodgson and Knudsen, 2010)

Before putting model into use, empirical literature is revisited and evidence from the cases is used to verify how conceptual model works in the given context. Findings significantly corroborated theoretical insights and displayed a considerable fit with the proposed analytical model. The analysis of cases showed that sensitive periods and presence of an environmental influencer do not automatically result in stamping of a cluster. The VSR mechanism is functional and is linked to the environmental influencer. Moreover, genotypes of firms play an important role in the success of an imprint. Thus these preliminary findings encourage us to work on this comprehensive model, which enhances multiple imprinting theory.

Conceptual model with supporting evidences from literature was empirically studied in two regional shoe production clusters, namely, in Konya and Izmir. After a preliminary site research interview questions are prepared for the second site research, which was followed by the collection of all types of data (i.e documents, archival records, interviews, direct observation, participant observation).

Before deep analysis of possible imprints, industrial setting is described, and possible historical influencers are located. There are seven possible historical influencers found under technological, economical and institutional domains: (i) Mechanization after industrial evolution, (ii) introduction of ready-made sole, (iii) urbanization, (iv) liberalization policies, (v) Chinese import boom, (vi) *Akhisim* and craft guilds, (vii) Westernization reforms. According to the preliminary findings, a deeper analysis of possible imprints on specialization, division of work and cooperation is conducted.

7.3 Imprints on Specialization, Division of Work and Cooperation

Specialization of Izmir in women shoes is dated back to pre-industrialization of the cluster. In order to find the trigger in this path development, changes in demand conditions on a time scale are analyzed. Historical analysis showed that the demand conditions had been strictly controlled by the Ottoman government before *Tanzimat* edict and there was no room for variation. After *Tanzimat* edict, clothing was liberalized and Westernization speeded up. These trajectories also continued during the early republic period, which transformed social life in big cities, as the demand for modern women shoes increased and opened an opportunity window for producers. Izmir had an advantage over Konya seizing this opportunity. Izmir used to be one of a kind in Westernization efforts after Istanbul during the Ottoman period, which can be mostly attributed to its cosmopolitan characteristics of the urban population, freedom and economic integration with the Western World. Moreover, demand was not only shaped by Western clothing through fashion but also by women's entry into working life. Republican revolutions idealized women's modern look and supported the integration of women into urban life. During this window of imprintability, the demand has been mostly local, and an environmental fit occurred for women shoe producers in Izmir. The local producers, which were able to seize this opportunity, were selected and reached a critical mass through retention mainly characterized by apprenticeship and spin-offs. Specialization of Izmir shoe producers in women shoes provided a successful imprinting example through WOI and natural selection mechanisms.

Division of work in industrial districts was generally justified as lowering transaction costs, creating external economies of scale and increased flexibility against market and demand conditions. On the contrary, exogenous conditions may also foster organizational changes such as in the case of Silicon Valley or film industry in Los

Angeles. In this regard, the structure of the industrial organization of Turkish footwear production is analyzed for possible imprinting instances and three cases are presented.

First, the case of stitcheries formed in small workshops since early industrial period, persisted despite the changes in scales and mentioned as one of the major problem for the industry with its unhealthy situation for a longtime. The process of upper-stitching has been outsourced since the traditional production era (*kunduracılık*), even after the mechanization and liberalization efforts, the decentralized structure of this supportive production did not change. The sensitive period created by the initiation of sewing machine, which began to be sold in İstanbul and İzmir during the late 19th century and first upper-stitching workshops opened as new variations. Through these workshops not only outsourcing model of upper-stitching welcomed by the industry but also this specialization was treated as a new profession among shoe makers (Yılmaz, 2007). The sewing machine increased the quality of shoes and specialization but machines had to be utilized in a low demand market. Therefore, small batched orders consolidated and outsourced these workshops, which rationalized the environmental fit of the model. On the other hand, environmental conditions changed, shoe consumption increased along with capacity requirement, but the structure of upper stitching workshops has not changed so far. Two factors were found to be affective in this persistence, first; TCE of this model is still superior, as small workshops continued practicing of unregistered work without insurance or overtime payment, enabling high flexibility with low batch sizes. A failed attempt to replace this model by opening an upper-stitching factory in Konya also supported this finding. Second, traditionalizing forces reinforced within group fitness through working environment and routines characterized by irregular working hours, seasonality, underdeveloped managerial capacities.

Second, the case of Sumerbank, which was a unique example of a vertical production model but failed to survive. The sensitive period was early years of new Turkish Republic when state industrialization had been the main logic of development. In this sense, this initiative can be classified as Wrigtian drift, in which the environmental force determines the fit conditions by breaking the focal entity away from a larger population and creating a newly formed selection conditions. Protectionist acts of the state through tenders and store openings were creating favorable selection niche for Sumerbank Shoe Factory. Profitability and increase in the production also provided

significant evidence that Sumerbank enjoyed these favorable conditions of its environment. Despite these evidences this fit did not result in a successful imprint on the industry. The interactor (Sumerbank Shoe Factory in this case) did not breed and replicators did not diffuse among producers. The barriers blocking possible diffusion of replicators to other existing manufacturers can be explained as the lack of absorptive capacity of existing manufacturers, parallel fit in the crossing niche and lack of physical proximity disabling knowledge dissemination. Without successful retention mechanism, imprinting failed. On the contrary the socialist imprint in Timișoara which is coeval with Sumerbank initiative has successfully persisted even after the firms are privatized. Compared with the Sumerbank case, the importance of retention mechanism, singularity of variation and reaching a critical threshold through reproduction enabled the solidification and persistence of the imprint.

Third, the shift in production technology with ready-made sole constitutes another critical case. This shift opened a window where milling and sole stitching became obsolete, as a result, these specialty workshops were eliminated and the division of work in the industry has changed. There was no force to maintain within group fitness which contradicted with this shift.

Institutions for collaboration (IFCs) were mentioned by many scholars including Porter as one of the critical determinants of efficient collective activities and successful clusters. However, very few scholars addressed the historical and sociocultural roots of them. Ancestors of modern IFCs in Turkey are Ottoman Guilds and their *Akhsim* roots. Although they were established by local artisans their links with the central government had been strong until they were vanished with the advent of industrialization and capitulations. Today, modern tradesman chambers and chamber of commerce do not carry any guild functions in practice, aside from keeping an administrative link with the governments. On the other hand, most of the values which were attributed to these old institutions were observed by interviewees in Konya until recent decades, and today, contentment still continues to some extent. Findings show that the change in these values started after liberalization. Liberal policies coupled with the development in production technologies (introduction of ready-made sole) had not only increased production capacities significantly but also decreased interdependency of firms by removing some of the production phases. In turn, the importance of internal economies of scale increased while external economies were decreased. On the other

hand, the strength of within group fitness forces depended on the reproductive success of individual firms which functioned collaboratively. Moreover, in this period not only the values of collaboration but also trust eroded according to the evidence gathered from the respondents. In the conceptual model there are three fits mentioned, fit between individual firm and environment, fit between the population and environment, and the fit within a group. After increased competition, individualistic behavior intensifies, and individual fit becomes more important than group fit. Erosion of social norms and customs along with individualistic behavior decreased the importance of within group fitness. When social norms deteriorate and customs erode, they lose their powers to govern/control the fate of the focal entity, instead, individualistic behavior which is governed by the environmental fitness takes the lead. Social norms and customs represent constraints on a behavior rather than a prescribed action (Greif 2006). Acts of firms are checked and balanced according to constraints, but what if conflict arises between norms and the defective action? As Platteau (2010) puts it; presence of conflicts between norms and other motives is considered as a choice problem and are subjected to trade-offs and cost–benefit calculations. Therefore, change in environmental conditions not only fostered individualistic behavior but also deteriorated pro-social motives. Although it is vague to label this change an imprinting process, our conceptual model enables us to assert that the liberalization changed the course of social capital formation and may lead to an imprint in the future. Summary of case findings are presented in the table 7.1.

Table 7.1 : Summary of case findings.

Case	Sensitive Period	Environmental Influencer	Variation	Selection	Retention	Main Mechanism	Evolutionary
Specialization in Women Footwear	Post Tanzimat Period	Cultural Westernization	In the late 19th century, stores brought Western products and created a center of attraction, western-style shoe manufacturing was started by Rum craftsmen	The proximity to the new demand condition shaped by participation of women in the social life, along with the westernization movement has created a fit situation for Izmir producers	The traditional apprenticeship system which also encourages spin-offs and supports family business ownership	Darwinian Selection	Natural
Case of Upper-Stitcheries	Industrial Evolution	Usage of sewing machine in shoe production	Singer sewing machines; first began to be sold in 1886 in Istanbul and Izmir in Turkey	Small batch sizes yield to consolidation of small batched orders and outsourcing. This division of work has remained valid for decades despite the dramatic change in shoe consumption volume	It turns to be still superior from TCE perspective and traditionalization reinforces within group fitness through working habits	Darwinian Selection	Natural
Case of Sumerbank	Early years of Turkish Republic when Statism doctrine is implemented	State itself was main actor in development through rapid industrialization	Beykoz Leather and Shoe Factory established during late Ottoman period consolidated under state led Sumerbank Holding	Protectionist acts of the state and lack of competition in the market led to fit situation which sustained its high profitability until 1980s	Retention was failed due to low absorptive capacity of producers, lack of capital and parallel fit of diversified workshops	Wrightian Genetic Drift	
Case of Ready-made Sole	Technological shift in shoe making	Initiation of ready-made sole	First pioneers were big companies which have enough financial resources (i.e. Zirve, İşbir and Model in Konya)	Shortening production processes, reducing the need of sole stitching and milling, increasing the output drastically created a fit situation	Localized learning and workforce mobility enabled rapid diffusion	Darwinian Selection	Natural
Case of Collaboration (Guilds)	First Sensitive Period: Foundation of Guilds Second Sensitive Period: Industrialization Third Sensitive Period: Trilogy of Liberalization, Mechanization and Economic Crisis	In the first period, Ottoman state and Akhism roots, in the second period, capitulations and in the third one financial difficulties	Increasing demands of minority tradesmen caused the alteration of the Akhi Organization with the Guild Organization	Suffering and loss against European products affected tradesmen negatively. Guilds are abolished with Tanzimat Edict. The collaborative values of guilds are also dissolved due to erosion of trust	Individual fit becomes more important than group fit. Deteriorated pro-social motives along with individualistic behavior decreased the importance of within group fitness and values did not retained	Darwinian Selection & Within Group Fitness	Natural

7.6 Comparison of Cases

As discussed in the previous sections historical unfolding may have different outcomes in different regions. The strength of conceptual model comes from its power to explain not only successful imprints but also failures which also enables us to explain regional differences. The findings on imprints are compared in the Table 7.2. Findings indicated both regional and industry-wide examples of imprinting. Specialization and collaboration cases present regional imprints, cases of Sumerbank, stitcheries and ready-made are examples of industry-wide imprinting.

