Dissertation

Navigating Transition: The Role of Formal and Informal Institutions in Shaping Entrepreneurial Ecosystems

zur Erlangung des Doktorgrades (Dr. rer. pol.)
der Fakultät Wirtschaftswissenschaften, Wirtschaftsinformatik und Wirtschaftsrecht der Universität Siegen

vorgelegt von
Ganira Ibrahimova

Erstgutachter: Prof. Dr. Petra Moog
Zweitgutachter: Prof. Dr. Giuseppe Strina

Tag der Disputation: 17.12.2024

Abstract (Deutsch)

Unternehmerische Ökosysteme haben aufgrund ihrer enormen wirtschaftlichen Bedeutung große Aufmerksamkeit erlangt. Die Eigenschaften und Komponenten dieser Ökosysteme, ihre systemischen Beziehungen und insbesondere ihre Auswirkungen auf unternehmerische Aktivitäten in verschiedenen Ländern sind für viele Forscher von großem Interesse. Dieser Einfluss wirkt sich wiederum direkt oder indirekt auf die wirtschaftliche Entwicklung und das Wachstum von Ländern und Regionen aus. Doch selbst Regionen mit ähnlichen Merkmalen können gänzlich unterschiedliche Ergebnisse bezüglich des Vorhandenseins von Unternehmertum aufweisen. Daraus ergibt die Frage, warum Länder mit ähnlichen strukturellen Merkmalen und historischen Pfaden unterschiedliche unternehmerische Ökosysteme haben, und wie sich diese Unterschiede auf unternehmerische Aktivitäten auswirken. Warum entwickeln einige Ökosysteme mit ähnlicher Geografie, Ressourcen oder historischem Kontext unternehmerische Aktivitäten effektiver als andere? Darüber hinaus wirft diese erste Hauptforschungsfrage weitere Fragen auf, wie z. B.: Haben bestimmte Ökosystemelemente mehr Einfluss auf die anderen und auf das Gesamtsystem? Und weshalb? Ist dieser unterschiedliche Einfluss auch der Auslöser für die wichtigsten Voraussetzungen für unternehmerische Ergebnisse?

Es scheint daher, dass ein effektives und gut angepasstes Design eines unternehmerischen Ökosystems ein entscheidender Punkt für viele Länder und Regionen ist, die besondere Schwierigkeiten bei der Entwicklung des unternehmerischen Sektors haben. Dies gilt insbesondere für Situationen, in denen eine solche Entwicklung notwendig oder wünschenswert ist. Das Thema ist vor allem für Entwicklungsländer oder für Länder inmitten einer wirtschaftlichen Transformation relevant, die eine vergleichsweise kürzere Geschichte kapitalistischer Marktwirtschaften haben und daher in vielen Fällen eine schwächere unternehmerische Kultur und ein niedrigeres Niveau an Unternehmertum aufweisen. Dies gilt für Kaukasus-Länder wie Aserbaidschan oder

Georgien (und viele andere post-sowjetische Länder), die weiterhin Schwierigkeiten haben, einen florierenden unternehmerischen Sektor zu entwickeln. Die gleiche Herausforderung zeigt sich in Entwicklungsländern mit unterschiedlichen Niveaus der Industrialisierung oder wirtschaftlicher Freiheit. Daher kann die Untersuchung des Einflusses von unternehmerischen Ökosystemen und deren Elementen aufeinander und auf das Gesamtniveau des Unternehmertums in verschiedenen Ländern und Kontexten mehr Licht auf das Thema werfen und Entscheidungsträger dabei unterstützen, ein tieferes Verständnis dafür zu gewinnen, wie solche Ökosysteme funktionieren. Das beinhaltet auch die Überlegung, was erforderlich ist, um ein besseres Ökosystemdesign zu entwickeln und unternehmerische Aktivitäten zu fördern.

Das Hauptziel dieser Dissertation ist es, neue Erkenntnisse über die Auswirkungen von unternehmerischen Ökosystemen auf das Unternehmertum zu gewinnen. Um dieses Ziel zu erreichen, ist es zunächst notwendig, ein detaillierteres Verständnis von unternehmerischen Ökosystemen zu erlangen – einem Begriff, der sich in der Literatur noch in der „Adoleszenz“ befindet. Anschließend werden im Rahmen des Ökosystem-Unternehmertum-Nexus neue Einsichten darüber gewonnen, warum die Effektivität des Unternehmertums je nach Ökosystemkonfiguration unterschiedlich ist und auf welche Elemente der Fokus gelegt werden sollte, um den Prozess zu fördern. Solche Erkenntnisse können zur Schaffung positiver Ökosysteme und damit auch eines unternehmerfreundlichen Klimas beitragen, das den privaten Sektor dazu ermutigt, darüber nachzudenken, wie bestehende Systeme geändert und fruchtbarer für die unternehmerische Entwicklung gemacht werden können. Basierend auf den Erkenntnissen über den Einfluss von unternehmerischen Ökosystemen auf das Unternehmertum vergleicht die Dissertation a) die Entwicklung eines Ökosystems in einem Land; b) zwei kaukasische Länder innerhalb derselben Region und desselben historischen Unabhängigkeitsdatums, um zu verstehen, wie unterschiedliche Entwicklungswege entstehen können und welche Faktoren zu solchen Divergenzen führen; und c) analysiert Entwicklungsländer mit

Fokus auf spezifische Aspekte in ihren Ökosystemen (insbesondere formelle Institutionen) und deren Auswirkungen auf unternehmerische Ergebnisse.

Der erste Aufsatz untersucht das institutionelle Element von unternehmerischen Ökosystemen und analysiert, wie formale Institutionen unternehmerische Aktivitäten in einer großen Ländergruppe beeinflussen, indem hochentwickelte und weniger entwickelte Länder verglichen werden. Die Analyse basiert auf einem einfachen linearen Regressionsmodell, das eine signifikant positive Beziehung (mehr als 0,5 in allen Fällen) zwischen Unternehmertum und ausgewählten institutionellen Dimensionen zeigt. Dies führt zu einem Modell, das erklärt, wie unternehmerische Aktivitäten eines Landes von formellen Institutionen beeinflusst wurden. Um die Analyse noch interessanter zu machen, haben wir zwei Datensätze erstellt, einen für entwickelte (innovationsgetriebene) und einen für Entwicklungsländer (effizienzgetriebene) Länder, mit jeweils 11 Ländern. Wir haben unternehmerische Aktivitäten auch in „TEA“ (frühe Etablierung) und „EBO“ (etablierte Unternehmungen) unterteilt, um zu sehen, welche spezifischen unternehmerischen Aktivitäten empfindlicher auf das formelle institutionelle Umfeld reagieren. Es hat sich herausgestellt, dass es eine sehr starke Beziehung zwischen formellen Institutionen und dem Niveau unternehmerischer Aktivitäten in beiden Gruppen gibt, aber die Schlüsselerkenntnis ist, dass die Verbindung zwischen dem formellen institutionellen Umfeld und unternehmerischen Aktivitäten zwischen den Ländergruppen variiert. In entwickelten Ländern hat die Rechtsstaatlichkeit den größten Einfluss auf etablierte Geschäfte, während in Entwicklungsländern die regulatorische Qualität die wichtigste Institution für bestehende Unternehmungen ist. Somit zeigt die Studie klar die Notwendigkeit einer genaueren Untersuchung der verschiedenen institutionellen Indikatoren auf unternehmerische Aktivitäten in Ländern mit unterschiedlichen Entwicklungsstufen.

Der zweite Aufsatz zielt darauf ab, ein Verständnis des unternehmerischen Ökosystems eines bestimmten Landes zu vermitteln, indem eine historische und

wirtschaftliche Analyse der Veränderung des unternehmerischen Ökosystems über fast 4.000 Jahre vorgenommen wird. Es gibt keine vergleichbaren Studien, die bisher ein so umfangreiches Datenset aus historischen Texten, Archivmaterial und politischen Dokumenten analysiert und verglichen haben. Die Forschung wurde mit dem Ziel durchgeführt, um die größte Auswirkung auf die Ressourcenverteilung und die unternehmerische Aktivität im Laufe der Zeit zu ermitteln und zu analysieren, ob und in welchem Ausmaß und in welchen Bereichen die Elemente des unternehmerischen Ökosystems die Spielregeln für unternehmerische Aktivitäten geändert haben. Die aufschlussreichen Ergebnisse zeigen, dass Institutionen und politische Regierungsführung den größten Einfluss haben, unabhängig von den natürlichen, menschlichen oder Wissensressourcen, währenddessen Geografie und Ressourcen über die Zeit stabil blieben. Insbesondere Kolonisierung und Autarkieregime haben sich negativ auf die unternehmerische Aktivität ausgewirkt, während liberalere, autonome und demokratische Umfelder förderlich für unternehmerische Aktivitäten sind. Vor allem in Perioden von Unabhängigkeit und Demokratie haben die gemessenen und analysierten Ökosystembedingungen einen positiven Einfluss auf unternehmerische Aktivitäten gehabt. Mit Hilfe des Ansatzes von Stam und Van de Ven (2021), ihrem „Entrepreneurial Ecosystem Elements Table“ und einer Punktbewertungstechnik (Pandey & Leelashree, 2012) zur Messung von Ökosystemelementen über diesen langen Zeitraum hinweg ist es möglich, diese Tabellen zwischen verschiedenen historischen Perioden und Ereignissen zu vergleichen, um aufschlussreiche Forschungsergebnisse zu erzielen.

Im dritten Aufsatz wird eine vergleichende Analyse der unternehmerischen Ökosysteme von Aserbaidschan und Georgien durchgeführt. Diese beiden Nachbarländer in der südkaukasischen Region haben dieselbe Vergangenheit, da sie bis 1991 Teil der USSR waren und erst dann ihre Unabhängigkeit wiedererlangten. Ziel der Forschung ist es, zu ermitteln, wie sich die unternehmerischen Ökosysteme dieser Länder seit ihrer Unabhängigkeit bis heute entwickelt haben und welche Faktoren den größten Einfluss auf diesen Prozess hatten. Der Forschungsansatz ist

dadurch gekennzeichnet, dass eine vergleichende Analyse anhand bestehender Daten für beide Länder durchgeführt wird, wobei wiederum der Ökosystemansatz von Stam und Van de Ven (2021) verwendet wird. Das Forschungsdesign umfasst jedoch einen kürzeren historischen Zeitraum und zielt darauf ab, zu erklären, wie konkrete formelle und informelle Elemente im Ökosystem beider Länder die unternehmerischen Ergebnisse während des immer noch andauernden Transformationsprozesses beeinflussen. Wiederum kann gezeigt werden, dass formelle Aspekte wie Liberalisierung und demokratische Strukturen einen starken Einfluss haben, informelle Institutionen jedoch über Jahre hinweg stark bleiben und sich Transformationsprozessen widersetzen oder diese sogar rückgängig machen können. Insgesamt trägt die Dissertation zum Verständnis des Einflusses von Elementen des unternehmerischen Ökosystems auf das Unternehmertum bei und beleuchtet, warum die unternehmerische Performanz unter verschiedenen Ökosystembedingungen variiert, wobei der Fokus insbesondere auf formellen und informellen institutionellen Rahmenbedingungen liegt.

Abstract (English)

Entrepreneurial Ecosystems have gained significant attention due to the enormous economic importance they have. The unique properties of ecosystem components, their systemic relationships, and, most significantly, the impact they have on entrepreneurial activities in various nations, are of great interest to many researchers in this field. Such influence, in turn, directly or indirectly affects the economic development and growth of countries or regions. Yet even regions with similar characteristics can display varying entrepreneurial outcomes. So, the question is why similar nations or areas have different ecosystem settings, and how does this variance impact entrepreneurial activity? Why do some ecosystems, with similar geography, size, resources, or historical context, develop entrepreneurial activities more effectively than others? Furthermore, this first main research question raises other questions like, such as: do certain ecosystem elements have more influence on the others and onto the overall system, and if so, why? Moreover, does this differential influence trigger the main antecedents of entrepreneurial outcomes?

Thus, it seems that an effective and well-fitting entrepreneurial ecosystem design is a crucial point for many countries and regions which face particular difficulties in the development of the entrepreneurial sector. It is especially true for situations in which such development is necessary or desirable. The issue is mostly relevant for developing countries, or countries in transition, which have a comparatively shorter history of capitalist market economies, and therefore, in many cases, a weaker entrepreneurial culture and a lower level of entrepreneurship. It holds true for Caucasian countries like Azerbaijan or Georgia (and many other post-Soviet countries) which continue to struggle in developing a thriving entrepreneurial sector. The same challenge is observed in developing countries with different levels in industrialization or freedom. Therefore, examining the influence of the entrepreneurial ecosystems and their elements on each other and on the overall entrepreneurship level in different countries and contexts can shed more light on the issue and help policymakers to gain a deeper understanding of how such ecosystems function, including what is needed to develop better ecosystem design in order to foster entrepreneurial activity.

The main purpose of this dissertation is to gain new insights into the influences resulting from entrepreneurial ecosystems' impact on entrepreneurship. To achieve this goal, it is necessary to first gain a more detailed understanding of the entrepreneurial ecosystems, a term still in its "adolescence" in the literature. Next, within the framework of the ecosystem-entrepreneurship nexus, we establish new insights of why the effectiveness of entrepreneurship is different depending on the ecosystem setting, and which elements are important to focus on to boost the process. Such insights can contribute to the establishment of favorable ecosystems, and therefore also the entrepreneurial climate, encouraging the private sector to think about how to change existing systems and make them more fruitful for entrepreneurial development. Based on the findings regarding the influence of entrepreneurial ecosystem on entrepreneurship, the PhD thesis a) compares the development of an ecosystem in one country; b) compares two Caucasian countries within the same region and same historical date of independence, to understand how different developmental paths can occur, and which factors lead to such divergence; and c) analyzes developing countries focusing on specific aspects in their ecosystems (especially formal institutions) and their effect on entrepreneurial outcomes.

The first study examines the institutional element of entrepreneurial ecosystems and analyzes how formal institutions affect entrepreneurial activity in a big country set, comparing developing and developed nations. The analysis relies on a simple linear regression model that shows a significant positive relationship (more than 0.5 in all cases) between entrepreneurship and selected institutional dimensions. It results in a model that explains how entrepreneurial activity of the country has been influenced by formal institutions. To make the analysis even more interesting we have created two data sets, one for developed (innovation-driven) and one for developing (efficiency driven) countries, 11 countries in each group. We also divided entrepreneurial activity into TEA (early established) and EBO (established business) rates to see which particular entrepreneurial activity is more sensitive to the formal institutional environment. We discovered that there is a very strong relation between formal institutions and entrepreneurial activity level in both groups and both entrepreneurial activities, but the key finding is that the connection

between the formal institutional setting and entrepreneurship activity varies between the country set. In developed countries, the rule of law has the highest impact on established business, as a strong formal institutional dimension, while in developing countries the most important institution for the existing business is regulatory quality. Thus, the study clearly identifies the need for a closer examination of the various institutional indicator influences onto entrepreneurial activities in countries with different levels of development.

The second study seeks to provide an understanding of the entrepreneurial ecosystem of a particular country by conducting a historical and economic analysis of entrepreneurial ecosystem change over nearly 4,000 years. There are no such prior studies which have analyzed and compared such a voluminous dataset collected from historical texts, archives and policy papers. The research was conducted to determine the greatest impact on resource allocation and entrepreneurial activity over time, and to reveal whether, to what extent, and in which areas entrepreneurial ecosystem elements changed the rules of the game for entrepreneurial activities. The results are quite interesting, showing that institutions and political governance have the biggest impact, irrespective of the natural, human or knowledge resources, while geography and resources were stable over time. In particular, colonization and autarky regimes are found to have a negative impact on entrepreneurial activity, while more liberal, autonomous and democratic environments are conducive to entrepreneurial activity. Thus, it is evident that during periods of independence and democracy, the measured and analyzed ecosystem conditions had a positive impact on entrepreneurial activities. Using Stam and Van den Ven's (2021) approach and their structured “Entrepreneurial Ecosystem Elements Table” on the one hand, and a point ranking technique (Pandey & Leelashree, 2012) to measure ecosystem elements over this long period of time on the other hand, it is possible to compare these tables between different historical periods and events to obtain innovative and useful results.

In the third study, the comparative analysis of entrepreneurial ecosystems of Azerbaijan and Georgia is undertaken. These two neighboring countries in the South Caucasian region have the same past, having been part of the USSR and having

regained their independence in 1991. The research purpose is to determine how entrepreneurial ecosystems of these countries evolved from the same starting point since their independence until now, and which factors had the biggest influence in that process. In the paper, a comparative analysis is performed using the information on policies and statistics for both countries, following again the structure of the ecosystem approach of Stam and Van der Ven (2021). However, the study covers a shorter historical period and aims to explain how specific formal and informal elements in the ecosystem of both countries influence entrepreneurial outcomes during the ongoing transition process. Again, it can be shown that formal aspects such as liberalization and democratic structures have a strong influence, but informal institutions remain strong over the years and can resist or even drive back transition processes. Overall, the dissertation contributes to the understanding of the influence of entrepreneurial ecosystem elements on entrepreneurship and sheds light on why entrepreneurial performance varies across ecosystem conditions, especially focusing on formal and informal institutional settings.

Acknowledgments

Doing PhD research and writing a dissertation is a challenging task for any researcher. It is an effort-demanding process, sometimes leading to euphoria, sometimes to burn out. The only way to succeed in it is to have support from people in both personal and professional networks. They are the most important resource in this journey, the people who supported me all the way on this challenging path, and believed in me. I want to express my gratitude to all of them.

First and foremost, I would like to express my deepest gratitude to my academic supervisor, Prof. Dr. Petra Moog. Beyond being a brilliant researcher, she has been an invaluable mentor and a constant source of inspiration. Her unwavering professional guidance and personal support have greatly enriched my academic journey. Prof. Moog is not only an exceptional scholar but also a role model for me and many other women in research. Her ability to balance her roles as a dedicated academic, a supportive mentor, and a devoted family member is truly admirable. I am deeply honored to have had the privilege of learning from her and am forever grateful for her mentorship and for her friendship, which has left an indelible mark on both my academic and personal development.

I also want to thank all my teammates from our chair of Entrepreneurship and Family Business. Even though I was never “officially” integrated into the chair, I never felt it. I want to thank Sven Wolff for being my true friend and helping with everything related and unrelated to the PhD process. Although we knew each other long before I started my thesis, our friendship has grown even stronger. And of course I want to thank Ann-Christin Grözinger for being my bestie, officemate, and my academic sister along the way - for all the support, academic discussions and private talks we had, and the challenges we overcame together. I wish to thank Julian Ruf for all the support, Philipp Köhn for his friendly advice, Konrad Meisner for his big heart, Juni Mohos for helping me integrate here, Jutta Leonhardt for her kindness and professionalism. Even though many of you are not a part of this university anymore, you have all become a memory of my professional family here in Germany. It is something I deeply appreciate.

A huge share of gratitude belongs to my family members, who were by my side during the difficulties that inevitably arose. I want to thank my husband, who was my partner and friend, for supporting me and taking care of our children when I was away, pushing me out of my comfort zone and helping me grow. My beautiful children Jamila and Murad, who were my joy and my happiness, cheering me up and healing with a single hug and smile. In addition, I want to express my gratitude to my family and friends in Baku, and other places and countries, who believed in me even when I doubted myself. My father and my brother in Baku, my best friend Sabina, who was my 911, my friend Emily in Belgium for rehab weekends together, my Norwegian family Terje and Annelis and my dearest friend and guru Paul R.M., who has been an inspiration for me both academically and in my personal life.

I would also like to thank my second supervisor, Prof. Dr. Giuseppe Strina, for all the kindest assistance and support he provided me during my doctoral studies and conferences we attended together. It was a great honor to work together. And I want to thank Prof. Dr. Marcus Schweitzer, who guided my disputation process.

In addition, I wish to express my gratitude to Prof. Dr. Friederike Welter for her doctoral courses I attended every semester, all her wisdom and expertise I received, and all the great people I met there. I want to thank Stephie Weiss for becoming my good friend. And I want to thank Mark McAdam, who has also become a very dear friend to me, for always being by my side, for his kindness, support and willingness to help throughout my journey.

Last but not the least; I wish to thank the DAAD for providing me the opportunity to conduct my doctoral research in Germany, to grow, to change and to achieve an important milestone in my life.

Ganira Ibrahimova

Table of Contents

List of Figures

List of Tables

List of Abbreviations

ADR	Azerbaijan Democratic Republic
ASAN	Azerbaijan Service and Assessment Network
BC	Historical Chronology, Before Christ
CC	Control of Corruption
CRA	Civil Registry Agency
EBO	Established Business Ownership Rate
EE	Entrepreneurial Ecosystems
e.g.	Exemplum gratia: for example,
et al.,	Et al: and others
Etc.	Et cetera: and so forth
EU	European Union
GEM	Global Entrepreneurship Monitor
H	Hypothesis
i.e.	id est: that is
IT	Information technology
M	Model
Max	Maximum
Min	Minimum
N	Sample size
OECD	Organization of Economic Cooperation and Development
OLS	Ordinary least squares
RL	Rule of law
RQ	Regulatory quality
SME	Small and Medium Enterprises
TEA	Total early established business
UNEC	University of Economics
WB	World Bank
WBGES	World Bank Global Entrepreneurship Survey
WGI	World Governance Indicators
WEF	World Economic Forum

1. Introduction

1.1 Purpose of the dissertation

The "Entrepreneurial Ecosystems" approach has received noticeably popularity recently (Wurth, Stam, & Spigel, 2022), as a way of understanding entrepreneurship at the macro level of organizational communities – for nations, regions, or local areas and spaces (Fuentelsaz, et al., 2022). It all started as a shift from individualistic, personality-based research to a community-based, systemic perspective in entrepreneurship studies in the 1980s and 1990s. It has since led to the development of the foundational ideas behind the entrepreneurial ecosystems literature, which encompass the influence of social, cultural, and economic forces on entrepreneurship (Aldrich, 1990; Nijkamp, 2003; Steyaert and Katz, 2004). Even though, research on entrepreneurial ecosystems is still in an "adolescent" stage, several empirical studies have already been able to show how entrepreneurship and value creation can be enabled by a rich, supportive and functioning entrepreneurial ecosystem (Stam & Van den Ven, 2020; Spiegel, 2017; Autio et al., 2014; Fritsch, 2013; Tsvetkova, 2015).

Some ecosystem researchers focus more on entrepreneurs – that is, individuals (Aldrich, 1990), others analyze precisely the network between players and resources (Stam, 2015), and a third group places the emphasis especially on the institutional environment (Acemoglu et al., 2005). In any case, when considering the development of entrepreneurial ecosystems research over time, it is fair to say that these ecosystems represent a very complex phenomenon, including the social, economic, cultural, and political as well as individual components within a region or state (Theodoraki & Messeghem, 2017). Therefore, the entrepreneurial ecosystem approach is particularly useful when it follows the systemic character of entrepreneurial economies (Leendertse et al, 2020). That is because it makes it possible to define very clearly the different and diverse elements of such ecosystems. In parallel, it allows for the systematic analysis of a large variety of related data, necessary to measure the changes and outcomes in national or regional economies (Stam, 2015). It implies that the ecosystem approach can

provide an assessable framework guiding policymakers in creating a favorable entrepreneurship climate in a given country or region (Leendertse et al, 2020), and therefore can generate an improvement of the economic (entrepreneurial and innovative) performance of the country or region. Moreover, the approach delivers a framework for researchers to measure ecosystems and compare them between spaces and locations, as well as over time.

The central idea of this dissertation is to discuss and clarify the importance of entrepreneurial ecosystems to the economy, especially with respect to institutional settings as a core element. This PhD thesis studies the way in which formal and informal institutions affect the overall entrepreneurial ecosystem, and as a result, the potential entrepreneurial output of a given country, region or space.

1.2 Structure of the dissertation

In addition to the introduction, general framing and discussion sections, the dissertation has three main sections. The first section conducts a quantitative, data-driven study, to examine how the formal institutional elements of an entrepreneurial ecosystem affect the newly and established entrepreneurial activities at a country level. This analysis covers a wide range of countries, including both innovation-driven (developed) and efficiency-driven (developing) nations. The result of the study reveals a significant positive correlation between the quality of institutions and both early-stage and established entrepreneurship, demonstrating that robust formal institutions foster entrepreneurial growth across different levels of economic development.

The second section goes into a more detailed analysis of the entrepreneurial ecosystem development in Azerbaijan, a country located in the South Caucasian region. It is a qualitative, longitudinal analysis of the ecosystem development over time, considering historical and economic context, starting from the ancient period until its independence in 1991. The study examines which factors affect the entrepreneurial ecosystems most. Its research outcomes are that institutions and political governance have the greatest impact on a) the ecosystem and other factors in it and b) entrepreneurial activity. Negative effects are observed during

colonization and autarky regimes, while positive effects emerge during periods of independence and democracy.

The third section provides a qualitative comparative analysis of the entrepreneurial ecosystems of Azerbaijan and Georgia, focusing on their evolution since gaining independence in 1991. This longitudinal, historical study examines the factors influencing these ecosystems and evaluates their favorability for entrepreneurship in both countries. The study finds that while formal institutions may undergo changes, informal institutions often remain stable and can have a negative impact on entrepreneurship. This effect is particularly pronounced when formal institutional change is absent or insufficient, emphasizing the persistent influence of informal factors on entrepreneurship.

The dissertation takes a multi-level approach to gain a better understanding of how formal and informal institutions affect the entrepreneurial ecosystem design (or better put, the systemic interaction of its factors) and entrepreneurial outcome. It includes a macro level, cross country analysis, with a dataset of 22 countries, a regional comparative analysis of Georgia and Azerbaijan, and finally a detailed historical analysis of the development of the entrepreneurial ecosystem in Azerbaijan over a long period.

Figure 1: Structure of dissertation:

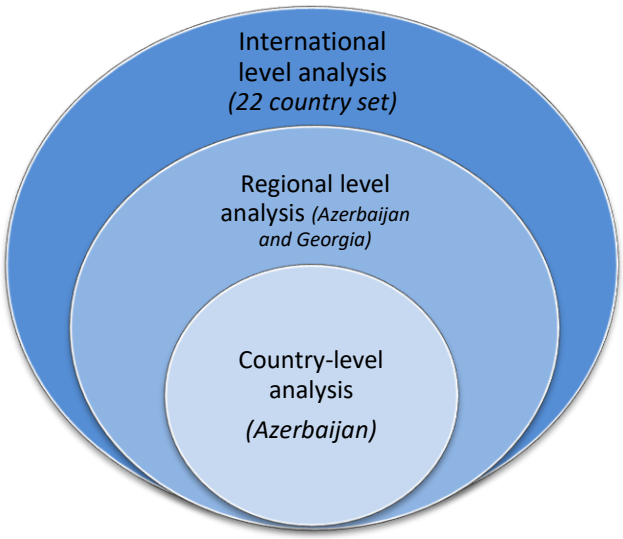


Illustration: Own

It should be noted that the more expansive the object under study is, the shorter the analyzed period. There is also a corresponding decrease in the number of ecosystem elements. The in-depth analysis for Azerbaijan includes all ecosystem factors over a long period of time, while the macro-level cross-country analysis with a dataset of 22 countries focuses on three dimensions of formal institutions, using GEM (TEA and EBO rates) and WGI (Rule of Law, Control of Corruption, Regulatory Quality) data for one year only. When undertaking the meso-level regional analysis, comparing the ecosystem development in two countries, Azerbaijan and Georgia, a longer and more detailed analysis was conducted. This study compares their institutional transition from socialism to capitalism and the evolution of their entrepreneurial ecosystems since the collapse of Soviet Union, focusing on both formal and informal institutions as well as on some other factors of the ecosystem. The last study focuses only on one country, Azerbaijan, providing an extensive, long-term analysis, with the maximum amount of ecosystem elements involved (Stam and Van den Ven, 2021); starting from ancient times and finishing with independence period in 1991, using all available data sources and archives. Obviously, this helps to deal with and reduce data complexity, either by focusing on many aspects over a long period of time in one country or focusing on one aspect for many countries in a cross-sectional study.

Figure 2: Types of analysis conducted

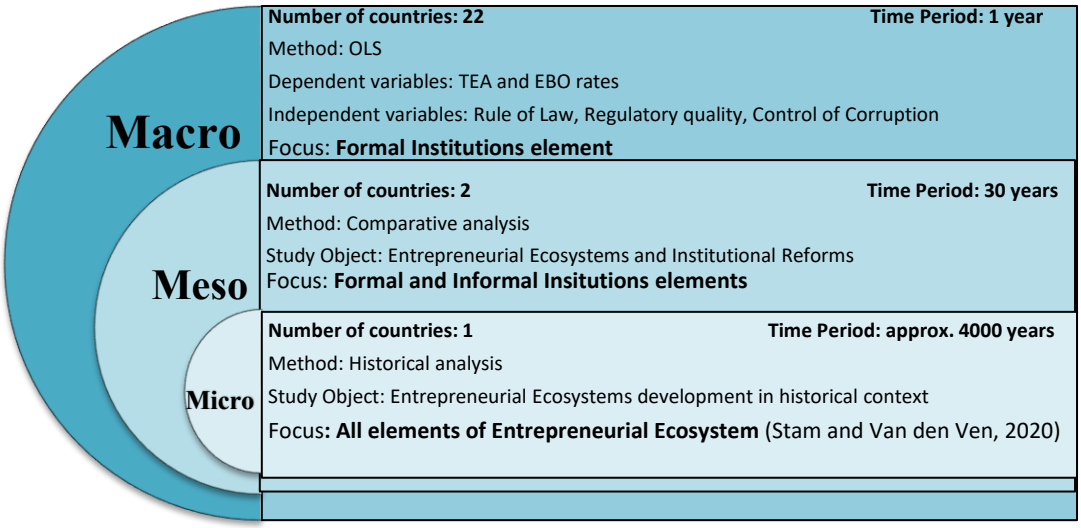


Illustration: own

This research illustrates that institutions are a crucial element of entrepreneurial ecosystems on all levels of analysis, whether it is a study of a single country, a region (two countries), or an international analysis involving 22 nations. In all cases studied, the institutional setting consistently emerges as the main element significantly affecting both the ecosystem itself (including the impact of other EE factors) and entrepreneurship outcomes. Hence, the dissertation findings emphasize the significant role of institutional elements in shaping the overall dynamics and success of entrepreneurial ecosystems.

1.3 First study – overview

In the *first paper,* a cross-country analysis is conducted, splitting countries into two different sets – innovation-driven and efficiency-driven economies, depending on the level of their economic development. The main goal of this study is to assess how formal institutional settings, such as Control of Corruption, Rule of Law and Regulatory quality, influence early and established entrepreneurship rates (TEA and EBO rates) in both groups of countries.

Based on theoretical assumptions, several hypotheses are put forward on how exactly formal institutional settings affect early and established entrepreneurship rates, defining the main research questions of this study:

- *Which formal institutional dimensions exert an effect on the intention to form a business, or on the early development of entrepreneurship rates?*

- *Which formal institutional dimensions affect mature entrepreneurship rates?*

- *Are there any differences in these effects between differently developed groups of economies, namely, between efficiency-driven and innovation-driven economies*?

The study uses a large set of cross-country data from different regions, focusing on indicators from sources such as the World Bank's Governance Indicators and the Global Entrepreneurship Monitor (GEM). The methodology uses regression

models to analyze the impact of institutional variables on the level of entrepreneurship in each country set.

The results of our research illustrate the difference in how formal institutions work and affect early and established entrepreneurship levels in innovation- and efficiency-driven countries. It appears that in both groups of countries Rule of Law has the biggest impact on TEA rates, as well as on EBO rates in innovation-driven (or developed) countries, while the institution of Regulatory Quality has the greatest impact in efficiency-driven countries (developing countries).

The findings illustrate two interesting trends. First, new businesses in innovation-driven countries are much less affected by the institutions than the established ones. In addition, in efficiency-driven countries, on the contrary, it is new businesses which are more sensitive to the institutional environment. Another interesting observation is that in efficiency-driven countries, established businesses are much more sensitive to Regulatory Quality than to Rule of Law, which has also been established by others in this research field (Hartog et al, 2010; Agostino et al, 2020). This divergence indicates that the regulatory framework plays a more important role in less developed economies, while innovative economies are more dependent on the overall legal infrastructure that supports entrepreneurship.

This study contributes to a broader understanding of entrepreneurial ecosystems by providing empirical evidence on how formal institutional factors operate differently in various economic contexts. It offers policy recommendations to adapt institutional reforms to the specific needs of different economies, underlining the importance of strengthening legal frameworks in innovation-driven economies and improving regulatory quality in efficiency-driven economies. In conclusion, this paper enriches the debate on the role of formal institutions in shaping entrepreneurial outcomes and implies that institutional reforms should be context-specific, reflecting the stage of development and entrepreneurial maturity of each economy.

1.4 Second study – overview

The second paper studies the historical development of entrepreneurial ecosystems in Azerbaijan starting from the first records on social and economic life in ancient times until the modern period, relying on all kinds of available historical data as well as the use of archives. The main objective of this paper is to define how various formal and informal institutions have shaped the entrepreneurial landscape in Azerbaijan over the centuries, using an historical approach to evaluate the long-term impact of these institutional elements on entrepreneurship. Thus, this study helps to understand how different historical events, traditions, religion, political regimes and other elements of an entrepreneurial ecosystem affect entrepreneurship outcomes in the long-term.

The study organizes Azerbaijan's history into 17 different periods, each reflecting significant social, economic, cultural and political changes in the country. This chronological breakdown allows for a comprehensive analysis of how various formal and informal institutions, such as the state system, economic policies, culture, traditions, religious practices and other social norms have influenced the entrepreneurial ecosystem in each era. The analysis is done according to the ecosystem approach and making use of Stam and Van de Ven's table (2021) to record ecosystem elements in each of the periods. They are measured using a simple point rating technique (Pandey & Leelashree, 2012). All periods are first evaluated, and then they are compared to each other to reveal the factors affecting productive entrepreneurship the most.

The focus of this study is to understand how the interplay of historical institutions, political regimes and informal social practices have facilitated or hindered entrepreneurship over time. By examining historical documents, archives and other available data, and then coding it into points, the study identifies main events and shifts that have either facilitated or hindered the growth of entrepreneurship in Azerbaijan over a very long period.

Therefore, the research question of the second paper is: *What happens to entrepreneurial activities over time using the lens of history, where the factors underlying the ecosystem change.*

The main finding is that institutions remain the primary drivers of entrepreneurial success. According to the research results and Stam based on van De Ven's ecosystem approach (Stam & Van de Ven, 2021) (see table on the page 10), the productive entrepreneurship domain – i.e. flourishing start-ups and existing businesses – has been mainly affected by the overall institutional element of the entrepreneurial ecosystem throughout Azerbaijan's history.

Another interesting insight is that the level of entrepreneurial activity is also very much influenced by political freedom and expectations of it. The study reveals that entrepreneurship flourishes during periods of political independence and declines when freedoms are restricted, even if other factors remain unchanged. It can be observed that the higher the negative numbers of the evaluation and perspectives, the lower the outcome of entrepreneurial activities is.

This might not seem surprising, but a closer look reveals that during periods of independence, even if the level of hindering factors remains the same, entrepreneurship rates increase (for example in the periods of Qaraqoyunlu and Aggoyunlu States, and Safavi State), whereas during the colonization periods with the lowest levels of freedom and independence, (like during the Arab, Seljuk, Mongol or Russian colonization periods), entrepreneurship rates are the lowest, irrespective of the quality of other entrepreneurial ecosystem factors. This trend illustrates that, despite unfavorable institutional conditions, entrepreneurial activity increases when there is a sense of autonomy and opportunity.

This study contributes to the existing research by offering a longitudinal historical analysis of the entrepreneurial ecosystem, outlining how formal and informal institutions have shaped entrepreneurial activity over the centuries. It emphasizes the crucial role of political independence and institutional conditions in fostering entrepreneurship, even in the presence of unfavorable environments.

1.5 Third study - overview

The last paper is dedicated to a comparative analysis of entrepreneurial ecosystems in two transitive countries – Georgia and Azerbaijan, since their independence in 1990. This paper provides an in-depth analysis of the formal institutional reforms and frameworks in Georgia and Azerbaijan, with a particular focus on identifying challenges and opportunities that emerged during the institution-building process in these countries. In parallel, the study examines the informal institutions accompanying this process.

The comparative analysis conducted in this study captures political, social and economic transformations in these two post-Soviet states, bringing to light how their entrepreneurial ecosystems have evolved under different conditions. By focusing on formal and informal institutional elements in each country, the study reveals how various factors such as government reforms, political stability, economic policies, trust in government, corruption and nepotism, and entrepreneurial culture have influenced entrepreneurial success over time.

Thus, the research question of this study is: *if two countries with similar backgrounds and a similar past and an identical starting point can develop very different entrepreneurial ecosystems, what factors cause such disparity*?

The methodology of this study implies a qualitative comparative approach that includes historical and institutional analysis. The study includes detailed case studies of both Georgia and Azerbaijan, examining informal aspects of their ecosystems (such as culture, social norms, and networks) as well as formal institutions (laws, regulations, and public policies). The research uses policy papers, international surveys, secondary data, interviews, newspaper articles, historical records, government reports, and statistical data to trace the evolution of these ecosystems and determine how institutional stability (or its absence) has influenced entrepreneurial development over the last thirty years.

The paper takes a critical look at formal institutions in both countries, such as taxation systems, access to finance, public service reforms, state funds and other settings of governance system. Moreover, informal institutions are also studied, in particular the mindset of individuals in the country, their attitudes towards fairness and trust in institutions, etc. The results of the study allow to create policy recommendations relevant not only for Georgia and for Azerbaijan, but also for other countries facing similar problems of transition, which is still ongoing.

The main findings show that in both Azerbaijan and Georgia entrepreneurial activity has fluctuated due to the long-lasting impact of Soviet-era institutions and the different pace of reforms. Despite similar starting points, Georgia's early economic liberalization and radical measures against corruption created a more favorable environment and higher levels of entrepreneurial activity, with SMEs playing a significant role in the economy. In contrast, Azerbaijan’s dependence on oil exports and slower formal institutional reforms hinder the development of an active entrepreneurial sector. The lack of effective formal reforms, in turn, leads to the inertia of public opinion and thus, the persistence of old Soviet informal beliefs and a lack of trust in governmental reforms. Therefore, this analysis also reveals that informal institutions in both countries continue to play a critical role in shaping their entrepreneurial ecosystems, often hindering entrepreneurial dynamism despite formal institutional changes.

This study concludes that the different development paths of the entrepreneurial ecosystem in Georgia and Azerbaijan are largely due to differences in formal and informal institutional frameworks. It provides valuable recommendations for policymakers in transition economies, emphasizing the need for comprehensive institutional reforms to support long-term economic growth.

The contribution of this study is that it delivers valuable insights in comparison of entrepreneurial ecosystems of Georgia and Azerbaijan, focusing on the evolution of formal and informal institutional element. The study offers policy makers a valuable framework for understanding how different institutional paths lead to different entrepreneurial outcomes, enriching the understanding of the establishment of entrepreneurship in post-Soviet countries.

Table 1: Integrated studies

Authorship	Research Gap	Methodology and Sample	Presentations	Journals	Contribution
Paper 1: The effect of formal institutions on early and established entrepreneurial activity: A cross-country analysis					
Ibrahimova Ganira Moog, Petra	Influence of formal institutions on different entrepreneurship (TEA and EBO)	Quantitative, 22 Countries set, WGI, TEA and EBO rates, OLS regression analysis	IECER International Conference, Maastricht, October 2022	Journal of Entrepreneurship and Public Policy Status: *Under review*	In this paper, I was in charge of collecting all data, reviewing the literature, analyzing the data, and writing the paper.
Paper 2: Colonialism versus Independence: the role of entrepreneurial ecosystems in Azerbaijan over time					
Ibrahimova Ganira Moog Petra	Analysis of Entrepreneurial Ecosystems (EE) development in Azerbaijan over time	Quali-Quantative historical analysis, Simple point ranking technique, 17 historical periods, EE elements	SASE International Conference, Amsterdam, June 2022	Small Business Economics Journal Status: *Published*	In this paper, I was in charge of collecting the data, reviewing the literature, analyzing the data, developing the overall model, and writing the paper.
Paper 3: How does a common past lead to a different future? Variations in entrepreneurial ecosystem development					
Ibrahimova Ganira Moog Petra	Comparative analysis of EE development in Georgia and Azerbaijan after USSR collapse and independence in 90s	Comparative analysis of two countries in the same region and with the same historical past.	RENT International Conference, Gdansk, November 2023		In this paper, I was in charge of collecting the data, reviewing the literature, analyzing the data, developing the overall model, and writing the paper.

2. Theoretical background

This chapter provides the general overview of the most important definitions and discussions of the terms and concepts discussed in this dissertation. It is intended to offer a broader perspective on existing approaches and concepts. It, thus, paves the way for the following analyses, focusing on different aspects of these approaches and concepts. This section offers basic definitions of the entrepreneurial ecosystem, as well as perspectives on the concept of entrepreneurial elements, activities and their interrelationships.

2.1 Entrepreneurial ecosystems: definitions and literature review

Concepts of entrepreneurial ecosystems first emerged in entrepreneurship studies in the late 1980s and early 1990s as an alternative to individualistic, personality-based studies (Van de Ven, 1993), as well as in contrast to earlier cluster-studies (Porter, 1990), and industry district research (Becattini, 1990). According to this perspective, entrepreneurial ecosystems are conceptualized as a network of actors, resources, and environments that interact with one another and are connected to each another, creating a dynamic and systemic environment that can either support or destroy certain advantages (Stam & Van de Ven, 2021; Sternberg, 2021).

The main objective of an entrepreneurial ecosystem is to promote growth by generating new job opportunities and attracting new financial capital from inside or outside network partners to create innovation and entrepreneurship (Spiegel, 2020). Furthermore, like any other system, entrepreneurial ecosystems are interactive and deal with a variety of actors, resources, and institutional settings. They are components, supporting entrepreneurial activity (Van de Ven, 1993) which are beneficial for the area or region where the system operates (Stam, 2015; Stam & Van de Ven, 2021). And at the center of such entrepreneurial ecosystems are always entrepreneurs and their professions acting in a particular environment which is promoting or hindering them (Stam, 2015).

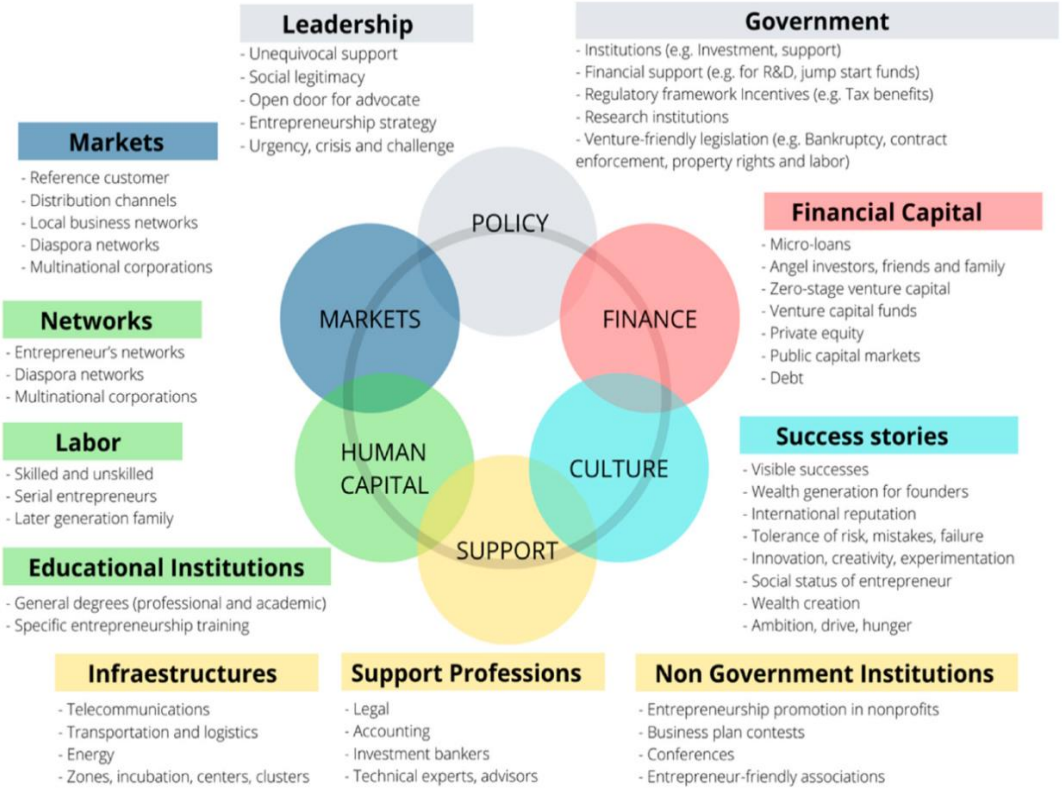
As research on entrepreneurial ecosystems has evolved, it has become apparent that these ecosystems involve complex phenomena consisting of economic, social,

political, and cultural elements, as well as various individual components within a region or state (Theodoraki & Messeghem, 2017).