Table 7.2 : Comparison of cases.

Imprint Case	Impact	Konya	Izmir
Specialization	Regional	Closed demand hinterland shaped by socio cultural factors, legacy on mens footwear made immune to the new imprint	Proximity to new demand condition and presence of early variations yield to successful imprint
Stitcheries	Industry-wide	TCE of current model is still superior in terms of environmental fit and mobility of stitcheries enable to reproduce the working model in both Izmir and Konya	
Ready-made sole	Industry-wide	Division of work in the industry has changed, specialty workshops for sole making are closed	
Collaboration (Guilds)	Regional	Akhism affiliated guild imprint dissolved after Tanzimat Edict and values are diminished with the liberal market logic	Cosmopolitan city with no affiliation with Akhism since foundation

Specialization is a concrete example of how regions can be receptive or immune to imprinting attempts. The environmental influencer changed the demand condition but Izmir was able to seize this opportunity not Konya. Niche width of Konya was not enough the cover new opportunity. Moreover, heredity factors were also in place to support development of Izmir towards new condition.

The other regional imprinting example is collaboration case. Since development of Izmir dated back to 17th century as a port center, it did not have Akhism roots. Moreover the city is portrayed as cosmopolitan since then and did not have any affiliation with Akhism movement which was born in central Anatolia, specifically in Konya region. Therefore, no imprint of Akhi based guilds structure was present in Izmir, on the other hand it was also found that the imprint of guilds had dissolved in

Konya. Function of guilds dissolved after *Tanzimat Edict* and values diminished with the rise of the liberal market logic.

Lastly, industry-wide imprinting cases also show that mobility of a replicator determines the impact area of imprinting. In the stitcheries case, mobility of stitcheries also enabled the reproduction of the model in all clusters including Izmir and Konya. Besides, the technological diffusion of ready-made sole had taken place during the same period for Konya and Izmir. Both cases highlight the importance of defining the environmental niche and describing the range of conditions necessary for interactors (firms) to function in order to analyze imprinting.

7.7 Contribution to The Literature

Despite the fact that the role of historical events is acknowledged as an important factor by Porter (1990), in his seminal concept of diamond model present them as merely chance factors rather than explaining the causal mechanisms of these ruptures. On the other hand, regions should be seen as products of history and offering a historical analysis model to cluster studies is valuable for analyzing their dynamics over time.

This study contributed to the EEG literature by showing how endogenous factors of evolution react to exogenous influencers in the vicinity of population evolution. Until today, there is no general evolutionary approach to economic geography embodying the abstract principles of Generalized Darwinism with environmental nurturing. Combining elements of multi-level imprinting theory and general Darwinism not only helps us to understand causal mechanisms of evolution in organizational collectives but also provides us with the opportunity to formulate a coherent and holistic view of the phenomenon by explaining how different mechanisms (i.e drift, group selection, within group fitness) operate collectively in the evolution process.

Moreover, this study also extended MLIT in many ways. Findings illustrated that sensitive periods do not automatically result in the evolution of a cluster. In order for an imprint to establish during a sensitive period, the presence of a VSR mechanism, overcoming within group fitness and reaching the critical mass are necessary. MLIT is also enhanced by explaining how “window of imprintability” and emulation of imprints works. Moreover, the function of secondhand imprinting in the retention mechanism is also presented within the model.

7.7 Limitations and Future Research

Even though we achieved a deeper understanding of the imprinting phenomena by bringing social and historical facts together in a meaningful way, findings are presented on few cases. In order to solidify these findings, the conceptual model should be challenged in different settings. Secondly, although Lamarckian mutation direction mechanism has been explained in the model and its applicability was shown in the empirical case, findings did not support its functioning in the Turkish footwear cases. Therefore, further studies analyzing the appropriateness of this type of evolutionary mechanism is necessary. Lastly the conceptual model can be enhanced by deeper evolutionary concepts and rules, such as Hamilton's rule, which determines the conditions under which reproductive altruism evolves.



REFERENCES

- Abbott, A.** (1995). Sequence analysis: New methods for old ideas, *Annual Review of Sociology*, 21 (1), 93-113.
- Abernathy, W.J. & Utterback, J.M.** (1978). Patterns of industrial innovation, *Technology Review*, 80 (7), 40-47.
- Acemoglu D., Johnson S., Robinson J.** (2005). Chapter 6 Institutions as a Fundamental Cause of Long-Run Growth, Editor(s): Philippe Aghion, Steven N. Durlauf, *Handbook of Economic Growth*, Elsevier (Vol. 1, Part A, 385-472).
- Acemoglu, D. & Robinson, J.** (2012). *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. 1st ed. New York: Crown, 529.
- Ahuja, G., Soda, G., Zaheer, A.** (2012). The Genesis and Dynamics of Organizational Networks. *Organization Science*, 23, 1211-1211. 10.1287/orsc.1120.0774.
- Akbaş H. E., Bozkurt, S., Yazıcı K.** (2018). Osmanlı Devletinde Lonca Teşkilatı Yapısı ve Yönetim Düşüncesi ile Karşılaştırılması, *Muhasebe ve Finans Tarihi Araştırmaları Dergisi*, 165-202.
- Akkayan, T.** (2007). Geleneksel Ayakkabı Yapımında Organizasyon. *Ayakkabı Kitabı*, Kitabevi, İstanbul, 2007, 2. Baskı, 291-302
- Akkuş M.** (2017). Moğol Tahakkümü Döneminde Anadolu Şehirlerinin Korunmasında Ahiler (The Role of Ahis in the Protection of Anatolian Cities During Mongolian Invasion), *The 3rd International Symposium of Akhism*, Kırşehir, TURKEY, October 5-7.
- Aktay, Y., Topçuoğlu A.** (2007). Civil society and its cultural origins in a Turkish city: Konya. Critique: *Critical Middle Eastern Studies* 16 (3): 273–87.
- Alonso W.** (1964). “Location Theory”, in Friedmann J. and Alonso W. (eds.), *Regional Development and Planning: a Reader*, MIT Press, Cambridge, Mass., pp. 78-106.
- Amin, A.** (1999). An institutional perspective on regional economic development, *International Journal of Urban and Regional Research*, 23 (2), 365-378.
- Anadolu Ayakkabıcılar Derneği.** (2014). “*Anadolu Ayakkabısı Dünya Pazarında*” *Projesi İhtiyaç Analizi Raporu*. Konya: ANAYDER Anadolu Ayakkabıcılar Derneği.
- Aoki, M.** (2000). Institutional evolution as punctuated equilibria. Chapters. In: *Institutions, Contracts and Organizations*, Edward Elgar Publishing.

- APPICAPS** (2018). *The World Footwear 2018 Yearbook*. Porto: Portuguese Footwear, Components, Leather Goods Manufacturers' Association.
- Arrow, K.** (1962). Economic Welfare and the Allocation of Resources for Invention. In: Rowley C.K. (eds), *Readings in Industrial Economics*, Palgrave, London. doi.org/10.1007/978-1-349-15486-9_13
- Arthur, W. B.** (1994). Increasing Returns and Path Dependence in the Economy. *Ann Arbor: University of Michigan Press*.
- Arthur, W.B.** (1983). On competing technologies and historical small events: The dynamics of choice under increasing returns, *The Economic Journal*, 99 (394), 116-131.
- Asheim, B. T.** (1999). Interactive learning and localised knowledge in globalising learning economies. *Geo Journal*, 49(4), 345–352.
- Aslan, E.H.** (2013). *Türklerde İş Ahlakı Ve Geçmişten Günümüze Ahilik*. (Yüksek Lisans Tezi) Beykent Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.
- Aston, B. & Williams, M.** (1996). *Playing to Win: The Success of UK Motorsport Engineering*, London: Institute of Public Policy Research.
- ATSO** (1999). *Deri ve Ayakkabı Sanayi*, Antalya Ticaret ve Sanayi Odası.
- Audretsch, D.** (1995). *Innovation and Industry Evolution*, Cambridge, MA, MIT Press.
- Audretsch, D.B. & Feldman, M.P.** (1996). Innovative Clusters and the industry life cycle, *Review of Industrial Organization*, 11 (2), 253-273.
- Avci, Y.** (2007). *Osmanlı Devleti'nde Tanzimat Döneminde "Otoriter Modernleşme" ve Kadının Özgürleşmesi Meselesi*, OTAM, Ankara. DOI: 10.1501/OTAM_00000000293
- Axelrod, R.** (1984). *The Evolution of Cooperation* (NY: Basic Books)
- Bach, J.** (1995). *Was aus den DDR Verlagen geworden ist* (What happened to the G.D.R. publishers), Frankfurter Allgemeine Zeitung 12 December.
- Balloni V., Iacobucci D.** (1997). *Cambiamenti in atto nell'organizzazione dell'industria marchigiana*, *Economia Marche*, n. 1, pp. 29–66
- Bandura, A.** (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191
- Bandura, A., Ross, D., & Ross, S. A.** (1961). Transmission of aggression through imitation of aggressive models. *The Journal of Abnormal and Social Psychology*, 63(3), 575–582. https://doi.org/10.1037/h0045925
- Barbarosoğlu, F.** (2009). *Moda ve Zihniyet*, İz Yayıncılık, İstanbul.
- Baron, R. S., Vandello J. A., Brunzman, B.** (1996). The Forgotten Variable in Conformity Research: Impact of Task Importance on Social Influence. *Journal of Personality and Social Psychology* 7(5). 915–927.
- Barro R.J.** (1990). Government Spending in a Simple Model of Endogenous Growth. *Journal of Political Economy*, vol. 98, n. 5, pp. 103-125

- Bathelt, H. & Glückler, J.** (2003). Toward a relational economic geography. *Journal of Economic Geography*, 3(2), 117-144.
- Bathelt, H.** (2001). Regional competence and economic recovery: Divergent growth paths in Boston's high technology economy, *Entrepreneurship Regional Development*, 13 (4), 287-314.
- Bathelt, H.** (2002). The re-emergence of a media industry cluster in Leipzig, *European Planning Studies*, 10 (5), 583-611.
- Bathelt, H., & Boggs, J.S.** (2003). Toward a reconceptualization of regional development paths: Is Leipzig's media cluster a continuation of or a rupture with the past? *Economic Geography*, 79 (3), 265-293.
- Bathelt, H., Malmberg, A., & Maskell, P.** (2004). Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography*, 28(1), 31-56.
- Becattini, G.** (2004). *Industrial Districts - A New Approach to Industrial Change*. Cheltenham UK: Edward Elgar Publishing.
- Beckmann M.J.** (1969). "On the Distribution of Urban Rent and Residential Density", *Journal of Economic Theory*, n. 1, pp. 60-68
- Beinhocker, E.D.** (2006). *The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics*, Harvard Business Press.
- Belussi, F. & Hervás-Oliver, J.L.** (2016). Introduction: Unfolding Cluster and Industrial District Evolution: Into the Future. In *Unfolding Cluster Evolution* (pp. 29-36). Routledge.
- Belussi, F.** (2010). Transferring entrepreneurialship: the making of the cluster of Timișoara, in Belussi and Sammarra (eds), *Clusters and Industrial Districts: The governance of the global value chain* (pp. 172–85). London: Routledge
- Bengtsson, M., Kock, S.** (2000). Coopetition in Business Networks—To Cooperate and Compete Simultaneously. *Industrial Marketing Management*. 29. 411-426.
- Bentele, G., Liebert, T. & Polifke, M.** (2000). *Medienstandort Leipzig III: Eine Studie zur Leipziger Medienwirtschaft 2000* (Leipzig as a Location of the Media Industry III: A Study of Leipzig's Media Economy 2000). Leipzig.
- Berber M., Eser B.** (2008). "Türkiye'de Kadın İstihdamı: Ülke ve Bölge Düzeyinde Sektörel Analiz", *İş, Güç, Endüstri İlişkileri ve İnsan Kaynakları Dergisi*, 10 (2) , Nisan.
- Berg, L., Braun, L. & v. Winden, W.** (2001). Growth Clusters in European Metropolitan Cities. *A Comparative Analysis of Cluster Dynamics in the Cities of Amsterdam, Eindhoven, Helsinki, Leipzig, Lyon, Manchester, Munich, Rotterdam and Vienna, Aldershot, Burlington, USA: Ashgate.*
- Bianchi, G.** (1992). Requiem per la Terza Italia? Paper presented at the *XIII Italian Regional Science Association Conference*

- Blaug, M.** (1985). *Economic Theory in Retrospect* (4th ed.). Cambridge: Cambridge University Press
- Boeker, W.** (1989). The development and institutionalization of subunit power in organizations. *Administrative Science Quarterly*, 34(3), 388–410.
- Boggs, J.** (2001). Path dependency and agglomeration in the German book publishing industry, *Annual Meeting of the Association of American Geographers*, New York.
- Boratav, K.** (2006). *Türkiye’de Devletçilik*, İmge Yayınları. Ankara.
- Börsenblatt** (1993). *Verlage der früheren DDR im Überblick: Übernahmen, Beteiligungen, Liquidationen* (Publishers of the former G.D.R.: Mergers, acquisitions, closures). Börsenblatt 5 January, 53-54.
- Boschma R. A.** (1997). New industries and windows of locational opportunity. A long-term analysis of Belgium. *Erdkunde* 51(1), 1-19
- Boschma R. A., Eriksson, R., Lindgren U.** (2009). How does labour mobility affect the performance of plants? The importance of relatedness and geographical proximity, *Journal of Economic Geography* 9, 169-190.
- Boschma, R. & Frenken, K.** (2003). Evolutionary economics and industry location. *Review of Regional Research*, 23 (2), 183-200.
- Boschma, R. & Frenken, K.** (2006). Why is economic geography not an evolutionary science? towards an evolutionary economic geography, *Journal of Economic Geography*, 6 (3), 273-302.
- Boschma, R. & Martin, R.** (2007). *Constructing an Evolutionary Economic Geography*, Oxford: Oxford University Press.
- Boschma, R. & Van der Knaap, G.A.** (1997). New technology and windows of locational opportunity. Indeterminacy, creativity and chance. In J. Reijnders (Ed.), *Economics and Evolution*, Edward Elgar.
- Boschma, R. & Van der Knaap, G.A.** (1999). New high-tech industries and windows of locational opportunity: The role of labour markets and knowledge institutions during the industrial era, *Human Geography*, 81 (2), 73-89.
- Boschma, R.** (2007). Path creation, path dependence and regional development. In: J. Simmie and J. Carpenter (eds.), *Path Dependence and the Evolution of City Regional Development*, Chapter 3, Working Paper Series No. 197, Oxford Brookes University, Oxford, pp. 40-55.
- Boschma, R. and Lambooy, J.** (1999). Evolutionary Economics and Economic Geography. *Journal of Evolutionary Economics*. 9. 411-429. 10.1007/s001910050089.
- Boschma, R. and Martin R.** (2010). The Aims and Scope of Evolutionary Economic Geography. *Papers in Evolutionary Economic Geography (PEEG) 1001*, Utrecht University, Department of Human Geography and Spatial Planning, Group Economic Geography.
- Boschma, R. and Wenting, R.** (2007). The Spatial Evolution of the British Automobile Industry: Does Location Matter? *Industrial and Corporate Change*. 16. 213-238. 10.1093/icc/dtm004.

- Boschma, R.A.** (2004). Competitiveness of regions from an evolutionary perspective, *Regional Studies* 38(9): 1001-1014.
- Boyd, R., & Richerson, P. J.** (1985). *Culture and the evolutionary process*. University of Chicago Press.
- Breschi, S. & Malerba, F.** (2001). The geography of innovation and economic clustering: Some introductory notes. *Industrial and Corporate Change*, 10 (4), 817-833.
- Brusco, S.** (1990). The Idea of the Industrial District: Its Genesis. In F. Pyke, G. Becattini and W. Sengenberger (eds.) *Industrial Districts and Inter-Firm Co-operation in Italy*, ILO Geneva.
- Bryman, A.** (2012). *Social Research Methods 4e*. Oxford, UK: Oxford University Press.
- Buenstorf, G. and Klepper, S.** (2005). Heritage and Agglomeration: The Akron Tire Cluster Revisited. *Max Planck Institute of Economics*. Papers on Economics and Evolution, #0508.
- Burk, J.** (1988). *Values in the marketplace: The American stock market under federal securities law*. New York: de Gruyter.
- Çağatay N.** (1997). *Bir Türk Kurumu Olan Ahilik*, TTK, Ankara.
- Cainelli G. and Lacobucci D.** (2009). Do agglomeration and technology affect vertical integration? Evidence from Italian business groups. *International Journal of the Economics of Business*. 16(3). pp 305–322.
- Çakır, S.** (1993). *Osmanlı Kadın Hareketi*, Metis Yayınları, İstanbul.
- Camagni, R.** (1991) Local ‘Milieu’, Uncertainty and Innovation Networks: Towards a New Dynamic Theory of Economic Space. In R. Camagni (Ed.), *Innovation Networks: Spatial Perspectives* (121-144). Belhaven, London, 121-144
- Capello, R.** (2011). Location, Regional Growth and Local Development Theories. *Aestimum*, 1-25.
- Caporal, B.** (1982). *Kemalizm’de ve Kemalizm Sonrası Türk Kadını*, Türkiye İş Bankası Yayınları, Ankara.
- Carroll, G.R. & Hannan, M.T.** (1989). Density delay in the evolution of organizational populations: A model and five empirical tests, *Administrative Science Quarterly*, 34 (3), 411-430.
- Carroll, G.R., Bigelow, L., Seidel, M.D. and Tsai, L.** (1996). The fates of de novo and de alio producers in the American automobile industry, 1885–1981, *Strategic Management Journal*, 17: 117–38
- Chernow, R.** (1998). *Titan: The life of John D. Rockefeller, Sr.*, Vintage.
- Christopherson, S., and Storper, M.** (1986). The city as studio, the world as back lot: The impact of vertical disintegration on the location of the motion picture industry. *Environment and Planning D: Society and Space* 4:305-2
- Clemens, E.S.** (2002). 13. Invention, innovation, proliferation: Explaining organizational genesis and change. In M. Lounsbury & M.J. Ventresca