That implies that they have been around for all recorded history, initially referred to as “national systems”, but later conceptualized as “business ecosystems” by James Moore in the 1990s. According to Moore (1993, page 76), “Entrepreneurial Ecosystem is a space of interconnection and mutual dependence between economic agents, whose collective health was essential for the success and survival of organizations”. It takes into account elements like structures, relationships among participants, connection types, and a variety of functions, comparing business with its environment. However, Moore (1993) only considered the enterprise level, which is a limitation for his concept.

Later, in 2010, Isenberg (2010, page 5) proposed a more holistic approach; he published an article for the *Harvard Business Review* that discussed the environmental settings fostering entrepreneurship. This environment was based on several domains such as financial capital, entrepreneurial culture, and public policy pertaining to SMEs, technical support, human capital and markets as integral components of the entrepreneurial ecosystem. The concept states that each of these six domains is fundamental, as together they make up the entrepreneurial ecosystem. A nation’s level of development determines the level of its entrepreneurship. His model is shown below.

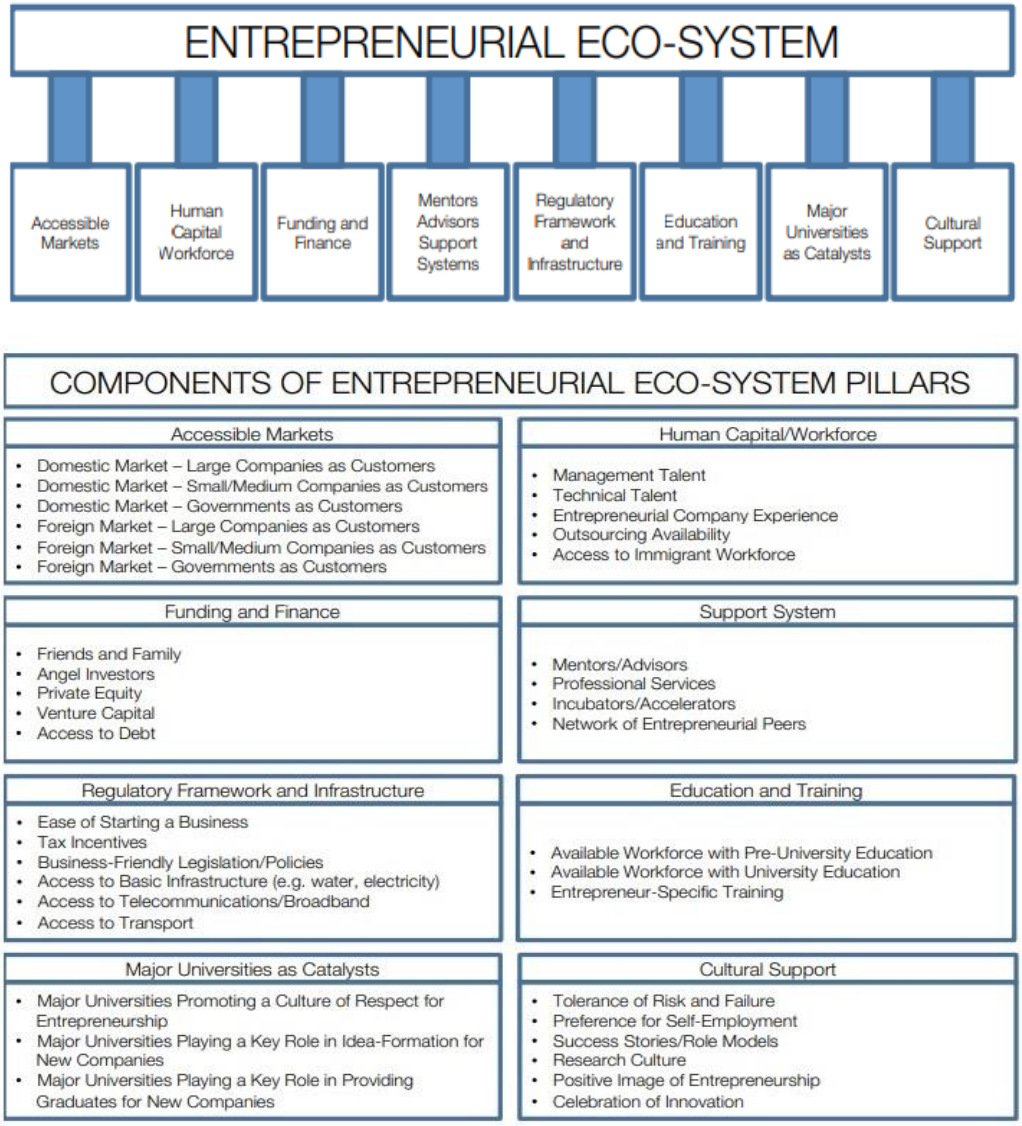
Figure 3: Isenberg Model



Source: Domains of the entrepreneurship ecosystem, Isenberg, 2010, page 5

The World Economic Forum, in collaboration with Stanford University, Ernst & Young, and Endeavor, conducted further significant research in this focus in 2013, interviewing over 1,000 entrepreneurs from all around the world (World Economic Forum, 2013). They wanted to understand how successful entrepreneurial companies accelerate access to new markets and transform into scalable, high-growth businesses. The final report was aimed to address two research questions: what do entrepreneurs believe to be the differences between entrepreneurial ecosystems around the world, and what components of an entrepreneurial ecosystem do entrepreneurs think are the most important for the development and success of their businesses?

Figure 4: WEF Model of an Entrepreneurial Ecosystem



Source: The World Economic Forum report, 2013, Page 6-7
https://www3.weforum.org/docs/WEF_EntrepreneurialEcosystems_Report_2013.pdf

Figure 4 illustrates the model they created, based on the survey results, which is in a way very similar to the Isenberg Model but expanded or refined by including two "new" domain sub-categories: (i) universities as catalysts and (ii) education and training. In Isenberg's model this would have been included in human capital and infrastructure, but it stands for specific human capital. In addition to this specification, the study made some intriguing discoveries, helping this PhD thesis to develop ideas and focus, especially on specific entrepreneurship ecosystem factors, such as institutions:

- Accessible markets, human capital, and finance are seen by entrepreneurs as three crucial components of the entrepreneurial ecosystem that are essential to success.
- In most regions, a small number of breakout companies are often the main contributors to a robust, healthy expanding market for early-stage companies.
- Large companies in the overall business ecosystem have the potential to significantly influence the growth and development of early-stage companies.
- There are big differences between the entrepreneurial ecosystems of different regions, whenever entrepreneurs consider expanding their business beyond their country or region; they face a problem of alignment with foreign governments who frequently adopt a strong local focus in their laws regarding the entrepreneurial ecosystem policies.
- Entrepreneurial ecosystems can be shaped in numerous ways by the entrepreneurs themselves. The case studies highlight five crucial roles enabling that: mentoring, inspiration, funding, new entrepreneurs, and new hires.
- Entrepreneurs view government and regulatory policies (which are nothing less than formal and informal institutions) as both potential drivers of growth and possible inhibitors of progress (WEF, 2013)

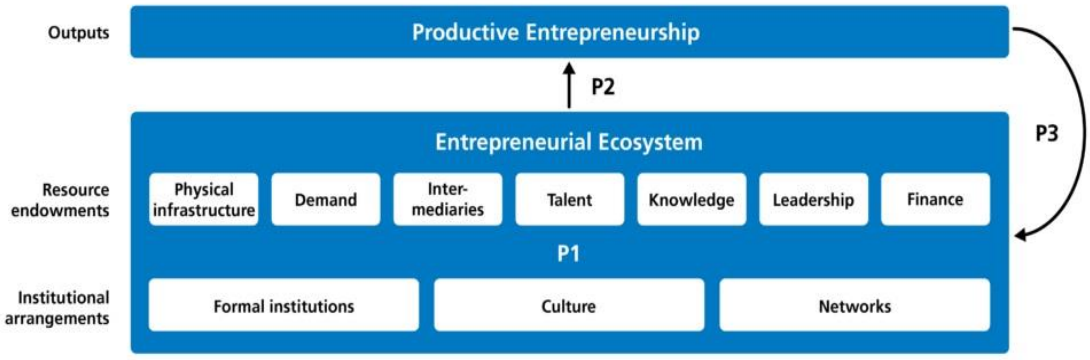
Thus, this study demonstrates the first evidence, that even from entrepreneurs' perspective, the governance of a country – or its formal settings and institutions – are the basis for developing and sustaining entrepreneurial activity. This is the area of study, into which this doctoral dissertation delves more in-depth.

Further progress in understanding entrepreneurial ecosystems was made by Mason and Brown in 2014 at a workshop entitled "Entrepreneurial Ecosystems and Growth-Oriented Entrepreneurship" organized by the OECD LEED Program and the Dutch Ministry of Economic Affairs. The definition they proposed in this work quickly gained popularity in the ecosystem literature: "The Entrepreneurial Ecosystem is a set of different individuals who can be potential or existing Entrepreneurs, organizations that support Entrepreneurship that can be businesses, venture capitalist, business angels, and banks, as well as institutions like

universities, public sector agencies, and the entrepreneurial processes that occur inside the ecosystem such as the business birth rate, the number of high potential growth firms, the serial entrepreneurs and their Entrepreneurial ambition." (Mason & Brown, 2014, page 5). In this study, they look at several case studies utilizing Isenberg domains to provide unique metrics for policymakers that would help them assess and even estimate the strengths and weaknesses of various entrepreneurial ecosystems. This work helps in the decision-making process for policymakers regarding when and how to act, as well as how to track the efficacy of those interventions over time (OECD, 2014).

The next major break-through in the entrepreneurial ecosystem literature occurred with Eric Stam and Andrew Van de Ven, and their paper "Entrepreneurial ecosystem elements" published in 2021 (Stam & Van de Ven, 2021). In this study, they attempt to create a wider and more comprehensive model of an entrepreneurial ecosystem by adding more components and dimensions to it. Additionally, the authors discover casual relationships between the elements of their model, namely in the model's P1 section, representing the ecosystem itself, and in the model outputs section, which are the newly added domain of productive entrepreneurship, as seen in the image below.

Figure 5: Stam and Van de Ven Ecosystem Model



Source: Stam & Van de Ven, 2021

Thus, they developed a systematic approach to analyze, measure and operationalize entrepreneurial ecosystems, showing the loops and interrelationships between all aspects and factors of the system. The table below

clearly shows that they enriched the EE approach by proposing specific measures to operationalize the construct and subcategories.

Table 2: Constructs of entrepreneurial ecosystem elements and outputs

Concept	Construct	Definition	Element
Institutions	Formal institutions	The rules of the games in society	Formal institutions
	Informal institutions	Cultural context	Culture
	Social networks	The social context of actors, especially the degree to which they are socially connected	Networks
Resources	Physical resources	The physical context of actors enables them to meet other actors in physical proximity	Physical Infrastructure
	Financial resources	The presence of financial means to invest in activities that do not yet deliver financial means	Finance
	Leadership	Leadership that provides guidance for, and direction of, collective action	Leadership
	Human Capital	The skills, knowledge and experience possessed by individuals	Talent
	Knowledge	Investments in (scientific and technological) knowledge creation	Knowledge
	Means of Consumption	The presence of financial means in the population to purchase goods and services	Demand
	Producer services	The intermediate service inputs into proprietary functions	Intermediate Service
New Value Creation	Productive entrepreneurship	Any entrepreneurial activity contributes (in)directly to net output of the economy or the capacity to produce additional output	Productive entrepreneurship

Source: Stam & Van de Ven, 2021

While Stam and Van den Ven's model remains the most influential model in the study of entrepreneurial ecosystems, some notable models have emerged since then. These are for example, *The Nested model of Entrepreneurial Ecosystems*,

introduced by Autio et al. (2020). This model conceptualizes entrepreneurial ecosystems as nested within larger economic and institutional contexts. It underlines the interactions between the institutional environment at the macro level, ecosystem dynamics at the meso level, and entrepreneurial activity at the micro level. *The quadruple helix model* is based on the concept of the "triple helix", but the quadruple helix model brings together government, industry, academia and civil society as key stakeholders in entrepreneurial ecosystems. This model emphasizes the role of multi-stakeholder collaboration and co-creation of knowledge and innovation (Carayannis & Campbell, 2020). *The 3C model* by Sussan and Acs (Sussan & Acs, 2020) focuses on the interaction of culture, capital, and connections in entrepreneurial ecosystems. It emphasizes the importance of social capital, cultural values, and network connections in shaping entrepreneurial activities and outcomes. *The evolutionary model of the ecosystem*, developed by Roundy et al. (2021), considers entrepreneurial ecosystems as complex adaptive systems that evolve over time through variation, selection, and retention processes. This model stresses the important role of dynamic interactions, feedback loops, and evolutionary processes in ecosystem development. In addition, *The resilience based model* developed by Ponomariov et al. (2021) should be mentioned here, too, as it emphasizes the resilience of entrepreneurial ecosystems to external shocks and disturbances, identifying adaptive capacity, redundancy and diversity of ecosystem components as key factors affecting resilience.

These models and frameworks develop and extend the conceptual understanding of entrepreneurial ecosystems, offering new insights into the dynamics, structures and mechanisms that shape entrepreneurial activity and ecosystem development. They include many domains – sometimes identical, sometimes not – but all provide valuable tools for researchers, policymakers and practitioners seeking to analyze, assess and sustain entrepreneurial ecosystems in a variety of contexts. Besides, they once again demonstrate that entrepreneurial ecosystems are crucial components of communities, while they foster entrepreneurial growth, both at the national and at the individual level. Such ecosystems assist business owners in finding what they need quickly (Stam, 2015). Additionally, due to increased business-agent rivalry and activity diversification, areas with well-developed entrepreneurial ecosystems

are typically better suited to external shocks (Mason & Brown, 2014). It depends not only on the components of the ecosystem, which may be the same, but also on how one component interacts with others, and how that interaction changes the consequences for the whole system (Stam & Van De Ven, 2021). This influence may strengthen or weaken the relationship between other components, or it may aid in the exclusion of ineffective components and promote the formation of new and improved ones (Stam & Van De Ven, 2021).

This warning is crucial and must encourage researchers to think more before they use the ecosystem idea as a tool or a "black box", without giving the ideas they use any critical distance. Additionally, it can also help policymakers understand the social complexity of the ecosystem and signal that: (a) entrepreneurial ecosystems need to be regulated because they do not strive for a perfect state, and b) it is a country, region, or even city-specific setting to attain; there is no one-size-fits-all ecosystem that can be accepted as the gold standard. To achieve this, governments, business owners, and other ecosystem stakeholders must cooperate and create such favorable entrepreneurial ecosystem environments together.

The theoretical foundation of this PhD thesis lies in Stam and Van de Ven's (2021) entrepreneurial ecosystem model, which offers a systematic and comprehensive framework for analyzing the different components of ecosystems and their interactions. This model was chosen as the basis for the thesis due to its robustness in capturing the multifaceted and interrelated aspects of ecosystems, from formal institutions to individual actors such as entrepreneurs. By operationalizing ecosystem constructs such as physical resources, leadership, and human capital, the model provides a clear framework for understanding how these factors dynamically interact and contribute to productive entrepreneurship.

However, this thesis also considers dynamic models that broaden the understanding of ecosystems over time, such as the evolutionary model and the resilience-based model, which show how ecosystems adapt to changes and external shocks. The integration of these models in complex with an historical approach enhances the discussion by showing how individual ecosystem components evolve, influence each other, and either strengthen or destabilize the ecosystem. This dynamic

approach complements the static nature of Stam and Van de Ven's model, offering a deeper view of ecosystem functioning over time.

In conclusion, this dissertation makes a valuable contribution to the literature by applying a multi-level analysis combining quantitative and qualitative approaches to examine formal and informal institutional influences on entrepreneurship. The results provide important insights for policymakers seeking to strengthen entrepreneurial ecosystems by tailoring institutional reforms to specific economic and social contexts. Through this integrated framework, the dissertation emphasizes the importance of strengthening political independence, regulatory quality, and sound institutional frameworks to support long-term entrepreneurial growth and economic development.

2.2 Institutional element of entrepreneurial ecosystem as a game changer for entrepreneurship

Entrepreneurship, as a driving force of economic growth and innovation (Audretsch & Keilbach, 2004; Schumpeter, 1934), is significantly influenced by the institutional framework within which it operates (North, 1990; Acemoglu & Robinson, 2012). The failure or success of entrepreneurs depends not only on their ingenuity and the market they are entering, but also on the legal, cultural, educational, regulatory and governmental frameworks that make up the broader institutional setting (Baumol, 1990). Therefore, if entrepreneurship is considered as a point of intersection between vision and environment, institutions will act as the architects of the latter (Ostrom, 2005; Isenberg, 2010). Institutional frameworks dictate the rules of doing business, determining how easily new entrepreneurs can navigate and solve the challenges of creating and sustaining businesses (Djankov et al., 2002).

The institutional approach allows researchers to analyze the impact of legal systems on the ease of doing business, as demonstrated by Djankov et al. (2002) in their comprehensive World Bank study that found a positive correlation between the ease of starting a business and the level of entrepreneurial activity. Transparent and efficient legal systems, effective protection of property rights, and ease of

contract enforcement are crucial components that contribute to a favorable business environment. La Porta et al. (1997) examined this topic more deeply by showing how legal traditions such as common law and civil law influence investor protection and financial market development, which subsequently affects entrepreneurial decisions. Furthermore, Acemoglu and Johnson (2005) argue that inclusive economic institutions characterized by equal access to economic opportunities and secure property rights promote entrepreneurship and sustainable economic growth.

Thus, these studies among many others (North, 1990; Acemoglu and Johnson, 2005; Rodrik et al., 2004) deliver the basis for this PhD thesis, by showing in long-term or very in-depth analysis, that government (formal) institutions play a key role in shaping the entrepreneurial ecosystem development. They can either hinder or promote entrepreneurial activities through the development of various policies and supporting mechanisms. Acs and Szerb (2009) emphasized the positive impact of government policies on entrepreneurial activity, especially those that promote innovation, research and development, and support for small businesses. Lerner (2010) highlighted the role of government-sponsored venture capital programs, showing how targeted support can stimulate entrepreneurship. Moreover, Welter et al. (2017) elaborated on the role of regional policies in supporting entrepreneurship, emphasizing the need for context-specific approaches to foster entrepreneurial ecosystems at the local level. Thus, this PhD thesis utilizes this approach and the basic ideas that institutions matter both in entrepreneurial ecosystems and in relation to the outputs of the ecosystem – i.e. the outcomes of entrepreneurial activity.

Access to capital and financial institutions are another important part of the institutional setting in entrepreneurial ecosystems. The availability of credit, venture capital, business angels, special funds and other financial resources plays an important role for starting and scaling business. Beck et al. (2006) found that a well-functioning financial system is positively correlated with higher levels of entrepreneurial activity. In addition, Kerr et al. (2014) examine the geographical nuances of financial institutions, showing how local banking conditions

significantly affect small businesses' access to capital, thereby emphasizing the regional dimensions of institutional influences on entrepreneurship. Moreover, Shane and Cable (2002) introduced the concept of "financial capital environment", emphasizing that the availability of venture capital and angel investment plays a critical role in fostering high-impact entrepreneurship. Therefore, this complex process of interaction between financial institutions and entrepreneurial activities highlights the importance of studying the institutional structures governing access to finance in different contexts. The literature also points out that functioning and productive banking and financial systems as part of the entrepreneurial ecosystem often depend on institutional elements, so some interrelationships and dependencies between the factors of the entrepreneurial ecosystem are already visible (Levine, 2005). This PhD thesis will analyze it in more depth and provide innovative insights.

Culture as an informal institution also plays a very important role in the entrepreneurial ecosystem design. Cultural institutions influence social perception of success and failure as well as a willingness of entrepreneurs to take risks and pursue entrepreneurial opportunities (Hofstede, 2001). Shane (1993) argues that cultural support for entrepreneurship can inspire individuals to take risks and start new businesses. Wennekers and Thurik (1999) studied the influence of national culture on the level of entrepreneurial activity, emphasizing that cultural factors contribute to differences in the level of entrepreneurial activity globally. In addition, the well-known Hofstede cultural – dimensional theory (1980) also provides insights into how cultural insights such as individualism/collectivism, power distance, masculinity/femininity, short/long term orientation, uncertainty avoidance and power distance affect entrepreneurial behavior in different societies. Thus, it is important to understand that informal institutions are crucial for entrepreneurial ecosystems and entrepreneurial activity, therefore this PhD thesis analyzes its potential effect and impact differently, using long-term and a historical analysis.

Institutions in the educational sector play an important role in shaping entrepreneurship, too (Isenberg, 2010). Access to quality education and different

training programs can develop skills necessary for entrepreneurship. Guerrero et al. (2008) conducted a study of university entrepreneurship education, showing a positive relationship between these programs and subsequent entrepreneurial activity. Audretsch and Keilbach (2004) emphasize the role of education in shaping the entrepreneurial mindset. In addition, Fayolle and Gailly (2015) argue for the importance of entrepreneurship education in developing a range of competencies including opportunity recognition, creativity and risk management, and other skills necessary for entrepreneurial success. These aspects are thus necessary for the development of the human capital of the ecosystem, but it becomes evident that formal and informal institutions are necessary to realize successful and beneficial entrepreneurship education in order to create an enabling environment for idea generation. Thus, it is again evident that fundamental institutional conditions are necessary for the development of other factors in the entrepreneurial ecosystem (Acs et al., 2014).

In conclusion, both formal and informal institutions form the basis of the entrepreneurial ecosystem. While formal institutions such as legal and regulatory frameworks play a dominant role, they also influence the development of financial, cultural and educational institutions. Together, these institutions shape the environment in which potential and existing entrepreneurs operate. Recognizing the relationship between institutions and entrepreneurship is critical for policymakers, as creating an enabling institutional framework is a necessary condition for an entrepreneurial ecosystem to thrive. This dissertation builds on this theoretical framework and highlights gaps in research on the historical, long-term development of entrepreneurial ecosystems, as well as comparative studies of ecosystems in regions with similar cultural and institutional conditions (Acemoglu & Robinson, 2012).

Entrepreneurship, an important part of this research, is defined as the process of creating and managing a business for profit or value creation (Schumpeter, 1934). It includes various activities such as identifying opportunities, acquiring resources, launching ventures and managing risks (Shane & Venkataraman, 2000). Moreover, entrepreneurial activities include both the creation of new ventures (nascent or

early-stage entrepreneurship) and the operation of existing firms (Reynolds et al., 2005). These activities are influenced by a variety of factors, including personal motivation, institutional frameworks, and the surrounding entrepreneurial ecosystem (Kuratko, 2009) that is studied in this dissertation. Therefore, a broader definition of entrepreneurship is discussed in greater detail in each of the three papers included within this doctoral thesis.

The first paper provides a cross-country analysis of entrepreneurial activity, focusing on the role of selected formal institutions in both early-stage and established entrepreneurship functioning (see paper 1). Entrepreneurship is discussed there as a part of theoretical framework, within the GEM definitions. The second paper expands on the role of institutions in a historical context, analyzing the development of entrepreneurial activity in Azerbaijan, and how various formal and informal institutions and regimes influenced the country's entrepreneurship over centuries (see paper 2). In that paper entrepreneurship – and productive entrepreneurship in particular – has been discussed within the framework of Stam and Van de Ven's (2021) ecosystem model. The third paper delves into a comparative analysis between Azerbaijan and Georgia, highlighting the role of both formal and informal institutions in shaping entrepreneurial ecosystems and the level of entrepreneurial activities in these two post-Soviet countries (see paper 3). There, entrepreneurship is discussed using general framework and definitions, mostly at the SME level, using statistical data from both countries.

3. The effect of formal institutions on early and established entrepreneurial activity: A cross-country analysis

ABSTRACT

Evaluating the development of entrepreneurial ecosystem research over time reveals that it is a complex phenomenon within a region that consists of institutional, social, economic, cultural, political and other important elements. Institutions, and especially formal institutions, increasingly come into focus as important factors that either foster or hinder entrepreneurial activities at different development levels. However, there is still a lack of specific analysis regarding the interconnection between formal institutions and early-established and mature entrepreneurial activity in ecosystems. Addressing this research gap, we use international data from the Global Entrepreneurship Monitor and the Worldwide Governance Indicators projects to analyze the impact of different formal institutional dimensions that are well known in research, (The rule of law, the control of corruption, and regulatory quality) on two levels of entrepreneurial activity, namely, early-stage activity and established business activity. Since entrepreneurship depends not only on the institutional environment but also on the stage of economic development, we conduct a cross-country analysis on two groups of countries: those with efficiency-driven economies and those with innovation-driven economies. Our empirical findings suggest that in efficiency-driven countries, the relationship between formal institutions and the rate of new firms is more intense, while in innovation-driven countries, the connection between formal institutions and the established business ownership rate is stronger. We also discover that in efficiency-driven economies, the rule of law is a critical element for new entrepreneurial activities (TEAs), while in the case of mature entrepreneurship, regulatory quality is the most important factor. These results can contribute to the discussion around creating and developing national ecosystems to foster either one or the other type of entrepreneurial activity.

Keywords: *Entrepreneurial ecosystems, formal institutions, entrepreneurship, Rule of Law, Regulatory Quality, Control of Corruption, Global Entrepreneurship Monitor (GEM), World Governance Indicators (WGI)*

3.1 Introduction

The term "ecosystem" was introduced in the field of social science by the path-breaking work by Moore (1993), and it describes an entrepreneurial ecosystem as a firm's external environment. It interconnects groups of actors in a particular local geographical community that are committed to sustainable development through the support and facilitation of new sustainable ventures. In other words, it is the favorable or nonfavorable framework within which entrepreneurship operations occur and, therefore, an ecosystem can stimulate or stipulate the economic performance of a given country or region (Theodoraki & Messeghem, 2017). In recent decades, the contribution of entrepreneurship to economic growth has been widely recognized (Wong et al., 2005; Desai, 2011; Acs et al., 2014; Urbano et al., 2019). Entrepreneurship can boost innovation, create new job places and provide a fairer distribution of income (Baumol, 1990; Acs, 2006; Valliere and Peterson, 2009). Nevertheless, the contribution of entrepreneurial activities significantly differs across countries, even countries belonging to the same geographical area or sharing a similar culture. Against this backdrop, questions arise as to why these varying developments occur, such as a firm being flourishing in one country and failing in others. In recent years, a fruitful and promising research agenda has therefore evolved to analyze the ways in which context moderates the evolution of different models of entrepreneurship (Welter & Gartner, 2016). This study contributes to this stream of literature by exploring through the observation of a continuum of entrepreneurial activities precisely how the development of both newly established firms and mature companies is shaped by context. This study is particularly focused on the different patterns exhibited by a formal institutional setting as an important part of the ecosystem (Stam & Van de Ven, 2021); the study is thus aimed at explaining the heterogeneous entrepreneurial landscape of new and existing entrepreneurial activity among countries in different stages of development.

Institutions, as a foundational component of any entrepreneurial ecosystem (Stam & Van de Ven, 2021), place incentives and constraints on economic actors (North, 1990). In addition, as Acemoglu and Robinson (2008) stated, they are thought to be the fundamental causes of economic growth. Thus, specific institutional characteristics may be the reason why economic outcomes, based on entrepreneurial activities, differ across countries; this difference arises because these institutions contribute to building the macroeconomic foundations of microeconomic behavior (Minniti and Levesque, 2008). As extant studies have already shown, entrepreneurship is associated with human nature, human behavior and human decision-making; thus, the realization of the entrepreneurial propensity of individuals is highly dependent on the (expected or recognized) quality of a country's institutions (Baumol, 1990, Mickiewicz, et al, 2021). Therefore, institutional arrangements influence not only the level of entrepreneurship in a country or a region but also the type of entrepreneurship initiatives by making such initiatives more or less productive and sustainable (Bruton et al., 2010). Urbano et al. (2019), based on a comprehensive synthesis of the literature over the last 25 years (1992-2016), summarized the interaction among entrepreneurship, institutions and economic growth and detailed that entrepreneurship exerts different impacts on the economy due to national or regional institutions on an aggregated level.

Most policy makers aim to foster entrepreneurial activities. Thus, for them, understanding the essence of the entrepreneurial ecosystem and, in this particular case, how and why institutions create an effect on entrepreneurial activities is an important endeavor (Vivarelli 2012). This is also true when attempting to better understand the motivational aspects faced by potential entrepreneurs as well as those already in business. Thus, in the current state, we know that formal institutions shape conditions that either foster or hinder entrepreneurs and influence the sustainability of entrepreneurship in economies (Valliere and Peterson 2009; Bosma et al. 2018; Chowdhury et al. 2019, Vivarelli, 2012), but we know much less about how this works in different developmental contexts.

Thus, former studies that have delivered important insights have focused on the quality of formal institutions as an aggregate and its impact on entrepreneurship.

However, there is a gap in this research field regarding the impact of different single formal institutional settings on both entrepreneurial intentions and on new start-ups; this is even more true from the perspective of different effects on the established business ownership rate in different contexts pertaining to the development stage of countries.

Our paper rests on the shoulders of these giants and their works, and it is aimed at delivering new insights regarding the relationship between different formal institutions and new or established forms of entrepreneurship and observing the impact of the relevant development contexts. The goal of this paper is to elucidate the effect of different formal institutional dimensions on entrepreneurship and whether it enables or hinders entrepreneurial activities in two different stages, namely, the early stage and the mature stage. We do so because there is a gap regarding the differentiated analysis of existing businesses compared to newly established businesses. Bosma (2013) summarized 89 academic publications based on the Global Entrepreneurship project that were published from 2004 to 2012 and found that early-stage entrepreneurial activity was considered in the majority of empirical studies. Little attention has been given, however, to established business ownership rates. Bosma et al. (2018) pointed out that in the future, researchers should use other variables associated with entrepreneurial activities rather than only relying on start-up rates. We follow this call and analyze the formal institutional effects on both kinds of entrepreneurial activity in a heterogeneous national development context. Following former research, we address only those formal indicators that might have a stronger effect on entrepreneurial activity, such as the rule of law, control of corruption or regulatory quality (Agostino et al., 2020). In this sense, this manuscript explores this relationship among a specific sample of heterogeneous countries (as categorized by development status). Thus, the country choice follows the idea that *efficiency-driven* and *innovation-driven* countries are analyzed to reflect the effects of formal institutions in different contexts. In addition, countries from various geographical areas worldwide were selected with regard to the size of their economies. For instance, we excluded from our analysis the largest economies, such as those of the USA, China, Brazil, Russia, and India. Thus, each

group of selected countries consists of 11 countries with similarly sized economies from different geographic regions.

This study aims to uncover the answers to the following research questions:

- Which formal institutional dimensions exert an effect on the intention to form a business or on the early development of entrepreneurship rates?

- Which formal institutional dimensions affect mature entrepreneurship rates?

- Are there any differences in these effects between differently developed groups of economies, namely, between efficiency-driven and innovation-driven economies?

To answer these questions, deliver new insights and contribute to this field of research, we work with data from the Global Entrepreneurial Monitor (GEM). The data are grouped into two categories: economic development stages and geographical regions. Moreover, they allow access to the intention and setup of new entrepreneurial activities (TEAs) or existing companies (EBOs), thus providing internationally consistent and comparable data for assessing the entrepreneurial activities in different countries (GEM, 2015). To determine the specific formal institutional setting, we work with the established and validated measures of the Worldwide Governance Indicators project (WGI, 2020). Thus, the dataset we work with is interesting due to different countries and development stages reflected within it, which allows us to compare countries with different contexts and formal institutional settings.

This paper delivers the novel insight that selected formal institutions enhance both established and early-stage entrepreneurship; however, the extent of this impact differs according to the country's development level. In innovation-driven countries, the institutional framework triggers a more established (mature) entrepreneurial rate; in efficiency-driven countries, the opposite is true, and the institutional framework rather fosters the early-stage entrepreneurial rate. This work may help policy makers design formal institutional settings to shape a sustainable entrepreneurship landscape and support entrepreneurial activities on different

levels, namely, those of start-ups and established businesses that are tailored for the development status of these countries or regions.

The remainder of this paper is structured as follows. In the next chapter, the theoretical framework of (formal) institutions and entrepreneurial activities is reviewed and thoroughly discussed. Based on this, the hypotheses to be tested are then developed. Next, the data sources and operationalizations are explained, and the methodology employed is outlined. Next, the results are presented and the outcomes are discussed, and we connect with ongoing research to show how our study relates and contributes to the ongoing research. Finally, in the conclusion, the findings are reviewed, limitations are explained, and future research ideas are proposed.

3.2 Institutions and entrepreneurship: theoretical framework, measurement and indicators

Beyond a neoclassic world, the mainstream of new institutional economics focuses on several explanations of institutions' impact on economic behavior and economic development and thus on entrepreneurship (i.e., Douglass North, 1990; Ronald Coase, 1981; Oliver Williamson, 2000, and Elinor Ostrom, 1990). These institutional economists state that institutions matter a great deal for economic behavior and development (North 1990, 1991; Acemoglu and Robinson, 2008; Greif, 2006; Gneezy and Rustichini, 2000; etc.). As one of the first such economists, Douglass North defined institutions as the humanly devised constraints that structure political, economic and social interaction. Throughout history, people have created institutions to secure order and reduce uncertainty in interactional processes and thus in entrepreneurship. Along with the standard economic constraints, these institutions also define choice sets and thus determine transaction and production costs, as well as the profitability and feasibility of engaging in different economic activities (North, 1991). Since these beginnings, our understanding of the importance of formal and informal institutions has increased and grown, and now institutional settings are widely explained and well discussed in the literature as well being discussed in relation to entrepreneurial activities (i.e., Grindle, 2004; Ackerman, 2004; North et al., 2009; 2013; Leftwich and Sen, 2010). However, the

interpretation that sees institutions as a tool for providing the framework for social interactions and economic activity could differ. According to Chang and Evans (2005), institutions do not exist separately from individuals but are rather embedded in normative values and cultures that are internalized and affect either social behavior (including the choice of a job) or self-identity (whether to act as an entrepreneur or not). Barley and Tolbert (1997, p.93) saw the complexity of institutions as a "web of values, norms, rules, beliefs and taken for granted assumptions." Leftwich (2010) stated that the establishment of institutions stands on the interaction process between social structure and individual agency, being dependent on actors to create and adopt norms that are key to stable social conditions.

Thinking in terms of the relationship between institutions and entrepreneurship, the importance of the following terminology, namely, "game rules," the "hindering" and the "fostering" of institutions, becomes clear; in addition, those institutions may exist or not and may exert a general impact or may not. In greater detail, the activity of any entrepreneur or economic agent in society is governed by a certain set of rules (North, 1991 that structure the interaction and create either opportunities or restrictions. Institutional norms can be followed or broken, so the rules are often accompanied by enforcement mechanisms for their execution; these mechanisms prep the game for working in society, as well as the organizations and businesses that operate in this environment (North, 1991), and thus they prepare the field for entrepreneurial activities. When these rules are clear and well defined, opportunistic behavior decreases, and trust increases (North et al., 2013). This leads to long-term contract enforcement, a reduction in transaction costs and, as a result, an efficient institutional structure. In contrast, "bad" quality institutions can reduce the incentives for investing and hinder the process (i.e., of starting and running a business) because in this case, resources could not be allocated in the most productive way (Knowles and Weatherson, 2006, p.10). Thus, the quality of institutions can shape or destroy the conditions needed for entrepreneurship (Baumol, 1990; Johnson et al., 1997; Mickiewicz et al, 2021). For example, if there is protection of ownership or legal structures to enforce contracts in place, then investors are provided with the sufficient security justify taking risks (Aidis, et al.,

2012). Johnson, McMillan, & Woodruff (2002), in their paper on property rights and finance, undertook a survey of new companies in several post-communist countries and discovered that weak property rights discourage firms from investing their profits into their business, even when bank loans are available to them. Where property rights are strong, entrepreneurs reinvest their profits. This dynamic has led to much research regarding the ways that any general kind of institution might exert an impact on start-ups or on running a business and has led to research on the quality of institutions (Urbano et al., 2019).

3.2.1 Formal and Informal Institutions

To obtain deeper insight into the potential impact of institutions in general, it makes sense to specify them as informal or formal institutions: formal institutions are those that are provided in written form, while informal institutions represent nonwritten codes of behavior, conventions and customs (North, 1990). Formal institutions are found in rules, laws, regulations and policies and are often embedded in political or economic systems. These include not only codified rules but also well-organized sanctions, such as binding contracts and formalized actions (i.e., becoming a landowner (Boettke and Coyne 2009).

In contrast, informal institutions refer to noncodified but established social attitudes, customs and values (Casson et al., 2010) as well as noncodified sanctions. In most cases, informal institutions are inherited by a social group, a society, or a culture, and people learn about them through social interactions (North 1990). Whether formal or informal, institutions undoubtedly exert a very significant impact on the entrepreneurial climate and environment of a given country. Thus, it is natural that researchers have already analyzed the effects of formal and informal institutions on entrepreneurship in general. However, the effects regarding a) early-stage and mature entrepreneurship categories in b) different types of countries, such as efficiency-driven and innovation-driven countries, have yet to be distinguished. This is the research gap that our study aims to fill.

Many cross-country comparison studies (see Table 1) have elucidated the impact of informal and formal institutional settings on business start-ups for either necessity-

or opportunity-driven new firms (Wong et al., 2005; Van Stel et al., 2007; Fuentelsaz et al., 2015; Amorós et al., 2019). For example, Fuentelsaz et al. (2015) concluded that the development of formal institutions primarily benefits opportunity entrepreneurship, which is linked to economic growth. Rather, informal institutions favor the relative presence of necessity entrepreneurship (Aparicio et al., 2016). A large research area is focused on the topic of entrepreneurship as related to different formal institutions and the associated effects, especially on new business formation either inside of a single country (Agostino et al., 2020) or in cross-country samples (Klapper et al., 2007; Levie and Autio, 2011; Aidis et al., 2012; Stenholm et al., 2013), thus delivering the first insight that institutional settings exert an important impact on new entrepreneurship development. A few papers have analyzed how various institutional dimensions differently affect either the entrepreneurial stage (Hartog et al., 2010) or entrepreneurial aspirations (Troilo, 2011).

Based on these results and to close the research gap, our research is focused on selected1 formal institutions and their impact on the focal entrepreneurial activity levels in different country contexts.

Table 3: Overview of extant research papers on institutions, entrepreneurship and countries

Paper	**Year and Journal**	**Author**	
Rule of Law and regulatory quality as drivers of entrepreneurship.	*Regional Studies, 2020*	Agostino, et al.	Specific Institutions with entrepreneurship in common
Institutions and entrepreneurship: The role of the Rule of Law.	Research Report, 2010	Hartog, et al.	
Regulatory burden, Rule of Law, and entry of strategic entrepreneurs: An international panel study.	*Journal of Management Studies*, 2011	Levie & Autio.	
Which institutions encourage entrepreneurial growth aspirations?	Journal of Business Venturing, 2013	Estrin, et al.	
Entrepreneurship and quality of institutions: A developing-country approach	WIDER Research Paper, 2009	Amorós	Specific countries with institutions and

Institutional Perspectives on Entrepreneurial Behavior in Challenging Environments	Journal of Small Business Management 2011	Welter & Smallbone	entrepreneurship in common
Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence.	*Technological Forecasting and Social Change*, 2016	Aparicio, et al.	Specific entrepreneurship with institutions in common
The effect of business regulations on nascent and young business entrepreneurship.	*Small Business Economics*, 2007	Van Stel et al.	
Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future?	*Entrepreneurship Theory and Practice*, 2010	Bruton, et al.	Institutions, countries and entrepreneurship held in common
Testing Baumol: Institutional quality and the productivity of entrepreneurship.	*Journal of Business Venturing, 2008*	Sobel	
Twenty-five years of research on institutions, entrepreneurship, and economic growth: What has been learned?	*Small Business Economics*, 2019	Urbano et al.	
How different formal institutions affect opportunity and necessity entrepreneurship.	*BRQ Business Research Quarterly. 2015*	Fuentelsaz et al.	Specific entrepreneurship and specific institutions with countries in common
Legal institutions and high-growth aspiration entrepreneurship.	*Economic Systems, 2011*	Troilo	
Exploring country-level institutional arrangements on the rate and type of entrepreneurial activity.	*Journal of Business Venturing, 2013*	Stenholm et al.	Specific entrepreneurship and specific countries with institutions in common

Source: Own

3.2.2 Studies on institutions and experiences concerning the measurement of indicators

Based on the related literature, we find different sets of formal institutional indicators for measuring the impact of institutions on economic performance and entrepreneurship. Quantifying the measurement of institutions could be a complicated task because institutions themselves have a more qualitative nature (Svensson, 2005). Nevertheless, there are different data sources used worldwide that

are providing formal institutional indices. These include the Global Competitiveness Report (Dutta, 2012) and others that maintain a greater focus on corruption topics, such as the International Corruption Perceptions Index (Wilhelm, 2002) and the World Bank "Doing Business" Report https://www.doingbusiness.org/en/reports/global-reports/doing-business-2020 (Groşanu et al., 2015). Meanwhile, studies focusing on the formal institutional impacts on different aspects of business, including entrepreneurship, prefer to work with the World Governance Indicators that were developed in 1999 by Daniel Kaufmann (Natural Resource Governance Institute and Brookings Institution) and Aart Kraay (World Bank Development Research Group) https://info.worldbank.org/governance/wgi/(Levie & Autio, 2011).

Table 4: Institutional data sources and papers

Index	Paper	Journal	Year	Author(s) :
GCR	Entrepreneurship and Global Competitiveness: A Study on India	Indian Journal of Industrial Relations ,	2012	Dutta
CPI	International Validation of the Corruption Perceptions Index: Implications for Business Ethics and Entrepreneurship Education	Journal of Business Ethics	2002	Wilhelm
WB DB	The Influence of Country-Level Governance on Business Environment and Entrepreneurship: a Global Perspective	Amfiteatru Economic Journal	2015	Groşanu, et al.
WGI	Regulatory burden, Rule of Law, and the entry of strategic entrepreneurs: An international panel study.	Journal of Management Studies,	2011	Levie & Autio

Source: Author

The World Governance Indicators (WGI) represent the common views on governance quality as provided by many survey data collected by various survey institutes, nongovernmental organizations, international organizations, and private

sector companies in more than 200 countries since 1996 (Kaufmann et al. 2008). The WGI covers a wide range of formal institutions and is considered a well-known, reliable and valid database. Most of the indicators included provide very specific and disaggregated information covering certain governance dimensions that are of great interest in themselves. Regarding formal institutions, six composite WGI measures are of interest and represent useful tools for making broad cross-country comparisons and evaluating broad trends over time, and these measures are often used in entrepreneurship studies. They are the rule of law; regulatory quality; the control of corruption, voice and accountability; political stability and government effectiveness. Notably, these six indicators are divided into 3 groups: A, B and C.

Group A includes those indicators used to reflect the process by which governments are selected, monitored, and replaced. These indicators are voice and accountability, political stability and the absence of violence/terrorism. Voice and accountability is the indicator used to measure the extent to which a country's citizens are able to participate in selecting its government, as well the extent to which freedom of expression, association, and a free media are protected. Political stability and the absence of violence/terrorism are indicators that operationalize the probability that a government will be destabilized or replaced through nonconstitutional and violent means, or more specifically, through politically motivated violence and terrorism.

The Group B indicators are used to reflect the government's capacity to formulate and implement effective and sound policies, and they include government effectiveness as a measure of the quality of public and civil service, the degree of its independence from political pressures, the quality of formulated and implemented policies and the government's level of commitment to such policies. Additionally, regulatory quality is implemented by delivering insights into the ability of the government to formulate and implement sound policies and regulations that provide for private sector development.

The Group C indicators show the respect that state and citizens have toward the institutions that govern the social and economic interactions among them. Here, rule of law, which measures the extent to which agents have confidence in and abide

by society's rules, comes into play. Additionally, the control of corruption, which reflects the extent to which public power is interested in private gain, corruption, and the "capture" of the state by elites and private interests, becomes relevant (Kaufmann et al. 2010).

These formal institutional indicators, which are used to reflect "institutional quality," are broad concepts capturing law, individual rights and high-quality government services and regulations. The quality of institutions affects different entrepreneurial activities (Sobel, 2008). Undoubtedly, not all institutional indicators are equally powerful drivers of entrepreneurship, while some of them have a larger impact on entrepreneurial activity (Agostino et al., 2020). Formal institutions shape the rules, and they directly affect the economic incentives and strategies of entrepreneurs (North, 1990, Williamson, 2000):

For example, the rule of law indicator reflects a well-organized and defined legal framework that provides security and reduces the uncertainty and transactional costs of economic activity (Rodrik, et al., 2004). It rests upon a legislative basis. In addition, the rule of law also has the capacity to attract high-growth companies (Estrin et al., 2013) and increase the level of mutual trust among economic agents (Efendic, et al., 2015). All these effects have a positive influence on entrepreneurial activity in a given country.

Regulatory quality is another important institutional dimension that shapes entrepreneurship (Van Stel, et al., 2007). It provides easier market entry for entrepreneurs due to transparency and well-enforced rules and regulations on the market (Johnson, et al., 2002), while weak or regulatory quality can create opportunistic behavior and reduce the level of economic efficiency (Bridgman et al., 2009). Regulatory quality generates favorable economic conditions within which entrepreneurs can operate.