- (Eds.), *Social structure and organizations revisited* (Research in the sociology of organizations) (Vol. 19, pp. 397–411)
- Corò, G. & Grandinetti, R.** (1999). Evolutionary patterns of Italian industrial districts. *Human Systems Management*. 18. 117-129.
- Çoruhlu, Y.** (2007). Orta ve İç Asya’da Kazı ve Araştırmalarda Elde Edilen Materyale Göre Erken Devir Türklerinde Çizme. *Ayakkabı Kitabı*. Kitabevi, İstanbul, 2007. 2. Baskı, 159-199
- Creswell, J.W.** (2007). *Qualitative Inquiry and Research Design: Choosing among Five Approaches* (2nd ed.), Sage Publications, Inc.
- Dağtaş, L.** (2007). *Anadolu’da Dericilik*, İdesbaş Kültür Hizmeti, İstanbul: Dönence Yayınları.
- Dahl, M. S., Pedersen, C. Ø. R., Dalum, B.** (2003). Entry by spinoff in a high-tech cluster. *DRUID Working Paper*, No. 2003–11.
- Dahl, M. S., Pedersen, C. Ø. R., Dalum, B.** (2005). Entrepreneurial founder effects in the growth of regional clusters: how early success is a key determinant. *DRUID Working Paper*, No.2005–18
- Danacı, C.** (1996). *Türkiye’de Özelleştirme Faaliyetleri Bir Örnek Olay Sümerbank ve Dünya Uygulamaları*. (Doktora Tezi). İstanbul Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.
- Darwin, C.** (1871). *The descent of man: And selection in relation to sex*. London: J. Murray.
- David, P.** (1985). Clio and the economics of QWERTY. *The American Economic Review*. 75. 332-7.
- David, P.** (1992). Heroes, Herds and Hysteresis in Technological History: Thomas Edison and The Battle of Systems Reconsidered. *Industrial and Corporate Change*, 1, 129-180.
- Dawkins, C.J.** (2003). Regional Development Theory: Conceptual Foundations, Classic Works, and Recent Developments, *Journal of Planning Literature*, 18 (2), 131-172.
- De Bresson C., Walker R.** (1991). Networks of Innovators, special issue of *Research Policy*, 20, 5, 363–514.
- Denzer, V. & Grundmann, L.** (1999). Das graphische viertel - ein citynahes mischgebiet der stadt leipzig im transformationsprozeß: Vom druckgewerbe- zum bürostandort (the transformation of leipzig’s graphical quarter: from printing and publishing to modern office functions), *Europa Regional*, 7 (3), 37-50.
- Denzin, N.K., Lincoln, Y.S.** (2005). Introduction: The discipline and practice of qualitative research. In *The Sage handbook of qualitative research*, Thousand Oaks, CA: Sage publications, 1-32.
- Devlet Planlama Teşkilatı.** (1991). *Deri ve Deri Mamulleri Sanayii Özel İhtisas Komisyonu Raporu* (Rapor No: DPT: 22246 – ÖİK:371). Ankara: Devlet Planlama Teşkilatı.

- DiMaggio, P. J.** (1981). Cultural entrepreneurship in nineteenth-century Boston, part I: The creation of an organizational base for high culture in America. *Media, Culture and Society*, 4: 33–50.
- DiMaggio, P. J.** (1982). Cultural entrepreneurship in nineteenth-century Boston, part II: The creation of an organizational base for high culture in America. *Media, Culture, and Society*, 5: 374 –397.
- DiMaggio, P.J., & Powell, W.W.** (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147–160.
- Dittmar, J.** (2011). Information technology and economic change: The impact of the printing press. *The Quarterly Journal of Economics*, 126 (3), 1133-1172.
- Dixit A. and Stiglitz J.** (1977). Monopolistic Competition and Optimum Product Diversity. *American Economic Review*. 67 (3). 297-308.
- Dobbin, F.** (1994). Forging Industrial Policy: The United States, Britain, and France in the Railway Age, Cambridge University press.
- Dopfer, K., Foster, J. & Potts, J.** (2004). Micro-meso-macro, *Journal of Evolutionary Economics*, 14 (3), 263-279.
- Dosi, G.** (1997). Opportunities, incentives and the collective patterns of technological change. *The Economic Journal*, 107 (444), 1530-1547.
- Dunne, T., Roberts, M., & Samuelson, L.** (1988). Patterns of Firm Entry and Exit in U.S. Manufacturing Industries. *The RAND Journal of Economics*, 19 (4), 495-515.
- Dunning, J.H.** (2000). *Regions, Globalization, and the Knowledge-Based Economy* (ed.), Oxford University Press, Oxford.
- Durak, İ. & Yücel, A.** (2010). Ahiliğin Sosyo-Ekonomik Etkileri ve Günümüze Yansımaları. *Süleyman Demirel Üniversitesi İktisadi ve idari Bilimler Fakültesi Dergisi*, 15 (2), 151-168.
- Durgun, F.** (2009). “A Comparison Of Medieval European Guilds and Akhism in Anatolia in Terms Of Their Emergence And General Functions”, *Tarih Okulu*, Summer 2009 No: IV, 1-16.
- Eisenhardt, K. M.** (1991). Better stories and better constructs: The case for rigor and comparative logic. *Academy of Management Review*, 16: 620-627.
- Eisenhardt, K.M. and Graebner, M.E.** (2007). Theory Building from Cases: Opportunities and Challenges. *Academy of Management Journal*, 50, 25-32.
- Eldredge, N. & Gould, S.J.** (1972). Punctuated equilibria: An alternative to phyletic gradualism, In T.J.M. Schopf (Ed.), *Models in Paleobiology* (pp. 82-115), San Francisco: Freeman, Cooper and Company.
- Essletzbichler, J. & Rigby, D.** (2005a). Competition, variety and the geography of technology evolution, *Tijdschrift Voor Economische En Sociale Geografie*, 96 (1), 48-62.

- Essletzbichler, J. & Rigby, D.L.** (2005b). Technological evolution as creative destruction of process heterogeneity: Evidence from US plant-level data, *Economic Systems Research*, 17 (1), 25-45.
- Essletzbichler, J. & Rigby, D.L.** (2007). Exploring evolutionary economic geographies, *Journal of Economic Geography*, 7 (5), 549-571.
- Essletzbichler, J.** (2012). Generalized Darwinism, group selection and evolutionary economic geography. *Zeitschrift für Wirtschaftsgeographie*, 56 (1-2), 129-146.
- Euromonitor International** (2018). *Footwear In Turkey*. Retrieved from <https://www.euromonitor.com/footwear-in-turkey/report>
- Fagan, J. H.** (2000). Do northeast Ohio's drivers derive competitive advantage from shared labor? *Economic Development Quarterly*, 14 (1), 111-125.
- Faroqhi S.** (2009). *Artisans of Empire: Crafts and Craftspeople Under Ottomans*, I.B. Tauris, London
- Feldman, G.** (2005). *Neo-Liberal Nationalism: Ethnic Integration and Estonia's Accession to the European Union*. 10.2307/j.ctt1x76dt9.7.
- Fisher, R. A.** (1930). *The genetical theory of natural selection*. Clarendon Press. <https://doi.org/10.5962/bhl.title.27468>
- Freeman, C.** (1988), Japan: A new National Innovation Systems?, in Dosi, G., Freeman, C., Nelson, R.R., Silverberg, G. and Soete, L.,(eds.), *Technology and economic theory*, London, Pinter Publishers.
- Freeman, C.** (1995). The 'National System of Innovation' in historical perspective, *Cambridge Journal of Economics*, 19 (1), 5-24, doi.org/10.1093/oxfordjournals.cje.a035309
- Frenken, K. & Boschma, R.A.** (2007). A theoretical framework for evolutionary economic geography: Industrial dynamics and urban growth as a branching process, *Journal of Economic Geography*, 7 (5), 635-649.
- Gargı, Z.** (2000). *Orta Asya'dan Osmanlı'ya Türk deri sanatı ve aksesuarları üzerine bir kimlik araştırması* (Master thesis). Dokuz Eylül University, Institute of Fine Arts, İzmir.
- Garretsen, H. and Martin, R.** (2010). Rethinking (New) Economic Geography Models: Taking Geography and History More Seriously, *Spatial Economic Analysis*, 5(2), 127-160, doi: 10.1080/17421771003730729
- Garud, R. and Karnøe, P.** (2001). Path creation as a process of mindful deviation. In: Garud, Raghu/Peter Karnøe (eds.), *Path dependence and creation*. Mahwah: Lawrence Erlbaum Associates, 1-38
- Gedikler, H.** (2006). *1950-1960 Yılları Arasında İzmir'de Gündelik Yaşam*. (Yayınlanmamış Doktora Tezi). Dokuz Eylül Üniversitesi Atatürk İlkeleri ve İnkılap Tarihi Enstitüsü, İZMİR.
- Genç, Ö.** (2005), *Ayakkabı Sektör Araştırması*, Ankara: Türkiye Kalkınma Bankası A.Ş. Araştırma Müdürlüğü.
- Geroski, P.A.** (1995). What do We know about Entry?, *International Journal of Industrial Organization*, 13, 421-40.

- Gölpınarlı, A.** (1952). “İslam ve Türk İllerinde Fütüvvet Teskilatı” (The Futuvva Institution in Muslim and Turkish Cities). *İstanbul Üniversitesi İktisat Fakültesi Mecmuası* 1-4: 3-317.
- Gormsen, N.** (1996). *Leipzig - stadt, handel, messe: Die städtebauliche entwicklung der stadt leipzig als handels- und messestadt* (Leipzig’s development as a trade and exhibition center), Leipzig: Institut für Länderkunde.
- Gorski, P.** (2003). *The disciplinary revolution: Calvinism and the rise of the state in early modern Europe*, Chicago: University of Chicago Press.
- Gräf, P.** (2001). Das Buchverlagswesen und seine Standorte (The German book publishing industry), In Institut für Länderkunde (Ed.) *Nationalatlas Bundesrepublik Deutschland: Band 9. Verkehr und Kommunikation* (116-117), Heidelberg, Berlin: Spektrum.
- Granovetter, M.** (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, 91 (3), 481-510
- Griliches, Z.** (1957). Hybrid corn: An exploration in the economics of technological change, *Journal of the Econometric Society*, 25 (40), 501-522.
- Grow, N. R.** (1977). *The “Boston-type open-end fund” Development of a national financial institution: 1924 –1940.*(Unpublished doctoral dissertation), Harvard University, Cambridge, MA.
- Gürsoy, M.** (1993). *Tarihi, Ekonomisi ve İnsanları ile Bizim İzmirimiz*, Metis Yayıncılık
- Hannan, M.T., & Freeman, J.** (1977). The population ecology of organizations. *American Journal of Sociology*, 82 (5), 929–964.
- Hart, N.** (1996). ‘Marshall’s Theory of Value: The Role of External Economies’, *Cambridge Journal of Economics*, 20 (3), 353–69.
- Hebb D.** (1993). Racing: the reason why, *British Cars*, April, pp. 51- 55.
- Helfat, C. and Lieberman, M.** (2002). The birth of capabilities: Market entry and the importance of pre-history. *Industrial and Corporate Change*. 11. 725-760. 10.1093/icc/11.4.725.
- Henrich, J.** (2004). Cultural group selection, coevolutionary processes and large-scale cooperation. *Journal of Economic Behavior & Organization*, 53 (1), 3–35. doi:10.1016/S0167-2681(03)00094-5
- Henrich, J., & Gil-White, F. J.** (2001). The evolution of prestige: Freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior*, 22(3), 165–196.
- Henriques, D. B.** (1995). *Fidelity’s world*. New York: Scribner
- Hodgson, G. M. & Knudsen, T.** (2010). *Darwin's Conjecture: The Search for General Principles of Social and Economic Evolution*, University of Chicago Press.
- Hodgson, G.M. & Knudsen, T.** (2006). Why we need a generalized darwinism: And why generalized Darwinism is not enough, *Journal of Economic Behavior & Organization*, 61 (1), 1-9.

- Hodgson, G.M.** (1993). *Theories of Economic Evolution: A Preliminary Taxonomy*. The Manchester School, 61, 125-143
- Hodgson, G.M.** (2001). *How Economics Forgot History: The Problem of Historical Specificity in Social Science (Economics as Social Theory)*, London and New York: Routledge.
- Hodgson, G.M.** (2002). Darwinism in economics: From analogy to ontology, *Journal of evolutionary economics*, 12 (3), 259-281.
- Holbrook, D.** (1937). The Boston trustee. Boston: Marshall Jones Company. Jensen, M. C. 1965. The performance of mutual funds in the period 1945– 64. *Journal of Finance*, 23, 587– 616.
- Hotelling, H.** (1929). Stability in competition. *Economic Journal*, 39:, 41–57. <https://doi.org/10.1111/j.1467-9957.1993.tb00228.x>
- Hull, D.L., Langman, R.E., & Glenn, S.S.** (2001). A general account of selection: Biology, immunology, and behavior. *Behavioral and Brain Sciences*, 24 (3), 511-528.
- Inglehart R. & Baker, W.** (2000). Modernization, Cultural Change, and the Persistence of Traditional Values. *American Sociological Review*, 65, 19-51. 10.2307/2657288.
- Isard W.** (1956). *Location and Space-Economy*, MIT Press, Cambridge, Mass.
- İzmir Ticaret Odası** (2015). “*Ayakkabı Sektöründe Uluslararası Rekabetçiliğin Geliştirilmesi*” *Projesi İhtiyaç Analizi Raporu*. İzmir: İzmir Ticaret Odası
- Johnson, V.** (2007). What is organizational imprinting? Cultural entrepreneurship in the founding of the Paris Opera, *American Journal of Sociology*, 113 (1), 97-127.
- Jones, G. & Khanna, T.** (2006). Bringing history (back) into international business, *Journal of International Business Studies*, 37 (4), 453-468.
- Kandiyoti, D.** (2007), *Cariyeler, Bacılar, Yurttaşlar*, Metis Yayınları, İstanbul.
- Karlsson, C., Mellander, C., Paulsson, T.** (2006). A Spatial ICT Clusters in Sweden – An Empirical Method to Identify Necessary Conditions for Existence. In B. Johansson, C. Karlsson, & R. Stough, *Entrepreneurship and Dynamics in a Knowledge Economy* (257-280). London & New York: Routledge
- Karrasch, I.** (1989). *Verlagswesen und Buchhandel in der DDR (Book trade and publishing in the G.D.R.)* (Diplomarbeit). Studiengang Verlagswirtschaft und Verlagsherstellung, Fachhochschule für Druck, Stuttgart.
- Kaya, M.** (2014). *Atatürk Dönemi Magazin Dergiciliği ve Sosyo Kültürel Dönüşüme Etkisi* (Doktora Tezi), Ankara Üniversitesi, Türk İnkılap Tarihi Enstitüsü, ANKARA.
- Kayabal, A.** (1999). “*Sanayi Tarihinin Önemli Durağı Sümerbank Beykoz Deri Kundura Fabrikası*” *SKYLIFE*, Kasım 1999 sayısı, <http://www.osmanakbasak.com/Beykoz/Beykoz.html>, (21.04.2013), s. 59

- Kazgan, G.** (1999). *Tanzimat'tan XXI. Yüzyıla Türkiye Ekonomisi*, İstanbul: Altın Kitaplar Yayınevi.
- Kenney, M. and V. Burg, U.** (2001). Paths and Regions: The Creation and Growth of Silicon Valley. In R. Garud and P. Karnoe (Eds.) *Path Dependence and Path Creation* (New York: Lawrence Erlbaum and Associates): 127-148.
- Kerimoğlu, T.** (2013). "19. Yüzyılda Reformlar ve İzmir", *İzmir Kent Ansiklopedisi*, Cilt 1, İzmir: İzmir Büyükşehir Belediyesi Kültür Yayınları, s. 81-89.
- Keyman E.F. & Lorasdağı B. K.** (2010). *Kentler: Anadolu'nun Dönüşümü, Türkiye'nin Geleceği*, Doğan Kitap, İstanbul
- Kırımlı, Y.** (2007). Gedikpaşa ve Çarşıkapı Ayakkabı İmalatçıları -1980. *Ayakkabı Kitabı*. Kitabevi, İstanbul, 2007. 2. Baskı, 303-314
- Kırtunç, E.** (1989). Ayakkabı deyip geçmeyelim, *Kültür ve Sanat Dergisi*, (3), 67–69.
- Klepper, S.** (1996). Entry, exit, growth, and innovation over the product life cycle, *The American Economic Review*, 86 (3), 562-583.
- Klepper, S.** (2001). Employee startups in high-tech industries. *Industrial and Corporate Change*, 10 (3), 639–674.
- Klepper, S.** (2002). The Capabilities of New Firms and the Evolution of US Automobile Industry. *Industrial and Corporate Change*. 11. 645-666. 10.1093/icc/11.4.645.
- Klepper, S.** (2007). Disagreements, spinoffs, and the evolution of Detroit as the capital of the US automobile industry. *Management Science*, 53(4), 616-631.
- Klepper, S., & Graddy, E.** (1990). The Evolution of New Industries and the Determinants of Market Structure. *The RAND Journal of Economics*, 21(1), 27-44.
- Klepper, S.** (2003). *The geography of organizational knowledge*, mimeo.
- Köksal, A., İlkin R.** (1973). *Türkiye'de İktisadi Politika Gelişimi*, Yapı Ve Kredi Bankası Yayını, Binbirdirek Mat, İstanbul: 1973.
- Kongar, E.** (1998). *21. Yüzyılda Türkiye*, 11th Edition, İstanbul: Remzi Kitabevi.
- Kono, C., Palmer, D., Friedland, R., Zafonte, M.** (1998). Lost in space: The geography of corporate interlocking directorates. *American Journal of Sociology*, 103: 863–911.
- Koonin E.V., Wolf, Y.** (2009). Is evolution Darwinian or/and Lamarckian? *Biol Direct* 4:42 <https://doi.org/10.1186/1745-6150-4-42>
- Krätke, S. and Scheuplein, C.** (2001). Produktionscluster in Ostdeutschland (Production clusters in East Germany), Hamburg: VSA.
- Krugman, P.** (1991). Increasing returns and economic geography, *Journal of Political Economy*, 99 (3), 483-499.
- Krugman, P.** (1996). *The self-organising economy*. Cambridge, Mass.: Blackwell Publishers