Control of corruption is the third institutional dimension affecting entrepreneurship. The less that the control of corruption is at play, the more that the development and growth of entrepreneurial activities become impeded (Aidis, et al., 2012) because corruption increases the costs of production and hinders the amount of formally

established entrepreneurial activity (Johnson, et al., 1997; Aidis, et al., 2012). It also increases the transactional cost, so entrepreneurs may choose to reduce their operations in the formal sector or choose to switch to the informal sector (Johnson, et al., 1997, Friedman et al. 2000). Therefore, according to the WGI (2020), this indicator is used to monitor of the levels of various corruption issues, including public trust in politicians, irregular payments and bribes. This indicator also has a direct impact on entrepreneurial activity because it provides transparency to the business conducted in a given country and ensures the absence of illegal transaction costs related to entrepreneurial activity.

Therefore, in our research, we focus on these three formal indicators, following the established definitions and individual variables, due to their greater impact on entrepreneurial activity (Agostino et al., 2020; Amoros, 2009; Estrin et al., 2013).

3.2.3 Different kinds of entrepreneurial activity at the cross-country level: Sources and indicators

For this study, it is necessary to not only understand what entrepreneurship is but also why, how and at what stage it might be affected by formal institutions; thus, we consider both start-ups and established entrepreneurial activities. Moreover, it is necessary to find reliable sources to check for these activities. There are two well-known and established international entrepreneurship datasets: the World Bank Group Entrepreneurship Survey (WBGES) and the GEM. Both databases reflect the continuum of entrepreneurial activities and measure entrepreneurship according to several indicators.

The World Bank's Entrepreneurship Survey is the only dataset to reflect the actual level of entrepreneurial activity. For example, the key indicator of entrepreneurship in WBGES is the entry rate, which is defined as the proportion of new firms (those that were registered in the current year) as a percentage of the total registered firms. Another important indicator is business density, which is determined by the number of registered firms as a percentage of the active company population (Klapper, 2006).

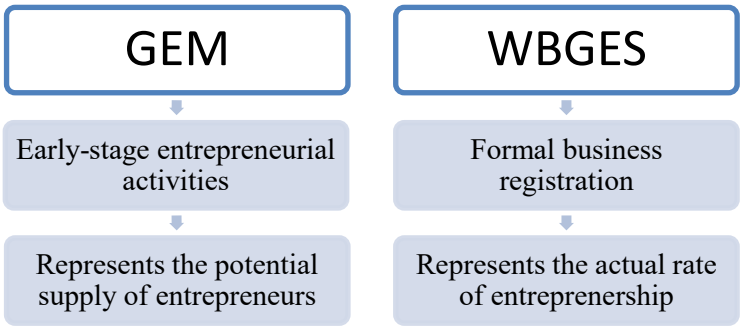
Instead, the GEM delivers a global overview of interest regarding entrepreneurial activity; thus, the GEM looks at entrepreneurship as a process. The key goal of the GEM is to explain why the rates of entrepreneurial activities "differ among economies at similar stages of economic development" (GEM, 2014). The project is unique in nature because it explores the dynamics of the level of entrepreneurial activity in various countries as a trend design and connects it to the level of economic development. Therefore, it is used to identify factors that stimulate or impede entrepreneurial activity. Moreover, the GEM is used to determine the extent to which entrepreneurial activities influence the economic growth of specific economies, such as factor-driven, efficiency-driven, and innovation-driven economies (GEM, 2016). This is why GEM data are fitted to answer our research questions as an initial perspective.

According to the literature and the GEM logic, there are several phases that entrepreneurs progress through during their entrepreneurial life, such as the stages represented by potential entrepreneurs, nascent entrepreneurs, new business owners, and established business owners. Potential entrepreneurs are those who are still expecting or thinking about starting a business. Nascent entrepreneurs are people actively involved in starting a new venture but do not have the ability to generate salaries or wages for a period of more than three months (Acs et al., 2008, p.279). New business owners are rather people who have moved beyond the nascent stage and have been able to pay salaries and wages for more than three but less than 42 months. Established business owners are individuals who have run ventures for more than three and a half years (the GEM 2016, p.21). Thus, GEM delivers the data we need to analyze the different levels of entrepreneurial activity. Nascent entrepreneurs as well as new business owners are categorized according to their total early-stage entrepreneurial activity (TEA). The TEA rate is the key indicator for the GEM. The established business ownership rate for EBOs is calculated as the percentage of the adult population who are established business owners. The business discontinuation rate is the percentage of the adult population between the ages of 18 and 64 years (who are either nascent entrepreneurs or an owner-manager of a new business) who have, in the past 12 months, discontinued a business by

either selling, shutting down, or otherwise discontinuing their owner/management relationship with the business (GEM, 2016).

The broad global approach makes the use GEM data quite appealing for researchers, as it offers the opportunity to work across countries and on different levels of entrepreneurship. To summarize how researchers work either with the GEM or the WBGES to inform their studies, the question "What does the "entrepreneurship" data show?" is always relevant (Acs et al., 2008). It is necessary to know the differences that exist between two popular sources for internationally comparable data and which one is the best fit for answering our research questions. Summarizing the discussed studies, the main discrepancy between the two datasets is shown in Figure 1.

Figure 6: Differences between the GEM and WBGES



Source: Adapted from Acs et al. *(2008).*

Based on these insights, the broad approach of using the data from the GEM project, where entrepreneurship is determined as "any attempt to create a new business or a new venture, such as self-employment, a new business organization or the expansion of an existing business by an individual, a team of individuals, or an established business (https://www.gemconsortium.org/wiki/1149), is a better fit for delivering the results of our research. In terms of entrepreneurial activity, The GEM embraces "the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets" (Ahmad & Seymour, 2008, p.12). To conclude, we explore the effect of formal institutions on the early and mature entrepreneurial stages in our analysis so that the entrepreneurial data used are

derived from the GEM. Two entrepreneurial indicators, the total early-stage entrepreneurial activity rate and the established business ownership rate, are considered and studied.

3.3 HYPOTHESES:

Based on the discussed theoretical aspects, the existing results in research and the observed research gap, the following hypotheses are developed and tested:

First, as previously discussed, we assume that the selected formal institutional dimensions have a different impact on mature and early entrepreneurship rates in both groups of countries. Thus, we propose the following hypotheses:

Nascent Entrepreneurs and Starting Businesses:

H1a: The rule of law is more strongly connected to the rate of nascent entrepreneurs and the creation of businesses than control of corruption or regulatory quality in both of the observed groups of countries.

H1b: The control of corruption is more strongly connected to the rate of nascent entrepreneurs and the creation of businesses than the rule of law or regulatory quality in both of the observed groups of countries.

H1c: Regulatory quality is more strongly connected to the rate of nascent entrepreneurs and the creation of businesses than control of corruption or the rule of law in both observed groups of countries.

Established Entrepreneurs and Businesses:

H2a: The rule of law is more strongly connected to the rate of established businesses than the control of corruption or regulatory quality in both of the observed groups of countries.

H2b: The control of corruption is more strongly connected to the rate of established businesses than the rule of law or regulatory quality in both of the observed groups of countries.

H2c: Regulatory quality is more strongly connected to the rate of established businesses than the control of corruption or the rule of law in both of the observed groups of countries.

Based on the discussion concerning country context (Welter, 2011), the last four hypotheses were developed to be more driven by efficiency and innovation. They are used to test the impact of formal institutional dimensions on nascent and new entrepreneurs and on established business depending on their economic development stage.

H3a: The rate of nascent entrepreneurs and new businesses is more strongly correlated with the selected formal institutional dimensions in efficiency-driven countries.

H3b: The rate of established businesses is more strongly correlated with the selected formal institutional dimensions in efficiency-driven countries.

H4a: The rate of nascent entrepreneurs and new businesses is more strongly correlated with the selected formal institutional dimensions in innovation-driven countries.

H4b: The rate of established businesses is more strongly correlated with the selected formal institutional dimensions in innovation-driven countries.

3.4 Methodology

To gain insights into this relationship among entrepreneurial activity, formal institutions and country context and to deliver answers to our research questions, we selected the database to work with and operationalized the dependent and independent variables to perform our empirical analysis.

3.4.1 The Sample

To uncover answers to our research questions, we need access to a) the different institutional formal (and informal) indicators and b) data on newly started or starting businesses as well as those that have already been established in the market. As

discussed in the literature section, there are few choices for gaining data on worldwide indicators. Because of the validity and broad country access, the data from the WGI seem to be more suitable and representative of the different countries worked with. Therefore, we use the 2016 waves of this database for 22 countries, delivering insights into the levels of the three chosen formal institutional settings, namely, regulatory quality, the rule of law and the control of corruption.

Even more important to the project is obtaining access to the different kinds of start-ups or nascent entrepreneurial activities as well as to established businesses. As the literature analysis showed, here, the GEM data deliver broader and better access to those different levels of entrepreneurship with tested and validated variables to measure these entrepreneurial activities. Moreover, the discussion made it clear that obtaining access to several countries with sufficient cases is possible by working with GEM data. The advantages of using GEM data are multifaceted. First, for all countries, the GEM offers access to either nascent entrepreneurs or already established entrepreneurs, as measured using the validated variables *Total Early-stage Entrepreneurial Activity* (TEA rate) and *Established business ownership rate* (EBO rate). The TEA rate reflects the share of the adult population between the ages of 18 to 64 years who have taken steps to start a new business (start-up entrepreneurs) or managed a new business and paid their own salary after 3 months but prior to 42 months (new entrepreneurs) (GEM, 2016). The EBO rate stands for the share of the adult population aged 18 to 64 who currently serve as the owner-manager of an established business, specifically both managing the business and earning a living through the business (thus, paying themselves salaries, wages or any other payments for more than 42 months) (GEM, 2016). Second, the GEM offers data for many countries worldwide regarding the categorization of economic development stages, such as factor-, efficiency- and innovation-driven economies. This allows us to explore the way in which formal institutions can support or hinder any entrepreneurial activities at the level of economic development. Based on the GEM sample, we constructed a random sample of countries accounting for their development status as either efficiency-driven or innovation-driven countries. The factor-driven group is excluded from our analysis due to its containing a very limited number of countries (seven out of sixty-four). These two groups of countries are

expected to exhibit two distinct patterns of entrepreneurial activities and attitudes toward starting a business and running a business under specific (formal) institutional conditions. It should be mentioned that countries with *innovation-driven* economies are the most developed and are characterized as more knowledge intensive. Countries with an *efficiency-driven* economy are located between the factor-driven and innovation-driven categories. This means that such countries have transitioned their activities from subsistence agriculture and extraction businesses, have more efficient production processes and strive to increase their competitiveness in the global market (GEM, 2016).

From the GEM, we picked countries that represent the continuum of nations regarding development stage and size, while excluding extremes. Thus, we chose countries from various geographical areas, such as Europe, Asia, Africa, and Latin America. Furthermore, the selection of countries is dependent on their size. For this reason, we exclude from our analysis the largest economies such as the USA, China, Brazil, Russia, and India and the smallest economies, such as Liechtenstein or Andorra.

Thus, each group consists of 11 countries from various geographic regions and of a comparable size. The list of countries is depicted in the Appendix (see Table A.1), and the chosen countries reflect the types of economies that they represent. To summarize our sample, our data were derived from the data published in the GEM Global report 2016/2017 and online databases such as the Worldwide Governance Indicators (WGI) project.

3.4.2 Operationalization of dependent and independent variables

In this paper, we investigate how formal institutions influence the different kinds of entrepreneurship, so our dependent variable for the study is entrepreneurial activity at the nascent or early-stage level as well as that at the established level. In addition, the independent variable is related to three institutional formal dimensions: The control of corruption, the rule of law and regulatory quality. We expect the impact of various formal institutional dimensions to differ according to the stage of entrepreneurial activities. To reflect differences between the two stages of

entrepreneurial activities, the total early-activity rate (TEA rate) and established business ownership rate (EBO rate) are both used in the analysis. A more detailed description of the entrepreneurial and institutional variables and their sources is given in Table 3.

Table 5: Description of the variables

Dimension	Variable	Description	Source
Entrepreneurship	*Dependent*		
TEA	Total early-stage entrepreneurial activity (TEA rate)	the share of the adult population aged 18 to 64 years who have taken steps to start a new business (start-up entrepreneurs) or managed a new business and paid their salary after 3 months but prior to 42 months (new entrepreneurs) (GEM, 2016).	GEM
EBO	Established business ownership rate (EBO rate)	the share of the adult population aged 18 to 64 who are currently the owner-manager of an established business and, specifically, has paid salaries, wages or any other payments to the owners for more than 42 months (GEM, 2016).	GEM
Institutional Indicators	*Independent*		
CC	Control of corruption	The perceptions regarding the degree to which public power is exercised for private gain, including petty and grand forms of corruption, as well as the "capture" of the state by elites and private interests (WGI, 2020).	WGI
RL	Rule of law	The perceptions regarding the degree to which agents have confidence in and abide by the rules of society, in particular, the enforcement quality, property rights protection, the police, and the court system, as well as the perception regarding	WGI

		the probability of crime and violence (WGI, 2020).	
RQ	Regulatory quality	The perception regarding the government's ability to formulate and implement sound policies and regulations that allow and promote private sector development (WGI, 2020).	WGI

Source: Own

3.5 Data analysis

The goal of this study is to understand which particular formal institutional dimension has a stronger impact on entrepreneurial activity at either the early or the mature stage. To study the relationship between two variables, simple linear regression (ANOVA model) is employed. We chose regression analysis as the primary statistical method for our study because of its inherent ability to explore relationships and dependencies between variables. It provides a versatile framework for modelling and quantifying the effect of one or more independent variables on the dependent variable, making it an ideal choice for exploring the complex interaction of factors in our study. We aim to explore the multifaceted relationships between different factors and their influence on the research outcomes of interest, so regression analysis not only allows us to assess the strength and direction of these relationships, but also to draw appropriate conclusions. In addition, this method fits well with the nature of our data, which consists of multiple variables, each of which may contribute to the phenomenon under study. Therefore, by using regression analysis, we can systematically examine these variables and gain a deeper understanding of the dynamics underlying our research questions

To test the form of the relationship between the institution (including our three cases: rule of law, control of corruption, and regulatory quality) and entrepreneurship (including two cases: the total-early-stage entrepreneurial activity rate and the established business ownership rate), we address six relationships for each group of countries. A random sample of the population can be written as follows:

$$Yi \text{ (institutional dimension)} = \beta_0+\beta_1 Xi \text{ (entrepreneurial rate)} + ui \quad (1)$$

Furthermore, the OLS method is used to estimate the regression parameters to determine the best-fitted line. If the model fits the data well, most points are allocated close to the straight line, which leads to the smallest sum of the squared residuals.

The OLS regression line is

$$\widehat{Y} = \hat{\beta}_0 + \hat{\beta}_1 X \quad (2)$$

where $\hat{Y}$ is the fitted value for y when x = xi and where the residual is

$$\hat{u}_i = y_i - \hat{y}_i = y_i - \hat{\beta}_0 - \hat{\beta}_1 x_i \quad (3)$$

The scatterplots represent the results of the six relationships for each group and are presented in Section 5. Our data interpretation follows the general rules regarding correlations, regression coefficients and controls (Wooldridge, 2016). In doing so, our R-squared analysis helps us identify whether the percentage of data is the closest to the best-fit line.

Statistical analysis of the data was executed using STATA software. The summary statistics provide us with the content of variables, which is important in making a comparison between groups of countries, on the one hand, and to better understand the impact of independent variables (formal institutional indicators) on the other. Table 4 and Table 5 demonstrate the descriptive statistics for the variables that are used in our study. The consideration of the TEA rate allows us to obtain two results. First, th1e TEA rate tends to be higher in efficiency-driven countries than in innovation-driven countries. Second, the value of the TEA rate inside groups of the same development level shows substantial variation. In the case of efficiency-driven economies, this indicator has a value between 4.7 and 24.2. In the case of innovation-driven economies, the TEA rate takes a value between 4.4 and 11. At the same time, established business ownership rates are higher in innovation-driven

economies than in efficiency-driven economies. For example, in the case of 11 innovation-driven economies, this variable takes a value of between 5.2 and 11.1, and for efficiency-driven economies, this indicator varies between 2.5 and 9.

Table 6 – Descriptive statistics, efficiency-driven countries

Variable	Obs.	Mean	Std. Dev.	Min	Max
TEA rate	11	10.364	5.559	4.7	24.2
EBO rate	11	6.345	2.058	2.5	9.5
Control of corruption	11	67.876	11.146	50.96	88.46
Rule of law	11	69.625	9.329	52.4	85.1
Regulatory quality	11	75.612	8.214	62.02	89.9

Source: Author's calculation based on the GEM and WGI

Table 7 – Descriptive statistics, innovation-driven countries

Variable	Obs.	Mean	Std. Dev.	Min	Max
TEA rate	11	7.345	2.067	4.4	11
EBO rate	11	7.627	1.752	5.2	11.1
Control of corruption	11	82.475	13.471	59.62	99.52
Rule of ;aw	11	87.545	10.756	62.02	99.04
Regulatory quality	11	87.063	9.707	73.08	98.56

Source1: Author's own calculation based on the GEM and WGI

According to our statistical results regarding formal institutional dimensions (see Tables 4 and 5), all three indicators are higher in innovation-driven economies. Notably, the value of these formal institutional indicators is measured in percentile rank terms ranging from 0 to 100, where higher values indicate better outcomes. Furthermore, the variation among countries is substantial. For example, in efficiency-driven countries, the rule of law has a minimum value of 52.4 and a maximum value of 85.1, with a relatively modest standard deviation of 9.33. These results are significant.

Table 6 and Table 7 show that the median TEA rate in both groups of economies is lower than the mean. For instance, in efficiency-driven countries, the median is equal to 8.6, and the mean is 10.4. The same can be shown for the EBO rate. This means that the distribution is skewed to the right for both types of entrepreneurial activities.

Table 8: The median, efficiency-driven countries

	TEA rate	EBO rate	Control of corruption	Rule of law	Regulatory quality
Min	4.7	2.5	50.96	52.4	62.02
p25	6.9	4.7	60.58	64.9	69.23
p50	8.6	6.2	63.46	69.23	75.48
p75	14.1	8.0	75.96	74.52	81.73
Max	24.2	9.5	88.46	85.1	89.90

Source: Author's own calculation based on the GEM and WGI

Table 9: The median, innovation-driven countries

	TEA rate	EBO rate	Control of corruption	Rule of law	Regulatory auality
Min	4.4	5.2	59.62	62.02	73.08
p25	5.2	6.6	68.27	83.17	76.44
p50	8	7.1	80.29	86.06	87.02
p75	8.2	8.8	94.71	97.12	96.63
Max	11	11.1	99.52	99.04	98.56

Source: Author's own calculation based on the GEM and WGI

3.6 Empirical results

In this section, we first examine the relationship between the three formal institutional dimensions (rule of law, control of corruption, and regulatory quality) and the two different types of entrepreneurial activities (early and mature). We find significant connections between all checked variables. However, we cannot postulate the direction of causality. The empirical results show that the differences in institutional quality can assist in explaining differences in entrepreneurial activities (early and mature) across the two groups of counties: those with efficiency-driven economies and those with innovation-driven economies.

Table 10: The coefficients of correlation

Relationship	**(r) for Efficiency-Driven countries**	**(r) for Innovation-Driven countries**
TEA rate and the control of corruption	0.749	0.480
TEA rate and the rule of law	0.819	0.567
TEA rate and regulatory quality	0.615	0.307
EBO rate and the control of corruption	0.537	0.729
EBO rate and the rule of law	0.571	0.761
EBO rate and regulatory quality	0.802	0.725

Source: Author's own calculation based on the GEM and WGI; the significance levels are strong

Here, the first interesting observation is (see Table 8) that for TEAs in innovation-driven countries, the relation between the formal institutional indicators is much weaker than in efficiency-driven countries, and this variation is significant. In contrast, the relation of the three formal institutional factors in innovation-driven countries to EBOs is much stronger, aside from regulatory quality (in both relations). This gives a first hint that developmental status seems to play a role in how formal institutional settings affect different levels of entrepreneurial activity.

3.6.1 *Analysis of the TEA rate and the three institutional indicators*

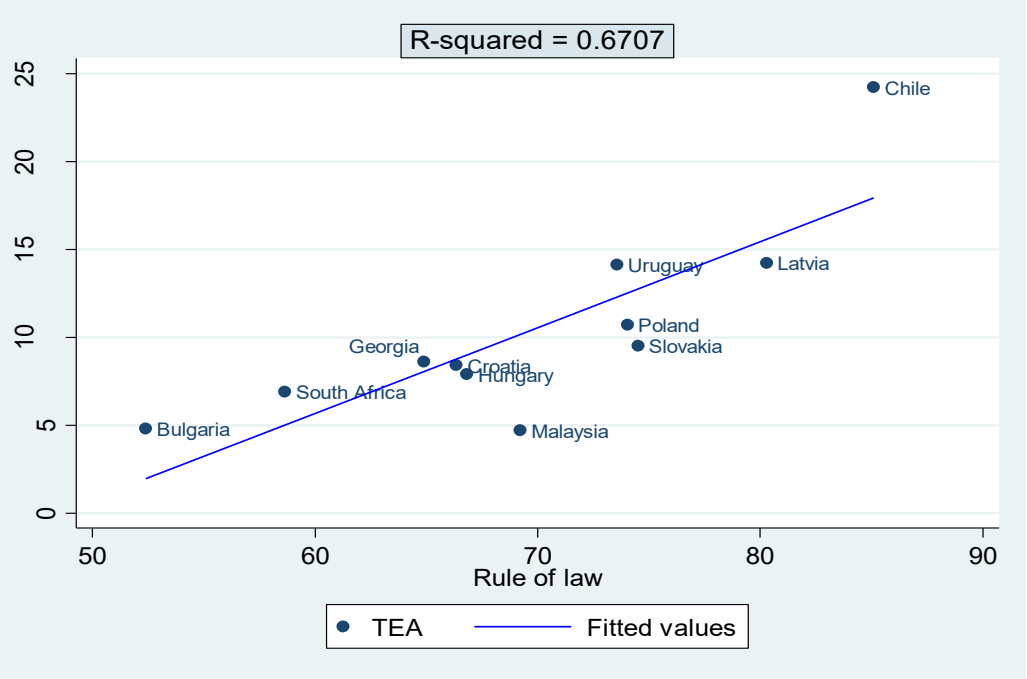
In a first step of our quantitative causal empirical analysis, we undertook twelve single ANOVA regressions to obtain separated scatter-plots illustrating the relationship between entrepreneurial activity levels (TEA and EBO) and the single formal institutional variables used in our two different country settings. By doing so, we wanted to obtain a first idea of how the formal institutional setting can explain the variance of entrepreneurship activities in all observed countries. We started with the efficiency-driven context and the effects of formal institutions on TEA (Figures 7-9), followed by the innovation-driven context and the effects of formal institutions on TEA (Figures 10-12). In a second step, we did the same, while this time showing the effects on EBO in the different country settings of the efficiency-driven context (Figures 13-15) and finally in those of the innovation-driven context (Figures 16-18).

Figures 7-9: TEA rate and formal institutional dimensions in efficiency-driven countries

Figure 7: Relation between the TEA rate and the control of corruption

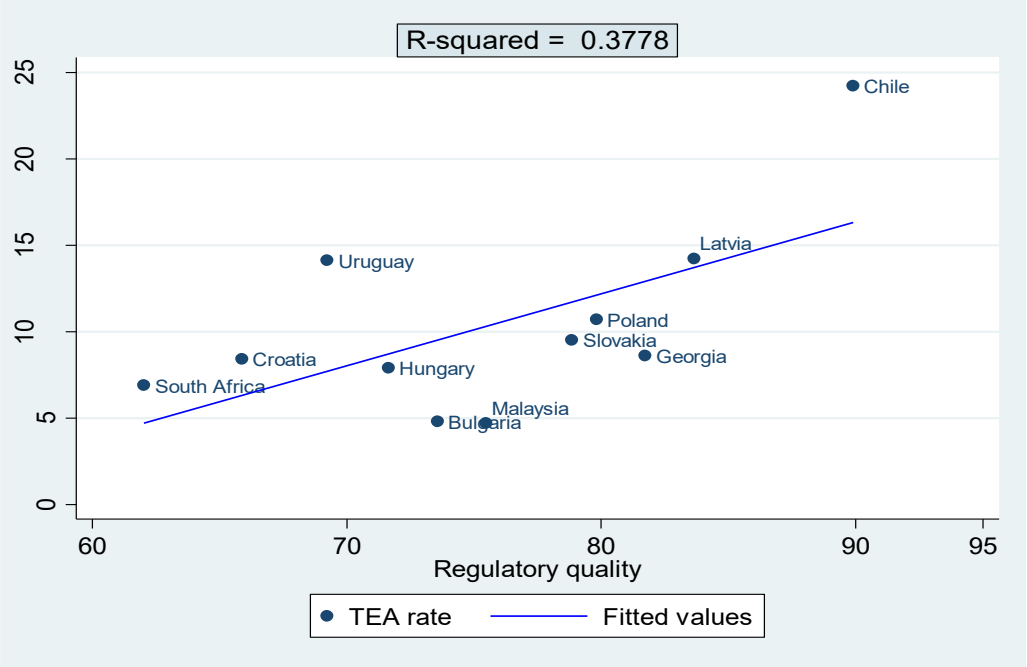
Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Figure 8: Relation between the TEA rate and the rule of law



Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Figure 9: Relation between the TEA rate and regulatory quality



Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Based on the empirical results shown in Figures 7-9 and plotted on the basis of ANOVA regressions, we summarize the following key points:

- In the case of efficiency-driven countries (Figures 7-9), the relation between the TEA rate and formal institutional indicators is significantly high, meaning that there is a significant influence of formal institutions on the TEA rate; the better the values regarding the institutional setting are, the higher the rate.
- Nevertheless, the explanatory power differs among the three formal institutional dimensions. Comparing the three figures and the R-squared values, the rule of law indicator (Figure 8) explains much more of the variation in the TEA rate for the 11 efficiency-driven countries, as does the control of corruption indicator (Figure 9). An even lower value of R-squared is associated with regulatory quality.
- Moreover, as the ANOVA regression coefficients (at a significant level) show, fluctuating between 0.615 (regulatory quality) and 0.819 (rule of law) (see Appendix, Table B.1), the rule of law has the strongest effect on TEA.
- In the case of regulatory quality, we observe some (strong) outliers, such as Chile, Uruguay, Malaysia and Bulgaria, and even Georgia, whereas in the case of the rule of law, most of the countries (except Chile) are more aligned with

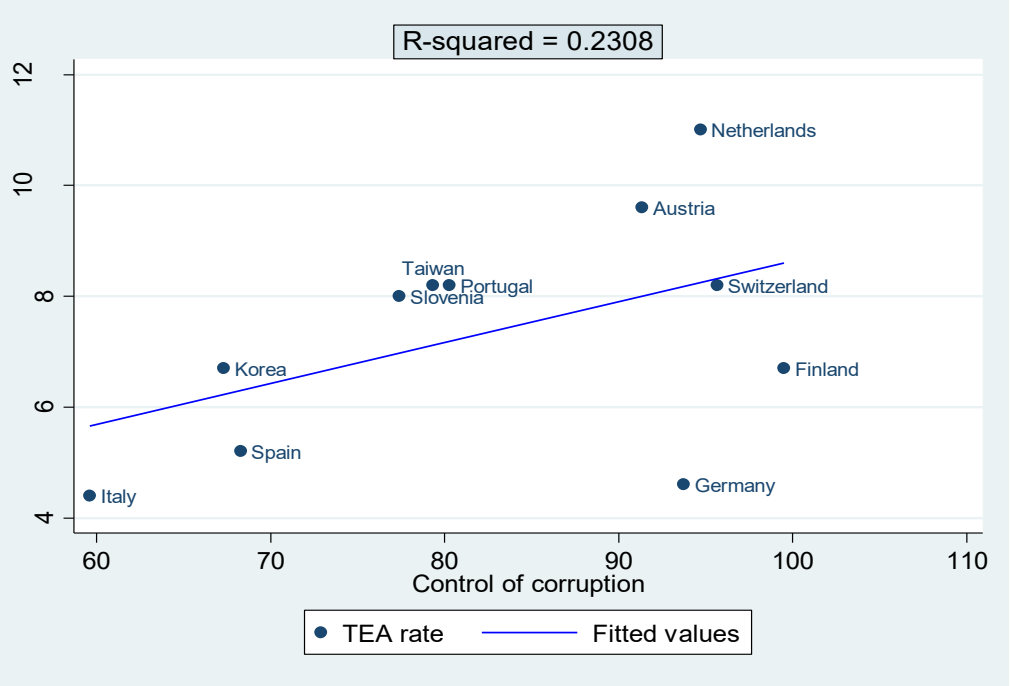
the regression line. Thus, the scatterplot displayed in Figure 8 depicts a fairly strong positive relationship between the TEA rate and the rule of law in 11 efficiency-driven countries. The data points are distributed close to the regression line. The coefficient is equal to 0.819. Interpreting the value of R-squared under this sample of countries shows that the rule of law explains approximately 67.07% of the variation in the TEA rate.

- Moreover, the plots show that in the case of underperforming the average coefficient, and in the case of control of corruption and rule of law, strong negative outcomes regarding TEA can occur, whereas when comparing countries in regard to the rule of law, it can be seen that they are almost well aligned, and the effects positively affect the TEA rate.

Looking at TEA rates in innovation-driven countries and the impact of formal institutions in this context, we find the following.

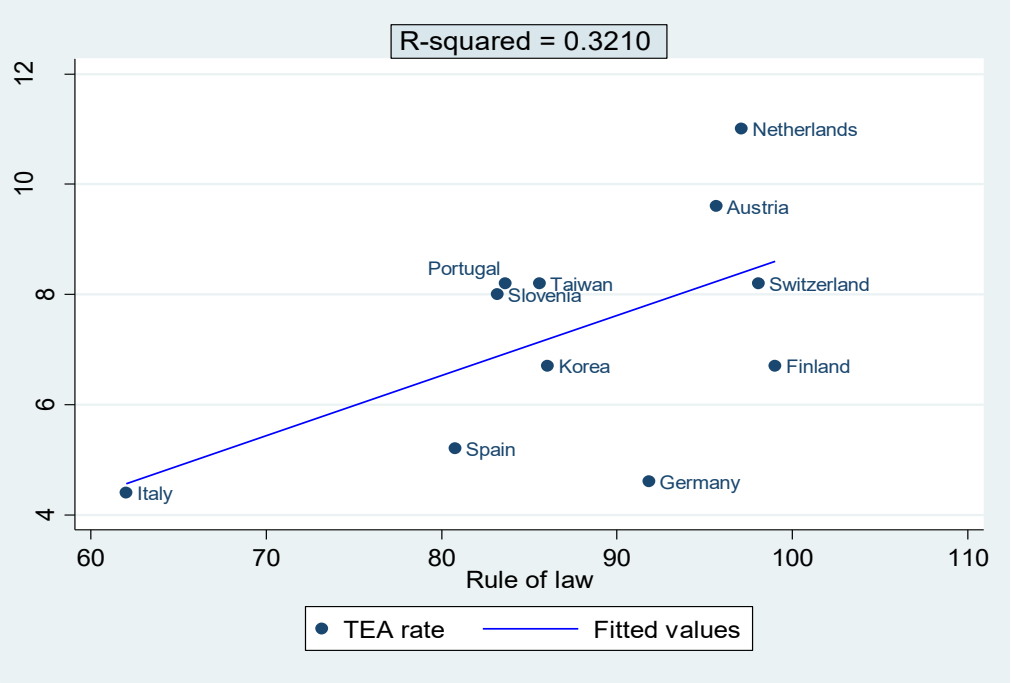
Figures 10-12: TEA rate and the three formal institutional dimensions in innovation-driven countries

Figure 10: Relation between the TEA rate and control of corruption



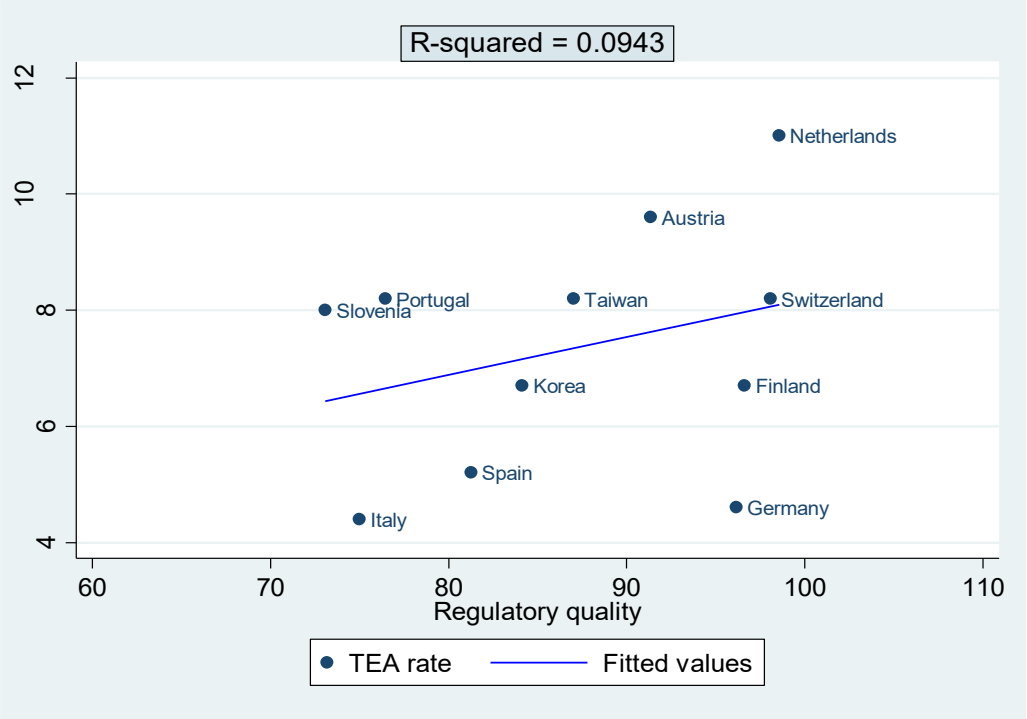
Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Figure 11: Relation between the TEA rate and the rule of law



Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Figure 12: Relation between the TEA rate and regulatory quality



Source: Author's own data and illustration, ANOVA Regression Scatter Plot

- In the case of the innovation-driven countries, once again a positive relation can be found between formal institutional indicators and the TEA rate in all three cases observable.
- Thus, the explanatory power of three formal institutional dimensions in innovation-driven countries has the same sequence, in descending order, as that in efficiency-driven countries; for example, the rule of law shows the strongest effects and can explain most of the variance in TEA rates in the countries, control of corruption delivers the second strongest effects and regulatory quality delivers the lowest. For instance, the scatterplot depicted in Figure 11 illustrates a more adjusted positive relationship between variables such as the TEA rate and rule of law in comparison with the other two. Interpreting the R-square value of 0.3210, the rule of law indicator explains slightly more than 30 percent of the variation in the TEA rate under the present sample of countries. Notably, all three formal institutional dimensions can explain less of the variation in the TEA rate in innovation-driven countries than in efficiency-driven countries.
- Again, regulatory quality seems not to be of high "importance" for the TEA rate.
- It is interesting that, again, some countries "outperform" the others, such as the Netherlands, Switzerland, or Austria, and that Italy is quite lagging behind.

Wrapping these results up and comparing them, we can summarize the following:

- The explanatory power of the influence of formal institutions on TEA is higher in efficiency-driven countries than in innovation-driven countries (Figures 7-9 and 10-12). Thus, the strength of the relationship between these formal institutions and the early-stage entrepreneurial rate is strong in both contexts but stronger in most models in innovation-driven countries at a significant level.
- In both groups of countries, the rule of law is more strongly associated with the TEA rate than control of corruption and regulatory quality.

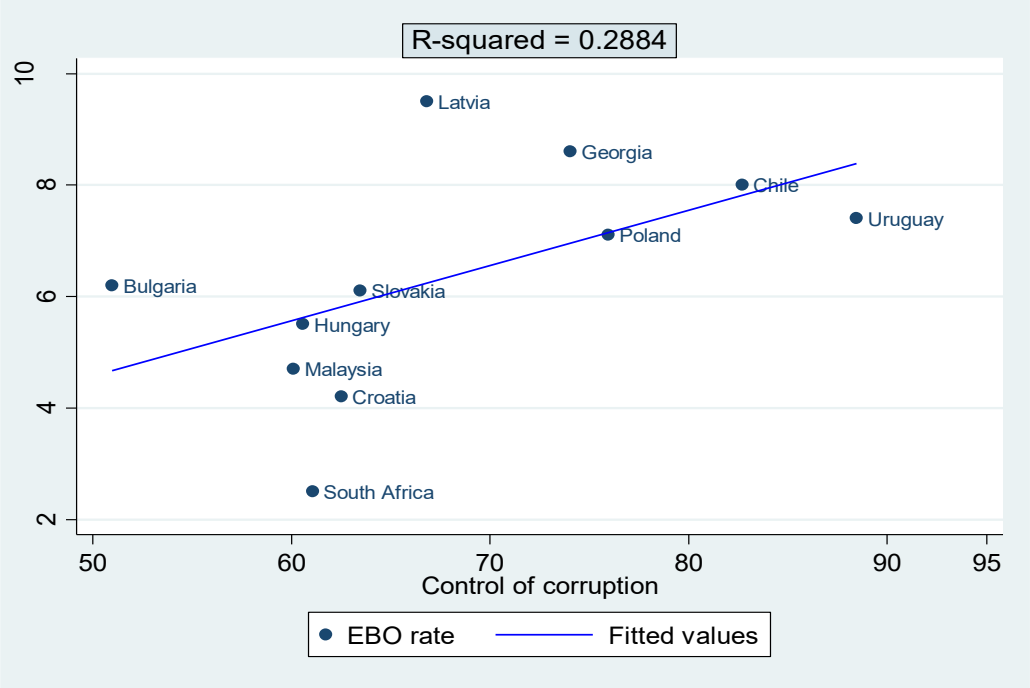
- On the basis of these first empirical results, we can see that Hypotheses 1a and 3a are approved, while Hypotheses 1b, 1c, 3b and 4a are neglected.

3.6.2 Analysis of the established business ownership rate and the three institutional indicators

In the next step, the results of the impact of formal institutions on the EBO rate are presented in scatterplots, which are again split in accordance with the two-country context.

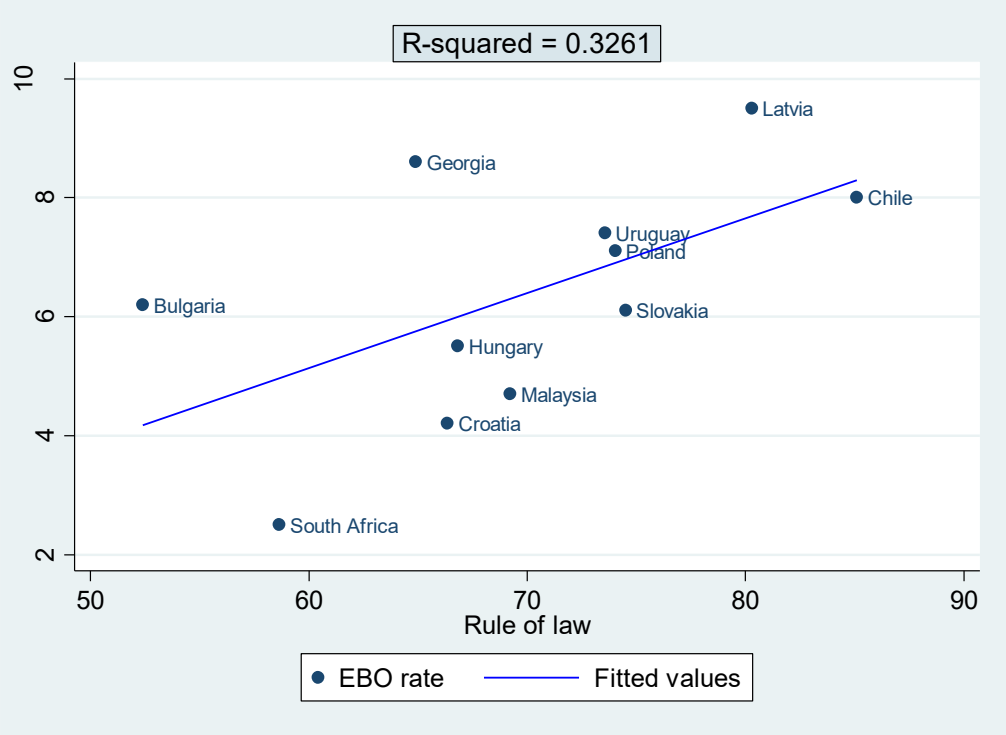
Figures 13-15: EBO rate and three formal institutional dimensions in efficiency-driven countries

Figure 13: Relation between the EBO rate and control of corruption



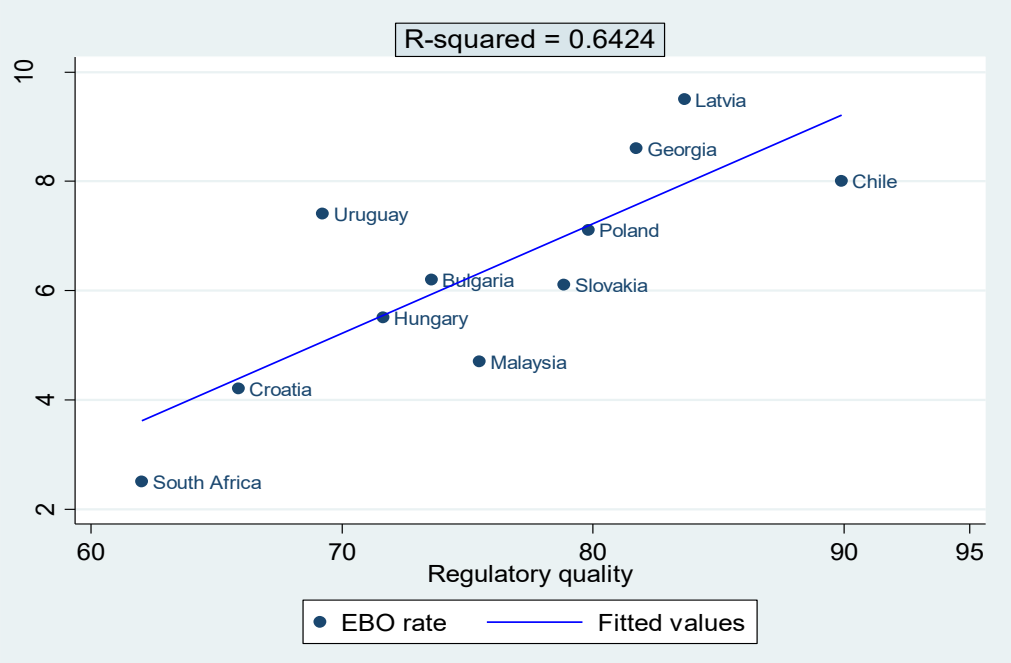
Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Figure 14: Relation between the EBO rate and the rule of law



Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Figure 15: Relation between the EBO rate and regulatory quality



Source: Author's own data and illustration, ANOVA Regression Scatter Plot

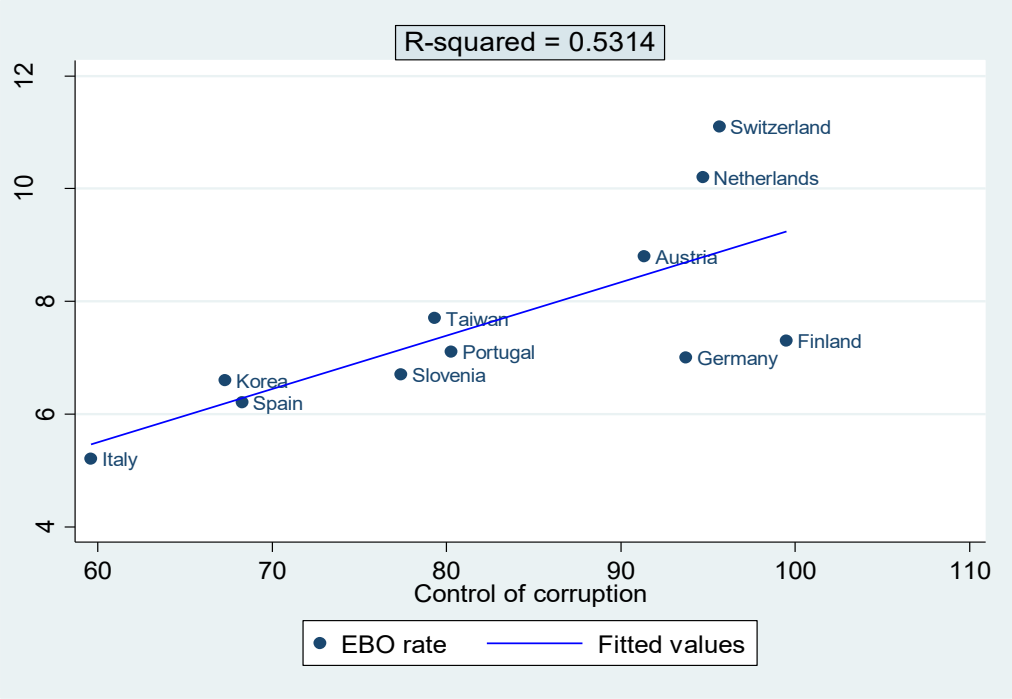
Looking at these results, it becomes immediately obvious that EBO rates are affected by formal institutional settings in a very different way, and it can here be observed in the context of efficiency-driven countries. However, there is again a positive relation between formal institutional indicators and the EBO rate.