- Krugman, P. and Venables, A.J.** (1996). "Integration, specialization, and adjustment," *European Economic Review*, Elsevier, vol. 40 (3-5), pages 959-967.
- KTO-Konya Ticaret Odası.** (2007). *Ayakkabı sektör raporu* (Rapor No. 2007/543/503). Konya: Etüd Araştırma Servisi.
- Küçükerman, Ö.** (1988) *Geleneksel Türk Dericilik Sanayii ve Beykoz Fabrikası Boğaziçi 'nde Başlatılan Sanayi*. 1. Baskı. İstanbul
- Kuru S., Paksoy C.** (2008). "Anadolu'da Ayakkabı Kültürü Ve Cumhuriyet Dönemi Ayakkabı Kültürü", C. 2, s. 821-835, 38. *ICANAS Bildiriler II*, Ankara, Atatürk Kültür, Dil Ve Tarih Yüksek Kurumu.
- Kutlu, Ö.** (2007). Local Government Tradition and Its Cultural, Social, and Political Bases: The Konya Model. *Critique: Critical Middle Eastern Studies*, 16 (3), 255–271.
- Lamarck, J. B.** (1984). *Zoological Philosophy: An Exposition with Regard to the Natural History of Animals*. Translated by Hugh Elliot from the 1st French ed. of 1809, with introductory essays by David L. Hull and Richard W. Burkhardt. Chicago University of Chicago Press.
- Lange, M.** (2013). *Comparative-Historical Methods*, London: SAGE Publications Ltd.
- Lemke, R.** (1992). Verlagswesen und buchhandel im osten deutschlands - versuch einer bilanz im frühjahr 1992 (Book trade and publishing in Eastern Germany - An evaluation), Internal document, *Leipzig: Verband der Verlage und Buchhandlungen in Sachsen, Sachsen-Anhalt und Thüringen*.
- Lienhard, J.H.** (2014). Engines of Our Ingenuity No. 1785: Matzeliger In 1924, <https://uh.edu>, Retrieved December 23, 2019, from <http://www.uh.edu/engines/epi1785.htm>.
- Lösch A.** (1954) *The Economics of Location*, Yale University Press, New Haven, orig. edn. (1940), *Die Räumliche Ordnung der Wirtschaft*, Gustav Fischer, Jena
- Lounsbury, M.** (2002). Institutional Transformation and Status Mobility: The Professionalization of the Field of Finance. *Academy of Management Journal*, 45, 255–266
- Lounsbury, M.** (2007). A tale of two cities: Competing logics and practice variation in the professionalizing of mutual funds, *Academy of Management Journal*, 50 (2), 289-307.
- Lucas Jr, R.E.** (1988). On the mechanics of economic development, *Journal of monetary Economics*, 22 (1), 3-42.
- Lundvall, B.A.** (1992). *National systems of innovation: An analytical framework*, London: Pinter.
- Mahoney, J. & Rueschemeyer, D.** (Eds.). (2003). *Comparative historical analysis in the social sciences*, Cambridge University Press.
- Mahoney, J.** (2000). Path dependence in historical sociology, *Theory and Society*, 29 (4), 507-548.

- Maillat, D., Quévit, M. & Senn, L.** (1993). Réseaux D'innovation et Milieux Innovateurs, Réseaux D'innovation et Milieu Innovateurs, *Un Pari Pour le Développement Regional*, Paris: GREMI/EDES.
- Makal, A.** (2001). Türkiye’de 1950–1965 Döneminde Ücretli Kadın Emeğine İlişkin Gelişmeler. *Ankara Üniversitesi Siyasal Bilgiler Fakültesi Dergisi*. (56)2. 117-155
- Malkoç, E.** (2016). *Ahilik Sistemi Örgütlenme Yapısının Günümüz Türkiye Esnaf Ve Sanatkarları Konfederasyonu İle Karşılaştırılması* (Yüksek Lisans Tezi). Karabük Üniversitesi Sosyal Bilimler Enstitüsü. KARABÜK.
- March, J. G., and Simon H. A. Simon.** (1958). *Organizations*. New York: Wiley.
- Marquis, C. & Huang, Z.** (2010). Acquisitions as exaptation: The legacy of founding institutions in the US commercial banking industry, *Academy of Management Journal*, 53 (6), 1441-1473.
- Marquis, C. & Tilcsik, A.** (2013). Imprinting: Toward a Multilevel Theory, *Academy of Management Annals*, 7 (1), 195-245.
- Marquis, C.** (2003). The Pressure of the past: Network imprinting in intercorporate communities, *Administrative Science Quarterly*, 48 (4), 655-689.
- Martin, R. & Sunley, P.** (2001). Rethinking the “economic” in economic geography: Broadening our vision or losing our focus?, *Antipode*, 33 (2), 148-161.
- Martin, R. & Sunley, P.** (2006). Path Dependence and Regional Economic Evolution, *Journal of Economic Geography*, 6 (4), 395-437.
- Martin, R. & Sunley, P.** (2015). On the notion of regional economic resilience: conceptualization and explanation, *Journal of Economic Geography*, 15 (1): 1–42.
- Martin, R. & Sunley, P.** (2017). The post-Keynesian state and the space economy, In R. Martin (Ed.), *Economy* (pp. 459-473), Routledge.
- Martin, R., & Sunley, P.** (1998). Slow Convergence? The New Endogenous Growth Theory and Regional Development. *Economic Geography*, 74 (3), 201-227. doi:10.2307/144374
- Maskell, P.** (2001). Towards a knowledge-based theory of the geographical cluster. *Industrial and Corporate Change*. 10. 921-943.
- Mayer, M.** (1968). *New breed on Wall Street*. New York: Macmillan.
- Mayr, E.** (1963). Animal species and evolution. *Systematics and the origin of species*. Harvard University Press, Cambridge, Mass.
- McAndrew, F.** (2002). New Evolutionary Perspectives on Altruism: Multilevel Selection and Costly-Signaling Theory. *Current Directions in Psychological Science*. 11. 79-82. 10.1111/1467-8721.00173.
- McCann P.** (2005). Transport costs and new economic geography. *Journal of Economic Geograph* 5(3):305–318
- McEvily, B. Jaffee, J. & Tortoriello, M.** (2012). Not all bridging ties are equal: Network imprinting and firm growth in the Nashville legal industry, 1933–1978, *Organization Science*, 23 (2), 547-563.

- Menz, G.** (1942). *Der Deutsche Buchhandel (The German Book Trade)*, 2nd Edition, Gotha: Perthes.
- Menzel, M.-P. & Fornahl, D.** (2009). Cluster Life Cycles-Dimensions and Rationales of Cluster Evolution, *Industrial Corporate Change*, 19 (1), 205-238.
- Mevlana Kalkınma Ajansı.** (2012). *Konya Ayakkabı Rekabet Edebilirlik ve Küme Raporu*. Konya: Mevlana Kalkınma Ajansı Retrieved from <https://www.kalkinmakutuphanesi.gov.tr/dokuman/konya-ayakkabi-rekabet-edebilirlik-ve-kume-raporu/1310>.
- Meyer, J.W., & Rowan, B.** (1977). Institutionalized organizations: Formal structure as myth and ceremony. *The American Journal of Sociology*, 83(2), 340–363.
- Miles, M. B. & Huberman, A. M.** (1994). *Qualitative data Analysis: An Expanded Sourcebook*, 2nd Edition, Sage Publications, Inc.
- Mintz, B., Schwartz, M.** (1985). *The Power Structure in American Business*. Chicago. University of Chicago Press.
- Morgan, K.** (1997). The Learning Region: Institutions, Innovation and Regional Renewal. *Regional Studies*, 31, 491-503. 10.1080/00343409750132289.
- Mossoff, A.** (2009). The Rise and Fall of the First American Patent Thicket: The Sewing Machine War of the 1850s. *Arizona Law Review*, 53.
- Nakamura, R.** (1985). Agglomeration economies in urban manufacturing industries: a case of Japanese cities. *Journal of Urban Economics*, 17, 108-124.
- Nalebuff, B., Brandenburger, A.** (1996). *Coopetition*, ISL Förlag AB, Oskarshamn
- Nasaw, D.** (2006). *Andrew Carnegie*. New York: Penguin.
- Nelson, R. & Winter, S.** (1974). Neoclassical vs. evolutionary theories of economic growth: critique and prospectus, *The Economic Journal*, 84 (336), 886-905.
- Nelson, R. & Winter, S.** (1982). *An Evolutionary Theory of Economic Growth*, Cambridge, MA: Belknap-Harvard.
- Nelson, R.** (1995). Recent evolutionary theorizing about economic change, *Journal Of Economic Literature*, 33 (1), 48-90.
- Neuman, W. L. & Robson, K.** (2014). *Basics of Social Research*, Toronto: Pearson Canada.
- North, D. C.** (1990). *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- Ögel, B.** (1978). *Türk Kültür Tarihine Giriş*, Ankara: Milli Eğitim Basımevi.
- Oncar, O.** (2016). *Osmanlı Devleti'nin Kuruluşunda Ahiler ve Ahilik Kurumunun Rolü*. Yüksek Lisans Tezi, Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü, KIRŞEHİR
- Öngüt, E. & Özçörekçi, M.** (2005). *Dünya’da ve Türkiye’de Deri ve Deri Ürünleri Sanayiinin Gelişme Eğilimleri ve Geleceği*, Ankara: İktisadi Sektörler

ve Koordinasyon Genel Müdürlüğü Sanayi Dairesi Başkanlığı, DPT, Yayın no, 2685.

- Onur, G.** (2008). Ayakkabı 2008, Ankara: T.C Başbakanlık Dış Ticaret Müsteşarlığı.
- Ostrower, F.** (2002). *Trustees of Culture: Power, Wealth and Status on Elite Arts Boards*. Chicago: University of Chicago Press.
- Özdemir, M.** (2007). Türk kültüründe dericilik sanatı, *Gazi Üniversitesi Endüstriyel Sanatlar Eğitim Fakültesi Dergisi*, 20, 66-82.
- Parr J. B.** (2002). Missing Elements In The Analysis of Agglomeration Economies. *International Regional Science Review*, 25, 151-168
- Peck, J. & Theodore, N.** (2007). Variegated capitalism. *Progress in Human Geography*, 31 (6), pp. 731–772
- Peker, M.** (1993). İzmir'in Nüfusunun Gelişimi . *Çağdaş Türkiye Tarihi Araştırmaları Dergisi* 1 (3). Retrieved from <https://dergipark.org.tr/tr/pub/ctad/issue/25524/269256>
- Perroux, F.** (1955): Note sur la notion de poles croissance. *Economic Appliquee*, (1 & 2), 307-320 (Translated by Mette Monsted, 1974).
- Pettegree, A.** (2017). The reformation as a media event, *Archiv für Reformationsgeschichte-Archive for Reformation History*, 108 (1), 126-133.
- Pettigrew, A.** (1990). Longitudinal field research on change: theory and practice, *Organization Science*, 1, 267-292.
- Pinch, S. & Henry, N.** (1999). Paul Krugman's geographical economics, industrial clustering and the British motor sport industry, *Regional Studies*, 33 (9), 815-827.
- Piore M. and Sabel F.** (1984). *The Second Industrial Divide*, New York: Basic Books
- Porter, M. E.** (1990). *The Competitive Advantage of Nations*, London: Macmillan.
- Porter, M.E.** (1998). Clusters and competition: New agenda for companies, governments and institutions. In *On Competition*, Boston, MA: Harvard Business School.
- Pouder, R., & St. John, C.H.** (1996). Hot spots and blind spots: Geographical clusters of firms and innovation, *Academy of Management Review*, 21 (4), 1192-1225.
- Price, G.R.** (1995). The nature of selection, *Journal of Theoretical Biology*, 175 (3), 389-396.
- Rabellotti, R.** (1995). Is there an industrial district model? Footwear districts in Italy and Mexico compared. *World Development*, Elsevier, vol. 23(1), pages 29-41
- Rafiqui, P. S.** (2009). Evolving economic landscapes: Why new institutional economics matters for economic geography, *Journal of Economic Geography*, 9, 329-353.
- Raynard, M., Lounsbury, M. & Greenwood, R.** (2013). Legacies of logics: Sources of community variation in CSR implementation in China, In

Institutional Logics in Action, Part A (pp. 243-276). Emerald Group Publishing Limited.