- The regression coefficient fluctuates on a significant level between 0.5 (control of corruption) and 0.8 (regulatory quality) (see Appendix, Table B.1), which is proof that a strong correlation among variables does exist in all three cases, but this time, the highest value refers to the impact of regulatory quality while the lowest is for that of control of corruption.
- The R-squared value is the highest with 64% of regulatory quality, explaining most of the EBO variance in an efficiency-driven group of countries.
- The rule of law has a weaker explanatory power, which explains approximately 32% of the EBO rate in efficiency-driven countries. The lowest explanatory power index is associated with control of corruption at 29%.
- Chile again outperforms the other countries; this time, Latvia and Georgia are also among the stronger group of countries.

The results for the EBO rate in innovation-driven countries are as follows:

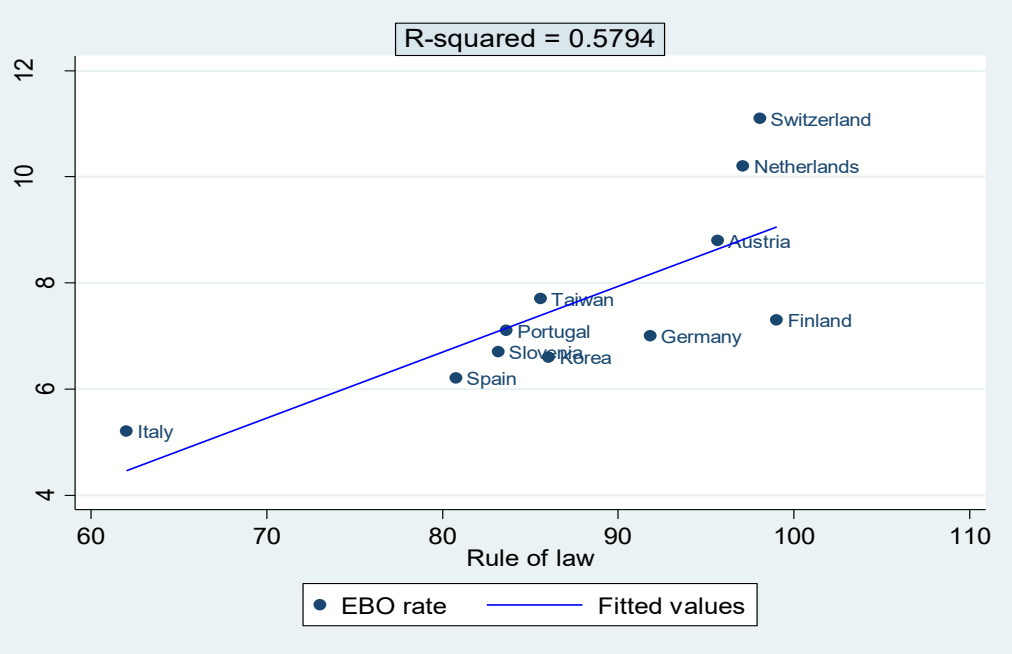
Figures 16-18: EBO rate and the three institutional dimensions in innovation-driven countries

Figure 16: Correlation between the EBO rate and control of corruption



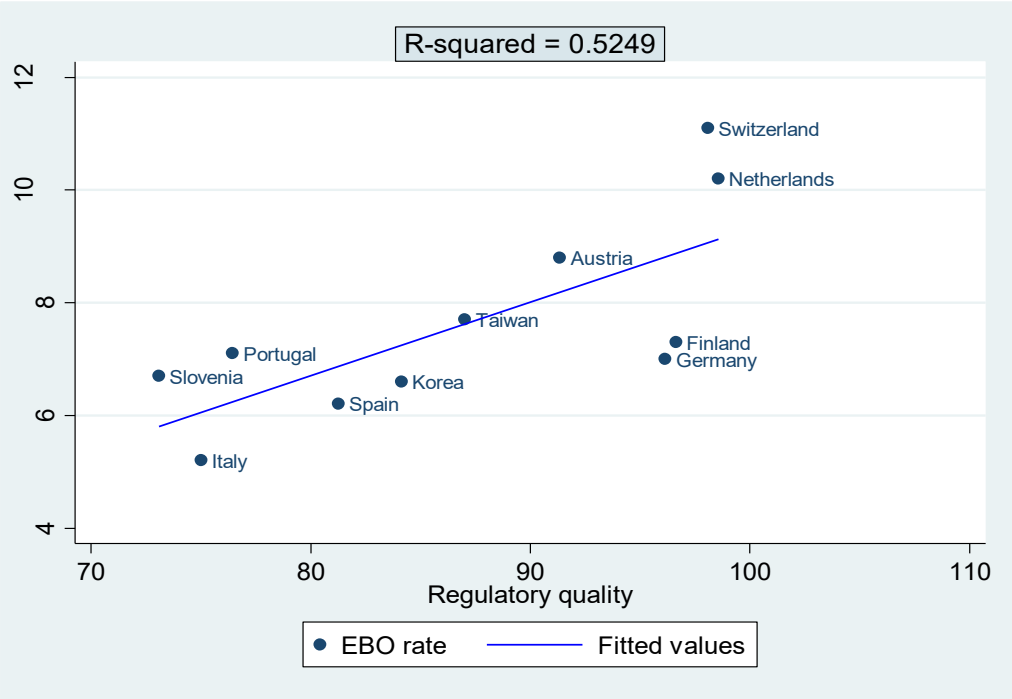
Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Figure 17: Correlation between the EBO rate and rule of law



Source: Author's own data and illustration, ANOVA Regression Scatter Plot

Figure 18: Correlation between the EBO rate and regulatory quality



Source: Author's own data and illustration, ANOVA Regression Scatter Plot

- Regarding the explanatory power of the three formal institutional dimensions, the sequence for innovation-driven countries in descending order is as follows: rule of law (57,9%), control of corruption (53,1%), and regulatory quality (52,4%).
- It is assumed that all three institutional indicators explain more than half of the variation in the EBO rate in the context of innovation-driven countries and that the explanatory power is more balanced between the three indicators.
- The coefficients of all three formal institutional indicators are both strong and positive as well as being on a significant level and influencing the EBO rate. In each case, this value is above 0.7 (control of corruption is 0,729; rule of law is 0,761; and regulatory quality is 0,725). Thus, the strength of the relationship between these institutions and the entrepreneurial rate is very strong.
- In this case, the rule of law shows the strongest effect on the EBO rate and has, in parallel, the strongest explanatory power.

Based on the empirical insights gleaned from Figures 13-15 and Figures 16-18, we can summarize the following results:

- In the case of innovation-driven countries, the relation between the EBO rate and formal institutional indicators is stronger than that in efficiency-driven countries, as the regression coefficients in the comparison show (see Appendix, Table B.1 and B.2).
- Moreover, the rule of law is more strongly connected to the EBO rate in innovation-driven countries than that in the other two institutional dimensions.
- Regulatory quality as a formal institution has the strongest correlation efficiency and highest explanatory power in all analyzed cases (67%) involving the EBO rate in efficiency-driven countries.
- On the basis of these first empirical results on the relationship between EBO and three institutional indicators, we can see that Hypotheses 2a and 2c are partly approved (the rule of law is the most correlated to EBO in innovation-driven countries, while regulatory quality is the most correlated to EBO in efficiency-driven countries), and Hypothesis 4b is supported, while Hypotheses 2b, 3b and 4a are not supported.

3.7 Robustness Check

To support our empirical ANOVA results, we performed multiple regressions with four different models in SPSS and also tested these models with Entrepreneurship and Enterprise Acceleration Index (EEA) control variable (GEM, 2016). We included all formal institutional indicators, a dummy for efficiency-driven countries, and dummies for all of the focal countries (aside from one kept as a baseline) in the first model and tested the effect on TEA. In a second model, we did the same but checked for innovation-driven countries. In the third one, we tested the effect of the three formal institutional indicators on EBO in efficiency-driven countries, and in the final model, we tested the effect of all formal institutional indicators in innovation-driven countries on EBO. We still split the regressions but incorporated all variables from the original data that we could obtain access to.

These regressions in all four models confirmed our previous results, that is:

- TEA rates are more sensitive to formal institutions in efficiency-driven countries, while EBO rates are more sensitive to formal institutions in innovation-driven countries.
- The EBO rate is significantly and strongly influenced by the rule of law in innovation-driven countries and very strongly influenced by regulatory quality in efficiency-driven countries.
- The TEA rate is significantly and strongly influenced by the rule of law in both groups of countries, but particularly in the efficiency-driven country context.
- One effect, namely, that TEA is weakly influenced or affected by formal institutions in an innovation-driven context, was nonsignificant, but the direction and weakness of the effect remained.

Three or the four tested models all delivered significant results; a very high specific significance can be shown between regulatory quality and the EBO rate in efficiency-driven countries, which is a key finding of our research.

Concluding our analysis of our results, we can state that the effects of formal institutional indicators are very heterogeneous in different country contexts, while early stage entrepreneurial activity TEA is more sensitive to formal institutions in efficiency-driven countries, and established entrepreneurial activity EBO is more sensitive to formal institutions in innovation-driven countries (see Table 9):

Table 11: Relationship between TEA, the EBO rate and the economic development

TEA rate in the Efficiency-driven countries	>	TEA rate in the Innovation-driven countries
EBO rate in the Efficiency-driven countries	<	EBO rate in the Innovation-driven countries

Source: Author's own data and illustration

Regarding our developed hypotheses (see Table 10), we can support the claim that the rule of law is more strongly connected to the TEA rate than the control of corruption and regulatory quality (H1a), regardless of the country's development status. Due to this result, hypotheses H1b and c are not supported. Thus, the rule of law regarding formal institution plays a key role in any kind of entrepreneurial activity.

Even for established businesses (EBO), the rule of law again shows a stronger impact than the control of corruption and regulatory quality (H2a), but only in the context of innovation-driven countries. For efficiency-driven countries, regulatory quality has a stronger effect than the two other institutional settings on EBOs. Thus, in the context of efficiency-driven countries, H2c is supported.

Table 12: Hypotheses tests and results

Hypothesis No	**Supported/Unsupported**
Hypothesis 1a	Supported
Hypothesis 1b	Unsupported
Hypothesis 1c	Unsupported
Hypothesis 2a	Supported (for Innovation-driven countries)
Hypothesis 2b	Unsupported
Hypothesis 2c	Supported (for efficiency driven countries)
Hypothesis 3a	Supported
Hypothesis 3b	Unsupported
Hypothesis 4a	Unsupported
Hypothesis 4b	Supported

Source: Author's own data and illustration

The TEA rate is more strongly dependent on the three selected formal institutional dimensions in efficiency-driven countries; thus, H3a can is supported. In contrast, the rate of established businesses EBO is more strongly affected by the three selected formal institutional dimensions in innovation-driven countries; thus, H4b is supported.

These results suggest that the development status of countries makes a difference regarding the effects of formal institutional settings on either nascent or young entrepreneurial activities or on established businesses.

3.8 Discussion

The main objective of our research is to elucidate the question of how the formal institutional indicators of an entrepreneurial ecosystem reflect its influence on the development of entrepreneurship on different levels (start-ups or established businesses per the TEA and EBO rate, respectively). Based on that research goal, we have discussed the theoretical relationship and effects of formal institutions on entrepreneurship in general and on different levels of entrepreneurial activities specifically, following the advice of Bosma (2013 and 2018). Moreover, we have focused on the variations in these effects under the context of different country settings, as measured by the development status (innovation-driven versus efficiency-driven) in an attempt to uncover results in the entrepreneurial context debate (Welter & Gartner, 2016). By doing so, we tried to close a research gap regarding different entrepreneurial activities in different country contexts because most of the relevant extant literature has mainly been focused on developed countries or failed to differentiate between the levels of entrepreneurship activity. This is why, in our paper, we decided to differentiate the sample countries by their development stage and measure the impact of given formal institutions separately according to either TEAs or EBOs. This study delivers quite surprising, innovative and interesting results.

We determined two different tendencies. On the one hand, in efficiency-driven countries, the TEA rate is more greatly affected by formal institutions than the EBO rate (especially regarding the rule of law on the one hand and regulatory quality on the other). Instead, in innovation-driven countries, the EBO rate is more strongly influenced by formal institutions than the TEA rate (especially regarding the rule of law). This means that different institutions have different effects on different entrepreneurial activities and levels (TEA versus EBO rates) and thus on the wellbeing of countries in accordance with countries' development levels.

The crucial part of our analysis was the evaluation of whether formal institutions have the same impact on innovation-driven (mostly developed countries) and efficiency-driven countries (mostly developing countries). Before we review our findings concerning the relationship between institutions and

entrepreneurial activities, we first discuss the specific aspects of the TEA rate and the EBO rate. As stated in various papers, especially in the research of Urbano et al. (2019) and Desai (2011), countries with similar economic development stages differ in their rate of entrepreneurial activities and often differ in the level of institutional indicators, which served as motivation to analyze this relationship. Therefore, our paper delivers insights into this complex relation between institutional and entrepreneurial indicators and enhances the ongoing discussion, suggesting future research ideas for more in-depth analyses of the impact of formal institutions, especially those in transitional countries and caught between two stages. Moreover, we deliver food for thought for policymakers on a national or regional level suggesting the need to consider institutional supporting measures either for TEAs or EBOs and also accounting for the country's development level. Finally, countries in different development stages can think about and work on changing their formal institutional settings to generate more positive and supportive entrepreneurial environments and ecosystems.

Importantly, the GEM data show that an economy can have many potential and nascent entrepreneurs, but this amount is not transformed directly into a high number of established firms that can maintain their sustainability over a long time. It is expected that TEA rates are usually high in emerging economies, but established business ownership rates are usually low (GEM, 2019). Moreover, in developing countries, there is a high rate of entrepreneurship, namely, the growth of new enterprises and a high proportion of startups. However, the much smaller percentage of such start-ups in developing (efficiency-driven) countries than in developed (innovative-driven) countries can evolve into fast-growing firms and remain in the market, resulting in a significant contribution to added value. This can be explained by the fact that a high proportion of entrepreneurial initiatives in innovation-driven countries are initiated by opportunities that indeed contribute to total economic growth (Amorós, 2009). Our two random samples of countries confirm this assumption (see Table 6).

Hence, these two crucial entrepreneurial indicators—total early-stage entrepreneurship (TEA) and established entrepreneurship (EBO) rates—are

important for a better understanding of the role played by entrepreneurial activity in the economy. The TEA rate reflects the situation of new firms' registration, bureaucracy and different procedures to start the business, while the EBO rate reflects the sustainability of the business in the economy.

After careful analysis of the current literature that is dedicated to this important topic (Agostino et al., 2020, Amorós, 2009, Estrin, et al., 2013, etc.), we suggest that institutions are equally important for all countries; however, they have different impacts within different entrepreneurial ecosystems due to the different historical and cultural backgrounds of institutions, as well as the period during which they have existed (Ibrahimova & Moog 2023). Moreover, differences in institutional quality help us to ascertain the differences in entrepreneurship between efficiency- and innovation-driven countries (Amorós, 2009). On the one hand, in efficiency-driven countries, the TEA rate is more strongly connected to formal institutions than the EBO rate. This could indicate that institutions have a more restrictive effect on the total early entrepreneurial rate in developing countries. It might also reflect that the institutional system in these countries is quite young, so it mostly affects newly established businesses (Acs & Zoltan, 2006). On the other hand, as we showed in our analysis, in innovation-driven countries, the EBO rate is more strongly associated with these three formal institutions than the TEA rate is. This might demonstrate the long-term historical interaction between institutions and entrepreneurship in developed countries (Boettke et al, 2009). It might also depict fewer institutional restrictions and favorable conditions for total early-stage entrepreneurial activities, such as start-ups and business incubators (Bosma et al, 2018).

We discovered that the institutional dimension with the highest correlation coefficient to entrepreneurial activity is the institution of the *rule of law*. Note that this indicates a very "healthy" interaction between entrepreneurs and the legislation system. The rule of law includes fundamental variables for business activity, such as property rights protection and contract enforcement mechanisms, as well as the court system, which is responsible for enforcing solutions to occurring problems. This institutional dimension reflects the ability of the business to define property

rights and to acquire or dispose of the property as a result of business transactions on conditions fixed in a business contract. If the contract is not implemented by one of these two sides, the police and the judicial system included in this mechanism are forced to intervene. In other words, the institution of the rule of law ensures the necessary legislative framework for the functioning of a business. This idea of the necessity of security and trust when starting and running a business is in line with the work of Mickiewicz et al. (2021)

The next most important dimension is that of the *Control of Corruption*. This is also frequently and quite strongly related to entrepreneurial activity in all our analyses. That institution comprises variables such as the level of transparency, the corruption level and the level of trust in politicians, bribery and the capture of the state by elites. This institution impacts both the TEA and EBO rates because corruption may create information asymmetries and, as a result, uncertainty, which has a negative effect on the business climate (Mickiewicz, et al, 2021, Svensson, 2005)

In addition, in all the mentioned cases of corruption, there could be hidden barriers for "outsiders" seeking to enter the market (capture of the state by the elite), as well as some corruption barriers such as the transactional costs involved in bribery that cause problems for established entrepreneurship (bribery to government officials). Thus, when considering the countries in our sample, those countries that are actively looking to address this problem outperform those countries that are not. This is in line with previous results of Tonoyan et al. (2010).

The institution of regulatory quality has the least impact on entrepreneurial activity in all cases, except the EBO rate in efficiency-driven countries. The **key finding** here is that the mature entrepreneurial activity in this group of countries has a stronger correlation with regulatory quality than with the rule of law or the control of corruption. This finding contradicts previous research in his field, while in all papers mentioned in Table 1, *the rule of law was shown to have the highest impact on entrepreneurship* (Agostino, et al. 2020, Hartog et al., 2010; Levie & Autio, 2011; Van Stel et al., 2006). This paradox leads to the assumption that *in efficiency-driven countries, a mature established business is very sensitive to the regulatory quality* institution, as it contains all of the necessary conditions for the business

environment. The variables included in this institutional indicator are investment and financial freedom, market conditions, taxes, ease of starting a business, etc. This means that business conditions in developing countries are not as favorable as those in developed countries, and established businesses are very reactive to these conditions. In this sense, financial freedom might mean low or no access to the financial funds needed to start a business, such as interest on bank loans being extremely high and unaffordable for entrepreneurs. Market conditions are also unfavorable for business in these countries. For instance, there might be unfair competitive practices, price controls and market monopolization cases due to weak anti-monopolistic regulations. Other regulatory quality problems are related to the fact that mature established businesses in efficiency-driven countries often face discriminatory tariffs and taxes can become unbearable regulatory burdens.

3.9 Conclusion

In this paper, we deliver new insights to facilitate a better understanding of the impact of particular formal institutional factors - as an important component of the entrepreneurial ecosystem - on early and mature entrepreneurial activity. Our contribution to this topic consists of two steps. *First*, we focus our attention on the selected set of institutional dimensions, such as the rule of law, the control of corruption and regulatory quality. *We investigate how particular formal institutional dimensions affect the different entrepreneurial activity rates (TEA and EBO) in a heterogeneous set of countries with different development levels.* This delivers new and innovative results; i.e., *not all formal institutions from our dataset equally influence the selected levels of entrepreneurship*. In summary, formal institutions play an important role in understanding both early and mature entrepreneurial rates, and they have an impact on entrepreneurial activity at different levels and scales. *Second*, we analyze two groups of countries with different development stages and compare their results regarding TEA and EBO rates in relation to formal institutions. Our findings show that formal institutional dimensions are strongly related to different entrepreneurial activity rates but their explanatory power is influenced by the country's economic development stage. Thus, it creates an enormous difference in the effect of formal institutions on TEA

and EBO when analyzing this in the context of innovation-driven versus efficiency-driven countries. This difference is due to the context is very different, or, in other words, the entrepreneurial ecosystem settings differ.

One of the implications of this research is that a better quality of formal institutions provides a more sustainable entrepreneurial ecosystem in countries regardless of the proportion of start-ups/existing businesses or the development stage in those countries. This is in line with some results of current studies on the general relations of institutional settings and entrepreneurial activity (Mickiewicz, et al, 2021)

The more compelling and innovative contribution is that newly established businesses (TEAs) in both groups of countries react almost identically to the formal institution of the rule of law, which seems to be, from our point of view, a kind of 'gold standard' in this research field. The rule of law reflects the legal system (property rights protection and transaction safety, such as contract enforcement) that exist in a country. The established business in innovation-driven countries is also affected by this institutional setting to the greatest degree, which is another interesting relation; thus, both types of entrepreneurial activity seem require this kind of quality institution to thrive and develop. However, established businesses in efficiency-driven countries are more sensitive to regulatory quality, which is more about a favorable environment and sustainable, survival-supportive effects than business and transaction protection. This might reflect generally more unfavorable business conditions from a long-term perspective in those countries than in innovation-driven (or more developed) countries. Therefore, the improvement of this specific formal institutional dimension will, in turn, improve the existing state of an entrepreneurial ecosystem in efficiency-driven countries.

In general, the comparison of formal institutional impact on early and mature entrepreneurial rates by using a simple linear regression model provides a basis for further (more) sophisticated empirical investigation. This limits the impact of this paper. Moreover, the selection of our countries and settings might be questionable, but we hope to provide a roadmap for further investigation. For example, the use of panel analyses to observe developments over time or to check for time lagged reactions of TEA or EBO on the changes in institutional settings can be interesting.

Further, future research can observe and compare countries involved in a transformation process from, i.e., efficiency-driven status to innovation-driven. Additionally, qualitative studies can deliver interesting new insights by dealing with the emotions or health issues of entrepreneurs in different country settings and under different institutional conditions. Undertaking deep case studies on entrepreneurs in the midst of transitioning from TEA status to EBO status might provide more interesting results for a better understanding of the role of institutional settings in different countries. Even with these limitations in mind, we are confident that our results contribute to the research on the impact of ecosystems and formal institutions on entrepreneurship activities in heterogeneous country settings. The main message of this paper is that various formal institutions, such as the rule of law, the control of corruption and regulatory quality, have heterogeneous effects on the total-early entrepreneurial or established business ownership rate and, therefore, on the entrepreneurial ecosystem as a whole. Such analyses can help to understand the difference between efficiency- and innovation-driven countries' entrepreneurial ecosystem settings and shape the appropriate policy for developing those ecosystems.

4. Colonialism versus independence – The role of entrepreneurial ecosystems in Azerbaijan over time

ABSTRACT

Entrepreneurial activity, its emergence, and development are considered important for the well-being of nations, especially for those in transition from one economic system or industrial setting into another. A crucial question is, why countries with similar basic resources develop differently regarding entrepreneurial activities over time? This study delivers new insights on ecosystems developing during different historical eras, and why some ecosystem factors have an impact not only during one point in time but also in the long-term. The paper focuses on Azerbaijan, a country with a turbulent history, and volatile formal institutions, endowed with natural resources, and now heavily dependent on the export of oil and gas. To transform the economy and overcome this resource dependency, entrepreneurial activities could provide one solution; however, the contribution of entrepreneurship in the economic development and growth remains low. This paper provides an analysis of why the promise of entrepreneurship remains quite elusive in Azerbaijan. The study contributes to the literature on entrepreneurship by drawing on archival data to gain insights on how the historical role of entrepreneurship and the underlying ecosystem have imprinted their long-term development of current entrepreneurial activities. It proposes a framework for a systematic and long-term analysis of the factors and mechanisms comprising the ecosystem-approach and shaping entrepreneurial outcomes across a broad spectrum of historical and contemporary contexts.

Keywords: *historical review, entrepreneurial ecosystems, institutions, entrepreneurship development, entrepreneurial policy, economic systems*

4.1 Introduction

The existence and development of entrepreneurial activities depends on many factors, spanning institutional, social, economic, and cultural (Lounsbury & Glynn, 2019; Zahra et al., 2014; Acs et al., 2017). Beyond these general aspects, researchers are now looking for a broader understanding of entrepreneurial activity, characterized as everyday entrepreneurship, which is also the focus of this research (Autio, et al. 2014, Welter et al., 2018). In particular, this paper examines the entrepreneurial ecosystem over a long-time span (Dimov, 2011; McMullen & Dimov, 2013; Wood et al, 2021), to understand the changes in supportive or hindering factors and their historical impact on entrepreneurial activity, as recommended by a number of studies (Aldrich & Ruef, 2006; Alvarez et al., 2013). We do this by focusing on entrepreneurial ecosystems, the specific factors comprising the ecosystem, along with entrepreneurial outcome (Stam 2015). The general entrepreneurial ecosystem approach (Feldman et al., 2019) claims that entrepreneurial activity is a "social geographic phenomenon" based on triggering or hindering factors (Sternberg, 2021, p. 8), and we follow this idea in our study. We do so especially, because entrepreneurial ecosystems consider that entrepreneurship is shaped by the regional spatial context (Acs et al., 2017; Stam & van de Ven, 2021; Van De Ven, 1993; Woolley, 2017). However, there has been a paucity of research analyzing the historical context of entrepreneurial ecosystems and over long periods of time. The latter has garnered increased interest in the entrepreneurship literature; undertaking it on a national or regional level, at present and in specific years or times, and in a historical context has been recommended by researchers to gain a full understanding of the underlying factors and outcomes (Stam & van de Ven, 2021; Sternberg, 2021; Fritsch, et al., 2019). We follow this recommendation by providing a historical analysis of ecosystems to deliver new and dynamic insights of ecosystems over time. This is, to discuss and explain how and why events or changes in specific (institutional) factors in the ecosystem impact entrepreneurial activity, which cannot be explained only by a static, spotlight-analysis. Thus, this paper poses the research question, what happens to entrepreneurial activities over time using the lens of history, where the factors underlying the ecosystem change?

Such long-term historical analysis of countries, industries, or institutional settings might serve as a useful tool to understand the development of entrepreneurial activity during moments of change, in different markets or societies (Wadhwani et al., 2020) in a more insightful way than analyzing only time invariant snapshots at a specific time or period. This study sheds light on the development of supportive or hindering factors for entrepreneurial activity over time, delivers innovative insights, and suggests that small or strong dynamics of ecosystem factors might change entrepreneurial activity at any stage in history and may have long-term, overarching effects.

To analyze the evolution of an entrepreneurial ecosystem over the long arc of history, we have selected a small country with a history characterized by change and volatility (Aliyev, 1995), Azerbaijan. Azerbaijan has undergone many changes in history, especially with respect to the institutional settings (Jafarov & Jafarova, 2017) and it exhibits the highest as well as the lowest rates of entrepreneurship at different times. (Ministry of economics, 2020). Azerbaijan is at the top of the list of countries that have undergone widespread transformation, along with Georgia, and Estonia. (Asian Development Bank, 2020); it is thus, comparable to these countries and their contexts, and therefore, it might serve as a role-model for the analysis of and comparisons between such nations. Azerbaijan is a Caucasian nation, positioned on the edge of two continents, cultures, and contexts (Orient and Occident) (Babayev, 1990, Hille, 2010). The traditional resources and industries (like silk, wine, fishing, and carpet industries) in Azerbaijan are comparable to that found in other countries (Heydarov, 1982, Fiegl, 2011; Niftiyev, 2021). We will show that by utilizing archives for such a small country it is possible to generate data and insights helpful to other scholars in the field to analyze other countries in this region or cultural context, or in similar situations or historical background. Thus, the results for Azerbaijan ensuing from this kind of analysis might be transferable to other countries with a similar context over time; or, it will deliver results, to be compared to other nations with different settings (Bate, 2021). However, in both cases, choosing Azerbaijan delivers novel and interesting results for a historical entrepreneurship research.

We attempt to find the answers to our research questions by working with data from different sources such as, historical books, archives, policy statements, or official statistics over centuries, and so on, in different languages (Azerbaijani, Russian, Turkish, French, and German). By analyzing and categorizing these broad data using strict qualitative methods of text analysis (Strauss & Corbin 2014), we deliver an overview of the cultural, political, and historical contexts and resources, and other important ecosystem related factors in a country. We also outline the particular and respective status of entrepreneurial activity during different periods and over time.

We contribute new insights on the relationship between historical context and entrepreneurship by providing long-term data and details on developments and changes in entrepreneurial ecosystems and activities. We deliver first evidence on the changes in fragile or robust entrepreneurial ecosystems and activities in different or changing historical contexts. This means, that some factors of an ecosystem may continue to exist in the same way, or develop over time, to achieve a positive and steady state effect. However, in some cases the formal system and institutions might change in an extreme way. Our analysis shows that just one change in a formal institutional (or political) factor may cause entrepreneurship to lose its positive impact (conceptual and formal research: Acemoglu & Robinson, 2012; Acemoglu & Robinson, 2006; and with first snapshot results by Mickiewicz et al., 2021). Another important contribution of this paper to the entrepreneurship literature is to show how historical data obtained from archives can be used for new insights explaining the evolution of entrepreneurship in a specific context or nation.

4.2 Theoretical Framework - Entrepreneurial ecosystems

The well-known economist already believed that historical contexts, resources, and environment do matter (e.g., Smith, 1776; Schumpeter, 1947, 1949), and thus different players and factors are necessary for and supportive to generating entrepreneurial activity with regards to the local needs and settings (e.g., Dubini, 1989; Van de Ven, 1993; Zahra, 2007; Zahra et al. 2014). Even without calling the infrastructure, resources, or people an ecosystem, the contextual and

empirical studies deliver evidence in favor of the need for a local or national system (Acs, Autio & Szerb, 2014; Acs, Audretsch, Lehmann & Licht, 2016) conducive to entrepreneurship over time (Saxenian, 1994; Feldmann, 2001; Feld, 2012), or for longer periods and eras (Fritsch et al. 2019). This leads to the idea of an ecosystem, following a more biological and systematic approach, where players, resources, and settings interact and relate to each other, thus forming an active and living environment either supporting or hindering the specific developments (see for an in-depth discussion Stam & Van de Ven, 2021 or Sternberg, 2021). Entrepreneurial ecosystems mean a social and interactive system and processes with different actors, resources, and (institutional) settings (or in other words, components) supporting entrepreneurial activity (Van de Ven, 1993), that are positive for the region (Stam, 2015; Stam & Van de Ven, 2021).

The development of this ecosystem approach clarifies the need for the key elements to create a productive context for entrepreneurial activity (Woolley, 2017; World Economic Forum, 2013). According to Mason and Brown (2014:5), who focused on singular players, "The Entrepreneurial Ecosystem is a set of different individuals who can be potential or existing Entrepreneurs, organizations that support Entrepreneurship that can be businesses, venture capitalist, business angels, and banks, as well as institutions like universities, public sector agencies, and the entrepreneurial processes that occur inside the ecosystem such as the business birth rate, the number of high potential growth firms, the serial entrepreneurs and their Entrepreneurial ambition." In other words, the entrepreneurs and their profession are in the center of this kind of ecosystem (Mason & Brown, 2014), acting in a setting or environment that helps them to do so. Other researchers put more focus on the network between the players and resources as well as institutions, considering a more economical point of view (Granovetter, 1992) or system approach and emphasizing the institutional setting (Acemoglu et al. 2005).

Considering the research on entrepreneurial ecosystems over time, we can state that ecosystems are a complex phenomenon, consisting of social, economic, cultural, resource-specific, and political as well as individual components within

a region or nation (Theodoraki & Messeghem, 2017). Thus, entrepreneurial activity undertaken by individuals depend on the following: political structures (centralized/decentralized) (Gnyawali & Fogel, 1994; Van De Ven, 1993), legislative systems (taxation, property rights, private property rights, economic freedom) (Bjørnskov and Foss, 2010; DeClercq et al., 2010; Levie and Autio, 2011), natural or man-made infrastructure (cities, access to financing, logistics, trade infrastructure, technology, etc.) (Acs et al., 2017; Brown & Mason, 2017), economic conditions (free/monopolized market, trade, import/export, finance and investment) (King and Levine, 1993), cultures and norms concerning questions like what is a "reasonable" activity to make an earning, and what kind of jobs are allowed for an employment (Freytag & Thurik, 2010), as well as geographical advantages and regional or city-related specializations like clusters or expertise (Brown & Mawson, 2019; Malecki, 2018). Moreover, other characteristics of an ecosystem could constitute the national entrepreneurial policy (colonization and exploitation versus democracy and economic freedom, supporting or hindering factors like specific taxation or subsidies, etc.) (Acemoglu & Robinson 2012; Stam, 2015), or forms of production (industrial versus private) (Stam, 2014).

To systemize all these factors and ideas, we follow Stam and Van de Ven's (2021) approach; we develop an integrative model for entrepreneurial ecosystems, based on ten categories and aggregated under three key elements (Van de Ven, 1993; Stam, 2015). This leads to a broader conceptualization and a more specific definition of an entrepreneurial ecosystem, incorporating a social component as well as a (potential) dynamic development. This definition embraces institutional settings, resource endowments as well as infrastructure and proprietary functions and the productive output of a broad entrepreneurial activity (see Table 1, page 814, Stam & Van de Ven, 2021). Moreover, this integrative, causal approach offers a) a kind of operationalization of key elements and measurement, and b) the observation of the co-evolution of all these elements over time and their potential interrelations and interactions. This leads to three propositions of co-evolution (P1), upward causation (P2) and downward causation (P3). All this suggests the need to deal with the mutual inter-

dependency of the components of the ecosystem (P1), the causal positive or negative impact of the existence of the key elements on the level of entrepreneurial activity in a region or territory (P2), and the effects of entrepreneurial activity level on the ecosystem (Stam & Van de Ven, 2021:814/815).

Table 13: Constructs of entrepreneurial ecosystem elements and outputs

Concept	Construct	Definition	Element
Institutions	Formal institutions	The rules of the games in society	Formal institutions
	Informal institutions	Cultural context	Culture
	Social networks	The social context of actors, especially the degree to which they are socially connected	Networks
Resources	Physical resources	The physical context of actors enables them to meet other actors in physical proximity	Physical Infrastructure
	Financial resources	The presence of financial means to invest in activities that do not yet deliver financial means	Finance
	Leadership	Leadership that provides guidance for, and direction of, collective action	Leadership
	Human Capital	The skills, knowledge and experience possessed by individuals	Talent
	Knowledge	Investments in (scientific and technological) knowledge creation	Knowledge
	Means of Consumption	The presence of financial means in the population to purchase goods and services	Demand
	Producer services	The intermediate service inputs into proprietary functions	Intermediate Service
New Value Creation	Productive entrepreneurship	Any entrepreneurial activity contributes (in)directly to net output of the economy or the capacity to produce additional output	Productive entrepreneurship

Source: Stam & Van de Ven, 2021:814.

Stam & Van de Ven (2021) develop a very thoughtful and thorough operationalization of the eleven constructs and elements, measuring with current standards and available data, offering many sub-categories to help understand the bases of the key-factor. They develop a hypothesis on the rate or level at which the existence of those variables is conducive to entrepreneurial activity.

Thus, in regards to this approach, we take into account the ecosystem and the elaborated elements (as explained later) for our analysis of the main and sub-categories of the factors (see: methodology section).

Further, to enlarge the snapshot analysis of ecosystems, we follow the advice of different authors, having a historical orientation (e.g., Smith 1776; Sternberg (2021), to adjust this approach of ecosystem measurement and deal with the available historical data over time. This delivers insights on the factors and the entrepreneurial outcome at different stages and periods. Luminaries of economic science used this idea before the denomination of entrepreneurial ecosystem came into existence, and a historical analysis was forgotten for a long while. However, Adam Smith, an economist and the "father" of market economy tried to understand the economic development of different nations through the historical prism ("An Inquiry into the Nature and Causes of the Wealth of Nations" (Smith, 1776)). Another well-known Austrian economist and entrepreneurship researcher, Joseph Schumpeter, adopted a historical approach in his work "The Creative Response in Economic History" (1947). He considered the historical research to be important for the empirical study of entrepreneurship and for the advancement of entrepreneurship theory (Schumpeter, 1947, 1949). According to him, "since entrepreneurship involves uncertainty, it cannot be predicted by applying the ordinary rules of inference from pre-existing facts" (p. 150). Thus, historical research with archival data seems very useful, because it aids an ex post-facto understanding (e.g., Ventresca & Mohr, 2002). In addition, a "historic turn" in management and organizational research, that has taken place over the last decade, offers an opportunity to reconsider history in the context of the current wave of entrepreneurship studies (Landström & Lohrke, 2012), human sciences, and different management fields such as international business, strategy and organization theory (Godfrey et al., 2016; Argyres et al., 2020; Ingram et al., 2012; Jones & Khanna, 2006). However, the contribution of historical data and analysis has still mostly been overlooked, especially while researching entrepreneurial activities and development in the context of entrepreneurial ecosystems (Sternberg, 2021; Fritsch et al., 2019; Stam & van de Ven, 2021). Working with historical data involves a compromise due to the

scarce availability of information and data, but it delivers a first and rough insight on the "causal" relationship of the ecosystem elements and entrepreneurial activity over time. Moreover, this approach will deliver first results on what kind of elements have been important over the centuries and might still be important in the current situation or might have a long-lasting impact in the future (Fritsch et al. 2019). Finally, we follow the recommendation by some authors regarding the historical overview, which are against defining entrepreneurial activity in a narrow way, such as focusing on the Silicon Valley model and on only high-tech entrepreneurship (Stam and Van de Ven, 2021; Sternberg, 2021), but are in favor of the everyday entrepreneurship idea which suggests that any risk-taking activity involving self-employment is measured as entrepreneurial activity (Welter et al. 2016).

4.3 Data and Method

Before starting the journey through history of ecosystems and entrepreneurship in Azerbaijan, we present an overview on how to deal with the cultural, political, or economic settings in the country and region and obtain an idea of what is going on at the entrepreneurial arena. We develop a measurement toolbox to rank settings over the history and eras, and the stage of entrepreneurial activity. To deliver this toolkit, at any point in the historical discussion, we will check out for typical/traditional ecosystem related aspects, such as the interdependence of all economic actors in a particular community to create new value (e.g., Acs, Stam, Audretsch and O'Connor, 2017) and democratic structures or political institutional settings (e.g., Audretsch and Moog, 2021; or even earlier, as recommended by Acemogly & Robinson, 2006 and 2012). The level of institutionalization of data is changing and becoming more professional or documented with time; thus, a one-to-one comparison between the different stages in history is very difficult. However, assigning the existence of a conductive factor plus points, and negative elements minus points helps organize the data. In addition, the number of people living in a country and the statistical accuracy of the measures of economic activities change over time, too. Thus, we heuristically number the factors effecting the entrepreneurial activity, bringing it

to a higher level or aggregating the available information, using a simple point ranking technique method (explained in detail in the following paragraphs), to evaluate and compare different ecosystems over time.

We can summarize the above-mentioned details in the following manner. For a better and/or easier understanding of all the processes, boosting and hindering factors, and ecosystem aspects in Azerbaijan, across the country-specific history and the respective entrepreneurial activity, we undertake a two-step analysis of entrepreneurial ecosystems in Azerbaijan during different historical periods. The methodology consists of two parts: qualitative and quasi-quantitative. The methodology of this study is highlighted below.

First, the boosting and hindering factors are defined in accordance with the entrepreneurial ecosystem related literature (Stam & Van de Ven, 2021), followed by presenting the idea of operationalizing the measurement of factors in a historical context. This is done in a deductive way by building categories and codes, following the methods and instructions of qualitative research in text analysis (i.e., Strauss & Corbin 2014; Yin 2016; Gioia 2021; Eisenhardt 1989; or Gioia, Corley & Hamilton 2013).

Second, the developments over the history of Azerbaijan are described. We have tried to measure it according to the ecosystem approach and by using the codes and categories for each era and period.

Third, the data is systematized following the simple point ranking technique method (i.e., Pandey and Leelashree, 2012), and the data is converted into the data points in regard with this systematization approach.

Fourth, we obtain the final conclusion by conducting a simple comparative analysis of the entrepreneurial activity development related to the particular era, using the data obtained and the point ranking technique, to deliver an overview of the time reviewed in this study.

Finally, we discuss the results and its contribution to the state-of-the-art discussion in this research field. We also reflect on the limitations of our approach and offer some ideas for future research.

To deal with all the information and data obtained from the archives, books, and historical references, we followed the data structuring model of Stam and Van de Ven (2021). Thus, the most important factors have been elaborated for the different time periods; they have been systemized, extracting the words or synonyms of every factor, filled with content; in quantitative empirics, this would be named as operationalization; however, here it is a qualitative collection of terms and descriptions of situations or context, feeding the three concepts or eleven constructs of the ecosystem framework of Stam and Van de Ven (2021) with "countable" facts for every period. This is done by reading and analyzing all the data and segregating them categories and codes. We cannot undertake a causal regression analysis to show the effects of single factors of the ecosystem on specific entrepreneurial activity because of the historical structure of the data and the non-existing (in some periods) or non-precise statistical data over time. In the paper of Stam & Van de Ven (2021), they develop item batteries and operationalize the available data to obtain the numbers, such as for transportation or human capital or entrepreneurial output. These data are accurate and currently available. In historical research, most data are non-existent or inaccurate; however, information on the modes and routes of transportation, and the opportunities or development of a new schooling system and training in craftsmanship are accessible in the archives. Thus, we follow the general systematization of Stam and Van de Ven (2021) but organize the historical data and information into categories, sub-categories or "empirical indicators."

To give an idea of the breadth of this is measurement, the sub-categories named in this paper, as well as some references dealing with these factors and elements are detailed below. The formal (political) institutions could be captured by the words, sentences, notions, or terms falling under "corruption, rule of law, government effectiveness, political system, voice and accountability, as well as public services like law enforcement, access to education and healthcare" (see

North, 1990, Charron et al. 2012), and by even more specified terms like "voting rights, contract law, protection of intellectual property, owning rights, freedom, rights of individuals" (Stam & and Van de Ven 2021; Bjørnskov and Foss, 2010). The informal institutions could be described in ways like "culture, norms, values, appreciation of professions/entrepreneurship, risk attitude, valuation of freedom, appreciation of role models, etc." (Stam & and Van de Ven 2021, Fritsch & Wyrwich 2014). "Networks or social networks" can be seen as a social capital of a society, of groups or individuals; thus, they form "valuable connectedness of businesses in a region, but as well as number of business contacts, helpful to act economically, weak and strong ties, clubs, unions" (e.g., Moog & Backes-Gellner 2013; Florin, Lubatkin & Schulze 2003). The overall category of "resources" embraces many aspects, such as physical resources (water, land, oil, iron, silk) or transportation. Here, we include "old" transportation possibilities to do business (or channels of commerce), like trade routes or roads, caravans, water-ways, local or national trade connections" - (Brown & Mason, 2017), which is a more general construct, compared to Stam and Van de Ven (2021). We follow as well a broader approach of "financing aspects", including the "existence of any kind of currency, banks or similar financing (former) institutions, friends, family, fools, interest rates, financing by specific ethnic groups or tribes" (Bjørnskov and Foss, 2010). To feed the term "leadership"—which involves providing guidance and direction for collective action—with content and meaning, we embrace expressions like natural/born leaders (tribal chiefs, local role models), producer groups, co-operatives, bourgeoisie, collectives, associations, local princes' syndicates, (closed) societies, commons and allmende, and so on (Sotarauta 2005). "Human capital", in this study, is measured in multiple ways to collect information on the hard and soft skills, and the knowledge and experience obtained by individuals, for example, experience in a profession, specialization in doing something, education in school or university, training in specific professional groups and merchant guilds, knowledge of languages, writing, handicraft skills, and other measurements (Moog, & Backes-Gellner, 2013). "Knowledge" is reflected in terms of the investment in schools and setting up training institutions, the number of educated

people, knowledge exchange, literacy rate access to education in general, and so on (Freytag & Thurik, 2010). Obtaining information on the potential or "real demand" – that is, the presence of any financial means of the population to purchase goods or services – was hard. The average values of income could be collected; however, in case of slavery, only limited parts of the population had any income to spend. In addition, specific taxations indicated the incomes or expenses. This category has the least number of codes and sub-categories; however, when trade came up and potteries could be sold, a corresponding demand and "income" to spend must also have emerged. Therefore, we went with this scarce information. To cover "producer services", we searched for suppliers, transport services, and value chains (for example, in agriculture, any kind of farming and delivering goods to mills or milk production; nut, apple or apricot plantations delivering these goods to refining and drying fruits producers). Thus, we searched for a broad spectrum of services. Finally, to capture the data and information on any "entrepreneurship activity/productive entrepreneurship", we collected all the terms and notions implying any activity contributing directly to the economy or society and its development: caravansary, camel breeders, carpenters, oil drillers, transportation organizers, restaurants, hotelliers and all other professionals or professions and activities mentioned in the archival data were included (Jafarov & Jafarova, 2017)

This study follows a qualitative approach of the historical text analysis (Strauss and Corbin 2014). First, we obtained the valid data. Azerbaijan is a small country, so we adopted the full source approach; we did not sort for specific archives or books, but went through thousands of texts in more than a year. These texts, documents, statistics, and books were mostly obtained from the Azerbaijan Academy of Science archives, Azerbaijan History Library at UNEC (State Economic University), and Azerbaijan Historical Institute. Many of the documents were found in their original form, along with the copies of the most used historical books and papers (ca. 100). We were supported by Prof. Dr. Hidayyat Jafarov, director of Azerbaijani Archeological Institute, in our search. Further, we used online as well as non-digitally available statistics which were obtained from the Azerbaijan Government.

Second, we conducted a systematic text analysis and searched deductively to obtain the data for every period, to fill in the categories of the ecosystem approach (e.g., Eisenhardt 1989; Yin 2016; Gioia, Corley & Hamilton 2013). We looked for the chapters/information on the social and/or economic life in Azerbaijan during different periods, reading through the historical books, texts, and statistics. We also specifically read and analyzed the texts on behalf of finding key words of Stam and Van de Ven (2021) tables and analysis, keywords describing the different ecosystem factors. In every period or any keywords that could fit those categories, depending on historical period we found in a first selection hundreds of categories. This is the idea of "open coding" given by Strauss and Corbin (2014), where every word describing a fact is taken into account. Thus, we looked for the words and descriptions of the contemporary definitions of Stam and Van de Ven (2021). However, in ancient and medieval periods, those categories were named differently. For example, the category of "Leadership" was named and defined in some eras as "Tribal community" or a prince or king or shah as a different kind or wordings for leadership, "Colonialism or Democracy" can be observed as well in the former periods, i.e. occupied by the Turks or finding a landlord system of Arab Caliphate. This open coding and the comparing axial coding following the Strauss and Corbin's (2014) approach of bringing together similar observations and obtaining other codes by different major categories, can help us in developing "primitive-advanced" scale of factors for the Stam and Van de Ven (2021) factors and categories. This procedure, undertaken by two to three researchers, lead to a drastic reduction in the number of codes, and helped us develop sub-categories and put them under the eleven key categories. Following the processes of analysis recommended by Gioia (2021), we obtained a comprehensive set of so-called first-order terms (general codes) and second-order themes (sub-categories), and the aggregate dimensions, that is, the key-categories. All these information when put together formed the basis for the further analysis, which is called data-structure. We can better understand how all these words and terms are inter-related, and how they form the specific ecosystems over time by organizing all the words and the colored similarities or differences. Thus, we can interpret the raw data as

categories and key-constructs (Eisenhardt 1989; Yin 2016; Gioia, Corley & Hamilton 2013).

Then, we compared the quality of the named categories per period. So i.e. if human capital is named several times only with one profession, or no public schools were mentioned, this is a lower level of human capital and skills. Instead, compared to be named and listed as i.e. specific schools for training for a profession, different professions, clusters of expertise (i.e. silk), etc.) are listed in one period, it is high level of human capital. Thus, discussing these rankings with the expert from Azerbaijan and within the two authors, we come up with the ranking from -3, 0 up to +3 for the different categories.

This data structure allowed us, as a second step, to rank the constantly evolving factors throughout the history. Thus, to use the collected data in a fruitful and logical way, we first systemize the data, and then, develop a heuristic model for the first insights on the relation between ecosystem factors and entrepreneurial activity over time. We use a well-tested and accepted methodological approach: the Simple point rating technique.

Simple point rating technique is developed for and mostly used in personnel economics/human resources (e.g., Bergmann & Scarpello, 2001; Pandey & Leelashree, 2012); it is also used in decision making theories or in other kinds of ranking approaches (e.g., Fielding et al. 1998) as a heuristic, descriptive methodological tool. The point ranking technique involves a more detailed, quantitative, and analytical approach to the measurement of single aspects and factors, and thus, it evaluates the factors of each process. In this method, any situation or process can be broken down based on various identifiable factors, that are in our case the elements of entrepreneurial ecosystem, or in other words, the factors affecting entrepreneurship in a positive or negative way. Thereafter, points are allocated to each of these factors in accordance with their importance in terms of weight (+3; -3 range), and then they are summed. The sum of points gives an index of the relative significance of the process that has been rated. Following to this method, we counted every boosting factor as + point (from +1 to +3) and every hindering factor as – point (from -1 to -3) in our dataset. The

basis for such an analysis is an existing theoretical framework, which helps categorize and collect the important factors, and also differentiate them according to their level of importance. In this study, we systemize all factors over different historical periods in line with the ecosystem model and framework (Stam and Van de Ven, 2021). Thus, for any historical period, we use the same framework, feed it with the accessible data on factors, and describe the situation or process at the time. Following the step-by-step procedure recommended for this approach (Pandey and Leelashree, 2012), we proceed as described below (see Theodoraki & Messeghem, 2017; Acs, Autio, & Szerb, 2014; Acs, Stam, Audretsch, & O'Connor, 2017; Stam & Van de Ven, 2021). 1) We group and systemize the factors based on specific constructs or concepts, typical for ecosystems, regardless of the era (Bergmann and Scarpello, 2001). 2) We identify the important factors for each period and create a simple ranking system or hierarchical order. 3) We assign points to the factors. Here we give a point (from +1 to +3) for any positive or supportive factor, and a minus point (from -1 to -3) for any disturbing or hindering factor. If a factor is not existing or could not be generated in the historical data, then it is given zero points (0). Finally, the points can be aggregated for each concept or construct, and added to deliver a categorization of hindering or supporting factors on the one side and the entrepreneurial activities (productive outcome) per period on the other side. This is shown on the chart below.

Table 14: Ecosystem elements categorization and grading

Ecosystem elements	Points	Institutions	Resources	New Value
Primitive	1	Tribes, barter, chaotic market and local trade connections, no centralized power, traditional learning, free decisions, one language, favorable policy and taxation	Land, natural resources, local trade benefits, not processed/simple products, agriculture	Simple/ primitive professions

Progressive	2	Centralized state, independent reign, organized markets and international trade connections, caravans, culture, independent leadership, trade and logistics bureaus, merchant guilds, entrepreneurship revival process, development of all regions	Long distance logistics, cities development, trade infrastructure, transit trade, caravans and caravanserais, international trade benefits, manufactured/processe d products, mining, early production, first industrial knowledge, aristocracy, religious representatives, schools, state capital	Specialization of craftsmanship and other entrepreneurial professions, early industrial production
Advanced	3	Private ownership, art, democracy, gender equality, constitution, equal voting rights, parliament, free religions, secular state, equal rights for local and international entrepreneurs,	High education and culture, universities, specialized organization, unified currency and national banks, high-skilled labor, art pieces, local bourgeoisie, SME, outsourcing, local and foreign investors and capital,	High professional specialization, creative professions, R&D professions, SMEs, Innovative profess Sions
Neutral	0	No centralized power, no formal/informal institutions	Absence of resources and knowledge	Extinction of outdated professions
Unfavorable	-1	Vassal service, feudalism, unfavorable/discrimi native state and tax policy, closed economy, religious discrimination	Recourses misusage, feudal fragmentation, vassal lands, wars and military/feudal acquired/ expanded lands, militarization and military knowledge	Discrimination of entrepreneurial professions
Destructive	-2	Colonialism, discriminative tax policy, poor property rights protection, sharp social stratification, non-democratic system, serfdom, ineffective laws, corruption	Colonial resource exploitation, colonization of population, economic crisis, monopolies, syndicates, riots, concentration of production and monopolization,	Prohibition of some entrepreneurial professions

			ineffective legislation/law	
Fatal	-3	Totalitarian regime, no property rights, prohibition on private capital/property/initiative/ accumulation, equal income, planned economy, criminalizing of entrepreneurial activity, shadow economy	Confiscation/nationalization, communism, no private capital, despotism, bankruptcy, Dependent production chains, controlled markets, cense	No private sector, Prohibition of all entrepreneurial professions, serfdom

Source: own, 2022

Thus, we can develop a first and basic data systematization. Therefore, the authors created a comprehensive table with all key information, stated in the entrepreneurial ecosystem definition and literature, for every historical period. These tables include all the key aspects, such as the historical period, the name of the administrative unit (state), and entrepreneurial activities (productive outcome). The factors and conditions that were boosting or hindering entrepreneurship during the specific historical periods in Azerbaijan, in accordance with available relevant literature and the points were implemented. Thus, we extracted the qualitative information from the archives and texts, added them to the tables and characterized them into the different constructs of the ecosystem. Then, every boosting and hindering factor in these tables was evaluated according to Chart 1, using the point ranking techniques. (*The contemporary period is not included into the data analysis, because it does not fit our historical approach. Current period is neither finished nor static, and the contemporary situation and conditions are constantly changing).

4.4 Historical review and estimation of the impact and effect on entrepreneurial activity

This study discusses and analyzes the different eras and important periods of Azerbaijan's history. The information and facts we could obtain, collect, and figure out by studying the archives, books, pics, papers, and newspapers are wrapped up in the following sections and summarized in the tables using the ecosystem approach of Stam and Van de Ven (2021). These tables form the bases

for the heuristic measurement to show the relations or interactions between, and the impact of single ecosystem factors on entrepreneurial activity over time. Moreover, systemizing the different factors indicate which factors remain more robust or change strongly, and which ones might have a steady state, and a strong or less important effect on entrepreneurial activity over time.

4.4.1 Ancient Period – The cradle of entrepreneurship: The State, trade and craftsmanship

Administrative units: The government of Manna; Atropatena and Caucasian Albania

Entrepreneurial activities, even at the time when this term did not exist, appeared in Azerbaijan, as well as in other countries during the Neolithic period (VIII-VII thousand BC), at the dawn of a producing economy (Svizzero & Tisdelli, 2014). Later, with the agricultural revolution in the VI-IV thousand BC, this process received new an impetus, and in the Early Bronze Age (3rd millennium BC), with the development of production relations and productive forces, the first major social division of labor took place, and the farmers separated from the cattle breeders. This process was followed by the second major division of labor in the Middle Bronze Age (first half of II millennium BC), when the craftsmen were distinguished from all other kind of producers (Smith, 1776). This process affected the territory of Azerbaijan, and in the second half of the second millennium BC, there were two entrepreneurial groups: those who produce the goods, that are, craftsmen, and those who were a link between the producers and consumers, that are, the intermediaries or tradespeople, engaged exclusively in the purchase and sale of goods (Jafarov & Jafarova, 2017). This social layer of the entrepreneurially active individuals led to the development of international trade. Several studies prove that the population of Azerbaijan had close mutual relations with neighboring areas as well as with the well-known cultural and economic centers of the Ancient East (Jafarov, 1984; Jafarov, 1985). Azerbaijani artisans and merchants were active participants in the trade fairs of Small Asia at those distant times; they conducted intensive trade in the international trade factories of Kanesh, located in the territory of modern Turkey (Kultepe) (Yankovskaya, 1968; Jafarov, 1984). It was a simple barter trade, dealing with

"primitive" exchange measures in terms of money equivalent, such as shells of kauri, metal ingots and hoops, or even cattle. Thus, those people were already involved in some international production-money-trade relationship and could be considered as the early entrepreneurs (Jafarov, 1984), following the general ideas of Cantillion (1734) or Kirzner (1973).

Table 15: Ecosystem elements and entrepreneurial activity: 2nd half of the 2nd millennium BC

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	No centralized power (-1)	0	-1
	Informal	free decisions (1), tribal values (1)	2	0
	Social networks	Local, national and "international" trade connections (1); trade routes (1)	2	0
Resources	Physical	Wide land/grass (1), Iron (1), shells (1)	3	0
	Financial	Barter Trading (1)	1	0
	Leadership	Tribal (1)	1	0
	Human capital	Traditional learning (1)	1	0
	Knowledge	-	0	0
	Means of consumption	Barter (1)	1	0
	Producer services	Metal ingots (1), hoops (1), Kauri shells (1), cattle (1)	4	0
Value	*Productive entrepreneurship*	*Intermediaries (1), Craftsmen (1), Merchants (1), Farmers (1), breeders (1)*	*5*	0
Total			***20***	***-1***

Source: Own data 2022, following Stam and Van de Ven (2021).

This development continued until the IX century BC, when the very first administrative form emerged on the territory of Azerbaijan, known as the government of Manna (or the Mannea Kingdom), which had relations with Assyria and Urartu (Kashkai, 1977; Geybullayev, 1994). As we know from the institutional entrepreneurial as well as ecosystem research, the state power may have a positive (or negative) influence on entrepreneurial activity through the laws, regulations, and norms (Kayne, 1999). Besides, when well organized, it

reduces the uncertainty for all economic agents in the society (North, 1990; Brouwer, 2000). This worked for Azerbaijan too, and this first centralized power provided a favorable environment for craftsmanship to develop into one of the spheres of the first ever-centralized economic market (Jafarov & Jafarova, 2017). The archaeological excavations in Hasanlu and Ziviye in South Azerbaijan, as well as similar excavations in the northern territories, helped discover the luxurious samples of jewelry (silver and golden cups), and pieces of clothing (Aliyev, 1995). The level of mastery illustrates the developed and valued craftsmanship of this period (Jafarov, 2020). These pieces were typically found in the graves of the wealthy, which is also a proof of valuation ability back then (Azerbaijan Academy of Science, 1995; Jafarov, 2020). Azerbaijani craftsmen also traded at the Ancient East markets, while the development of horse and camel breeding allowed long distance transportation and coverage by caravans (Jafarov, 1984). The first centralized government successfully provided the elements, crucial for entrepreneurship activity, such as freedom relating to the choice of employment and private ownership. This supported a complex working with existing resources and created a large variety of specialized craftsmanship as well as traders and breeders of animals important for transportation. Together with developing trading networks and routes, this led to the development of an international trade process and training of people to work in specialized facilities (jewelry, pottery, etc.) (Jafarov, 2020). This period can be considered the cradle of craftsmanship and professional trading and transport in Azerbaijan, as one of the oldest industries in this country.

Table 16: Ecosystem elements and entrepreneurial activity: IX century BC – The Manna period

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	centralized state emergence (2), centralized market (2), private ownership (3)	7	0
	Informal	free decisions (1), early culture emergence (2)	3	0
	Social networks	National (1) and international (2) trade connections	3	0

Resources	Physical	Wide lands (1), long distance transportation (2), caravans (2)	5	0
	Financial	Trading (2)	2	0
	Leadership	Independent (2)	2	0
	Human capital	Traditional learning (1)	1	0
	Knowledge	-	0	0
	Means of consumption	Simple form of national (1)/ international trade (2)	3	0
	Producer services	jewelry: silver (1), golden cups (2) & pieces of clothing attires (2); textiles (2); pottery (2)	9	0
Value	*Productive entrepreneurship*	*Specialized Craftsmen* (2)*, Farmers* (1)*, Breeders* (1)*, Merchants* (1), *Caravan leaders/Owners* (2)	*7*	*0*
Total			***42***	***0***

Source: Own data 2022, following Stam and Van de Ven (2021).

The eastern military campaign of Alexander the Great to the Middle East in the IV century BC, had a big impact on the territory: the Hellenistic culture mixed with the local culture, and it brought new opportunities in trading (Rasulova, 1969; Babayev, 1990). Moreover, at the end of IV century BC, two independent states were formed: *Atropatena* in the south and *Caucasian Albania* in the north (Aliyev, 1990; Babayev, 1990). After the death of Alexander the Great and the collapse of his empire, the two states became independent in 323 BC (Bosworth, 1989). Cities and other settlements, both in Atropatena and Caucasian Albania bordered the caravan trade routes and each of them had a big temple within its territory (Babayev, 1976; Babayev, 1990). *Caucasian Albania* had an exceptional location. Distinguishably successful were the water trade routes of the Ox River (now Amu Darya River), Hirkan Sea (now Caspian Sea), and Kura River. These, along with some land routes were the main paths by which the goods from India reached the Black Sea (Babayev, 1990). Therefore, local and international trade had a new impulse to develop. Fishing was another important part of the economy; Claude Elian wrote, "The Caucasian Albanians made medical remedies from the fish fat, and used the viscera of fish to produce glue"

(Feigl, 2011, page 24). Moreover, the iron ores deposits on this territory fostered the development of metallurgy; pottery was another sphere which saw development. Glass manufacturing starting from the I-st century BC (Azerbaijan Academy of Science, 1995). Thus, entrepreneurial activity developed around accessible natural resources and produced goods using high skill levels. The coins excavated in Shamakhi in 1958 and in Gabala in 1966 revealed that both local and foreign coins were used as means of exchange (money) during this trade period (Babayev, 1990). However, four social groups existed on the territory of Azerbaijan in that period; it included slaves, individuals, identified as the producers of material valuables and resembled the entrepreneurs - were free people (Mamedova, 1986). For a long time, the entrepreneurs where a well-respected social group. This period also gives evidence suggesting that goods were traded by exploiting the existing and new trade routes, and the competitive advantages (Babayev, 1990).

Table 17: Ecosystem elements and entrepreneurial activity: IV century BC – The Caucasian Albania

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	centralized state (2), centralized market (2), private ownership (3), slavery (-2), People identified as the producers of material valuables were free (1)	8	-2
	Informal	Free decisions (1), Hellenic culture impact (2)	3	0
	Social networks	national trade (1) and Inherited from Alexander the Great Empire wide international trade geography and connections (2)	3	0
Resources	Physical	Land, water trade route of Ox River and caravan trade routes (2), caravans sarais (2), temples (2)	6	0
	Financial	Trading (2), early industrial production (metallurgy, glass manufactures) (2)	4	0
	Leadership	Independent (2)	2	0
	Human capital	Traditional learning (1)	1	0
	Knowledge	New industry knowledge (2)	2	0
	Means of consumption	International (2) and local trade (1), production (2)	5	0

	Producer services	Remedies and glue from fish fat (2), pottery (2), glass and iron items (2)	6	0
Value	*Productive entrepreneurship*	*Merchants (1), caravan owners (2), specialized craftsmen (2), fishers (2), fish fat remedies and glue producers (2) breeders (1), intermediaries (1)*	*11*	*0*
Total			***51***	***-2***

Source: Own data 2022, following Stam and Van de Ven (2021).

4.4.2 Middle Ages - Feudalism and Colonization versus Independence and Entrepreneurship

Administrative units: Sassanian Empire, Arab Caliphate, Seljuk Empire, The Shirvanshakhs and The Atabek States

In the Middle Ages (III – XIII century), the pattern of social structure having different hierarchy levels and economic development in Azerbaijan were quite similar to that common around the world (Aliyev. 1995, pp.169-179), and thus, the development of entrepreneurial activities was also comparable. In the III-V centuries, Feudalism emerged in Azerbaijan, with a king on the top of a non-democratic system and lords on lower aristocratic levels (Hunter, 2012). Due to the feudalistic political system, a major part of the land was transferred from the state to private ownership of a wealthy group of people, serving the kings - the so-called servicemen. To create a strong social support, the kings gave these servicemen, the right to receive income from the land on which the peasants lived, in addition to their own lands. There were two types of land ownership: inherited and unconditional feudal land ownership called “dastakert,” and conditional land ownership called “hostak,” granted only for temporary possession, for the vassal service. However, “hostak” land often became “dastakert” (“patrimony” vs. “estate”) (Mamedova, 1986). The feudal lords, in their turn, expanded their possessions through military attacks, as well as by acquiring the land of impoverished peasants (Jafarov & Jafarova, 2017). The main peculiarity of the feudal way of production in Azerbaijan, as in all countries of the East, was the almost complete absence of the lord’s own household because starting an enterprise requiring large expenses was not profitable for them. The lords were mainly focused on collecting rent from the peasants. The peasants cultivated the land, give a part of the product the feudal lord, and

perform many duties (Mamedova, 1986). This kind of economic relationship between the peasants and feudal lords explains the fact that Azerbaijan, unlike other Eastern countries, did not have serfdom in the common sense. The peasants were dependent on and subject to cruel exploitation, but they were not considered serfs of the feudal lords, and the lords had no right to buy or sell them (Jafarov & Jafarova, 2017).

For entrepreneurial activities, the feudal system was rather destructive, because people outside the "privileged" feudal group had a limited ability to enhance their lives through entrepreneurial and business opportunities (Hunter, 2012). The feudal structure was mostly an outcome of the permanent occupation of Azerbaijan during these Middle Ages, by many big empires (Sumbatzade 1990), such as the Persian Sasanian Empire in the 6th century as a result of Sasanian-Roman war. This was followed by the dynasty of Mekhrani, the relatives of the Sasanians in the VII century. Two types of taxes were levied in Azerbaijan during this latter period: haradj, that was tax on land, and gezit, that was taxed from individuals. Haradj constituted approximately 1/3 to 1/6 of the crops, while gezit was levied once a year on the Christians and craftsmen. Such taxation policy had a negative effect on the society in terms of entrepreneurial activity, because it directly discriminated against the main group of entrepreneurs at that time: the craftsmen. As a result, the number of artisans decreased (Jafarov & Jafarova, 2017). A new regime and taxation system was established in 681 AD when the Arabs exploited a power vacuum and entered Caucasian Albania in Azerbaijan, and made it a part of the Arab Caliphate. Islam started spreading in the territory, and the tax policy of colonization served the religious ideals. The locals had to pay a tax "reckoned by head" – jiziya. The women, children, and poor were exempted from this tax, and so were the men joining the army. This latter military policy of taxation – like in most big empires at that time, resulted in a reduced number of craftsmen, merchants, and independent entrepreneurs, in favor of army men (soldiers).

Table 18: Ecosystem elements and entrepreneurial activity: III-V centuries, The Sassanian Empire

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Colonial power (-2), non-democratic hierarchy system (-2), vassal service and feudalism (-2), unfavorable for craftsmen taxation (-1), poor property rights protection (-2), vassal lands (hostak/dastakert) (-1) serfdom abolishment (2)	2	-10
	Informal	Severe social stratification (-2), expanding lands by military attacks (-1) and acquiring the land of impoverished peasants (-1),discrimination of craftsmen (-1)	0	-5
	Social networks	Local connections (1)	1	0
Resources	Physical	Wide lands(1), agriculture development (1)	2	0
	Financial	-	0	0
	Leadership	Colonial (-2)	0	-2
	Human capital	The number of craftsmen, merchants reduced, in a favor of farmers paying natural taxes to feudal (-1)	0	-1
	Knowledge	-	0	0
	Means of consumption	Internal/colonial trade (1)	1	0
	Producer services	Agriculture (1)	1	0
Value	*Productive entrepreneurship*	*Less farmers (-1), much smaller amount of craftsmen (-1)*	*0*	*-2*
Total			***7***	***-20***

Source: Own data 2022, following Stam and Van de Ven (2021).

Table 19: Ecosystem elements and entrepreneurial activity: VII century – The Arab Caliphate

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Colonial power (-2), non-democratic hierarchy system (-2), taxation based on religious/professional discrimination (-1) (Heavy tax burden for non-Islamic and non-military population, tax called Jizya). poor property rights protection (-2)	0	-7
	Informal	Colonization(-1) and religious discrimination (-1) of population	0	-2

	Social networks	Local connections (1)	1	0
Resources	Physical	Wide lands (1), agriculture (1)	2	0
	Financial	-	0	0
	Leadership	Colonial (-2)	0	-2
	Human capital	the number of craftsmen, merchants and all independent entrepreneurs reduced, in a favor of army men (-1)	0	-1
	Knowledge	Military (-1)	0	-1
	Means of consumption	Internal/colonial trade (1)	1	0
	Producer services	Agriculture (1), military acquisitions (-1)	1	-1
Value	*Productive entrepreneurship*	*Even less farmers (-1), and an even smaller amount of craftsmen (-1)*	0	-2
Total			***5***	***-16***

Source: Own data 2022, following Stam and Van de Ven (2021).

As a result of the collapse of the Arab Caliphate, the *state of Shirvanshakhs* came up as an independent government; it extended from Derbent to the Kura river and the shore of the Caspian Sea (Ashurbeyli 1984; Buniyadov 2007a). Despite the short period of independence, the entrepreneurial activities revived, the Islamic tax was abolished, the merchants, potters, breeders, fishers, and craftsmen returned to their professions, new craft specializations emerged (Buniyadov 2007a), and trade flourished again and almost the former level of business activities, quality, and trade could be reached. This is presented in Table 7.

Table 20: Ecosystem elements and entrepreneurial activity: 861-1538 – The Shirvanshakhs State

Concept	**Construct**	**Aspects and operationalization**	**Point +**	**Point -**
Institutions	Formal	Short term Independence (2), feudalism (-2); abolishment of Pro-Military (1) and later religious (1)taxation, unfavorable for craftsmen and self-employed individuals	4	-2
	Informal	Free choice (1), revival of entrepreneurship (2)	3	0
	Social networks	Revival of pre-colonial trade relations (2)	2	0
	Physical	Wide lands (1)	1	0

Resources	Financial	Trading (1)	1	0
	Leadership	Independent (2)	2	0
	Human capital	-	0	0
	Knowledge	Traditional learning (1)	1	0
	Means of consumption	Local (1) and international trade (2)	3	0
	Producer services	Pottery (2)and jewelry (2), as before colonization	4	0
Value	*Productive entrepreneurship*	*Higher and reviving numbers of craftsmen such as (potters (1) jewelers (1), clothing makers(1),new specialized craftsmen (2), farmers (1) merchants (1) intermediaries (1), breeders(1), fishers (1)*	10	0
Total			***31***	***-2***

Source: Own data 2022, following Stam and Van de Ven (2021).

However, this period was too short to lead things to a robust stage. So, again, in the XI –XIII century Azerbaijan fall under foreign occupation; this time the *Seljuk Empire* (1037–1194), held out a its military policy on the colonized territories. This meant high taxation on the independent self-employed and no taxes on the members of the military. The occupants were never interested in the development of their colonies; rather they wanted to use the population as a military force for further expansion which negatively affected the entrepreneurial activity (Buniyadov 2007; Sharifli 1978) (see Table 8). Thus, these occupations became a kind of recurring political phenomenon in Azerbaijan, and the country turned into a diversified society with different religions and cultural roots. This had an impact on Azerbaijan as a nation which is imprinted until today; modern Azerbaijanis are multicultural and tolerant towards different religions (Buniyadov, 2007).

Table 21: Ecosystem elements and entrepreneurial activity: Middle Ages (1037–1194) – The Seljuk Empire

Concept	**Construct**	**Aspects and operationalization**	**Point +**	**Point -**
	Formal	Colonial power (-2), high taxation on independent entrepreneurs, (-1) no taxes to	0	-6

Institutions		members of the military (-1). Poor property rights protection (-2)		
	Informal	Colonization and militarization of population (-2)	0	-2
	Social networks	Local connections (1)	1	0
Resources	Physical	Wide lands (1)	1	0
	Financial	-	0	0
	Leadership	Colonial (-2)	0	-2
	Human capital	The number of craftsmen, merchants and all independent entrepreneurs reduced, in a favor of army men (-1)	0	-1
	Knowledge	Military (-1)	0	-1
	Means of consumption	Internal colonial trade (1)	1	0
	Producer services	Military acquisitions (-1)	0	-1
Value	*Productive entrepreneurship*	*Very small amount of farmers (-1) and craftsmen (-1) (diminishing again)*	0	-2
Total			***3***	***-15***

Source: Own data 2022, following Stam and Van de Ven (2021).

At the end of the XIth century, the Seljuk Empire weakened, and the Shirvanshakhs state became independent again. To develop more resilience against future occupations, this state united with the regional neighbors, particularly with the Georgian kings and established the *Atabek State* (Farzaliyev, 1983). A unified language, currency, and means of weights and measurements were introduced. This emergence of a stable and independent state, and commonly accepted money and measures (1136-1225) boosted the development of such spheres as craftsmanship, and trade and culture; thus, the entrepreneurial activities received a boost (Buniyadov, 2007b). The Ganja city was named the most developed and rich city at that time: up to 500,000 people lived there at a time when cities with 20,000 to 30,000 residents in the Western Europe were considered large (Buniyadov, 2007b). Handicrafts and other entrepreneurial activities developed in this period and had a minimum of 30-40 different craft specializations. Ganja also was the biggest silk producing center in Azerbaijan (Buniyadov, 2007b). Moreover, there were rich iron and copper

mines close to the city, and this affected the development of all crafts dealing with metals. Ganja produced weapons and ammunition for the entire region of the Southern Caucasus, and hence, became an important city. As a consequence, the majority of Ganja's citizens consisted of independent traders and craftsmen. This leads to the overview in Table 9. Ganja had a great impact on the development of Azerbaijan (Alizade, 1956). Unfortunately, a strong earthquake in 1139 affected Ganja city's development; it had many negative effects on all positive aspects discussed earlier (Sultanov & Sultanova, 1958).

Table 22: Ecosystem elements and entrepreneurial activity: Middle Ages (1136-1225) - The Atabek State

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Long term Independence (2), property rights (3), unified currency (3),and measures, language (1)	9	0
	Informal	Free choice(1), craftsmanship(1), culture (1)	3	0
	Social networks	National trade(1) and wide international trade connections(2)	3	0
Resources	Physical	Even wider lands(1), development of Ganja city (2), iron and copper ore mining (2) and production (2), spill-over effects to the whole nation (2)	9	0
	Financial	Production (2) and trading (1)	3	0
	Leadership	Independent (2)	2	0
	Human capital	Advanced craftsmanship specialization (2)|	2	0
	Knowledge	Traditional learning (1), early industry knowledge (2), research (2)	5	0
	Means of consumption	Local (1) and international trade (2)	3	0
	Producer services	Weapons and ammunition to the whole Southern Caucasus region (3), silk and textile (2), Iron and copper ore (2), porcelain and crafts that used metals (2)	9	0
Value	*Productive entrepreneurship*	*Independent traders (2)and merchants (1), crafters - craftsmen specialization ,30-40 different craft professions (1x30)*	33	0
Total			***81***	***0***

Source: Own data 2022, following Stam and Van de Ven (2021).

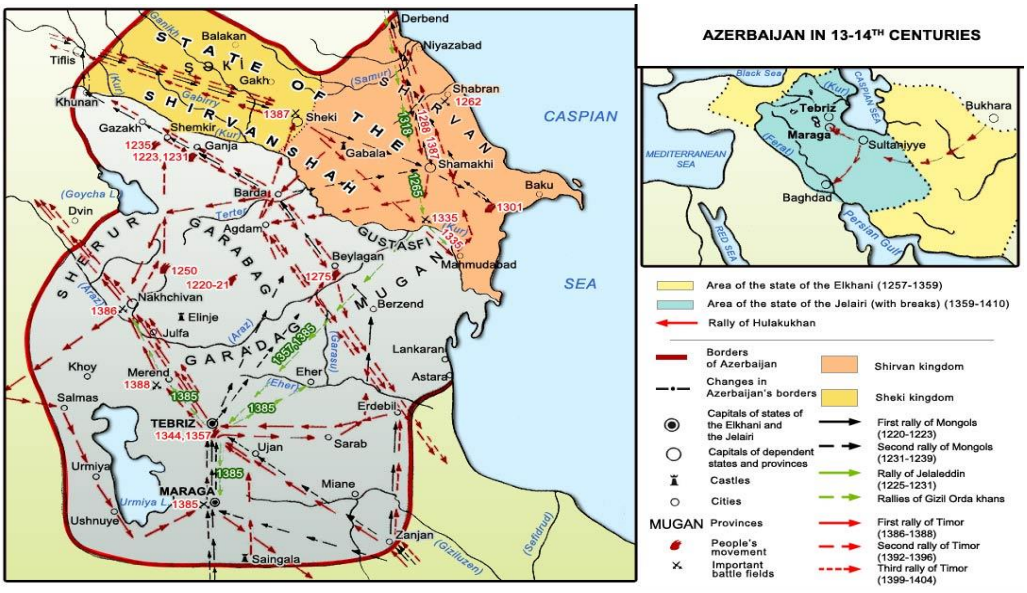
Historians refer to this era as the Azerbaijani renaissance. Azerbaijan introduced famous astronomers, poets, and architects to the world. This period was distinguished by the peak of Azerbaijani literature development; Nizami Ganjavi ("from Ganja") was the most famous poet, and his work "Hamse" has been translated into 27 languages. The fact that cultural and entrepreneurial activities peaked at the same time might suggesting that liberal and cultural factors, and economic development often develop in tandem and affect each-other (Freytag & Thurik, 2010). Another important development was the adoption of a common spoken language in Azerbaijan; Turkish became the main language for communication in Azerbaijan (Buniyadov, 2007b; Buniyadov, 1978).

4.4.3 XIII-XV Century – The Mongol Period

Administrative units: The Mongol Empire

Various military campaigns occurred in the territory during these prospering times, and finally, in the XIII-XIV centuries, the social and economic situation in Azerbaijan became unstable. After three main military rallies of the Mongol Empire (XIII) and later the Golden Hordes (XIV), Azerbaijan became a part of the Mongol Empire (Alizade, 1956). The local government of Shirvanshakhs still existed, though it obeyed the invaders.

Figure 19: Geopolitical map of Azerbaijan, 13-14 centuries



Source: https://www.history.az/images/3/460432.jpg.

Forty tax forms were introduced in addition to the duties and tribute during the Mongol invasion. The territorial policy of the Mongols, whose main source of income was cattle breeding, reduced the land used for agriculture (Buniyadov, 2007). This led to lower harvest, which harmed the local farmers. The local feudalists lost their lands and sources of income. Additionally, the Mongols followed the policy of enslaving the local men to use them during military campaigns, and the crafts masters and entrepreneurs were mostly male. The 200 years of destructive policy during the Mongol occupation led to a near-collapse of individual craftsmanship in Azerbaijan (Alizade, 1956).

Table 23: Ecosystem elements and entrepreneurial activity: XIII-XV Century – The Mongol Period

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Colonial power (-2), non-democratic hierarchy system (-2), slavery(-3), heavy tax burden of 40 taxes (-1), poor property rights protection (-2)	0	-10
	Informal	Severe colonization and slavery (-2)	0	-2
	Social networks	Local connections (1)	1	0
Resources	Physical	Wide lands (1)	1	0
	Financial	-	0	0
	Leadership	Colonial (-2)	0	-2
	Human capital	Severe reduction of farmers, craftsmen, merchants and all independent entrepreneurs, in a favor of army men (-1)	0	-1
	Knowledge	Military (-1)	0	-1
	Means of consumption	Internal/colonial trade (1)	1	0
	Producer services	Military acquisitions (-1)	0	-1
Value	*Productive entrepreneurship*	*almost none*	0	0
Total			***2***	***-17***

Source: Own data 2022, following Stam and Van de Ven (2021).

4.4.4 XV – XVII Century - Independent again: The Silk Route and international trade

Administrative units: Qaragoyunlu and Aggoyunlu states, The Safavi State

After the fall of the Mongol Empire, in the beginning of the XVth century, the *Qaragoyunlu* and *Aggoyunlu* states became the new rulers and formed local governments in Azerbaijan (Heydarov, 1982). These independent regimes created a new "prosperous" era for the cities in Azerbaijan (Farzaliyev, 1983), and the traditional entrepreneurial activities started reviving (Buniyadov, 2007). For example, in the second half of the XV century, Baku turned into the main port on the Caspian Sea, and played an important role in the trade with Moscow and Central Asia; Tabriz, Ganja, Shamakhi, and Ardabil were declared the main silk and cloth producing cities (Heydarov, 1982). The carpets from the cities of Shirvan and Tabriz gained popularity (Buniyadov, 2007) and became world famous by around 1475. Thus, craftsmanship and trading again became an important force in the society and economy (Azerbaijan Ministry of Culture, 2015). Fishing, agriculture, and caravan trade revived, while the number of taxes decreased drastically from 40 during the Mongol empire to only three in this new government. The craftsmen paid tax for production, the farmers paid the living tax reckoned by head, and also the tax for irrigation if they used water for this purpose (Buniyadov, 2007).

Table 24: Ecosystem elements and entrepreneurial activity: Qaragoyunlu and Aggoyunlu States

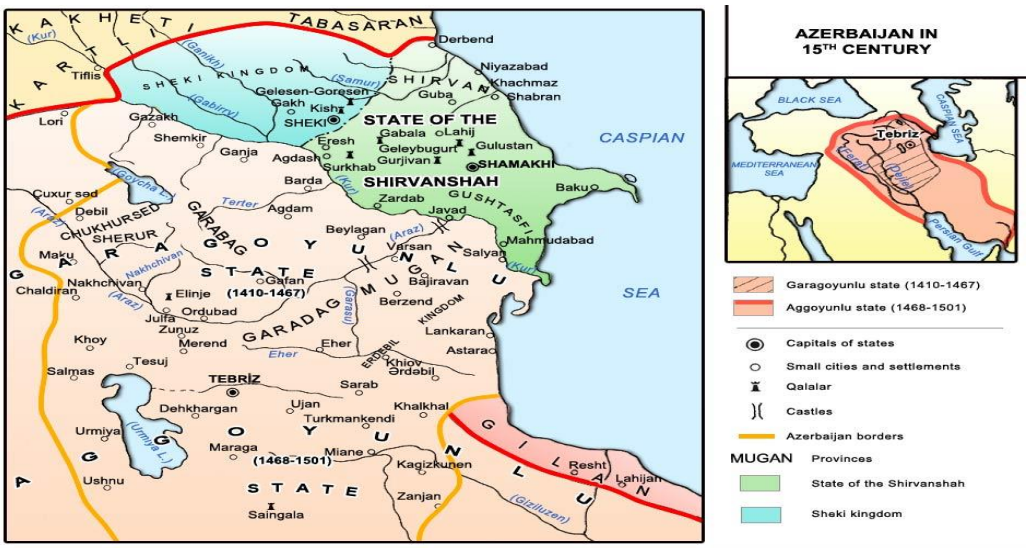
Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Independence(2), reduced amount of taxes (1)	3	0
	Informal	free choice (1), craftsmanship, trade and culture revived (2)	3	0
	Social networks	national trade (1) and wide international trade (2) The great Silk Route (2)	5	0
Resources	Physical	Ports (2))and shipping development (2) at the Caspian Sea, transport ways and routes (2), Evolving cities (2) along the Silk Route, more resources (1), more agriculture (1)	10	0
	Financial	Production (2) and trading (1)	3	0

	Leadership	Independent (2)	2	0
	Human capital	Industrial production (3) and advanced craftsmanship specialization (2)	5	0
	Knowledge	Traditional learning (1), industry knowledge (2)	3	0
	Means of consumption	Local (1) and international trade (2)	3	0
	Producer services	Intermediary trade (2), silk (2), cloth (2), carpets (2), agricultural products (1)	9	0
Value	*Productive entrepreneurship*	All over new developing cities and areas (2): Merchants (1), craftsmen (1), farmers (1) and traders (1), shipmen (2), boat owners (2), caravan leaders (2), hostels (2), breeders of cattle and camels (1).	15	0
Total			***61***	***0***

Source: Own data 2022, following Stam and Van de Ven (2021).

In 1501, the *Safavi state* with its capital in Tabriz city was formed on the remnants of these states; it was founded by the new dynasty of Shah Ismail Safavi of Azerbaijan, who in 1502 became the Shah of Persia (Muradaliyeva, 2011). The economic and social role of Tabriz, Shamakhi, Baku, Ardabil, Julfa, and other Azerbaijani cities increased due to the development of international trade alongside the great "Silk Route" and the fair, open-minded, and liberal leadership of this government.

Figure 20: Geopolitical map of Azerbaijan, 15th century

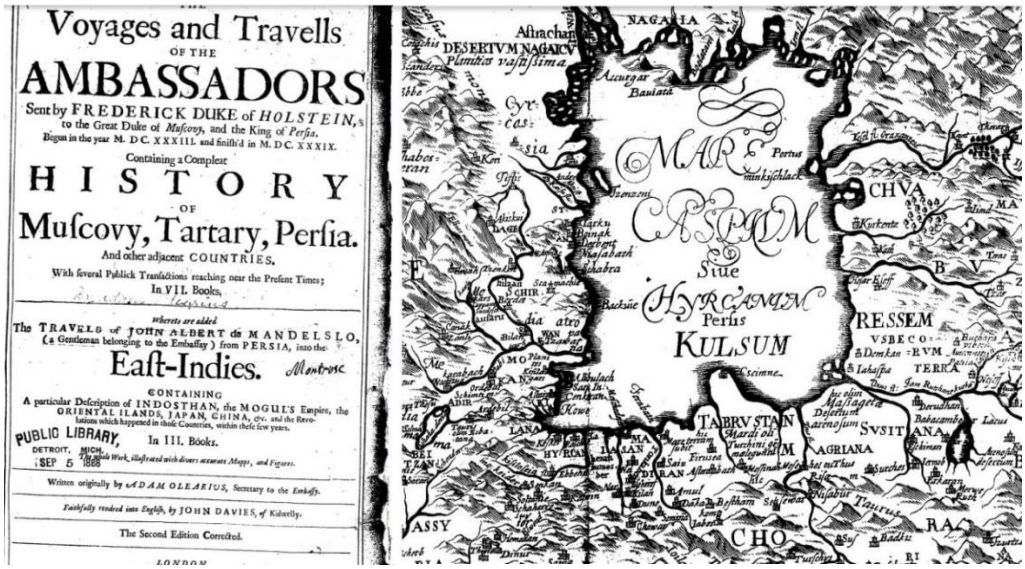


Source: https://www.history.az/images/3/139582.jpg.

For the ecosystem and entrepreneurial activities of Azerbaijan the Great Silk Route (starting in the I-III centuries BC as “Strabo path”) (Muradaliyeva, 2011) is of great importance. It has changed its paths and directions over time, but the Azerbaijani cities have always remained its part; Azerbaijan has been a gate between Europe and Asia (Heydarov, 1982). However, Azerbaijan played a great role in the trade and pathway of the Silk Route is during the XIV-XVIII centuries, when the goods from China were transported to the European markets, partially through the Caspian Sea. These water routes for transportation were widely used because they were the cheapest during that period (Heydarov, 1982). The enormous and steadily growing trade along the Silk Route also boosted the development of infrastructure and entrepreneurial activities in the Azerbaijani cities. They had caravanserais, which combined the functions of a hotel and a warehouse. The caravan trade provided work for various professionals: camel drivers, camel breeders, guards, moneychangers, and other servicemen. Besides, special bazaars and fairs were organized for foreign merchants and guests. All this, helped boost trade and entrepreneurial climate in the region (Muradaliyeva, 2011). Over a long period, these Silk Route activities helped Azerbaijan in being identified as a trading, transit, and intermediating country (Heydarov, 1982).

Silk became the main export item of Azerbaijan, especially when in 1562 the governor signed a trading contract with the English-Moscow company Jenkins (Mahmudov, 1993). Silk trade became a topic of negotiations between the Safavi state, the Russian Empire, and other European countries. The records of famous German traveler and embassy member, Adam Olearius, sent by the duke of Holstein to Moscow and Persia, show that he aimed to reach agreements with the two countries for establishing the silk trade route through Moscow into Holstein. He also mentions Azerbaijan in his work, “The Voyages & Travels of the Ambassadors” (Paris, 1666), and describes his two visits to Azerbaijan (1636 and 1639) and records that it produced more than 20,000 silk cocoons per year, mostly in the Shamakhi city (Olearius, 1666).

Figure 21: Illustration of Azerbaijani cities by Adam Olearius, 1666

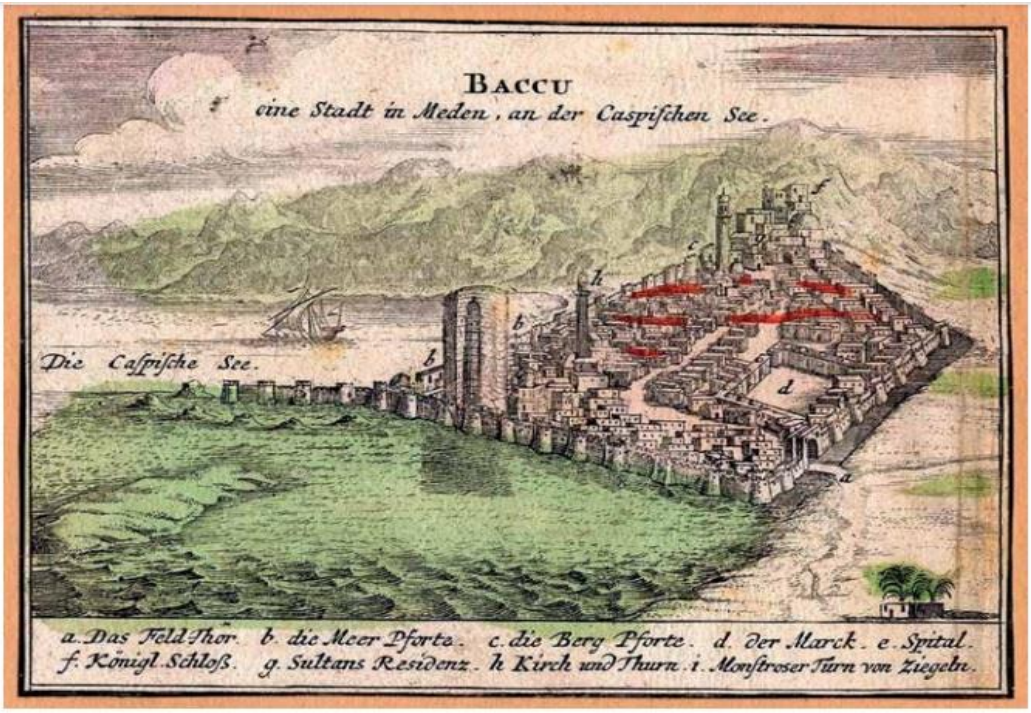


Source: Adam Olearius. The Voyages & Travels of the Ambassadors: Sent by Frederick Duke of Holstein, to the Great Duke of Muscovy, and the King of Persia, Paris, 1666, pp. 144-145. *Image produced by ProQuest as part of Early English Books Online. www.proquest.com Image published with permission of ProQuest. Further reproduction is prohibited without permission.*

Other craft types were also developing rapidly beyond this famous silk trade city of Shamakha. Saffron, harvested in different rural areas, was another valuable good exported to Moscow and Europe during this period (Muradaliyeva, 2011). Baku gained more fame as a port-city and for its oil resources (Mahmudov, 1993). Tabriz city became the center of carpet production (some pieces of that period are still kept in Milan and British museums, due to their extraordinary quality and design (Heydarov, 1982). Moreover, similar to the first high period of entrepreneurship, the art and culture developed during this period (Freytag & Thurik, 2010). In XVI a school of miniature art was established in Tabriz and many valuable manuscripts were produced during this period. Among them, were "Shah and Darvish" with three miniatures (Saltikov-Shedrin Library, St.Petersburg), "Shahname" with 258 miniatures (Metro Museum and Houghton collection, New York), and the world-famous "Khamsa" with 14 rare miniatures (British Museum, London). They all are considered as masterpieces of miniature painting and book art in the East because of their rich designs and exotic decorative adornments (Azerbaijan Ministry of Culture, 2015). Beside the trade

with Russia and Western Europe, strong Azerbaijan-India trade relations also existed. The local population referred to Indian merchants as "Multans," who stayed in caravanserais and had their own living areas in the cities (Chardin, 1735). In addition to these trade relations, a cultural or religious bond, Zarathustrianism (the cult of fire) also developed. A fire temple called "Ateshgah" was erected in Surakhani region, as a symbol of the good relationships between the two nations (Kämpfer, 1712); it broadened the cultural and religious diversity in Azerbaijan which exists until today (Buniyadov, 2007).