- Rebelo S.** (1991). Long-Run Policy Analysis and Long-Run Growth. *Journal of Political Economy*, vol. 99, pp. 500-521
- Rigby, D.L. & Essletzbichler, J.** (1997). Evolution, process variety, and regional trajectories of technological change in US manufacturing, *Economic Geography*, 73 (3), 269-284.
- Rigby, D.L., & Essletzbichler, J.** (2006). Technological variety, technological change and a geography of production techniques, *Journal of Economic Geography*, 6 (1), 45-70.
- Romanelli, E. and Schoonhoven, C.** (2001). The local origins of new firms. *Journal of Computational Biology - JCB*.
- Romanelli, E., and Tushman, M.** (1994). Organizational Transformation as Punctuated Equilibrium: An Empirical Test. *The Academy of Management Journal*, 37(5), 1141-1166.
- Romer, P.** (1987). Growth Based on Increasing Returns Due to Specialization. *The American Economic Review*, 77(2), 56-62.
- Romer, P.** (1990). Endogenous Technological Change. *Journal of Political Economy*, 98 (5), S71-S102.
- Romer, P.** (1994). The Origins of Endogenous Growth. *The Journal of Economic Perspectives*, 8 (1), 3-22.
- Romer, P.M.** (1986). Increasing returns and long-run growth, *Journal of Political Economy*, 94 (5), 1002-1037.
- Rueschemeyer, D. & Stephens, J.D.** (1997). Comparing historical sequences-A powerful tool for causal analysis. A reply to John Goldthorpe's current issues in comparative macro-sociology, *Comparative Social Research*, 16, 55-72.
- Rydberg, H.** (1965). The Location Of The English Shoe Industry, *Geografiska Annaler, Series B, Human Geography*, 47 (1), 44- 55.
- Sağlam, D.** (1980) *Türkiye’de Kamu İktisadi Teşebbüslerinin Yapısı ve Zarar Nedenleri*. Ankara. 18
- Sagurna, M.** (2000). Der Medienstandort Leipzig im Freistaat Sachsen (Leipzig’s role as a media location in Saxony). In H. Grunau, W. Kleinwächter und H.-J. Stiehler (Ed.), *Medienstadt Leipzig: Vom Anspruch zur Wirklichkeit* (pp. 22-30), Leipzig: Monade.
- Sancaktar, A.** (2006). *An Analysis of Shoe Within the Context of Social History of Fashion*. (Master Thesis). Izmir Institute of Technology, Graduate School of Engineering and Sciences, İZMİR.
- Saxenian, A.** (1983). The urban contradictions of Silicon Valley. *International Journal of Urban and Regional Research* 17:236-57
- Saxenian, A.** (1985). The genesis of Silicon Valley. In *Silicon landscapes*, ed. P. Hall and A. Markusen, 20-34. Boston: Allen and Unwin

- Saxenian, A.** (1990). Regional networks and the resurgence of Silicon Valley. *California Management Review*, 32, 89-112.
- Saxenian, A.** (1991a). Silicon Valley and Route 128 won't save us: Response to Richard Florida and Martin Kenney. *California Management Review*, 33, 136-42.
- Saxenian, A.** (1991b). The origins and dynamics of production networks in Silicon Valley. *Research Policy*, 20:423-37
- Saxenian, A.** (1994). *Regional networks: Industrial adaptation in Silicon Valley and Route 128*. Cambridge: Harvard University
- Saxenian, A.** (1996). *Inside-Out: Regional Networks and Industrial Adaptation in Silicon Valley and Route 128*, Cityscape. 2.
- Scalabrin, D.** (2015). *Per un'analisi comparativa della fashion industry in Italia e Spagna. I distretti calzaturieri della Riviera del Brenta e di Elda dagli anni Cinquanta ad oggi* (Doctoral dissertation). Retrieved from http://paduaresearch.cab.unipd.it/7941/1/scalabrin_daniela_tesi.pdf
- Schönstedt, E.** (1991). *Der Buchverlag*, Stuttgart: Metzler-Poeschel.
- Schubert, D.** (1999). Media city-Leipzig: Bestandsaufnahme und Ausblick (Media city Leipzig: present state and future perspectives), In O. Altendorfer and K. Mayer (Eds.), *Sächsisches Medienjahrbuch 1998/1999* (pp. 20-23), Leipzig: Verlag für Medien & Kommunikation.
- Schubert, D.** (2000). Die Stadt Leipzig und die Medien als Wirtschaftsfaktor (The city of Leipzig and the economic importance of media), In H. Grunau, W. Kleinwächter und H.-J. Stiehler (Eds.), *Medienstadt Leipzig: Vom Anspruch zur Wirklichkeit* (pp. 33-36), Leipzig: Monade.
- Schulz, G.** (1989). *Buchhandels-Ploetz*, 4th Edition, Freiburg: Ploetz.
- Scott, A.** (1986). High tech industry and territorial development: The rise of the Orange County complex, 1955-1984. *Urban Geography*, 7, 3-45
- Scott, A., and Paul, A.** (1990). Collective order and economic coordination in industrial agglomerations: The technopoles of Southern California. *Environment and Planning C: Government and Policy*
- Scott, A.J. and M. Storper** (1987). High technology industry and regional development. A theoretical critique and reconstruction, *International Social Science Journal*, 112, 215-232.
- Şener S.** (2005), Türkiye ekonomisinde ikinci dönem liberal iktisat politikaları, *Yönetim Bilimleri Dergisi*, 3 (1):141-148.
- Setterfield, M.** (1993). A Model of Institutional Hysteresis, *Journal of Economic Issues*, 27 (3), 755-774, doi: 10.1080/00213624.1993.11505453
- Sheehan, W. J.** (1934). Unique to Boston are the famous Boston trustees. *Boston Evening Transcript*. (28) 3.
- Simon, H. A.** (1990). A Mechanism for Social Selection and Successful Altruism. *Science* 250, no. 4988.1665–1668.

- Simsek Z., Fox B. C., Heavey, C.** (2015). "What's past is prologue" A framework, review, and future directions for organizational research on imprinting. *Journal of Management*, 41, 288–317 10.1177/0149206314553276.
- Singh, R.K., Garg, S.K., Deshmukh, S.G.** (2009). The competitiveness of SMEs in a globalized economy: Observations from China and India. *Management Research Review*, 33 (1), 54-65.
- Sober, E. & Wilson, D.S.** (1998). *Unto Others: The Evolution and Psychology of Unselfish Behavior*, Cambridge MA: Harvard University Press.
- Sober, E.** (1984). *The Nature of Selection: Evolutionary Theory in Philosophical Focus*. Bradford/MIT, Cambridge
- Sölvell, Ö.** (2008). *Clusters Balancing Evolutionary and Constructive Forces*. Sweden Stockholm: Ivory Tower Publishing.
- Sorenson, O.** (2003). Social networks and industrial geography. *Journal of Evolutionary Economics*, 13, 513–527.
- Soskice, D. and Hall, P.** (2001). *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. in Peter Hall and David Soskice (eds), 28, 10.2307/30040740.
- Spicer, A., McDermott, G., Kogut, B.** (2000). Entrepreneurship and privatization in Central Europe. The tenuous balance between creation and destruction. In: *Academy of Management Review*, 25, 630-649.
- Stinchcombe, A.L.** (1965). Social Structure and Organizations. In *Handbook of Organizations*, 44, 142-193.
- Storper, M.** (1997). Regional Economies as Relational Assets. In: Lee, R. and Wills, J., Eds., *Geographies of Economics*, Arnold, London, 248-258
- Storper, M.** (1997). *The Regional World: Territorial Development in a Global Economy*, Guilford Press.
- Storper, M. and Walker, R.** (1989). *The Capitalist Imperative: Territory, Technology and Industrial Growth*. New York: Basil Blackwell.
- Suddaby, R.** (2016). Toward a historical consciousness: Following the historic turn in management thought, *M@n@gement*, 19 (1), 46. doi:10.3917/mana.191.0046
- Swaminathan, A.** (1996). Environmental conditions at founding and organizational mortality: A trial-by-fire model, *Academy of Management Journal*, 39 (5), 1350-1377.
- Swann, P., Prezer, M.** (1996). A comparison of the dynamics of industrial clustering in computing and biotechnology. *Research Policy*, 25 (7), 1139-1157
- Sydow, J., Schreyogg, G. and Koch, J.** (2009). Organizational Path Dependence: Opening the Black Box. *Academy of Management Review*, 34 (4), 689-709.
- Sydow, J., Windeler, A., Möllering, G.** (2002). Path-Creating Networks in the Field of Next Generation Lithography: Outline of a Research Project. *SSRN Electronic Journal*. 10.2139/ssrn.1605164.