Figure 22:View of prospering Baku, 1683, by German traveler Engelbert Kämpfer



Source: Amoenitatum exoticarum politico-physico-medicarum fasciculi V, quibus continentur variae relationes, observationes et descriptiones rerum Persicarum et ulterioris Asiae, multa attentione, in peregrinationibus per universum Orientum, collecta, ab auctore Engelberto Kaempfero. Lemgoviæ: Typis & Impensis Henrici Wilhelmi Meyeri, Aulæ Lippiacæ Typographi, 1712, p.269; https://irs-az.com/new/files/2019/265/3072.pdf.

During this period, the nation mainly consisted of four social groups: feudalists, merchants, craftsmen, and farmers (Heydarov, 1982). The craftsmen in their turn were divided into three categories: 1) individual craftsmen, 2) united workshop organizations with several craftsmen (asnaf), and 3) craftsmen, working in

workshops belonging to the feudal. However, there was only one group of traders: the Azerbaijani merchants. They preferred to use the Ottoman trade routes; the goods transported by this pathway were all gathered in the major cities of Istanbul, Izmir, and Halebe, and then they were transported to Europe by sea (Heydarov, 1982). The Silk Road and trade had an enormous impact on the development of the Azerbaijani entrepreneurial activities, the craftsmen, and merchants. However, the discovery of transportation route from Europe to Asia via sea and around the African horn reduced the importance and use of the Silk Route, but it was still active (Swietochowski & Collins, 1999).

Table 25: Ecosystem elements and entrepreneurial activity: XVI-XVIII centuries – The Safavi state

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Independence (2)	2	0
	Informal	free choice (1), The Great Silk Route Era culture and trade development (2), art development (3)	6	0
	Social networks	national trade (1)and wide international trade (2), The great Silk Route (3) Evolving cities along the Silk route (2)	8	0
Resources	Physical	Baku port (3), cheap water transportation (2)caravanserai (2) and other trade infrastructure (2), transit country and routes (2), silk (2), saffron (1), further development of shipping (2) wide lands (1)	17	0
	Financial	Production (2) and trading (1), export of silk (2)	5	0
	Leadership	Independent (2)	2	0
	Human capital	craftsmen organizations (3), industrial production (3)	6	0
	Knowledge	Traditional learning (1), industry knowledge (2)	3	0
	Means of consumption	Local (1)and international trade (2) along the Silk Route	3	0
	Producer services	Intermediary trade (2) transit trade (2), carpet production (2), silk and silkworm (2), miniatures (3), saffron (1)	12	0
Value	*Productive entrepreneurship*	Merchants (1), craftsmen (1), farmers (1), traders (1), caravanserai owners (2) caravanserai (hotel) staff (2), camel drivers (1), guards (2), moneychangers (2) other free servicemen, required to assist Silk way trade (2), artists (3), teachers at crafts schools (2); strong	31	0

		development and prospering cities (2)and rural areas, ship builders (2), farmers (2) saffron producers (2) silkworm and silk producers (2)		
Total			***95***	***0***

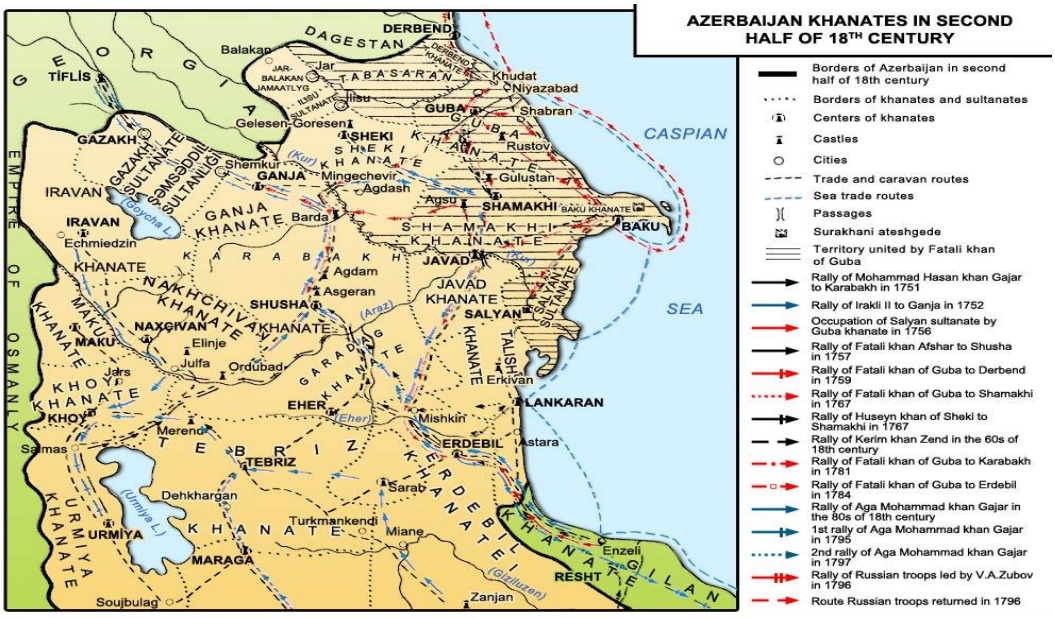
Source: Own data 2022, following Stam and Van de Ven (2021).

The overall development of entrepreneurial activity in that period is considered very high, although it was strongly related with the Great Silk Route and international trade. Therefore, this period mostly saw the developing "around" this international trade process along the route. The entrepreneurship was mostly focused on the service (merchants, Caravan Sarai's, moneychangers, transportation services, etc.) and export sectors, and was mostly involved in international trade in products, such as silk, carpets, and spices, the traditional trade on the Silk route trade. However, increase in craftsmanship and production were also witnessed.

4.4.5 XVIII century - Azerbaijani Khanates: Feudal fragmentation

Administrative units: Tabriz, Urmiya, Khoy, Maku, Garadag, Maraga, Sarab Karabakh, Ganja, Shamakhi, Baku, Derbend, Guba, Sheki, Lankaran, Iravan, Nakhchivan khanates, and the sultanates of Ilisu, Gabala, Aresh, Gazakh, Shamshaddin, Jar-Balakan, and Tabasaran.

Figure 23: Geopolitical map of Azerbaijan, 18 century



Source: https://www.history.az/images/3/292821.jpg.

Political instability following the assassination of Shah Nadir in 1747 ended the long and robust rule of the Safavi state (1501-1747) which saw the peak of a positive development. The struggle for succession to the throne among the four heirs of the Shah ended in repeated transfer of power , and this resulted in feud and the emergence of independent local states – Khanates, on the territory of Azerbaijan, and later on - to Russian Empire rallies (Abdullaev, 1965). A heavy tax burden was developed (35 types of taxes levied) in response to the strong need of money. Tabriz, Urmiya, Khoy, Maku, Garadag, Maraga, Sarab Karabakh, Ganja, Shamakhi, Baku, Derbend, Guba, Sheki, Lankaran, Iravan, Nakhchivan khabates, and the sultanates of Ilisu, Gabala, Aresh, Gazakh, and Shamshaddil Jar-Balakan, and Tabasaran developed as little political power centers. This process was strengthened by the feudalist independence in the territory and very weak economic ties between the regions in the territory of Azerbaijan (Rahmani, 1981). Some of these regions are still important parts of Azerbaijan, while others were annexed by Russia and Iran as a result of the war between them (see next section). The economic situation got worse during the Khanates period (Buniyadov, 2007). Every Khanate had its own regulations, and taxation and economic systems. Only the system relating to the property rights was similar in all Khanates, and the lands were still granted by the governor (Khan) except that conditional inheritance was changed to unconditional inheritance. The feudal fragmentation destroyed the existing production ties between the cities and other regions of Azerbaijan and resulted in the decline of total entrepreneurial activity (Jafarov & Jafarova, 2017) to a much-reduced scale to include only small craftsmen and merchant operations. Feudal fragmentation also created a favorable condition for Russian empire to invade and gain control in Azerbaijan (Buniyadov 2007).

Table 26: Ecosystem elements and entrepreneurial activity: End of XVIII century – The Khanates

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Feudal fragmentation (-2), feudalism (-1), non-democratic hierarchy system (-2), Poor property rights protection (-2), closed economy - every khanate had its own governor,	0	-9

		regulations, taxation and economic system (-1), vassal service (-1)		
	Informal	Social stratification (-2)	0	-2
	Social networks	Local trade (1)	1	0
Resources	Physical	Small khanates, broken production ties between them (-2)	0	-2
	Financial	-	0	0
	Leadership	Feudal system (-2)	0	-2
	Human capital	-	0	0
	Knowledge	-	0	0
	Means of consumption	Local trade (1) and trade between khanates (1)	2	0
	Producer services	Agriculture (1)	1	0
Value	*Productive entrepreneurship*	Lessened number of craftsmen (-1) merchants (-1) and farmers (1), discrimination of all other entrepreneurial professions (-1)	1	-3
Total			***5***	***-18***

Source: Own data 2022, following Stam and Van de Ven (2021).

4.4.6 XIX century – Russian Colonization

Administrative unit: Russian Empire 1

This period did not start on a favorable note for entrepreneurial activity. As a result of the two Russian-Iranian wars, the territory of Azerbaijan had been divided between the two fighting nations in the XIX century. It reduced the population of Azerbaijan; however, when the war ended, the people who had fled, started returning to the region. The local khanates were deposed by the Gulustan agreement in 1813 and the Turkmenchai agreement in 1828 (Aliyev, 1995; Buniyadov, 2007), and Azerbaijan became a Russian colony. *The Russian Tsar awarded the ruling administration as one governor (Aliyev, 1995; Buniyadov, 2007), who held power above the local aristocracy ("beks") (Jafarov & Jafarova, 2017) and had the right to take away the property of any bek..* He could also award properties to the beks, determine the tax rates and tax types, and rent the manufacturing and production locations, including the oil wells, salt lakes, ports, fish farms, and so on. The governor also approved the courts'

decisions (Jafarov & Jafarova, 2017). This period was highlighted by the severe colonial exploitation of Azerbaijan by Russian Empire, and a very centralized and non-democratic governance structure (Jafarov & Jafarova, 2017). The major portion of the population (90%) consisted of free farmers, while the two other social groups were the aristocracy (beks and religious representatives), and merchants and craftsmen (Buniyadov, 2007). The local aristocracy and the Russian imperialistic system could not co-exist peacefully, and open riots occurred in 1841 when the law declared that the lands of local aristocrats should be confiscated and they belonged to the Russian Empire (Jafarov & Jafarova, 2017). This law instilled insecurity related to investment and ownership, and different population groups openly protested against the colonial exploitation for several years. These riots lasted until 1846, when Tsar Nikolai I cknowledged the right of the aristocracy to inherit the lands as their property. Thus, a stable environment for farming, manufacturing, and craftsmanship, fostering a prosperous economic development, was restored (Jafarov & Jafarova, 2017).

As a positive consequence, two thirds of silk produced in the Southern Caucasus were from Azerbaijan during this latter time. A "Society spreading the silk production and trade on the territory of Southern Caucasus" was established in 1836, and a "Practical school of silk manufacturing" was established in 1843 in Azerbaijan to ensure a standard quality and easy trade (Sumbatzade, 1964). Additionally, there was a high demand for mastic by the Russian cloth industry; this boosted mastic's production in Azerbaijan's Guba city (Aliyev, 1998). These changes resulted in a situation, that was the opposite to the closed economy during the period of the Khanates. This led to the re-emergence of capitalism and manufacturing in Azerbaijan (Ismailov, 1964). However, Azerbaijan was mostly exploited and utilized by the Russian Empire for its materials resource (Sumbatzade, 1964).

Table 27: Ecosystem elements and entrepreneurial activity: XIX century -The Russian Empire I

Concept	Construct	Aspects and operationalization	Point +	Point -

Institutions	Formal	Colonial power (-2), non-democratic hierarchy system (-2), no private property rights (-3), ineffective and expensive rent system of production facilities (-2), ineffective legislation (-2),	0	-11
	Informal	colonization of population (-2), open riots (-2)	0	-4
	Social networks	colonial trade connections (1)	1	0
Resources	Physical	exploitation and utilization of local resources and resource-rich lands by the Russian Empire (-2)	0	-2
	Financial	Russian capital (1)	1	0
	Leadership	Colonial (-2)	0	-2
	Human capital	Local aristocracy (2) and religious representatives (2)	4	0
	Knowledge	Traditional learning (1), manufacture knowledge (2)	3	0
	Means of consumption	Internal/colonial trade (1), manufacturing (1)	2	0
	Producer services	Agriculture (1), Silk (2), Mastic polish (2)	5	0
Value	*Productive entrepreneurship*	Merchants (1), craftsmen (1), farmers (1)	3	0
Total			***19***	***-19***

Source: Own data 2022, following Stam and Van de Ven (2021).

4.4.7 Second half of the XIX century: Industrialization and the oil boom

Administrative unit: Russian Empire II

The technician, F.A. Semenov drilled the first oil well in the history of Azerbaijan in 1848, in the Bibi-Heibat area, in the suburbs of Baku (Jafarov & Jafarova, 2017). From then onwards, oil was widely used in the mass production processes across the Russian Empire (Kuzminov, et al 2017). Hence, there was a huge demand for the oil discovered in Azerbaijan (Jafarov & Jafarova, 2017). This led to the developments in oil production and the discovery of new wells and resources. The production of kerosene started in 1859 by the Russian capital (Jafarov & Jafarova, 2017). The mines and wells, that now belonged to the Russian Empire were given for short-term rents of maximum four years; thus, the renters were not interested in importing or inventing new technologies for

sustainable production (Sumbatzade, 1964). In 1865, an auctioneer company (modern LLC), Siemens Brothers & Co. built the largest copper-smelting plant in the Russian empire, located in Azerbaijan. Later, Siemens Brothers & Co built a cobalt factory in Dashkesen city. Silk production was also developing, and in 1861, in Nukha, the Voronin brothers opened the largest silk producing factory in Europe. It won a bronze medal in an exhibition in London in 1862 for its production quality and design (Jafarov & Jafarova, 2017).

Under the influence of the "Russian capitalism development," the "oily" Baku began to grow rapidly in the last quarter of the 19th century. It became the largest center for oil production in the entire Caucasus. In 1859, Russian entrepreneurs, Kokarev and Gubanin founded a large oil refinery in Surakhany district. In addition to this plant, dozens of other oil-related industrial enterprises operated in the Absheron region (Kuzminov, et al 2017). Even though the oil industry was developing, the system as a whole was not conducive to entrepreneurial activity and risk-taking, because the oil fields were rented out by the Russian Empire only for four years. This encouraged the leasing entrepreneurs to recover the high costs involved in the business due to exploration and test drilling during the four years (Kuzminov, et al 2017); this led to an extremely inefficient production because the renter was often unable to profit from his enterprise. Thus, this short-term leasing system paralyzed the development of this industry specifically, and entrepreneurial activities in general (Mendeleyev, 1949).

Figure 24: Oil fields in Baku suburbs, Balakhani, 1900

Source: **https://www.azer.com/aiweb/categories/magazine/ai102_folder/102_articles/102_oil_chronology.html**

The representatives of the nascent industrial bourgeoisie, who were interested in investing their capital in the oil business expecting large profits, demanded the abolition of this ineffective renting system. The Tsar government reckoned with those demands, and on February 17, 1872, this system was abolished. From then onwards, the oil fields' rent periods were changed; up to the maximum of 24 years. In addition, the rent contracts were sold on auctions to individuals and free entrepreneurs (Kuzminov, et al 2017). Initially, this sector required capital infusion. As a result of the auction biddings in 1872-1873, the major part of the oil fields and the most important oil areas rent contracts were sold to the Russian, Azerbaijani, and foreign auctioneers, and thus, they went into the hands of such private entrepreneurs as Mirzoyev (AZ), Lyonozov (RU), Vermashev (RU), Kokorev (RU), Gubanin(RU), Tagiyev(AZ), Benkendorff (DE), and K. Trading House (UK), and other big capital owners (Kuzminov, et al 2017; Jafarov & Jafarova, 2017). In 1879, the Swedish Nobel brothers established the "Nobel Brothers" company. In 1880s, they were followed by the Rothschilds, and in the 1890s by the James Vishaus Anglo-Russian Oil Company, Benkendorff, and K Trading House (Jafarov & Jafarova, 2017). In 1873, only 12 companies were engaged in oil production in Baku, while in 1883 and 1900, there were 79 and later, 146 companies, respectively. The capital investments in the oil industry were rapidly growing (Kuzminov, et al 2017). Despite the insignificant share of Azerbaijani entrepreneurs in the oil business, some Azerbaijani oil producers, and the first female business woman of Azerbaijan, Nabat Ashurbayli, were able to accumulate a huge fortune. The class of Muslim business people had a certain influence on various aspects of life in the Azerbaijani society (Jafarov & Jafarova, 2017).

Baku held the first place for the oil production in the world between the XIX and XX centuries based on the investments and the possibility of acquiring an ownership in the oil fields (Kuzminov, et al 2017). In 1873, an entire city district was set up for the factories and workers in Baku; it was called "Black city" because of the color of the oil that could be smelled and seen all-over (Kuzminov, et al 2017). The development in the oil business and industry also led to development and increased the demand in the related industries, that are,

chemical industry - producing sulfur, pyrite, soda, and other products (Sumbatzade, 1964). In addition, the business of the suppliers of work and food developed. Eventhough these were highly important spheres, the development of the other industrieswas not proceeding and the dependence on the oil and gas industry was created. This changed slightly in 1897, when Tagiyev (AZ) sold his oil fields and refineries for 5,000,000 rubles to the English companies. He reinvested the capital in new businesses in different industries, such as, textile, shipbuilding, and fishery. This helped other industries to flourish, and thereforeto slightly decrease the dependence on oil (Jafarov & Jafarova, 2017).

Merchants and craftsmen constituted local entrepreneurs, other than those involved in the oil and gas industry. The industrialization process led to the reduction in the number of craftsmen, as craftsmanship gave way to small businesses (Jafarov & Jafarova, 2017). However, the merchants were still active during this period. In 1876, the law regarding the merchants' rights and the Merchant's Guilds were established in Azerbaijan, which was then, a part of the Russian Empire. The Merchants' Guild consisted of three categories of merchants: the merchants of the first guild had the right to open a shop, bureau, or a fstorage facility in any location within the territory of the Russian Empire, while the merchants of the other two guilds were subject to rules and limitations. The merchants of the first guild could conduct foreign trade, own ships, and had the right to move freely in the country; they enjoyed the "passport benefit." The merchants of the second guild could own river ships. In addition, the merchants of the first and second guilds could own factories and plants, and were exempt from physical punishment and conscription. The merchants of the third guild could carry out petty trade, maintain taverns and innards, and do handicrafts (Orlov, 2017).

Parallel to this more or less flourishing business environment, the cultural and the educational system were also developing. A new kind schools, with classes separated by age and gender were opened in 1865; male and female gymnasiums were established in large cities, such as, Baku and Ganja (Jafarov & Jafarova, 2017). Libraries and reading halls belonging to schools, were opened across the

country. In 1868, the first independent library and reading hall was opened in Ganja, and in 1894, the first national reading hall was opened in Baku. Thus, Azerbaijan was developing into an open and modern society, besides being a part of the Russian Empire, and only due to some exceptional rules of freedom (Jafarov & Jafarova, 2017).

Table 28:Ecosystem elements and entrepreneurial activity: The Russian Empire II

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Colonial power (-2), no private property rights (-2), high taxes (-2), non-democratic governance (-2)	0	-8
	Informal	colonization of population (-2), cultural development (2)	2	-2
	Social networks	colonial trade connections (1), foreign investors welcomed (3)	4	0
Resources	Physical	Resource-rich lands (1), exploitation and utilization of local resources by the Russian Empire (-2) and foreign investors (-2), industrial production (2)	3	-4
	Financial	Foreign capital (3)	3	0
	Leadership	Colonial (-2)	0	-2
	Human capital	Local bourgeoisie emergence (2), Merchant guilds (3)	5	0
	Knowledge	Outsourcing (3), import of industrial knowledge (2), schools(2)	7	0
	Means of consumption	Local (1), colonial (1) and international trade (2)	4	0
	Producer services	Silk (1), Mastic polish (2), Oil (2), Kerosene (2), Cobalt (2), sulfur(2), pyrite(2), soda(2), textile (2), ship-building(2),	19	0
Value	*Productive entrepreneurship*	Merchants (1), craftsmen (1), Foreign businessmen (3), Local aristocracy – entrepreneurs (2), nascent industrial bourgeoisie (3) fishers (1) innards and tavern owners (2)	13	0
Total			***60***	***-16***

Source: Own data 2022, following Stam and Van de Ven (2021).

4.4.8 Beginning of the XX century – Economic Crisis and Monopolization

Administrative unit: Russian Empire III

The World Economic Crisis during 1900-1903 had an enormous effect on the Russian Empire, and therefore, on Azerbaijan's Economy. It negatively affected the oil and metallurgical sector, though it did not bring down the light industry production. The small and medium sized enterprises faced the biggest challenges in those years, and later on, the majority of them went bankrupt. This allowed monopolies to strengthen and led to the concentration of production (Akhundov, 1954; Muradalieva, 1989).

However, in 1901, against all these odds, more than a half of world oil production came from Azerbaijan's oil industry, and between 1898 and 1901, Baku produced more oil than the US. Judging by the capital concentration, Baku's oil production was on the first place, not only in Russia, but in the entire world (Kuzminov, et al 2017). Thus, even at low prices, the oil industry of Azerbaijan, in general remained profitable; during 1902-1904, the Nobel Brothers Company received a net profit of 9.3 million rubles, Baku Oil Company received over 1.5 million rubles, Russian Association "Oil" received about 1 million rubles, and so on. (Ibrahimov, 1984). Therefore, despite the crisis at the beginning of the 20th century, foreign capital continued to flow into Baku, and its position was very significant and strong. The interest of foreign business persons in Azerbaijan was still growing. The Noble brothers, the Rothschild, and other oil giants were among the international investors. The British companies were particularly active financially from 1898 to 1903; investing approximately 47 million rubles in oil enterprises of Baku. The Royal Dutch Shell (UK), the Standard Oil (USA), the Caspian-Black Sea Company (FR), and the Nobel Brothers from Sweden were working on new oil fields in Baku, too. Out of the 213 million rubles invested in the Azerbaijani economy by foreign investors, 8 percent was from Germany, 30.5 percent from France, and 53.3 percent from United Kingdom. Millionaires from different countries invested in different areas as well. While the German investors were also interested in the railway industry and security market (bonds, stocks, etc.), the French and British capitalists preferred the copper and oil

industries (34.6 percent of the total copper produced in Russia belonged to Azerbaijan). Thus, 167 enterprises were engaged in the oil industry, of which 29 percent were national, and 71 percent foreign capital (Jafarov & Jafarova, 2017). Half of the employees engaged in this sphere were Azerbaijanis, and the rest half were foreigners. So, these were more like oligopoly structures instead of broad Azerbaijan entrepreneurial activity in this sector.

By 1900, the six largest companies: 1 / Partnership of Nobel Brothers, 2 / Montashev, 3 / Caspian-Black Sea Partnership Rothschild, 4 / Baku Oil Company, 5 / Caspian Partnership, 6 / Society for the production of Russian oil and liquid fuels, constituting only 3.6% of the total number of companies, accounted for 50% of all oil produced in Baku. This more and more monopolistic concentration of power also occurred in the refining industry. Despite the reduction in the total number of refineries, their volume of produce grew continuously. The same six largest factories of the early 1900s were producing 44 percent of all kerosene, and one of them, namely Nobel Brothers produced over 22 %. Under the conditions of the existing industrial crisis, the Nobel Brothers Company has taken the control over the oil export from Baku in a major way, so much so that some firms and entrepreneurs, including local oil producers (Sh. Asadullayev, M. Nagiyev) had to request the Nobel Company for the permission to sell their products in Astrakhan, Russia (Muradalieva 1989).

On one hand, this foreign capital inflow led to the further development of entrepreneurial activity in Azerbaijan; however, that was true only for the large businesses and entrepreneurs, who prospered even in during crisis. On the other hand, the sharp drop in oil product prices during the crisis led to bankruptcy of many small and medium-sized entrepreneurs and contributed to the concentration of oil production in the hands of large monopolistic associations (syndicates) (Jafarov & Jafarova, 2017). The tendency to unite was observed also among the Baku ship-owners. In 1903, large ship-owners like Tagiyev, Buniyatov, Ashurov, Manafov, Useynov, Humayevs, and others, signed a kind of syndicate agreement (Jafarov & Jafarova, 2017).

Baku had become a large industrial and commercial center of Azerbaijan. More than 5000 enterprises served more than 400,000 people in the city and the surrounding villages. Baku had extensive import-export relations, not only with the other Azerbaijani cities, but also with the trade centers of the Caucasus, Russia, and other countries. All other spheres of industrial production were also located in the Baku city. In 1912, Baku housed 462 industrial enterprises (177 in oil industry), and in 1915, it had 549 enterprises (184 in oil industry) (Jafarov & Jafarova, 2017). By the end of the 19th century and in the early 20th century, Baku had already become a large industrial center with a great reputation for international and local entrepreneurship. The rapid development of industries created the preconditions for the banking sector development. In 1913, Baku had 15 large banks, which played an important role in international import-export and lending operations (Ibrahimov, 1984). The local banks mostly belonged to the Russian and Azerbaijani magnates (Muradalieva, 1989). Baku and other parts of Azerbaijan was also exporting cotton, wine, walnut, silk, wool, nuts, raw or shabby skin, fur, fish products (including caviar), porcelain, dishes, and so on, to the various Russian and Caucasian countries, Iran, and the world markets (Sumbatzade, 1964).

The agricultural sector in Azerbaijan also prospered during that period. The main area of agricultural sector development was cotton production and delivery to the textile industry (Valiyev, 1987). According to the 1914 statistics, cotton harvest in Azerbaijan accounted for 70 percent of the total volume of cotton produced in the Caucasus. "This stimulated the development of other related industries, such as textile factories; they were almost monopolistic, with the largest factory belonging to H. Z. Tagiyev (it had a construction cost of 1 million gold coins, and imported 2,500 cars from Europe to ensure supply the plant (Seidzade, 1978))."

The need for cotton grew constantly, and the amount of cotton processed increased by 5.3 times in 1901-1910. The products were mainly sold to Russia, Central Asia, and Iran (Seidzade, 1978).

The development of sericulture also played an important role in the history of entrepreneurship in Azerbaijan. At the end of the 19th century, there were more than 400 large and small silk-weaving enterprises in such cities as Zagatala, Fizuli, Ordubad, Shusha, and Sheki. The Azerbaijani silk became recognized in the world (Valiyev, 1977). In addition, 114 of the 120 silk processing plants (more than 2/3) in the Caucasus were situated in Azerbaijan (Valiyev, 1977).

Grape constituted another prospering agricultural industry. The alcoholic drinks, such as wine and cognac, were the main products of this industry. More than 30 percent of the vineyards in the Caucasus belonged to Azerbaijan during 1901-1913. The country accounted for more than 45 percent of grape production in the Caucasian region for the corresponding years. At the beginning of the 20th century, more than 1300 small, medium, and large enterprises dealt with primary wine, vodka, and cognac processing and production in Azerbaijan (Ismayilov, 1960). Licorice root was also exported to the UK and US; it was widely used in the pharmacy, dyeing, and confectionery industries (Ismayilov, 1964).

The fishing industry was a popular sphere of entrepreneurship at that time, too, given the geographical location and resource access. Fishing in Azerbaijan became the third most profitable industry after oil and wine production. It was divided into different specialization areas: torch-bearers, hunters, rowers, technicians, transporters, marinades, and so on (Seidzade, 1978). *This division of labor promoted different performers in every stage.* All fishing units were integrated under the control of large private fishing and joint-stock companies. Four syndicate fishing companies, with the largest ones in Azerbaijan, occupied more than 40 percent of total white fish caviar exports in the world market. On an average, more than two million rubles per year inflow into the state treasury resulted only from the fishing industry, which was mostly owned by Azerbaijan's wealthy individuals (Seidzade, 1978).

The entrepreneurial activity of the said period was controversial. One the one hand, there was a huge inflow of foreign direct investment, the oil boom, development of oil and related industries, and other large industrial productions

and monopolistic or oligopolistic structures (Muradalieva, 1989). However, for the first time, there arose a local aristocracy – entrepreneurs, who formed a brand-new social layer of nascent bourgeoisie who owned big capital. They also invested into the country's development, opened schools and universities, financed students studying abroad, built theaters and libraries, opened new facilities and factories, and provided new working places. In addition, there were female entrepreneurs, which indicated cultural development and evolution; the early female voting right were also introduced in Azerbaijan (Jafarov & Jafarova, 2017). However, on the other hand, there were the small enterprises, which were negatively affected by the economic crisis; many of them had to close their businesses and switch to bigger industrial production houses as employees (Jafarov & Jafarova, 2017). This process of mergers, monopolization, and consolidation of capital occurred all over the Russian Empire to stand the consequences of the economic crisis (Poliak & Markova, 2010)

Table 29: Ecosystem elements and entrepreneurial activity: XX century - The Russian Empire III

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Colonial power (-2), no private property rights (-2), high taxes (-2), non-democratic governance (-2)	0	-8
	Informal	colonization of population (-2), cultural development (2),	2	-2
	Social networks	colonial trade connections (1), foreign investors welcomed (3)	4	0
Resources	Physical	development of Baku city (2), exploitation and utilization of local resources by the Russian Empire (-2) and foreign investors (-2), industrial production (2)	4	-4
	Financial	Foreign (3) and local capital (2), Banks emergence (3), small business bankruptcy (-3), the World Economic Crisis of the 1900(-2)	8	-5
	Leadership	Colonial (-2)	0	-2
	Human capital	-local bourgeoisie (3) monopolies (-2), discrimination of local entrepreneurs (-2) Outsourcing (3)	6	-4

	Knowledge	Private scholarships (3), schools (1) and universities (3),	7	0
	Means of consumption	Local colonial (1) and international trade (2), -monopolization (-2)and concentration of production (-2), -syndicates emergence (-2)	3	-6
	Producer services	Oil (2), Ships (2), Cooper (2), Textile (2), Silk (2), Wine and Cognac (2), Fish and Caviar (2), Cotton and wool (2), Walnut and nuts (2). raw or shabby skin (2), fur (2), porcelain (2), pottery (1)	25	0
Value	*Productive entrepreneurship*	Foreign businessmen (3) and local magnates (3) in oil industry SME (3) in agricultural sector	9	0
Total			***68***	***-31***

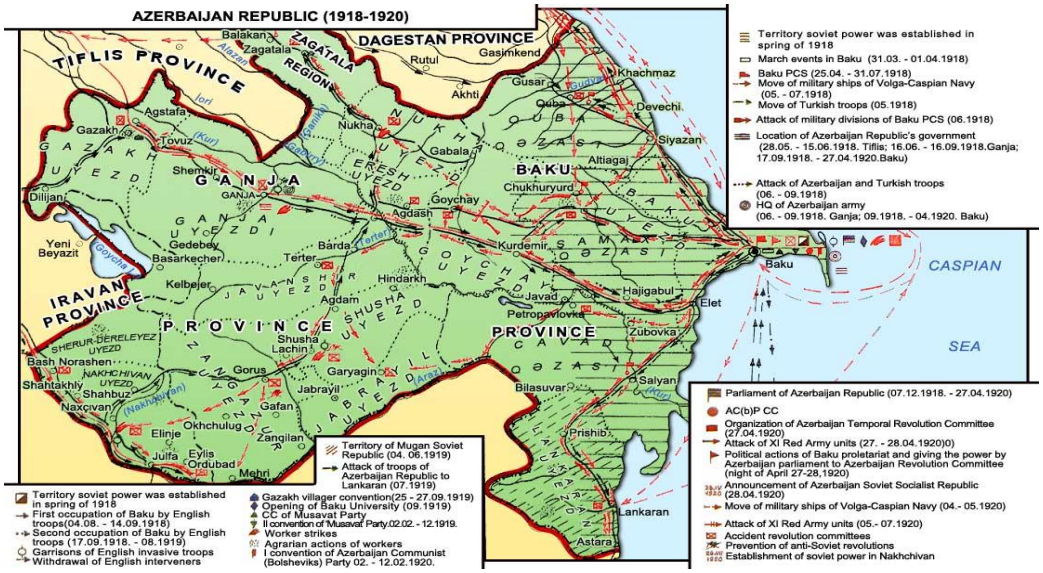
Source: Own data 2022, following Stam and Van de Ven (2021).

4.4.9 Azerbaijan Democratic Republic - The Secular State.

Administrative unit: ADR

After the October revolution in Russia, the "Caucasian Seym," including the entire Caucasian region, was announced. On May 26, 1918, Seym accepted its inefficiency, and the member states declared their independence, demanded their rights on their behalf, and voiced their democracy (Allahverdiyev & Mehdiyev, 1990).

Figure 25: Geopolitical map of Azerbaijan, 1918, The Azerbaijan Democratic Republic



Source: https://www.history.az/images/3/434201.jpg.

In Azerbaijan, the Declaration of Independence of Azerbaijan Democratic Republic (ADR) was announced on May 28, 1918, after being signed by the newly established government (Rasulzadeh, 1990a). This declaration announced the following: 1) Azerbaijan is a rightful and sovereign independent state (South and East Transcaucasia), 2) it is a national democratic republic, 3) ADR aims to establish friendly relations with all states, specifically its neighboring countries, 4) ADR will not discriminate against any nationality, race, religion, or gender, living in its territory and gives them equal rights. The same day, the new temporally government was declared. All the capitals in the world received radio notes about the restoration of the Azerbaijani government, and the Azerbaijan Democratic Republic was introduced to the world. On September 17, ADR moved its capital from Ganja to Baku (Swietochowski, 2004, Balayev, 1990).

Figure 26: The ADR office in Ganja: M. E. Rasulzadeh and the other members of the parliament

Source: https://millikimlik.az/2021/3451/.

The main economic goals of the democratic government were to remove deficit of goods, and to heal the destruction that followed the riots and the past political situation. Hence, in 1919, the National Bank of Azerbaijan has started its activity; the united currency, Bakuvian Bonna, was accepted. The freedom of trade was

declared, and the Russian federal government no longer owned the oil sector. All the manufacturing entities were returned to the previous local owners and businesses; in case they were confiscated and nationalized by the Russian empire, the remaining foreign businesses were still operating but now without a rent fee to the Russian government. In 1918, to increase the oil production, the "Bureau of Trade of oil and oil products" was opened (Jafarov & Jafarova, 2017; Aliyev, 1995). In addition, the state language changed from Russian to Azerbaijani, and the first study books in the Azerbaijani language were published in 1919. *Azerbaijan was one of the first countries in the Caucasian region, as well as in the whole world, to provide equal rights for men and women, including the voting rights* (Constitution of ADR, 1918 (Rasulzadeh, 1990a).

Figure 27 and 28: ADR Parliament members at Paris Peace Conference, 1918

Source: https://en.azvision.az/news/87493/azerbaijan-celebrates-100th-anniversary-of establishment-of-the azerbaijan-democratic-republic.html

The unified government provided a better living environment to the majority of the population. The education and economy were boosted. The government sponsored the youth to help them receive higher education in Europe (Rasulzadeh, 1990b; Balayev, 1990, Jafarov & Jafarova, 2017). The Baku University opened its doors to the first students. The schools were nationalized; the structure of education remained unchanged, but education was provided in the national Azerbaijani language. The majority of the buildings were erected by the famous European architects of the time who were invited to Baku by the local magnates to add up to the city's new face (Jafarov & Jafarova, 2017).

This particular period is often called the "Golden Age" of the Azerbaijani entrepreneurial activity in all related literature (Jafarov & Jafarova, 2017;

Buniyadov 2007a); this period had all the conditions required for entrepreneurship to flourish –initial capital, opportunities, initiatives, education, knowledge and skilled workers, access to resources, one language, a banking system, transportation, and of course, independence and democracy and the entrepreneurs *planning the future* (Acs et al. 2017).

A specific group of Azerbaijani entrepreneurs of that period acted financially intensively, being the same people owning oil areas or refining entities in Azerbaijan. They were millionaires and played an important role in the social and economic development of the country, not only in this period, but also during the Russian occupation (Jafarov & Jafarova, 2017). The private entrepreneurship in the oil sector started to flourish again because of democracy (Swietochowski, 2004). Besides the development of the oil and oil refining industries, these people also invested in other industries, to diversify economically, while maintaining the main focus on oil. Therefore, textile factories, ship-building, manufacturing, and construction facilities also existed. These people (like Haji Zeynalabdin Tagiyev, Musa Nagiyev, Murtuza Mukhtarov, Shamsi Asadullaev, Seyid Mirbabaev, Salimov, Mirzaev, Mantashov, and many others) were the real influencers of their times; they invested their money for the development of the country. Many schools, theaters, hospitals, and buildings in the country were constructed by them. They owned many businesses, and hence, they also provided jobs to a significant proportion of the population in those days. They are an historical example driving entrepreneurial spirit in a country while also being socially responsible (Seidzade, 1978). Despite the fact that they were mega entrepreneurs having the biggest shares of the market, they also tried to increase the society well-being. Moreover, they provided opportunities to the small- and medium-sized enterprises through financial supports to small entrepreneurs and start-ups by allowing them to become suppliers or helping in transport, food delivery, and other sectors. This way, they helped creating a conductive environment for all kinds of entrepreneurial activities, at all levels (Jafarov & Jafarova, 2017). The culture also flourished during this period; *in 1914 and 1916, teachers' seminaries were established in Ganja and Baku, respectively.* In 1904, "the society of Muslims actors" started its activity; in 1908, the first

Azerbaijani and whole East opera “Leyli and Mejnun” was premiered (Aliyev, 1995). In 1901-1917 the free press emerged as a start-up business with “Molla Nasraddin” and “Sharqi-rus” as most highlighted newspapers representing the democratic ideas of those days (Jafarov & Jafarova, 2017).

Table 30: Ecosystem elements and entrepreneurial activity: The Azerbaijan Democratic Republic

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Independence (2), Private property rights (3) constitution (3), gender equality (3), voting rights for women (3), Democratic system (3), parliament (3) secular state (3), equal rights for entrepreneurs (3)	26	0
	Informal	Free choice (1), cultural (3) and education development (3)	5	0
	Social networks	Local (1)and international (2)trade connections, foreign investors (3)	6	0
Resources	Physical	wide lands (1), natural resources (oil and minerals) (1)	2	0
	Financial	Foreign (3) and local (3) capital, national Banks (3), The unified money currency (3)	12	0
	Leadership	Democracy (3)	3	0
	Human capital	Local bourgeoisie (3), local (3) and foreign entrepreneurs (3), The Bureau of Trade of oil and oil products was opened (3)	12	0
	Knowledge	Schools (2) and universities (3), state scholarships (3)	9	0
	Means of consumption	Local (1) and international (2) trade , Industrial production (2)	5	0
	Producer services	Oil (2), Ships (2), Cooper (2), Textile (2), Silk (2), Wine and Cognac (2), Fish and Caviar (2), Cotton and wool (2), Walnut and nuts (2). raw or shabby skin (2), fur (2), porcelain (2), pottery (1) Publishing (3) Architecture (3) and Construction (3)	34	0
Value	*Productive entrepreneurship*	Foreign businessmen (3) local entrepreneurs (3) SME (3) Fishers (2) Craftsmen (1) Merchants (1) farmers (1) traders (1) artists (3) oil magnates (3) silk producers (2) carpet producers (2) clothing producers (2) poets (3) writers (3) composers (3) theater owners, (2) bank owners (2) private school owners (2)	54	0

		start-uppers (3) scientists (3) artists (3) academicians (3)		
Total			***168***	***0***

Source: Own data 2022, following Stam and Van de Ven (2021).

4.4.10 1920 - The Soviet period. Socialism and de-entrepreneurship

Administrative unit: USSR

The end of the new government was abrupt, when the Soviet Russia refused to recognize the independence of ADR. On April 27, 1920, the last session of the ADR was held, and it protested against the Russian behavior; On April 28, a month before the two-year anniversary of the country's independence, ADR was declared invalid and Soviet power was established (Guliyev, 1997). Azerbaijan was included in the USSR since 1920; however, it became a full-fledged subject of the soviet system only in December 1936. Prior to this, the country had undergone a harsh process of sovetization by the Bolsheviks. The Moscow Executive Committees (CEC) of the Transcaucasian republics decided the Treaty of Alliance between the Azerbaijan, Armenian, and Georgian SSRs, and established the Federative Union of Socialist Soviet Republics of the Transcaucasia (ZSFSR), signed in Tbilisi, on March 12, 1922 (History of USSR in documents, 1917-1957, pp. 309-310). *This should have eased and speed-up the sovetization process in all three countries.* The ZSFSR existed for 14 years, and this period was marked by the severe destruction of the national elite, local aristocracy, politicians, entrepreneurs and self-employed, and representatives of private business in these three countries (Matveeva, 2002). During the 14 years, the process of building political and economic institutions took place, which was defined as the victory of socialism in the Transcaucasian republics (Constitution of ZSFSR, Section 4, Chapter VII, Article 38). After the 8th All-Georgian Congress (February, 1937), where the decision to dissolve the ZSFSR was taken, all the three republics became independent members of the USSR (Hille, 2010). The most important result from an economic point of view, was the "cleansing"

of bourgeois elements, which in effect meant the abolition of private property and the nationalization of large, medium, and small private enterprises (Hille, 2010). This ZSFSR era could be referred to as a very harsh and painful transitive period from capitalism to socialism.

However, it is considered that the Soviet system did not penetrate the Caucasian society as deeply as in the Slavic parts of the USSR. Private enterprises and black markets were never fully eradicated, and corruption weakened the soviet system (Matveeva, 2002).

All the private enterprises, and small and medium businesses were nationalized and included into a centralized economic system (Tokarzhevsky, 1958) The formation of the Azerbaijan's economic structure continued gradually, and the main industries were oil, gas, chemicals, textile industry, food processing, mechanical engineering and metallurgy (Aliyev, 1982). Baku and the North Caucasus were the main source of oil for the entire Soviet economy; up to 80 percent of the entire USSR oil was produced in Azerbaijan SSR. During the Second World War, Baku provided 90 percent of the oil needed by the soviet army (Agayev et al., 1995). Many international sources consider Baku oil as a main factor that lead to the victory in the Second World War (Muchin 2020; Tieck, 2005; Sultanov, 2005). After World War II, all sectors of the economy increased their production. In 1950, the production of industrial goods increased by 39 percent compared to that in 1940. Industrial development intensified and regional and industrial structures improved. The volume of goods production increased by 5.5 times compared to that in 1940. Between 1941 and the 1970s, 146 large state-owned industrial enterprises were built and started operations; they included large plants such as aluminum plants, refinery plants, hydroelectric power stations, and others (Veliyeva, 2009). This laid the foundation for the development of such industries as heavy industry, energy, chemistry, petro-chemistry, oil refining, ferrous and non-ferrous metallurgy, instrument engineering, and electrical engineering (Aliyev, 1982). However, the Russian policy did not change, and Azerbaijan was still used as a resource-rich satellite

of the USSR-Russian metropolis, and all the plants were state-owned (Agayev et al., 1995).

The Soviet period could be considered as very destructive in relation to entrepreneurial activity, because the socialistic ideology was opposite to the entrepreneurial ideology of making free decisions (Audretsch & Moog, 2021). Entrepreneurship, as such, was forbidden during the early years of the Soviet state, because it did not fit into the political and ideological doctrine of the new regime (Aidis et al, 2010; Estrin & Mickiewicz, 2011). Thus, the decrees "On the Confiscation of Equity Capital",On the Nationalization of Industrial Enterprises," "On the Nationalization of Foreign Trade," and other acts, were used in the adoption of the new "criminal law" (Veliyeva, 2009). The situation involved a struggle between collectivism versus individualism, and equal state income versus business profits. Personal income was prohibited and persecuted by law; thus, there was no opportunity for any capital accumulation for further business establishment, even if the system failed (Estrin & Mickiewicz, 2011; Van Hoorn & Maseland, 2010; Hogwood, 2000). However, the entrepreneurial inclination of the entire USSR population remained so strong that the transition to a socialist economy proved to be a difficult task. Therefore, the New Economic Policy (NEP) was proclaimed by Lenin in 1921 (Glaza, 2009). The essence of NEP was to allow the return of elements of a market economy during peacetime but with mandatory state regulation. The NEP idea was perceived by the communist ideologists as a "strategic retreat" to soften the transition to socialism. It implied a significant restoration of capitalism to improve the economy for a successful introduction of communism (Glaza, 2009). Private enterprising was permitted, such as trade between peasants in case if they had the surplus product after payment of a tax, which was guaranteed in small quantities. Foreign trade and leasing of enterprises was also allowed. However, Stalin after becoming the new leader of USSR, gradually eliminated this initiative and entrepreneurship was prohibited once again (Georgadze, 1982).

The absence of private property and formal institutions protecting rights and property, as well as the controlled market laws, could not allow the discovery of

entrepreneurial skills and qualities in the population. This process continued from 1929 to 1986. However, the policy of industrialization and the command-centralized top-down management system could not provide the population with all the goods and services it needed, and thus, handicrafts and handicraft production existed irrespective of the established political rules of the state (Andryukhin, 2010). The Soviet power tried to control this; however, the situation was quite controversial: according to the law, the individual craftsmen could engage in legal trade, but the tax levied on such activities was more than 50 percent (About Personal Income Tax: Decree of the USSR Supreme Soviet of 30 April 1943). This was why most individual craftsmen avoided an official registration and tried to operate in the shadow sector which rendered their activity illegal (Matveeva, 2002), due to the lack of a free market for craftsmen's products and the absence of a legal opportunity to sell hampered entrepreneurial activity (Andryukhin, 2010). In addition, the law enforcement or authorities punished the identified individuals who had not registered their business activities (Gaikov, 1969)

Despite the fact that entrepreneurial activities and communism were incompatible, and that the USSR government was authoritarian, some development work was done to benefit the locations of industrial sectors and facilities in the country, for the regions with a low standard of living, and to increase the use of human resources in small and medium towns during the USSR regime. All official enterprises were also nationalized and included into the USSR global production chain (Tokarzhevsky, 1958). All this meant that if the system failed, there will be no possibility to improve the production scenario, because the factories in the supply chain were situated in different soviet republics. In case of a system collapse, all the member countries were doomed to free fall, hyperinflation, and absence of private sector, and extra-long production lag, which happened in 1988, when the USSR broke down (Jafarov & Jafarova, 2017).

Table 31: Ecosystem elements and entrepreneurial activity: The Soviet Period, 1920-1989

Concept	Construct	Aspects and operationalization	Point +	Point -
Institutions	Formal	Colonial power (-2), communism (-3), nationalization (-3), prohibition of private sector (-3) prohibition of private capital accumulation(-3), prohibition of private initiative (-3), equal income (-3), planned economy (-3), criminalization of entrepreneurship (-3), high taxes (-2)	0	-28
	Informal	Religious discrimination (-1), corruption (-2), sovetization, shadow economy (-3)	0	-6
	Social networks	Personal connections with USSR/Nepotism (1)	1	0
Resources	Physical	Dependent production chains (-3), development of all regions (2), resources (1)	3	-3
	Financial	State financing (2), controlled markets (-3)	2	-3
	Leadership	Totalitarian/authoritarian system (-3)	0	-3
	Human capital	Sovetization/colonization of population (-2)	0	-2
	Knowledge	Cense (-3)	0	-3
	Means of consumption	Trade within USSR (1)	1	0
	Producer services	Oil (2), Cotton (1), Fishing and Caviar (1)	4,	0
Value	*Productive entrepreneurship*	No private sector (-3), Small and discriminated amount of handcrafters (-1)	0	-4
Total			***11***	***-52***

Source: Own data 2022, following Stam and Van de Ven (2021).

4.4.11 Current period: Independent Azerbaijan Republic

Administrative unit: Azerbaijan Republic AR

The Beginning - Political instability period: Azerbaijan became independent again. In 1991, the Supreme Council of Azerbaijan elected Ayaz Mutalibov as the First Secretary of the Communist Party Central Committee of the Azerbaijan SSR, and he became the first president of the new Azerbaijan Republic. After the adoption of the "Declaration on the restoration of state independence of the

Republic of Azerbaijan" on August 30, the first presidential elections were held on September 8, which was won by Ayaz Mutalibov. However, the country faced heavy political instability. Immediately after the collapse of the USSR, Azerbaijan was involved in the war with Armenia in the Karabakh region, resulting in the loss of about 20 percent of Azerbaijan's territory. One million Azerbaijanis were expelled from their lands and became refugees. This war and the defeat resulted in national revolts, and the president, Ayaz Mutallibov resigned in May 1992, after the Azerbaijani army lost Shusha, the city considered as the cultural capital of Azerbaijan. The interim President Isa Gambar, assumed the office until the next elections took place, one month later. In June 1992, the representative of the National Font, Abulfaz Elchibey was elected as Azerbaijan's president (59.4 percent votes). However, his presidency led to a worse political situation and bigger losses in the battlefield. He invited Heydar Aliyev to take the position of Prime Minister. In 1993, Heydar Aliyev was elected as the president of Azerbaijan by 93 percent of the electorate. His presidency solved many problems, including the war situation; he signed the peace treaty with Armenia. A new era dawned on Azebaijan, and its economic status changed to a transitive one (Hasanov R, 2009, S.Estrin,T. Mickiewicz, 2010).

Current development and state of today**:** Since its independence, Azerbaijan has been driving its economic growth mainly by developing its hydrocarbon resources. In fact, its GDP per capita increased tenfold between 2001 and 2014, and the oil exports enabled Azerbaijan to become an upper-middle-income country (OECD, 2019). Reforms to the business environment, and the development of infrastructure contributed to the creation of favorable conditions for economic growth. However, the economy's heavy reliance on oil extraction has rendered it vulnerable to commodity price shocks. This vulnerability was exposed during 2014-2016, when the oil-price collapse resulted in the devaluation of the national currency (manat) and a sharp recession (OECD, 2019), many bankrupt local banks, very high interest rates (up to 30 percent), and so on. The country has somehow recovered, but the crisis has shed light on the need for diversification of the economy towards the non-oil sector. Thus, in 2016 the government adopted 12 strategic roadmaps with the goal of developing non-

oil sectors, particularly small and medium-sized enterprises (SMEs) (Strategic Road Maps, 2016).

The potential of the SME's in Azerbaijan remains largely untapped. They contributed only 6.4% of value added and 18.5 percent of employment in different years up to 2016, compared to 60-70% of employment and value added in the OECD countries (OECD, 2019). A large portion of the current workforce is engaged in low-productivity occupations in big national firms or foreign owned companies or hotels. Sometimes, they work in micro-enterprises that have limited growth potential or their own informal SMEs (OECD, 2019). Therefore, the reforms that promote the development of new activities and export sectors can also result in more high-productivity jobs and give rise to new entrepreneurial activities. Besides, the SME share in the GDP is less than 3 percent (Azerbaijan State Statistical Committee, 2021). Today, Azerbaijan faces a large-scale task of modernizing and diversifying the economy to reduce its dependence on the export of natural resources, which is still more than 90 percent (Statistical Committee of Azerbaijan Republic, 2021). By implementing this SME strategic roadmap and action plan, Azerbaijan's uneven, oil-driven economic structure may be reshaped, and SMEs' potential may be realized to the fullest. That is why, small and medium-sized enterprises (SMEs) should be empowered to play aprominent ole in diversification and in promoting the growth of non-oil sectors and boosting innovation and productivity. The former existence of entrepreneurial activities shows that this is possible, and Azerbaijan, when those could and should probably a) focus on industries with a competitive advantage over time; for example, organic agriculture (fruits, nuts, tea, wine, etc.), silk, textiles, craftsmanship, logistics and transport, tourism and hospitality business, as well as technology oriented startups based in the chemical, gas, and oil industry. Moreover, the ecosystem should be analyzed more deeply with a focus on the banking system and interest rates, private ownership and legal situation, access to wireless payment, transportation issues (i.e., fright flights, railway connection only via Russia, logistics via vans), non-membership in international trade agreements, educational system, vocational training, taxation, corruption, venture and business angel capital, and so on.

All in all, we cannot deliver an ecosystem overview like for the other historical periods at this point. Nevertheless, the scarce accessible data show that there are potential industries or triggering factors, conducive to broader entrepreneurial activities in Azerbaijan, and which will help them thrive in the coming years. In addition, the formal institutional setting can be interpreted as a strong impact factor on entrepreneurial activity. Thus, the present supportive government measures in regards to entrepreneurship could be fostering positive factors and delivering a positive push in entrepreneurial development in the future. The institutional setting might be hindering at the moment, even when trying to push entrepreneurship on a federal level, due to political leadership, banking system or property rights. However, as long as the ownership structures are unclear, financing is expensive and complicated, and taxation and probably (political) nepotism, the Russian pressure (current war with Ukraine), and the autocratic government structures are existing, the rate of entrepreneurial activities might remain small in Azerbaijan.

The Soviet Union destroyed private sector in a favor of production concentration and economy industrialization; however, some structures of those specific periods still remain on the territory of modern Azerbaijan. Oil is still the main basis of its national economy, and now, it is owned by the State Oil Company of Azerbaijan Republic (SOCAR). Many industries that started with craftsmanship are also developing; for example, Silk production in Sheki, or Carpet production in Gabala, Ganja, Guba, Shirvan, Nakchivan, and Karabakh. Ganja produced metal ammunition during the Atabek State period because of the metal ore, and grapes during the Russian empire colonization; now, there are wine, car, and aluminum factories. Baku was always famous for oil, and fishing industries, that still exist. The cotton production also remains high (Ministry of economics, 2020, https://www.economy.gov.az/ru/article/azda-sahib-inkishaf-tar/21410). Thus, all that could become the bases for a more flourishing entrepreneurial setting in Azerbaijan; but, the general context is not supporting.

4.5 Results

In this chapter, the results of the point system approach are presented, and the different ecosystems at different time periods and eras in Azerbaijan are evaluated. The data were obtained in the previous step of data systematization and categorization, as described in the methodology section. We present descriptive tables, figures, and graphs depicting the positive and negative elements of entrepreneurial ecosystem at different historical periods. As already explained, every aspect in describing the ecosystem at its time is given a point, either positive for triggering and being supportive for entrepreneurial activities, or negative, when hindering it, in a range from -3 to +3. A zero was given when something did not exist, or the aspect does not have a real impact. Then, we added all the positive and negative points for each historical period (working with tables 2 to 18); we also added the points for the observable entrepreneurial activities (productive entrepreneurship) at those times, resulting in the following overview.

Table 32: Boosting and hindering factors and productive entrepreneurship outcome

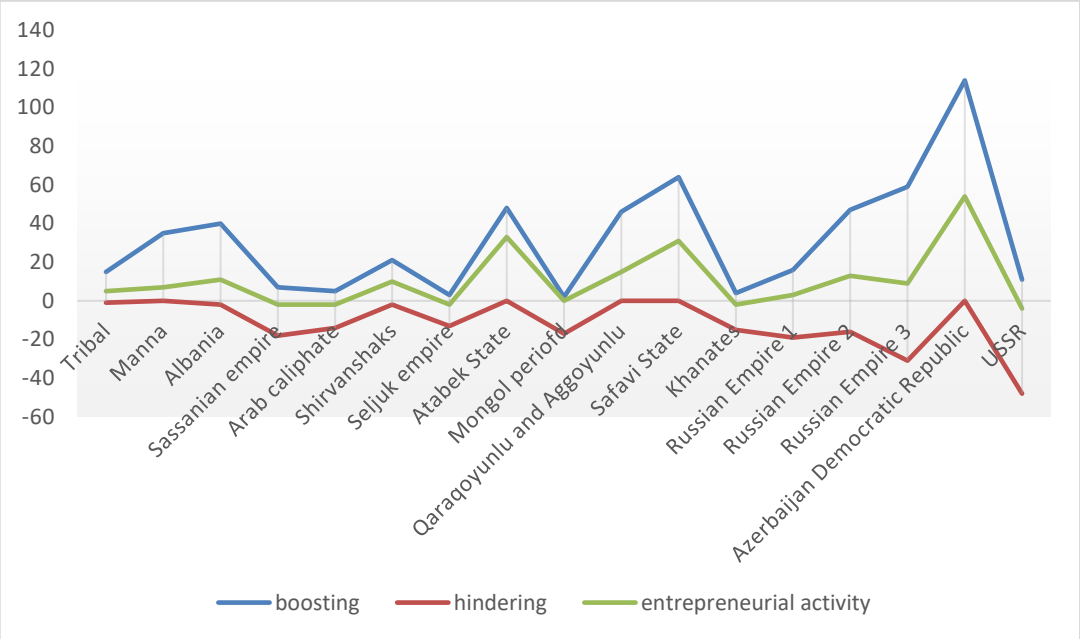
Historical Period/State	Boosting factors /Positive points	Hindering factors /Negative points	Productive entrepreneurship
Tribal community	20	-1	5
Manna	42	0	7
Albania	51	-2	11
Sassanian empire	7	-20	-2
Arab caliphate	5	-16	-2
Shirvanshaks	31	-2	10
Seljuk empire	3	-15	-2
Atabek State	81	0	33
Mongol period	2	-17	0
Qaraqoyunlu and Aggoyunlu	61	0	15
Safavi	95	0	31
Khanates	5	-18	-2
Russian empire 1	19	-19	3
Russian Empire 2	60	-16	13
Russian Empire 3	68	-31	9

Azerbaijan Democratic Republic	168	0	54
USSR	11	-52	-4

Source: Own data 2022.

By adding all the negative and positive aspects as well as the data on entrepreneurial activity, this overview delivers various interesting insights; this is represented by Figure 11. *The first overview to be recognized is, that for Azerbaijan over time, the positive and negative factors as well as the entrepreneurship rate do often and strongly oscillate, and go from one extreme to another.* Thus, Azerbaijan seems to be a country with strong changes in the ecosystem, and thus, extreme ups and downs in the entrepreneurial activity. If we had the data for Switzerland or the Great Britain (for the last 600-700 years), we would see a different picture due to the more stable overall system (Acemoglu & Robinson 2006&2012). *Moreover, we can observe a more general outcome in case of other countries as well. We may find more data and inputs to feed the positive and negative aspects with data-points, and thus, the observations would become more accurate and the levels of hindering or supporting structures would become "stronger" and more distributed.* Thus, in the beginning of the historical overview, the resources or the political system is not as developed and described by the data as in the 19th century; the same holds true for entrepreneurial professions and activities, which develop over time and become increasingly fine-grained and diverse.

Figure 29: Positive and negative factors and entrepreneurial activity (productive entrepreneurship).



Source: Own data, 2022.

We can observe that the higher the negative numbers of the evaluation, the lower the outcome of entrepreneurial activities is. This itself might not be surprising, but it is intriguing to get a closer look into that.

On the one hand, in some periods the (strongly) hindering factors can be overcome by a strong positive counterpart of factors, and thus making entrepreneurial activity observable, against all odds. Thus, even in critical historical periods like under the Russian Empire, or the Sassanian Empire, entrepreneurial activities survived or existed, and some productive outcome is still observable. Especially this pattern is observable during Aggoyunlu and Qaragoyunlu states period and Safavi State, or Russian Empire (1, 2 and 3). Despite the fact that negative factors were remaining on the same level, entrepreneurial level was increasing, because of independence and/or positive political expectations.

On the other hand, even when the aggregated positive factors are above zero, but the negative factors are existing or even strong, this cannot be equalized or balanced. Thus the entrepreneurial activity often stays around zero or below (i.e., the Manna period of Russian Empire 1). Therefore, it seems necessary to have

higher values of positive factors to generate productive entrepreneurship, and that negative factors have a disproportionate (negative) impact. In case the negative factors are overwhelming, the entrepreneurial activities are crushed, as happened in the USSR period. *We disentangled all the ecosystem factors one by one, and measured and compared them in relation to the entrepreneurial activity, or productive outcome, to get a deeper insight into the data to look for some factors in the ecosystem framework which might be more influential than others in relation to entrepreneurial activity over time. Going back to the framework of Stam & Van de Ven (2021:814/815), the different point evaluations of all single factors or aggregated concepts suggested that, as specific single factor, the formal institutions show a deep impact, and they aggregated the institutional background (based on formal and informal settings as well as culture and social networks).*

Therefore, we focus on this concept and its relation to entrepreneurial activity over time; it seems that this institutional aspect has a main effect on how the other resources and factors can be used, and thus, on the development and status of entrepreneurial activity in the different eras and historical periods. This includes the formal rules of the game in society, the cultural setting, and the societal network structures, such as, hierarchies. When diving back into the historical data from tables 2 to 18, we observe that these institutional concepts embrace colonial power, high or unfair taxation, nepotism of specific groups supporting the non-democratic government, and so on. Thus, over time, we can observe either more or less a more open minded liberal settings (or even democratic structures) in contrast to more centralized, authoritarian, non-democratic settings or taxation systems or ownership rules and legal settings, in favor of specific groups or political or cultural missions and aspects. Mongol Empire is a negative examples; it had formal settings like a strong colonial power, a non-democratic hierarchy system, heavy tax burdens resulting from 40 different taxes, more or less no property rights, and slavery, leading to a diminishing or almost non-existing entrepreneurial activity. The USSR regime, which took over the government of Azerbaijan is another such example. During this period, the country had to struggle with a strong colonization power, dictation communistic and nationalistic rules prohibiting private ownership and a private sector or capital accumulation,

running a regime of planned economy, extinguishing private initiatives and almost determining entrepreneurship as a criminal activity, and fighting it with high taxations. Informally, corruption and nepotism, a shadow economy, and discrimination due to religion and diversity were common. This parallelly caused one of the lowest rates of entrepreneurial activity that ever existed in Azerbaijan. The periods of the Qaragoyunlu & Aggoyunlu states stand out in contrast; the government guaranteed independence of the people and the states, the number and amount of taxes were reduced dramatically, the inhabitants had a free choice about where to live and what to work for, the Silk route and international contacts were (re-)established, trade was allowed and welcomed in the culture, and the work as craftsman or trader was appreciated and not doomed. Thus, in this era, we can observe a positive development of entrepreneurial activity.

Table 33: Productive entrepreneurship and institutions

Historical Period/State	Productive entrepreneurship	Institutions (Formal and Informal)
Tribal community	5	3
Manna	7	13
Albania	11	12
Sassanian empire	-2	-12
Arab caliphate	-2	-8
Shirvanshaks	10	7
Seljuk empire	-2	-7
Atabek State	33	15
Mongol period	0	-11
Qaraqoyunlu and Aggoyunlu	15	11
Safavi	31	16
Khanates	-2	-10
Russian empire 1	3	-14
Russian Empire 2	13	-4
Russian Empire 3	9	-4
Azerbaijan Democratic Republic	54	37

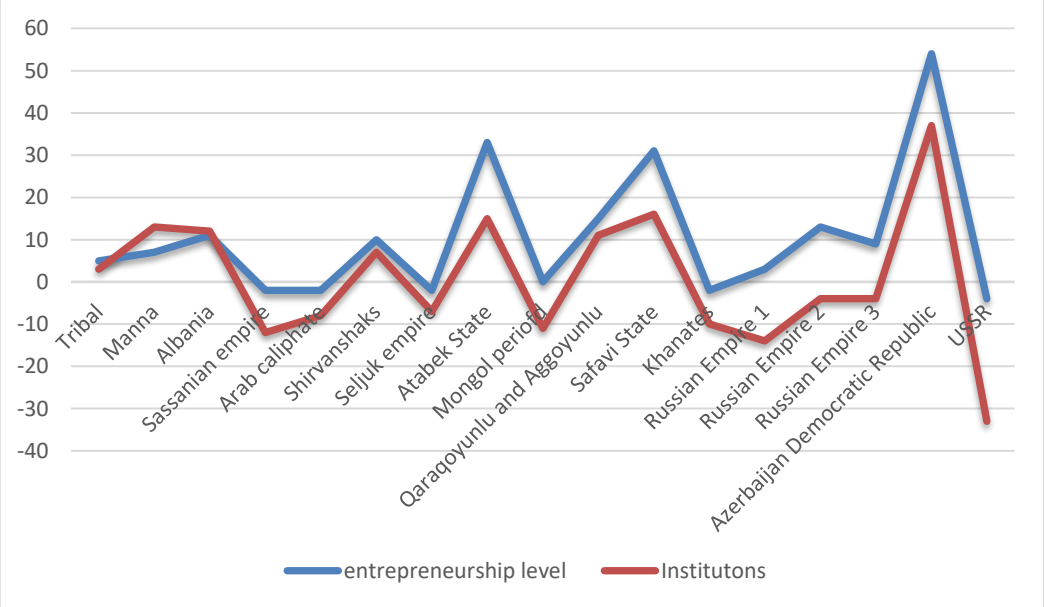
USSR	-4	-33

Source: Own data, 2022.

This relation of positive developments in the institutional context on entrepreneurial activity can be strongly observed during the short but fruitful period of the democratic Azerbaijan Democratic Republic. During this period, the country was independent and the government was democratically elected with a parliament, the vote for women was established, gender equality existed on the first level, private property rights were manifested, a Constitution with legal and human rights was decided, different religions were accepted, the Church and state were divided as in a secular state, foreign investors were welcomed, and national and international trade connections were fostered. In this period, we can observe one of the most flourishing developments of entrepreneurial activity.

The development during the Safavi period is also very interesting; here, long-term freedom with the same level of hindering factors led to rise of entrepreneurial activity.

Figure 30: Productive entrepreneurship and institutions



Source: Own data, 2022.

Thus, we follow the general idea of Acemoglu & Robinson (2006 and 2012), as well as Audretsch & Moog (2021) that democratic structures or well working political institutional settings foster entrepreneurial activity, expressed differently: formal institutions in a liberal way support productive outcome.

It is interesting to note that even when other important ecosystem factors do exist in periods of more centralized, non-democratic institutional setting, these positive factors do not thrive; thus, the institutional setting seems to have a strong impact on the usefulness of other factors in the ecosystem. We tested this proposition only on a descriptive level and figured out a very strong and significant positive correlation of 0.853. Thus, we can deliver, that over different time and historical periods, entrepreneurial activity and its "Ups" and "Dows" can be seen in a more or less obvious pattern; the periods of independence and local governance offered more favorable conditions, and thus, entrepreneurship was boosted. However, during the periods of colonization, along with heavy tax burdens on colonies, as well as population militarization and resource exploitation, the entrepreneurship level fell. We cannot prove a causal relationship using our data, but we can deliver the first hints that this might be an interesting relation to be examined in the future.

4.6 Discussion

This study provides the first analysis of entrepreneurial ecosystem data over different historical time stages and levels of accessibility. With our long-term historical overview of changing and developing ecosystems, their interacting and related actors, and the entrepreneurial development in Azerbaijan over centuries, we followed the proposition of Stam and Van de Ven (2021) and others (Sternberg, 2021; Colombo et al., 2019; Acs et al., 2016; Audretsch et al., 2022), to study ecosystems over longer periods of time. We break these main concepts down to items and measures fitting the historical approach but on a much broader level, thus being able to be used at any historical stage, for the available and accessible data - by checking for terms and words relating to different periods and developmental stages. Based on these more aggregated insights and data, we contribute to the measurement of factors in a developing ecosystem over time (historical eras), and on how to generate graphs for long-term entrepreneurial

activities and historically important periods and eras by using this information. Thus, we bring together all the multifaceted information in a more structured way to deliver a first approach to deal with so many historical information regarding ecosystems and entrepreneurial activity on a country level. The overall goal of doing this is to obtain the final ideas or hints to better understand, classify, and contextualize the current entrepreneurship situation in Azerbaijan (or other countries as well).

This overarching historical approach helps to uncover and interpret small as well as fundamental changes and developments in ecosystems and entrepreneurial activities. And, as can be seen in our study too, the often unevenly changing aspects. Our study helps as well to understand the mentioning and idea Acs e al. (2011), that especially some specific, temporal change of ecosystem elements and their uneven development over time could cause tremendous effects on the entrepreneurial activity, inhibiting or being conducive. Thus, our study offers several contributions to entrepreneurship and ecosystem literature.

First, we help understand that Szerb and Acs (2011) are right in thinking about the bottlenecks concerning specific ecosystem factors by showing that the formal and informal rules and settings of an ecosystem lead to great differences on other factors in the related social system, and thus on the entrepreneurial activity. This in line with the discussion by Fritsch, Obschonka, & Wyrwich (2019), who explain why some regions within a country or some countries are always “hotspots” of entrepreneurial activity while others are not (Acs et al. 2016), and with Acemoglu & Robinson (2006, 2012) and Audretsch and Moog (2021), who discuss that a more democratic formal (political) structure is the basis for freedom of choice and thus, entrepreneurial freedom and development. Our historical review suggests the associated reasons, and how they could be measured and explained over time, based on the ecosystem and by using a systematical framework. The study of Mickiewicz et al. (2021) supports this general idea, too, that negative changes in institutional settings and rule of law hinder and diminish entrepreneurship activity quite fast due to a feeling of insecurity regarding risks.

Thus, our study could help to understand this not even for some years but over a long-term period.

Second, we suggest an approach on how to systemize qualitative, historical data, with varying depths of information. By working with the framework and feeding in the available information systematically, we can understand the changes in the ecosystems over time and organize the data to measure the factors and potential relationships between factors or concepts. Even the rudimental point rating system helps organize the overwhelming data and offers descriptive or heuristic new insights and results. It can be shown that even in the ancient or medieval times, ecosystems existed and created a supportive or hostile environment for entrepreneurial activities.

Third, this work shows that using a historical approach and chronology of entrepreneurship development can be challenging, given the lack the information and sources. In our study, we tried to systematize the historical development of entrepreneurship in Azerbaijan by using data from different sources and languages. In our case, the historical facts in combination with contemporary entrepreneurial research and knowledge made it possible to shed some light on the important "moments of change" in entrepreneurship in a specific nation, as well as to better understand the development processes and define the factors, that hinder and boost entrepreneurship across history. The systematized information on entrepreneurial activity in Azerbaijan across the long historical period—from IX century B.C. till the Soviet Union—shows that entrepreneurial activity was always present in this country. However, the levels and periods of entrepreneurial activity varied, depending on the variety of the ecosystem factors and seemingly on the form of governance and formal institutions. The worst conditions for entrepreneurship were presented by the colonial governance, when the territory of Azerbaijan was conquered and ruled by huge empires such as the Arab caliphate, or during the Turkish, Mongol, Persian, and Russian invasions. The main barrier for entrepreneurship during the colonial reigns during the middle-ages (Arab Caliphate, Mongol Empire, Seljuk Empire, and Sassanian Empire) was militarization of the male population and a very high tax burden reckoned by the

colonizers, based on religious/gender discrimination. The social factor of entrepreneurship was affected, while all existing and potential entrepreneurs became army men. Russian colonization proved to be slightly different because some entrepreneurs still existed. The Russian empire was mostly interested in the Azerbaijani resources, rather than in its population. In this period, the capital factor was affected, while all the enterprises were nationalized and ownership passed on to the Russian empire. However, entrepreneurship, trade, and market economy in Azerbaijan flourished in the periods of independence, while in the periods of colonization, oppression, or authoritarian regimes, the economy experienced decreasing entrepreneurial activities, due to militarization, high taxes, and resource exploitation.

4.7 Limitations and further research

While our analysis and comparing ecosystem-over-time approach deliver the first insights suggesting that some elements or factors in an ecosystem might be of fundamental importance, we are not able to deliver any causal relationships or evidence with our historical, descriptive, and heuristic approach. Moreover, we deliver only first deductive codings, and the data sorting or key word search could be more systematized. Thus, we deliver a first search scheme, which might need adjustments for larger countries and databases.

We observe that an authoritarian or non-liberal governmental structures limits the probability of private ownership and that all such formal institutional settings lessen entrepreneurial activity; this might be because some important constructs of factors in the ecosystem, such as, the financial or natural resources, and human capital or technology or transport facilities, were not accessible or sufficiently useful in these more autocratic periods, which is in line with the theory of Acemoglu & Robinson (2006, 2012), or in the results of first attempt with small panel data by Mickiewicz, Stephan & Shami (2021). We can only deliver the first initial ideas about this relation, and further research is needed to deliver a weighing logic of ecosystem elements, or to go deeper into the interactions between those elements and factors or prove any causal relationships. This might

be in line with Audretsch and Moog (2021) and their general studies on the relation of entrepreneurship and democracy. This may also conform with the state-of-the art research dealing with institutions, places, and ecosystem factors and entrepreneurship, such as, Audretsch, Belitski, Caiazza, and Desai (2022), who show the importance of institutional or political setting for latent and emergent entrepreneurial activity for 66 nations. The innovative and first insights of eleven cities, and their ecosystems, especially institutional settings and the productive or unproductive entrepreneurial activity, show that institutions as well as a stable civil society (democracy) matter greatly (Audretsch, Belitski, and Cherkas. 2021). We guess, more research on these ecosystem interrelations over time would deliver helpful insights on interdependencies, and thus, help the support systems in becoming more targeted.

Our data shows that the historical development of triggering and hindering factors and the entrepreneurial activities in Azerbaijan over time show strong ups and downs. *So, to generating these long-term historical ecosystem data for the comparable countries (e.g., Argentina, or the countries in Africa or Asia), and also for the countries with a stable historical development like Switzerland or the Great Britain, would be interesting research approach (Acemoglu & Robinson 2012).* This would deliver insights on the impact of long-term continuity on entrepreneurial activity compared to extremely dynamic situations. This could help explain the current status quo of entrepreneurial culture and activities from an overarching long-term perspective. Moreover, it would deliver interesting insights to check for long-term effects of hindering factors, especially political and formal institutions, and if they have a long-term impact on individual characteristics of risk-taking or the thoughts on starting a business. Here, the overarching or overlapping effects into the next generation or era could be tested, in terms of imprinting factors. We do have trend date over centuries, but deeper insights could be generated and causal relations tested with panel data (for some of potential interrelations over time, when enough data are accessible for long-term analysis or event analysis). Moreover, a meta-analysis of the existing studies analyzing different (eco-)system factors (Hayek, North, etc.) and their impact over time, or the entrepreneurial infrastructure data, impact of government settings, and

institutional factors, could deliver specific insights on these issues, as done by the quantitative study of Stam and Van de Ven (2021) in some aspects – but this should happen over longer time periods or eras. Our data – due to very long historical time period – could not be delivered by thoroughly chosen, operationalized variables or indices, as recommended by many authors. This leads to the need for better access to historical statistical data, or magazines and chronicles to obtain more precise data to work with, and to get deeper insights into the ecosystem framework.

We followed the elements of an ecosystem based on and developed by Stam and Van de Ven (2021) as an interactive social system of different actors and institutions. Of course, these factors and elements could be more diversified or specified to help measure and making sense of the changes or historical effects over times. *Thus, we recommend the use of comparable data to work with these tested and validated elements of an ecosystem, while enlarging this measurement tool to include more qualified factors and cover more important aspects of context, especially for periods of change, turmoil, and problems (crisis, natural catastrophes, technological disruptive inventions, etc.). We can grow from the deductive to inductive research or theory building. Even with its limitations, our study offers the first historical insights focusing on ecosystem factors over time and their impact on entrepreneurial activity. This paper shows how archival data may be a sleeping giant with the potential to trigger future entrepreneurship research with new tools to deal with, search, and organize data over long periods of history, and to derive bold new insights from these qualitative data. Thus, we hope to open new doors to further research with a historical lens.*

5. How does a common past lead to a different future? Variations in entrepreneurial ecosystem development

ABSTRACT

A dynamic and vibrant entrepreneurial sector that creates jobs, makes new investments, increases innovation and productivity, and fosters overall development processes plays a crucial role in creating, maintaining, or ensuring economic growth. This is particularly relevant for Georgia and Azerbaijan, two neighboring countries, located in the South Caucasian region – as they are still going through the transition period after 35 years of independence since the collapse of the Soviet Union. Even though these countries are geographically located in the same area, and have one common past, the decisions taken, and the chances and obstacles they face in trying to stimulate entrepreneurship development nowadays are quite different. Within the transition period, both countries were facing similar challenges in building new market institutions, especially in dealing with old and new informal institutions and at the same time trying to create and introduce new formal institutions. The tension arose because the old institutions were mostly inherited from the old Soviet system. Overcoming the duality of institutions – old and new – is an important part of institutional change. As a result of the very different development of informal and formal institutions in both countries during their ongoing transition process, two entrepreneurial ecosystem designs are to be observed now. Data reveals that Georgia does well in exports, trade contracts, and start-ups as well as innovation, while Azerbaijan is still mostly dependent on oil exports and has one of the lowest entrepreneurship rates in the region. The paper shows that the two countries with a common historical background and similar resources can show a very different development of their ecosystems over time, based on the informal and formal institutional elements – and as a result: their entrepreneurial outcome.

Keywords : *Entrepreneurship, entrepreneurial ecosystems, institutions, comparative analysis*

5.1 Introduction – the shadow of the past in the transformation process

Although the economic and political freedom and independence from the former Soviet Union began in the late 1980s, entrepreneurship development in Georgia and Azerbaijan started only 20-25 years ago and is defined as a "transition" from a centralized planned economy to market-oriented systems (i.e. Sauka and Chepurenko, 2017). We have chosen two countries from the same regional context and with a similar historical past: both countries experienced Russian occupation and were part of the Soviet Union before gaining independence in the early 1990s (Korganashvili et al. 2017). While these two neighboring countries in the South Caucasus may seem similar on the surface (similar historical backgrounds and resources (Curtis 1995), we aim to demonstrate how their respective entrepreneurial ecosystems have evolved differently during their transition, in regard to both formal and informal factors and aspects. This research is necessary to understand the transformation process better (Mets, Sauka, Purg, 2018; Sauka and Welter, 2011; Welter, Smallbone, 2011), and it is often accompanied with ups and downs, backlashes, and government policies which are only enacted slowly.

To compare the two countries and their respective interacting systems of formal and informal institutions, as well as other important economic factors, we work with the ecosystem approach, because it is highly responsive to the national context and dynamic and systemic situations (Stam & van de Ven 2021). Our research compares the entrepreneurial ecosystems of two countries with a shared history, offering insights into how similar starting points can lead to different economic and entrepreneurial outcomes. The focus on Georgia and Azerbaijan provides a fresh perspective, showing that countries in transition are not homogeneous but very heterogeneous in terms of political decisions, culture, and laws. They are, therefore, also heterogeneous in terms of their formal and informal institutional settings (Smallbone and Welter, 2001). We will show that during the transformation process

of the two nations, the aspects that foster or hinder entrepreneurial development might differ not only compared to advanced market economies but also between the transitioning economies themselves (Smallbone and Welter, 2006).

Recent studies have shed light on how changes in institutional settings (formal and informal) and the development of resources (human capital or natural resources) can affect a national or local entrepreneurial ecosystem over time (Schäfer & Henn 2018; Kapturkiewicz 2022; Ibrahimova & Moog 2023). However, further research is needed to gain a better understanding of those aspects in the long run (Fischer et al. 2022). Therefore, this study offers a longitudinal analysis of the entrepreneurial ecosystem development in Georgia and Azerbaijan, emphasizing formal and informal institutional settings and their differences over time (Stam & van de Ven 2021). By examining the evolution of both formal and informal institutions, this study provides a systematic view of how these elements interact and impact the entrepreneurial ecosystems design in a long-term perspective, and how they imprint the current status quo (Brown & Mason, 2017).

Our research question is to explain variations in how formal and informal institutions change or evolve over time within the two national ecosystem settings, how these changes interact with the development and utilization of other factors and resources in the entrepreneurial ecosystem, and how this leads to different entrepreneurial outcomes. By following this approach, we hope to bring new ideas and innovative contributions to the research field of ecosystems and institutions. Moreover, we offer new insights into how ecosystems develop and foster or hinder entrepreneurial activity over time, while being affected by formal and informal institutional settings.

Overall, this paper is supposed to make a significant contribution to the growing body of research on entrepreneurial ecosystems by presenting a longitudinal comparative study that utilizes a well-established theoretical framework with qualitative and secondary data, identifying systematic differences in the informal

and formal institutional relationships that affect entrepreneurial outcomes. Our findings might inspire further research on similar neighboring countries and their development trajectories, beyond comparing the two former Soviet Republics in their transitioning process. In addition, this research has practical implications for policymakers and other entrepreneurial ecosystem stakeholders, as it emphasizes the importance of carefully considered ecosystem design. It highlights the fact that informal institutions must change and adapt in parallel with formal institutions, so the context and culture can change, knowing that the shadow of the past is often more durable than expected (Pankaj, 2024).

5.2 Theoretical Framework: The Entrepreneurial Ecosystem approach, Formal and Informal Institutions

5.2.1 Entrepreneurial Ecosystems

The establishment of successful and supportive entrepreneurial ecosystems whose aim has been the creation of a favorable business climate has gained significant interest from researchers and policymakers in recent years (Wurth, Stam & Spiegel 2022; Ratten 2020). Although most studies focus on investigating the status of existing entrepreneurial ecosystems or identifying best practices (Cao & Shi 2021; Stam & Van de Ven 2021), little is known about the specific development of entrepreneurial ecosystems over time. This can lead to a variety of heterogeneous types and characteristics of entrepreneurial ecosystems and raises questions about how and why they differ in their settings over time (Theodoraki & Catanzaro 2021; Brown & Mason 2017). Additionally, context-specific research is needed to understand the status quo and development of entrepreneurial ecosystems in the long run, as they can vary depending on the context (Ibrahimova & Moog 2023; Kapturkiewicz 2022). Therefore, more longitudinal research is required to identify events that might trigger entrepreneurial ecosystem developments and affect their orientation or long-term sustainability and survival (Ratten 2020, Wurth et al. 2021). This holds particularly true when political or economic systems are changing, irrespective of whether the objects of inquiry are regions, nations, or economies.

Thus, transition countries moving from communism, where entrepreneurial activity was largely viewed, perceived and associated as anti-social behavior that did not contribute to the common good and society (Aidis et al., 2008), to a market-oriented system are an excellent example for working with an ecosystem approach.

In the case of Georgia and Azerbaijan, these changes are still going on, even though the liberation from the Soviet Union took place at the end of the 1980s. To develop and find their place in the global economy, they had to transform their political and economic systems as well as governance structures on a macro (national) level as well as the individual micro level or the meso level (companies etc.). This kind of transformation involves the active role of the state, especially in developing the formal and informal institutions on a macro level to pave the ground for a market economy and hence entrepreneurial activities, which were prohibited or oppressed during the Soviet occupation (Korosteleva and Belitski, 2017; Aldis et al. 2008). This change is a complex and challenging task for governments and societies, while the cultural norms and attitudes of the communist regime (Soviet informal institutions) could be historically persisting, and therefore might have an impact on formal as well as informal institutional change at all levels. In the case of Germany and its reunification, things were different, as East Germany was integrated into the Western system in an instant and immediately received its existing formal institutions (Fritsch et al. 2021, 2022). In contrast, the former Soviet republics had to create their own model and system from scratch, in terms of the formal and informal institutional framework. Therefore, regional differences may arise, which requires further study of this matter, and its underlying conditions and dynamics (Fritsch et al. 2021, 2022).

To observe and analyze these transition processes, we follow the ideas of North (1990, 1997 or 2005) in our ecosystem approach, to understand how to create an enabling environment and structures conducive to market economies and entrepreneurial activity. North distinguished between formal and informal institutional settings that foster such an environment. Formal institutions are defined

largely as the official “rules of the game”; they include the legal framework and property rights, contracts and reinforcement mechanisms, bankruptcy, market entry and exit, bank regulations, public administration, etc. Informal institutions are norms or values, traditions, acceptable behaviors, and non-codified “rules of the game” (Stam & van de Ven, 2021; Mickiewicz, Stephan, Shamie, 2019).

However, as North (1990) already pointed out, informal institutions must change in parallel with formal institutions to provide the contextual basis for such transition. Informal rules and institutions should not be underestimated because they reflect social habits, possibly the proclivity for risk-taking, and entrepreneurial behavior. It may matter, therefore, whether they develop in parallel or replace formal institutions, filling institutional voids, or whether they stall, evolve less rapidly, or in a different direction (Raiser, 1999). Thus, the relationship between formal and informal institutions is important for understanding the chances and development of countries in transition periods (Aidis, 2006; Van de Mortel, 2002). In our research, we show that even coming from the same past with respect to Soviet formal and informal institutions, Azerbaijan and Georgia have evolved differently after independence, developing specific entrepreneurial ecosystem designs and institutional settings.

The general entrepreneurial ecosystem approach (Feldman et al., 2019) proposes that entrepreneurial activity is a “social geographic phenomenon” influenced by various factors (Sternberg, 2022, p. 8). In our study, we investigate how factors in the entrepreneurial ecosystem interact with each other to create an environment that favors or hinders entrepreneurship (Stam & Van de Ven, 2021; Sternberg, 2022). In particular, we consider entrepreneurial ecosystems as social and interactive systems, focusing on the formal and informal institutional conditions that facilitate entrepreneurial activity (Van de Ven, 1993). Through our analysis, we aim to shed light on how differences in the development of these parts of the ecosystem over time may affect long-term economic outcomes and entrepreneurial activity in the two countries.

We take this perspective because entrepreneurial ecosystem theorists claim that entrepreneurial activity is shaped by regional-spatial context (Acs et al., 2017; Stam & Van de Ven, 2021; Van De Ven, 1993; Woolley, 2017). However, there is a lack of research analyzing the historical context over long periods; leaving gaps in our understanding of how entrepreneurial activities evolve under the influence of these specific ecosystem factors (Stam & Van de Ven, 2021; Sternberg, 2022; Fritsch, et al., 2019). By conducting long-term historical analyses of countries, industries, informal and formal institutional settings, researchers can gain valuable insights into the development of entrepreneurial activity during periods of change in different markets, countries and societies (Wadhwani et al., 2020).

To do so and to make an innovative contribution to this discourse, we incorporate the ideas of Kapturkiewicz (2022), Ibrahimova & Moog (2023), and other relevant literature to obtain robust and fruitful qualitative as well as historical text (or quantitative) data over time for both countries. The data are comparable, in terms of kinds and use of resources, industry fields, internal and external institutional relationships and of course, informal and formal institutional settings. Especially activities conceptualized as institutional work (Lawrence and Suddaby, 2006) and practice (Whittington, 2006) are traced over several years from 1991 (independence) to the present day, using a variety of data sources, such as statistical data, archival data, political treaty documents, newspaper articles, policy statements and other relevant sources.

By adopting this innovative data collection approach, we aim to overcome the challenges of data limitations and better understand the long-term framework of the two countries' entrepreneurial ecosystems affected by informal and formal institutional setting. To accomplish this, we will analyze primary qualitative data for each case and then compare them to create a model of the direct and indirect effects of informal and formal institutional factors on entrepreneurial outcome as well as the potentially moderating/indirect effects of institutional setting on other important ecosystem factors. We will use different data sources for Azerbaijan and

Georgia employing WGI, policy statements and reports from international organizations, like data sources on formal institutions and reforms, the WB Global Values Survey (wave 4 and 7) for data on informal institutions, and national statistics for data on the level of entrepreneurship over selected period.

5.2.2 The Institutional Element of Entrepreneurial Ecosystems: Formal and Informal Institutions

The mainstream of modern institutional economics focuses on several explanations of how formal and informal institutions affect economic behavior, economic development and growth, and entrepreneurial activity (North, 1990; Coase, 1981; Williamson, 2000, Ostrom, 1990, Acemoglu & Robinson, 2008). As defined by Douglas North (1991), institutions are humanly devised regulations and norms that structure economic, political and social interactions. According to his definition, formal institutions are codified laws, rules, and regulations that are usually a part of political or economic systems (North, 1990). They include both codified regulations and imposed sanctions (Boettke and Coyne 2009). On the other hand, uncodified social norms, customs, and values—as well as uncodified sanctions—are referred to as informal institutions (Casson et al., 2010). People learn about informal institutions through social contacts, which are usually inherited in a social group, society, or culture (North 1990).