- Taş, M.** (2004). Menderes döneminin ekonomi politiği ve 1958 istikrar programı, *Mevzuat Dergisi*, 7 (76).
- Temel, H.** (2007). *Ahilik Teşkilatının Halkın Eğitimi ve Öğretimindeki Rolü*, Yüksek Lisans Tezi, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, KONYA
- Ter Wal, A.L. & Boschma, R.** (2011). Co-evolution of firms, industries and networks in space, *Regional Studies*, 45 (7), 919-933.
- Thompson, P. & Klepper, S.** (2005). Spin-off Entry in High-tech Industries: Motives and Consequences. *Perspectives on Innovation*. 10.1017/CBO9780511618390.010.
- Torun, A.** (1998). *Türk Edebiyatında Türkçe Fütüvvet-nameler Üzerine Bir İnceleme*, KB Yayınları, ANKARA
- Tuna, S.** (2002). *Türkiye’de Devlet İşletmeleri (1930-1940)*. (Yayınlanmamış Doktora Tezi), İstanbul Üniversitesi Atatürk İlkeleri ve İnkılâp Tarihi Enstitüsü. İstanbul
- Turgut, F.** (2017, 21 Eylül). Konya'daki sayacılar: Eylemler 1 senelik çalışmamızın sonucu. *Evrensel Gazetesi*. Erişim adresi <https://www.evrensel.net/haber/332987/konyadaki-sayacilar-eylemler-1-senelik-calismamizin-sonucu>
- Ulusoy, A.** (2002). Türkiye ayakkabı sanayi ve dış ticareti, *Dış Ticaret Dergisi*, (26). URL-1 <<https://evolution.berkeley.edu>>, date retrieved 22.09.2020.
- Ünal, N.** (2013). *İzmir ve Selanik Liman Kentlerinin Gelişim Süreçlerinin Karşılaştırmalı Analizi (1950-1750)* (Doktora Tezi). Dokuz Eylül Üniversitesi, Sosyal Bilimler Enstitüsü, İZMİR.
- Üsdiken, B. & Kieser, A.** (2004). *Introduction: History in Organization Studies*. *Business History*, 46(3): 321-330.
- Volcker, P. A.** (2000). *John Bogle on investing: The first 50 years*. New York: McGraw–Hill.
- Volpers, H.** (1991). *Der gesamtdeutsche Buchmarkt 1990/91: Eine Bestandsaufnahme – ein Jahr nach der Vereinigung*, Media Perspektiven, 11, 735-743.
- Webb, E.J., Campbell, D.T., Schwartz, R.D., & Sechrest, L.** (1966). Unobtrusive Measures: Nonreactive Research in the Social Sciences, Rand McNally.
- Weber, A.** (1909). *Über Den Standort Der Industrien*, Tübingen: Mohr.
- Weidhaas, P.** (2009). The Frankfurt book fair: 60 years and still a shining example, *Publishing Research Quarterly*, 25 (1), 30-35.
- Wheeler, D., Mody, A.** (1992). International Investment Location Decisions: The Case of U.S. firms. *Journal of International Economics*, 33(1-2), 57-76
- Whitley, R.** (1986). The transformation of business finance into financial economics: The roles of academic expansion and changes in U.S. capital markets. *Accounting, Organizations and Society*. (11). 171–192.
- Wilson, E. O.** (2012). *The social conquest of Earth*. W. W. Norton & Co.

- Wingo L.** (1961), *Transportation and Urban Land, Resources for the Future*, Washington D.C.
- Winter, S. G.** (1982). “*An Essay on the Theory of Production.*” In *Economics and the World around It*, ed. Saul H. Hymans. Ann Arbor: University of Michigan Press. 55-91.
- Wittmann, R.** (1999). *Geschichte des deutschen Buchhandels*, 2nd Edition, Munich: Beck.
- Wright, S.** (1986). *Evolution: Selected papers*. Univ Chicago Press. Chicago.
- Wynne-Edwards, V. C.** (1962) *Animal dispersion in relation to social behaviour*. Edinburgh: Oliver & Boyd
- Yelmen, H.** (2007). 2400 Yıllık Türk ayakkabıcılığı, *Ayakkabı Kitabı*, 2. Edition, İstanbul: Kitabevi.
- Yerlitaş, O.** (2013). *Osmanlı'dan Cumhuriyet'e Sümerbank Beykoz Deri Kundura Fabrikası* (Yüksek Lisans Tezi). Marmara Üniversitesi, Sosyal Bilimler Enstitüsü, İSTANBUL.
- Yılmaz, B.** (2010). *1950–1960 Döneminde Türkiye’de Kadının Giyinme Davranışının Dönüşümü*. (Yüksek Lisans Tezi). Ege Üniversitesi, Sosyal Bilimler Enstitüsü, İZMİR.
- Yin, R.K.** (2003). *Case Study Research: Design and Methods*, 5, SAGE Publication.
- Yurtoğlu, N.** (2014). *Demokrat parti dönemi tarım politikaları ve siyasi, sosyal, ekonomik hayata tesirleri (1950-1960)* (PhD thesis). Institute of Atatürk Principles and Revolution History, Ankara.
- Zook, M.** (2005). *The Geography of the Internet Industry: Venture Capital, Dot-coms, and Local Knowledge*. Blackwell Publishing. Oxford, UK

APPENDICES

APPENDIX A: Preliminary site research questions

APPENDIX B: Interview questions



APPENDIX A

Preliminary Site Research Questions

1. Evolutionary patterns and historical reflections (imprints) on firms

RQ.1.1 What are the sensitive periods in the history of clusters/ firms?

RQ.1.2 What were the economical and technological conditions in sensitive periods of clusters/ firms ?

RQ.1.3 What were the institutional conditions in sensitive periods of clusters/ firms ?

RQ.1.4 Who were the influencing individual actors in sensitive periods and what were the actions of these actors in clusters/ firms ?

2. Localized learning routines in vertical and horizontal business relations

RQ.2.1 In vertical relational patterns, what are the practices for inter-firm relationships regarding engagement of collaborations on product development and production processes

RQ.2.2 Regarding horizontal relational patterns, how firms observe and monitor their competitors within cluster? (in terms of products they produce, fashion trends they follow, production capabilities they own)

3. Non-local business relations

RQ.3.1 What is the structure of external business ties (presence of introvert / extrovert firms)

RQ.3.2 In which channels and what extent information, news about markets, products, technologies come from outside of cluster?

RQ.3.3 What is the role of national / international fairs on knowledge flow and how intense is the participation to the fairs

RQ.3.4 What are the forms of external partnerships?

4. Social context regarding information and communication ecology

RQ.4.1 How face to face contacts take place?

RQ.4.2 What are the roles and activities of cluster management?

RQ.4.3 What are the shared cultural traditions, business habits?

RQ.4.4 What are practices of participation in social networks?

RQ.4.5 How much is the cluster coherence / cognitive homogeneity?

5. Differences of structural contingencies

RQ.5.1 # and type of providers / suppliers

RQ.5.2 Firm size & age distribution, firm ownership structure



APPENDIX B

Interview Questions

1. General Inquiries

I.Q.1.1 What is the establishment date of your company?

I.Q.1.2 Who are the founders?

I.Q.1.3 What is your production capacity? (pair, number of employees, mechanization status)

I.Q.1.4 What are your sales channels and regions?

2. Regional Inquiries

I.Q.2.1 What developments have you witnessed regarding the economy of the region?

I.Q.2.2 What developments have you witnessed regarding the social life of the region?

I.Q.2.3 Are you a local? How many generations have you lived in this region?

3. Cluster Inquiries

I.Q.3.1 How long have your firm been in the industrial zone

I.Q.3.2 What are your memories about the history of the industrial area?

I.Q.3.3 What events influenced the development of the industrial area?

4. Inquiries on Specialization

I.Q.4.1 How long has the company been producing women shoes? What is its history?

I.Q.4.2 How did the economic and social life of the city / cluster affect specialization?

I.Q.4.3 Have the recent technological developments affected specialization?

I.Q.4.4 How has the demand for women shoes changed over the years, what were the factors affecting this change?

I.Q.4.5 Have your sales channels / regions changed compared to the past? How?

5. Inquiries on Division of Labor

I.Q.5.1 Which works do you outsource

I.Q.5.2 How long has the overall division of labor existed in the cluster?

I.Q.5.3 How was this division of labor like in the past?

I.Q.5.4 How did socio-economic factors and technology affect division of labor in the past?

I.Q.5.5 Are there factories (enterprises) in the cluster that handle all the work?, When were these factories established? Can such initiatives continue in the future?

6. Inquiries on Cooperation and competition

I.Q.6.1 What are the areas you collaborate with-in the cluster? (production, design, sales, etc.)

I.Q.6.2 How do you evaluate the contribution of your collaboration to the success of the cluster?

I.Q.6.3 Do you think that collaborating has a negative impact on your own company?

I.Q.6.4 Do you think your cooperation will help companies like you to exist in the future?

I.Q.6.5 What kind of benefits do other institutions (Chamber of Commerce, Development Agency, etc.) have for the areas of cooperation you mentioned within the cluster?

7. Harmony With-in the Cluster

I.Q.7.1 Do you think you adapt more to the dominant business model (product types, production chain, etc.) in the cluster? Or do you try to differentiate?

I.Q.7.2 What do you think are the prominent / exemplary / prestigious companies in the cluster ?, how much are these companies followed? Are there any companies trying to copy from these companies?

I.Q.7.3 How is the social environment between companies ?, Can you evaluate it? (social rules, relationships, positions)

I.Q.7.4 Are there more prominent groups in this social environment?

I.Q.7.5 Can you evaluate the impact of this social environment on work?

8. Retention Mechanisms

I.Q.8.1 How do you gain knowledge about new techniques of production? What are the learning mechanisms?

I.Q.8.2 How long have your masters been working with you

I.Q.8.3 Could you give information about the previous workplaces of your masters?

I.Q.8.4 Are there people who left you and moved to other places / started their own business?



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