Institutions, whether formal or informal, undoubtedly have a great influence on the environment and entrepreneurial climate of a particular country. It means that every economic agent or entrepreneur in society acts under a set of rules that structure interactions and impose limitations or opportunities. These rules are often supported with enforcement mechanisms for their execution since formal norms have the potential to be followed or disobeyed. When these rules, or formal institutions, are precise and clearly defined, opportunistic behavior decreases and trust increases (Sauka, 2020). This leads to lower transaction costs and, ultimately, an efficient institutional framework. Conversely, low-quality formal institutions can weaken incentives to invest and make it more difficult for businesses to establish and

operate, which can lead to inefficient allocation of resources in the economy (Knowles and Weatherson, 2006, p. 10). New studies on this topic show exactly this: even the expectation of inefficient or worsening formal institutions (rule of law) hinder investments and lower the startup rate of entrepreneurs (Mickiewicz, Stephan, Shami, 2019; Ibrahimova and Moog, 2023).

Thus, the quality of formal institutions can either create or destroy an environment that is favorable to entrepreneurship (Baumol, 1990; Johnson et al., 1997). Therefore, institutions, both formal and informal, have become increasingly relevant in entrepreneurship research. Moreover, formal and informal institutional settings are now widely explained and discussed in relation to entrepreneurial activities, as an important part of entrepreneurial ecosystem (Grindle, 2004; Ackerman, 2004; North 1990; Leftwich and Sen, 2010, Stam and Van de Ven, 2021, Urbano et al., 2019).

Thus, several studies have investigated the impact of institutions on entrepreneurship. As an example, Aidis et al. (2008) examined the role of formal institutions in influencing start-ups and their performance in transition economies. They discovered that a sound legal and regulatory framework has a positive effect on entrepreneurial activity. Likewise, Bowen and De Clercq (2008) analyzed the interaction between formal institutions and entrepreneurial activity across countries, emphasizing the importance of regulatory quality and especially the rule of law to enhance entrepreneurship. On top of that, informal institutions have also been the focus of researchers' attention: Estrin and Mickiewicz (2011) discuss how social norms and cultural values form entrepreneurial behavior in different regions. Their work emphasizes the role of trust and social networks in facilitating entrepreneurial endeavors.

In addition, there are studies of entrepreneurship in various transitional contexts that show that under the influence of institutional frameworks that were not always well established, entrepreneurs often followed unproductive paths (Estrin and Mickiewicz 2012). In many "transition" countries, large private companies were

often led by members of the former communist party elites, who used their connections in national governments, privatization agencies, and even international organizations to transform their political influence and useful contacts into economic power. While these activities also potentially delivered some productive output, they involved a significant amount of corruption and elements of rent seeking. These "predatory entrepreneurs" were a good example of Baumol's (1990) idea of unproductive and destructive entrepreneurship due to weak institutional settings.

Notwithstanding this contribution, several gaps in the literature must be addressed. The bulk of existing research provides a snapshot of the impact of institutions on entrepreneurship at a single point in time. Thus, longitudinal studies tracking this impact over long periods are needed to understand how changes in the quality of formal and informal institutions affect the dynamics of entrepreneurship. In addition, while some studies have examined the impact of institutions within individual countries or regions, comparative analysis across countries, especially those with contrasting institutional environments, is limited. Such comparisons could provide more in-depth insights into how different institutional settings facilitate or hinder entrepreneurship development.

With this in mind, we will analyze the relationship between formal and informal institutions in Georgia and Azerbaijan, to find out how they affect entrepreneurial activity and ecosystem development in both countries. This comparative study aims to fill some of the identified gaps by providing longitudinal data and focusing on both formal and informal institutions in different cultural contexts.

5.3 The status-quo of Azerbaijan and Georgia

Azerbaijan and Georgia are two countries located in the South Caucasus region that have similar historical backgrounds but differ significantly in their current development trajectories today (Niftiyev, 2022). To gain a better understanding of

these countries, we will start with an overview of general data and characteristics and then present their current state with respect to entrepreneurial activities.

After the collapse of the Soviet Union, the 15 newly independent states were faced with a choice: to remain in the previous political alliances and governance structures or to take a new path by creating their own networks and state structures (Åslund, 2007). As a result of this decision-making process, two main groups of states emerged: one oriented towards the European Union (EU) and the other towards the Commonwealth of Independent States (CIS). The first group includes the Baltic States - Estonia, Latvia and Lithuania - which have been EU members since 2004, as well as Moldova, Ukraine and Georgia, which are still on the list of EU candidate countries. Conversely, the CIS includes Russia, Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan (Aidis, 2017). Georgia was a member of the CIS but withdrew in 2008, while Azerbaijan remains a member but maintains close economic relations with Turkey.

5.3.1 Georgia

The population of *Georgia* is about 3.7 million (geostat.ge, 2023). It is a developing country with a very high Human Development Index and a representative democracy governed as a unitary parliamentary republic (Constitution of Georgia, UNDP, 2022). According to WB Global Values Survey, more than 85% of population in Georgia is religious, the state religion is Christianity (WB, 2017). The country has access to the Black Sea, and therefore, to transportation routes to international markets. Economic reforms since independence have led to higher levels of economic freedom, as well as reductions in corruption indicators, poverty, and unemployment (WB Georgia Overview, 2022). The entrepreneurship level in Georgia is also very high – for example the SME share in GDP is more than 60% (OECD 2023, geostat.ge 2023). Besides, Georgia is a member state of several international organizations and agreements and active participant of global trade agreements and cooperation – Georgia joined the World Trade Organization (WTO) in June 2000, which fosters its integration into the global economy and helps to

promote trade liberalization and economic reforms (World Population Review, 2024). In addition, Georgia is involved in numerous bilateral and regional trade agreements, i.e. it has signed a free trade agreement (FTA) with China, which took effect in 2017, thus strengthening trade relations between the two countries (EDIT Treaty Database). Georgia is also part of the Deep and Comprehensive Free Trade Area (DCFTA) with the European Union, which has been in force since 2014. This agreement is part of the Association Agreement signed between Georgia and the EU, aimed at enhancing political association and economic integration with the EU.

Key industries in Georgia are agriculture, tourism, mining and minerals, energy and manufacturing. Thanks to its rich cultural heritage, historical sites and natural landscapes, tourism in Georgia is a growing industry. The country attracts tourists with its unique cuisine, ancient monasteries and scenic mountain ranges (geostat.ge). The agricultural sector also forms a significant part of the economy, producing a variety of crops including grapes (for wine production), nuts, citrus fruits and vegetables. The country is known for its wine production, which is of historical and economic importance (FAO, 2015). The manufacturing sector includes food processing, textiles, and chemicals (Invest in Georgia, 2024). The country has been working on modernizing its industrial base to attract foreign investments. The construction sector is growing rapidly due to urbanization processes and infrastructure development (geostat.ge). Besides, Georgia has a significant potential for renewable energy, especially wind power and hydropower (National Renewable Energy Action Plan, 2024).

Education system in Georgia and Azerbaijan are similar. Both countries require primary education and propose a transition to middle and secondary education leading to higher education. Moreover, both systems are facing challenges related to the quality of education; they both are currently undergoing reforms to address these issues. The visible differences are that Georgia has made significant efforts to develop inclusive education and integrate international cooperation to improve its education system, as reflected in partnerships with Estonia and Poland (UNICEF).

Besides, the higher education structure in Georgia includes a wider range of institutions offering extensive programs, while higher education reforms in Azerbaijan aim to align with international standards (Scholaro, 2024).

Following the collapse of the Soviet Union, Georgia underwent significant political and economic transformation aimed at distancing itself from the Soviet past and engaging more closely with Western institutions (FAS Project on Government Secrecy). After independence in 1991, Georgia experienced internal conflicts and economic difficulties. However, significant reforms began in the early 2000s, especially after the 2003 Rose Revolution (CSIS, 2021).

Table 34: Major Laws and Reforms in Georgia Post-Independence (1991-present)

Year	Law/Reform	Details and Impact
1991	*Act of Independence*	Georgia formally declared independence from the Soviet Union on April 9, 1991.
1995	*Constitution of Georgia*	Established a framework for a democratic, market-oriented state with a division of powers and respect for human rights.
2004	*Rose Revolution Reforms*	Sweeping anti-corruption reforms post-Rose Revolution under President Mikheil Saakashvili, focusing on government transparency and economic liberalization.
2004	*Tax Code Reforms*	Simplified the tax system, reducing the number of taxes and improving tax collection efficiency, fostering a more business-friendly environment.
2006	*Labor Code Reforms*	Major labor law changes to increase flexibility in the labor market, aligning with European labor standards.
2006	*Privatization Reforms*	Accelerated privatization of state-owned enterprises to encourage private investment and economic growth.
2008	*Judicial Reforms*	Comprehensive reforms aimed at improving the independence of the judiciary, increasing the rule of law, and enhancing legal procedures for businesses and citizens alike.

2010	*Law on Investments*	Law aimed at attracting foreign direct investment (FDI) by offering protection and incentives to investors, and simplifying business registration processes.
2012	*Universal Healthcare Reform*	Launched a universal healthcare system to provide basic health services to all Georgian citizens, particularly targeting low-income and vulnerable populations.
2013	*Land Reform Law*	Restricting foreign ownership of agricultural land to protect national interests, alongside reforms to increase agricultural productivity.
2015	*Pension System Reforms*	Introduction of a contributory pension system, aiming to create a sustainable and equitable pension system for Georgian citizens.
2018	*Electoral Reform*	Constitutional changes to improve the transparency and fairness of electoral processes, in line with democratic principles and EU integration requirements.
2020	*Anti-Monopoly Law*	New regulations aimed at preventing monopolies and promoting fair competition, fostering a more competitive business environment in line with EU standards.
2023	*"Foreign Agents" Law*	This law aimed to label individuals or entities receiving over 20% of their funding from foreign sources as "foreign agents."

Source: own

These reforms were aimed at reducing corruption, improving governance, and stimulating economic growth. Georgia's efforts have led to stronger ties with Western countries and institutions, including its aspirations to join the European Union (EU) and NATO. In 2014, the country signed an Association Agreement with the EU that includes a Deep and Comprehensive Free Trade Area (DCFTA), underscoring its aspirations for European integration (CSIS, 2021). The country's efforts to deepen ties with the EU and NATO are part of a broader strategy to ensure sovereignty and stability through international cooperation and integration (FAS Project on Government Secrecy). However, the democratic system is struggling with elections and changing governments (Jawad, 2005), trying to erode corruption

and bribery and getting over the Soviet informal and formal settings (Aliyev, 2017). Besides, Territorial conflicts in Georgia, particularly in Abkhazia and South Ossetia, have had a fundamental impact on its economy - they have displaced a large proportion of the population, disrupting economic activity and depleting the country's resources (Cornell, 2002). The instability caused by the ongoing disputes discouraged foreign investment and hindered economic growth. In addition, the conflicts have blocked vital transportation routes and created barriers to trade, especially with Russia, an important trading partner of Georgia before the conflict escalated (Gvalia et al., 2019).

The political system of Georgia is unitary semi-presidential republic, meaning that power is concentrated at the national level, with a degree of autonomy granted to local governments, and it operates under a semi-presidential system where executive power is shared between the president and the Prime Minister (Constitution of Georgia).

Table 35: Political Leadership and Major Laws in Georgia Post-Independence

President	**Political Party**	**Term**	**Political Course**	**Key Laws and Reforms**
Zviad Gamsakhurdia	Round Table Party	1991–1992	Nationalist, Anti-Soviet	- Declared independence from the USSR. - Constitutional law for a fully sovereign state (1991).
Eduard Shevardnadze	Union of Citizens	1992–2003	Stabilization, Foreign relations with West	- Introduced reforms to stabilize post-Soviet Georgia. - Shifted focus towards European integration.
Mikheil Saakashvili	United National Movement	2004–2013	Pro-Western, Democratic reforms	- Rose Revolution reforms (2004) to fight corruption. - Economic liberalization laws (privatization, tax reforms). - Judicial reforms (strengthening rule of law).

Giorgi Margvelashvili	Georgian Dream	2013–2018	Continuation of democratic reforms	- Reform of labor laws (2013) to align with European standards. - Land reform laws to restrict foreign ownership of agricultural land (2017).
Salome Zourabichvili	Independent	2018–present	Continued Euro-Atlantic integration	- Continued judiciary reforms. - Anti-corruption legislation. - Electoral reforms toward greater transparency and fairness (2018).

Source: Own

However, after several years of moving toward closer ties with the West, including the establishment of transparent standards and steps toward EU membership, Georgia's political landscape has changed significantly since 2023. Despite pro-western president Salome Zurabishvili (Jones, 2013) the current government, under Prime Minister Irakli Garibashvili and his "Dream" party, that has majority of seats in parliament, has introduced controversial legislation reminiscent of Russia's governance style (Kakachia & Lebanidze, 2023; European Parliament, 2023). The most visible evidence of this alignment has been the laws related to media regulation and laws targeting foreign-funded organizations similar to Russia's law on "foreign agents." These legislative changes have raised serious concerns both domestically and internationally, putting Georgia's candidacy for the EU in danger (European Parliament, 2023). The European Union and pro-Western segments of the Georgian public have criticized these actions as detrimental to democratic reforms and human rights, which were previously seen as necessary for potential EU integration (Kakachia & Lebanidze, 2023).

5.3.2 Azerbaijan

Azerbaijan with the population of 10 million people is categorized as a developing nation with a notable Human Development Index and operates as a unitary presidential republic (State Statistical Committee 2024, Constitution of Azerbaijan, UNDP, 2022). According to a recent 2015 Gallup poll, Azerbaijan is one of the most

secular countries in the Muslim world and ranked Azerbaijan as 13th least religious country in the world, based on data collected (Gallup poll, 2015).

Geographically, Azerbaijan has access to the Caspian Sea, giving it strategic importance and opportunities for more regional, international transport possibilities and trade. Transportation problems related to the Nagorno-Karabakh region have existed for several decades. Since Azerbaijan regained access to the territory after the 2020 Nagorno-Karabakh war and subsequent events in 2023, new opportunities have emerged to optimize transport routes, especially through the Zangezur corridor, linking Azerbaijan to its Nakhichevan exclave and further west. This could create more direct and efficient rail and road links to Europe and Turkey, significantly improving regional trade and integration opportunities (Güney, 2023)

Since independence, the country has undergone significant economic reforms (see Table 3) that have led to increased economic freedom, reduced corruption and marked improvements in poverty reduction and unemployment (WB Azerbaijan Overview, 2022).

Table 36: Major Laws and Reforms in Azerbaijan Post-Independence (1991-present)

Year	**Law/Reform**	**Details and Impact**
1991	*Declaration of Independence*	Formal declaration of independence from the Soviet Union on October 18, 1991. Established Azerbaijan as a sovereign state.
1992	*Law on Privatization of State Property*	Introduced to begin the privatization process, aimed at transitioning from a centrally planned economy to a market economy.
1995	*Constitution of Azerbaijan*	New constitution establishing a strong presidential system, separation of powers, and a legal framework for the democratic state.

1994	*"Contract of the Century"*	Signed with major Western oil companies, leading to significant foreign investment in Azerbaijan's oil sector and boosting the country's economic profile globally.
1996	*Land Code of Azerbaijan*	Facilitated the privatization of land and encouraged private land ownership, crucial for agricultural and real estate reforms.
2000	*Anti-Corruption Reforms*	Introduced anti-corruption measures aimed at increasing transparency in government and public services.
2002	*Civil Code of the Republic of Azerbaijan*	Comprehensive civil code covering contracts, obligations, property rights, family law, and commercial activity.
2006	*State Program on Socio-Economic Development*	Focused on balanced regional development, improving infrastructure and social services in rural areas, and promoting economic diversification beyond the oil sector.
2009	*Constitutional Amendment*	Removal of presidential term limits
2012	*Law on Public Procurement*	Introduced regulations to enhance transparency and efficiency in public procurement, reduce corruption, and improve the allocation of public resources.
2015	*Judiciary Reform*	Aimed at increasing the independence of the judiciary and improving the efficiency of the legal system, particularly concerning commercial and business disputes.
2016	*ASAN Service Reforms*	Creation of ASAN (Azerbaijan Service and Assessment Network) to streamline public service delivery, reduce bureaucracy, and fight corruption in state-citizen interactions.

2017	*Strategic Roadmaps for National Economy*	A comprehensive plan outlining the diversification of the Azerbaijani economy, reducing its dependence on oil and gas through the promotion of sectors like agriculture and tourism.
2020	*Reforms in Social Security*	Introduction of pension reforms and social security benefits to improve the welfare of Azerbaijani citizens, especially vulnerable groups.

Source: own

Despite the entrepreneurial-oriented reforms (Strategic Roadmap, 2017), the entrepreneurship level in the country is still very low (WB, 2013, Ibrahimova and Moog, 2023). In contrast to Georgia, where SME's share in GDP is almost two thirds, SMEs in Azerbaijan contribute only 6% to the GDP. This lower percentage indicates a more limited role for SMEs in the Azerbaijani economy compared to Georgia, highlighting the different economic structures and development trajectories of the two countries, with Georgia showing a stronger integration of SMEs into its economic framework, while Azerbaijan's economy remains less diversified in terms of entrepreneurship and SME partici//0pation (OECD, 2023). In Azerbaijan, large companies dominate the most important sectors such as oil, petrochemicals and transportation, and this dominance is ensured by foreign companies, especially from Turkey, Russia and Europe. As an example, in the energy sector, international giants such as BP have a strong presence, playing a central role in the development of the country's oil and gas resources. Turkish companies are active in transportation and construction, while firms from3 Russia are engaged in the food and chemical industries. This foreign influence plays an important role in shaping the Azerbaijani economy and its industrial sectors (Cornell, 2015).

As well as Georgia, Azerbaijan is involved in various bilateral and regional trade agreements (Azerbaijan country profile - BBC News) but is not a member of WTO. Although it applied for WTO membership in June 1997, the process of joining is

still ongoing as of 2024. Despite significant efforts and reforms to bring its trade and economic policies in line with WTO standards, Azerbaijan has not yet decided on the terms of its membership (WTO). In addition to seeking WTO membership, Azerbaijan actively participates in several regional and international organizations. It is a member of the Commonwealth of Independent States (CIS), which includes a free trade area between several former Soviet republics. Beyond the CIS, Azerbaijan has engaged in trade agreements with Turkey, Italy and Iran (Trade.gov, BCG Global). It is also a founding member of the Organization of Turkic States, which aims at cultural, economic and political cooperation among Turkic-speaking countries and a member of the Non-Aligned Movement (NAM), which defends the interests of developing countries in international forums (trade.gov). Although Azerbaijan is not a party to the EU's Deep and Comprehensive Free Trade Area (DCFTA) as Georgia, it is actively modernizing its trade and economic policies, by adopting European standards in some sectors such as agriculture and improving conformity assessment by cooperating with international organizations such as the International Organization for Standardization (ISO) (trade.gov.az).

When it comes to key industries, Azerbaijan's economy is heavily anchored in oil and gas production, which belongs mostly to the state (State Oil Company of Azerbaijan Republic – SOCAR) and accounted for roughly 57.8% of the country's GDP and over 92.5% of export and roughly half of the state budget (International Trade Administration, 2023). The petrochemical industry exists here too, as an extension of the oil and gas sector, producing various chemicals and refined products (SOCAR Annual Report, 2022). The construction industry has seen significant growth, driven by infrastructure projects funded by oil revenues (Oxford Business Group, 2023). The manufacturing industry in Azerbaijan is diverse, including food processing, textiles, and the defense industry, all supported by local raw materials (Ministry of Economy of the Republic of Azerbaijan, 2023). Agriculture plays an important role in the economy, even being overshadowed by the oil sector. The country produces grains, cotton, nuts, silk, vegetables and fruits, and wine, and there is potential for further development (Food and Agriculture

Organization, 2023). Tourism is developing, with efforts being made to diversify the economy and attract visitors to cultural and natural sites such as modern architecture and historical sites in Baku, as well as recreational tourism in the mountains or on the shores of the Caspian Sea (Azerbaijan Tourism Board, 2023).

Azerbaijan, unlike Georgia, has retained a more centralized and state-controlled political system (Freedom House, 2022). It is a unitary presidential republic where the president has significant executive powers (Constitution of Azerbaijan). Thus, although both countries are republics, they differ in their state structure and the distribution of powers between the different branches of government. In addition, Azerbaijan has had a one-party elected government for many years, which leads to some informal institutional attitudes inherited from the former Soviet system (Aliyev, 2017). Azerbaijan pursues a more balanced foreign policy, maintaining relations with both Western countries and regional powers such as Russia and Turkey. Despite numerous economic reforms, the political system remains closer to the Soviet legacy compared to Georgia's trajectory towards Western integration (CSIS, 2021). Thus, political and economic system, as well as formal and informal institutional setting is quite different in these two countries (OECD, 2023).

Table 37: Political Leadership and Major Laws in Azerbaijan Post-Independence

President	**Political Party**	**Term**	**Political Course**	**Key Laws and Reforms**
Ayaz Mutallibov	Communist Party	1991–1992	Post-Soviet transitional governance	- Initial market reforms, limited transition to capitalism. - Attempted reforms to stabilize the economy amidst Soviet collapse (limited success).
Abulfaz Elchibey	Popular Front	1992–1993	Nationalist, Pro-Western	- Focused on reducing Russian influence. - Military reforms during Nagorno-Karabakh conflict.

				- Privatization initiatives (partial and slow implementation).
Heydar Aliyev	New Azerbaijan Party	1993–2003	Centralization, Stability	- Major constitutional reforms (1995) introducing a strong presidential system. - Oil contracts signed with Western companies ("Contract of the Century" in 1994).
Ilham Aliyev	New Azerbaijan Party	2003–present	Centralization, Economic growth	- Constitutional amendment in 2009 removing presidential term limits. - Economic diversification plans. - Legal reforms to modernize public services (ASAN service).

Source: own

5.4 Data and Method

Even after 35 years of independence, former soviet countries like Azerbaijan and Georgia continue to face challenges in institutions-building process (Fritsch et al. 2022). Difficulties related to the process of transitioning from a socialistic to a market economy and other problems of post-soviet era created complex institutional situations in both countries (Kalantaridis, 2007). Informal institutions that existed under Soviet totalitarianism, such as nepotism, corruption, informal networks (and others), often persist in whole or in part in the new system and impede large-scale economic transformation in a number of post-Soviet countries (Chavance, 2008, Aliyev, 2017). Thus, the so-called formal and informal institutional environment changed in a process of co-evolution during this transition period, and the different balance of this relationship led to different outcomes in both countries (Aliyev, 2017). In our research, we will try to tackle this institutional settings evolution in both countries over time.

The **Method** we will employ in our research is a *comparative analysis method* (Ragin, 2014). It will a) allow us to examine the evolution of entrepreneurial

ecosystems in Georgia and Azerbaijan. By b) focusing on formal and informal institutional changes, we seek to understand how these changes have affected entrepreneurial activity in these two post-Soviet countries. Therefore, we will compare entrepreneurial outcomes in both countries using national statistical data and then conduct in-depth analysis of formal and informal institutional setting and institution building process to understand entrepreneurial ecosystem design of these countries better. Our methodology incorporates both qualitative and quantitative approaches, utilizing a variety of data sources (mostly secondary data) to provide a comprehensive view of institutional change and its impact on entrepreneurial activity.

The **Data** sources we used in our research are following:

- *National Statistical Data* - data on entrepreneurial outcomes, including the number of SMEs in the last 30 years (1994-2023 for Georgia and 1996-2023 for Azerbaijan – only available data), their share in GDP and export figures from the national statistical committees of both Georgia and Azerbaijan (goestat.ge, stat.gov.az)
- *World Governance indicators* - The WGI dataset, covering the period from 1996 to 2023, which will be used to assess governance quality in both countries. This includes indicators such as regulatory quality, rule of law, government effectiveness, political stability and control of corruption
- *World Bank Global Values Survey* - data from the World Bank Global, particularly focusing on waves 3 and 6, which include both Georgia and Azerbaijan. This survey provides insights into social norms, cultural values, and informal institutions that influence entrepreneurial behavior, with 1000 respondents' feedback for every country in our analysis.
- *International Property Rights Protection index* database, to analyze the privatization results
- *Archival and legislative documents* - National archives, policy papers and legislative records will be studied to track formal economic reforms and policy changes over time.
- *Relevant academic papers* – literature on transition processes, entrepreneurship and institutions to get a general information on how the countries undergo this process
- *International Organizations Reports* – OECD reports on SME, WB Doing Business report, WTO, FAO, and others, to get a general information on Georgia and Azerbaijan world ranking in entrepreneurship and institutions
- *Other sources* – local newspapers, historical archives, and other available online data sources, i.e. from news agencies, political research institutes, etc.

The methodology is based on a comparative analysis of formal and informal institutional settings in Georgia and Azerbaijan. By comparing the institutional frameworks and entrepreneurial performance in both countries, the aim of this study is to reveal patterns and differences in the design of their entrepreneurial ecosystems. To do so, a *qualitative longitudinal analysis* of legislative documents, policy documents (Mahoney & Thelen, 2010), and archival records is conducted, allowing to see the historical evolution of formal institutions over time. This will also include studying the implementation and impact of economic reforms as well as changes in governance structures. The study also employs a *quantitative analysis* when working with secondary data from WGI, WB Global Values Survey and State Statistical Committees of both countries.

First records on formal and informal quantitative institutional data for both countries are only available from 1996, and entrepreneurial data is only available from 2004 for Georgia and from 2006 for Azerbaijan. Therefore, the data sample we were able to collect started from these years respectively. Due to the small number of data rows, we were not able to run OLS regression model, but the correlation between institutions and entrepreneurship is obvious. We also found a few instances of small data and figures in the years immediately after liberalization for both countries, but these we only name and discuss, and do not include in the numerical analysis. Instead, we use these qualitative data as supporting examples.

To work with the available, secondary, quantitative data, we use the statistical technique of trend analysis (Chatfield, 2003) to plot entrepreneurial activity in Georgia and Azerbaijan and identify differences between them. In some cases, we do the same with the data on informal and formal institutions that we obtained in our institutional research. In regard to qualitative data, we work with all available information on formal and informal institutional changes in both countries to

conduct a comparative analysis. As mentioned above, we also use some qualitative data and text sources to discuss entrepreneurial activity before 2006.

By comparing institutional conditions and entrepreneurial outcomes in Georgia and Azerbaijan, we aim to expose systematic differences affecting entrepreneurial activity. This comparative analysis will show how similar historical context can lead to different institutional and entrepreneurial trajectories. (Ragin, 2014; Mahoney & Thelen, 2010)

The methodology outlined in this study will deliver a comprehensive comparative analysis of the entrepreneurial ecosystems in Georgia and Azerbaijan by combining qualitative and quantitative data and utilizing a longitudinal approach. The aim of this research is to uncover the complex interplay between formal and informal institutions and their impact on entrepreneurial activity, therefore, this study has a potential to contribute to the growing body of literature on entrepreneurial ecosystems and provide practical recommendations for policy makers and stakeholders in transition economies. Thus, our study discusses the idea of how formal and informal institutions affect entrepreneurial outcomes in the long run, and we use first qualitative and quantitative secondary data to show effects and (causal) relationships over time.

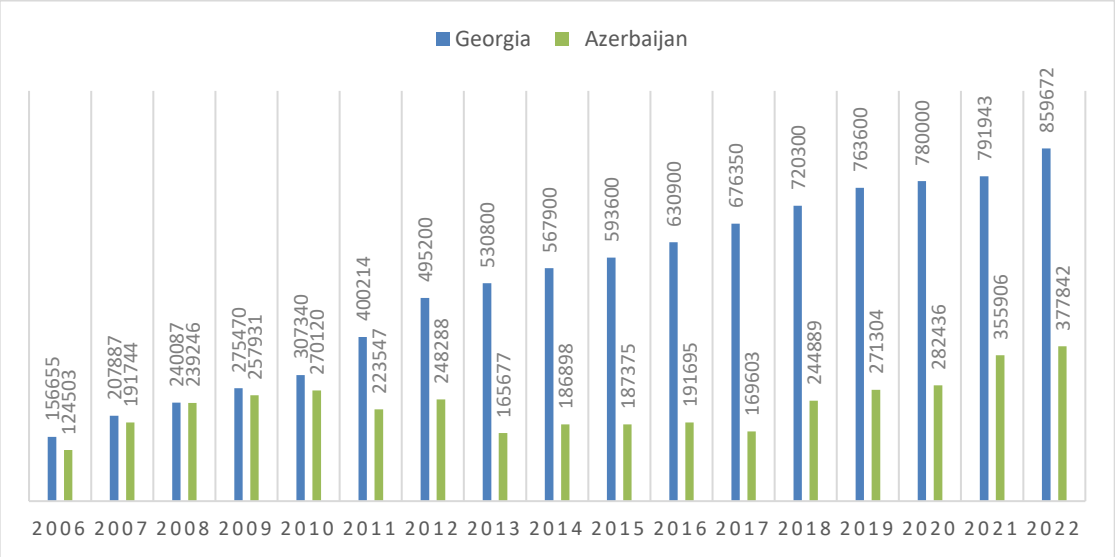
5.5 The comparative analysis

This analysis is based on a potential outcome variable, entrepreneurial activity. For this purpose, we follow the general literature that considers entrepreneurial activity in different ways, but mainly in relation to private businesses and here specifically to SMEs (Audretsch, 2003; Carree & Thurik, 2010); we could also use start-up rates or intentions to start a business as frequently used constructs to measure entrepreneurial activity (GEM, 2019). But due to data access issues and limitations, we use data on SMEs in two countries, which is also a traditional variable for measuring entrepreneurial activity (Levine, 2005).

5.5.1 Entrepreneurship

Entrepreneurship in Azerbaijan and Georgia is highly dependent on their institutional framework. Azerbaijan has made progress in entrepreneurship development due to reforms aimed at diversifying its oil-dependent economy (The World Bank, 2020). Government initiatives have simplified business registration and increased access to finance for startups. Yet challenges persist, including inconsistent enforcement of regulations, bureaucratic inefficiencies, and transparency issues (European Commission, 2021). In contrast, Georgia has created a favorable business climate through liberal economic policies and extensive deregulation efforts (World Economic Forum, 2020). Despite these advantages, there are challenges related to informal institutions, such as different levels of trust in the judicial authorities and corruption problems (EBRD, 2021). Both countries are trying to enhance their entrepreneurial ecosystems by strengthening formal institutions, improving regulatory framework, and encouraging innovation and risk-taking by entrepreneurs (European Commission, 2021). Addressing these challenges is critical to unlock their entrepreneurial potential and achieve sustainable economic growth. As it was already mentioned above, SME sector contribution in Georgia is more than 60%, whereas in Azerbaijan this figure is only 6% (State Statistical Committees of Georgia and Azerbaijan, geostat.ge, stat.gov.az). According to national statistics, number of SMEs in Georgia are twice more than those in Azerbaijan, and this is considering that the population of Georgia is three times lesser than the population of Azerbaijan.

Figure 31: SME Numbers in Azerbaijan and Georgia, 2006-2022, Statistical data



Source: State Statistical Committees of Georgia and Azerbaijan, geostat.ge, stat.gov.az

To make our comparison more accurate we divided the number of businesses in both countries by population size, and figured out our entrepreneurship ratio, or entrepreneurship per capita. For Azerbaijan, the divisor is 10.14 million inhabitants in 2024, for Georgia - 3.709 million inhabitants in 2024 (geostat.ge; state.gov.az).

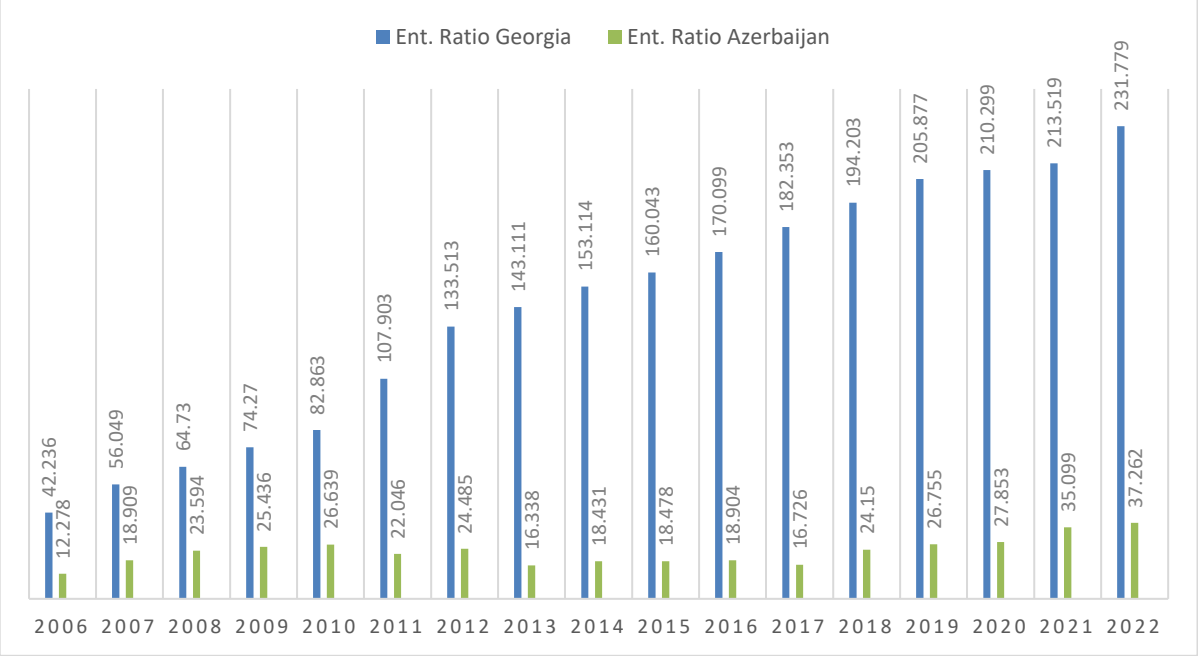
Table 38. SME numbers and ratio in Georgia and Azerbaijan, 2004-2022

Years	Georgia		Azerbaijan	
	SME Numbers	Ratio	SME Numbers	Ratio
2004	104682	28.223	No data	No data
2005	128739	34.709	No data	No data
2006	156655	42.236	124503	12.278
2007	207887	56.049	191744	18.909
2008	240087	64.730	239246	23.594
2009	275470	74.270	257931	25.436
2010	307340	82.863	270120	26.639
2011	400214	107.903	223547	22.046

2012	495200	133.513	248288	24.485
2013	530800	143.111	165677	16.338
2014	567900	153.114	186898	18.431
2015	593600	160.043	187375	18.478
2016	630900	170.099	191695	18.904
2017	676350	182.353	169603	16.726
2018	720300	194.203	244889	24.150
2019	763600	205.877	271304	26.755
2020	780000	210.299	282436	27.853
2021	791943	213.519	355906	35.099
2022	859672	231.779	377842	37.262

Source: State Statistical Committee of Azerbaijan and Georgia (stat.gov.az, geostat.ge)

Figure 32: Comparison of entrepreneurship ratio in Georgia and Azerbaijan 2006-2022



Source: Own calculation based on State Statistical data from Azerbaijan and Georgia (stat.gov.az, geostat.ge)

The difference between the entrepreneurship levels in the two countries is even more pronounced on this diagram. The maximum entrepreneurship ratio in Azerbaijan in 2022 (37.262) is even lower that the level of entrepreneurship in Georgia, that existed in 2006 (42.236). This inequality may exist due to the inefficiency of formal institutions, the negative influence of informal institutions that hinder the effectiveness of formal ones, or a combination of both. Moreover, we found several qualitative data describing the situation of self-employed, SMEs or start-ups in both countries, which paint roughly the same picture: in Georgia, after overcoming the problems in the beginning, entrepreneurial activity started to flourish much more than in Azerbaijan (Rahmanov et al., 2016).

In order to gain a deeper understanding of the current situation and its development and to find out why these two countries, starting from similar points, show such different entrepreneurial results, we will conduct a historical analysis of institutional reforms in both countries. In our next chapter, we will present long-term data on these institutional reforms to facilitate a comparative analysis of formal and informal institutional development in Georgia and Azerbaijan over the last 30 years. This comparison will help us to identify initial descriptive links between the institutional structure and the level of entrepreneurship levels in each country.

5.5.2 Formal and informal institutions

Formal institutions

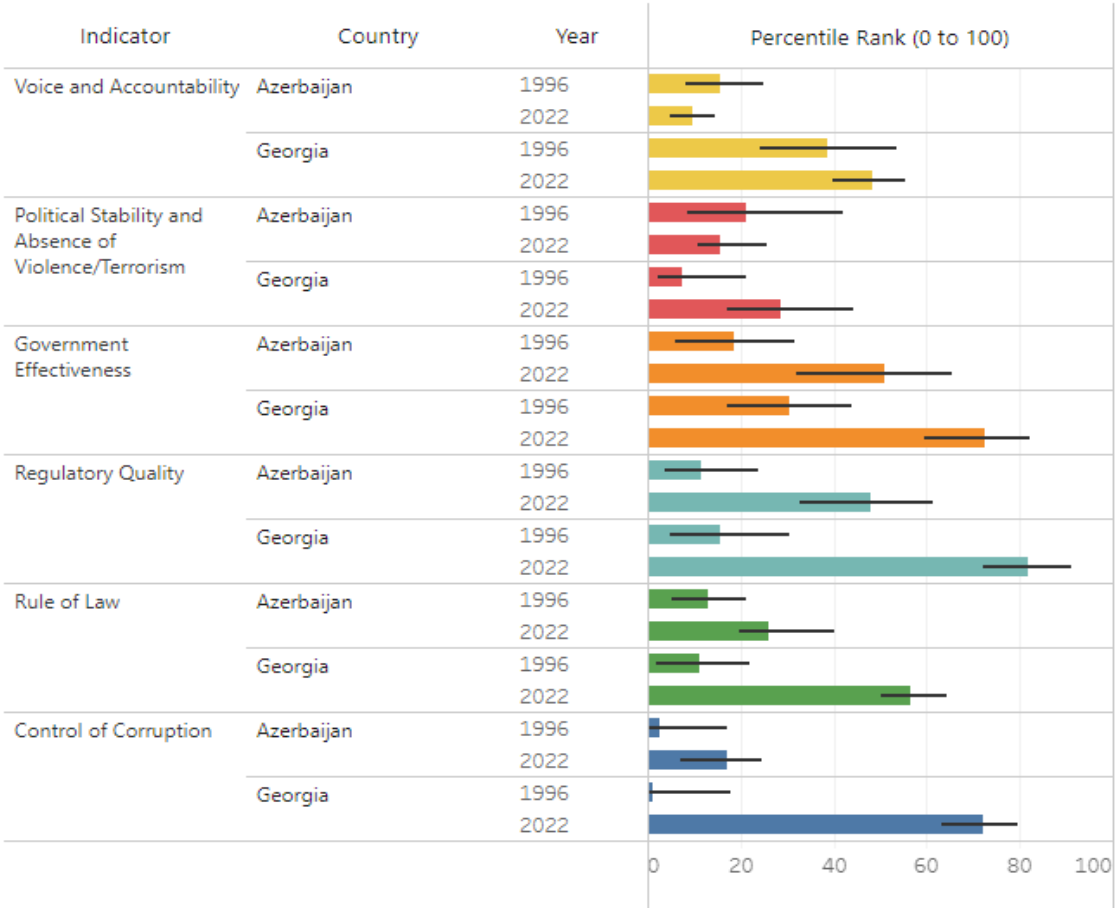
The formal institutional environment in Georgia has significantly improved over the past decade (WGI, 2021). The authorities have reaffirmed their commitment to the comprehensive reform agenda, which aims to facilitate economic activity, secure property rights, reduce corruption, and rapidly align the legal framework with international standards (Kalatnaridis, 2007). These advancements became possible through a robust institution building process, which includes privatization, police and court reforms, anti-monopolistic and anti – corruption measures (Aliyev, 2017).

This has led to Georgia's notable position in the World Bank's Doing Business report, 6th out of 190 countries (WBDB, 2020).

In Azerbaijan, the situation with formal institutions and their transparency has not improved as much despite similar reforms (WGI, 2021). The country is still struggling with the institutions building process and has some problems with corruption and nepotism, hindering the process. Azerbaijan ranks 34th out of 190 countries in the World Bank's Doing Business report (WBDB 2020).

The Chart below summarizes the most important formal institutional indicators from the World Bank Governance dataset (the earliest and the latest available data on both countries).

Figure 33: Formal institutional indexes, comparative table Azerbaijan and Georgia, 1996 and 2022



Source: WGI interactive data, 2023

https://www.govindicators.org/interactive-data-access

Data for the World Bank Governance Indicators (WGI) are collected from more than 30 different data sources, including household and firm surveys, commercial business information providers, nongovernmental organizations, and public sector organizations. Some data are collected through direct observations and analysis of administrative records. The World Bank combines these diverse data sources to produce governance indicators for more than 200 countries and territories, using a statistical methodology that considers the accuracy and reliability of each data source. The six dimensions of governance – standing for formal institutional settings - include Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption (WGI 2023).

When we look at the WGI indicators data for Azerbaijan and Georgia from 1996 to 2022, we see significant differences in formal institutional development between Georgia and Azerbaijan over the past decades. In terms of *Voice and Accountability*, Georgia has shown considerable improvements from a low starting point in 1996 – 24th percentile, to a much higher level in 2022 – 54th percentile, indicating strengthening of democratic institutions, better freedom of expression and citizen participation. Conversely, Azerbaijan showed a decline from the 19th percentile in 1996 to the 9th percentile in 2022, indicating the opposite situation. The *Political stability and absence of violence/terrorism* indicator have improved in both countries slightly since 1996, but challenges remain. Azerbaijan improved from the 27th to the 40th percentile in that indicator, and Georgia from the 21st to the 51st percentile. The reason for that delay might be territorial conflicts both countries were struggling with after independence - Abkhazia and South Ossetia in Georgia; Karabakh in Azerbaijan (BBC country profiles Azerbaijan and Georgia).

Government effectiveness and *Regulatory Quality* show similar trends. Georgia has shown noticeable improvement in both, reflecting successful reforms and better governance structures, while Azerbaijan's progress has been limited. The indicator

of *Government Effectiveness* saw Azerbaijan moving up from up from the 19th to the 27th percentile, while Georgia improved it from the 33rd to the 62nd percentile, especially since the 2004 reforms (See table 1 and 3). *Regulatory quality* has also improved significantly in Georgia – it leaped from the 14th to the 80th percentile, and in Azerbaijan, it improved from the 14th to the 30th percentile. The *Rule of Law* in Georgia illustrated a dramatic enhancement, improving significantly from the 20th to the 68th percentile, and reflecting a strengthened legal framework and enforcement in Georgia (see Table 1). Azerbaijan, while showing some improvement, still lags significantly. It moved up from the 7th to the 17th percentile. Finally, one of the most impressive achievements that Georgia made is the *Control of Corruption*. Georgia has risen from the 24th percentile in 1996 to the 76th percentile in 2022, putting it on par with countries such as Estonia and Slovenia, which typically have scores between the 80th and 90th percentile, whereas Azerbaijan improved from the 5th percentile in 1996 to the 17th percentile in 2022. This significant progress reflects Georgia's successful anti-corruption reforms (Rose Revolution reforms, 2004), while Azerbaijan's limited success reflects continuing challenges related to nepotism networks (Gerlich, 2023).

Overall, these indicators reflect the contrasting development trajectories of the two countries after the collapse of the USSR, where Georgia has made substantial progress in various aspects of governance, outperforming Azerbaijan, which has shown more modest and slower improvements in institutional development.

Table 39: Institutional indices in Georgia, 1996-2022

Years	Institutions (WGI percentile rank)						
	RL	RQ	GE	CC	VA	PS	Average
1996	11.06	15.76	30.60	1.08	38.50	7.45	17.40
1998	11.00	23.91	30.05	19.79	39.30	7.98	22.00

2000	22.39	29.89	38.80	13.83	42.29	20.63	27.97
2002	15.42	24.32	28.11	4.23	33.83	16.40	20.38
2003	20.90	28.65	50.27	31.22	42.29	11.56	30.81
2004	27.88	37.31	36.82	37.44	46.63	19.42	34.25
2005	30.62	28.92	41.18	50.24	47.60	25.24	37.3
2006	40.67	50.98	46.83	58.54	43.75	17.87	43.10
2007	44.98	60.68	55.83	53.40	38.46	24.64	46.33
2008	47.60	65.53	63.59	53.88	39.42	16.83	47.80
2009	49.29	67.46	63.16	54.55	41.23	17.54	48.87
2010	48.82	69.38	65.07	57.62	41.71	24.17	51.12
2011	51.64	73.46	69.67	61.14	41.78	27.01	54.11
2012	55.40	72.04	70.14	68.72	50.23	24.17	56.78
2013	54.93	72.99	70.14	69.19	55.40	31.28	58.98
2014	63.94	75.48	68.75	77.40	57.64	34.76	62.99
2015	61.90	74.76	64.29	75.24	56.65	29.52	60.39
2016	61.90	78.57	67.62	75.24	55.67	33.81	62.13
2017	60.00	80.00	68.57	76.67	54.68	31.43	61.89
2018	60.95	81.43	71.43	76.67	55.83	30.19	62.75
2019	59.52	81.43	75.71	76.19	52.66	27.36	62.14
2020	58.57	81.43	74.76	70.95	49.28	32.55	61.25
2021	55.71	82.86	70.95	74.29	47.34	30.19	60.22

2022	56.60	81.60	72.64	72.17	48.31	28.77	60.01

Source: WGI World Bank Interactive data, https://www.govindicators.org/interactive-data-access

Table 40: Institutional indices in Azerbaijan, 1996-2022

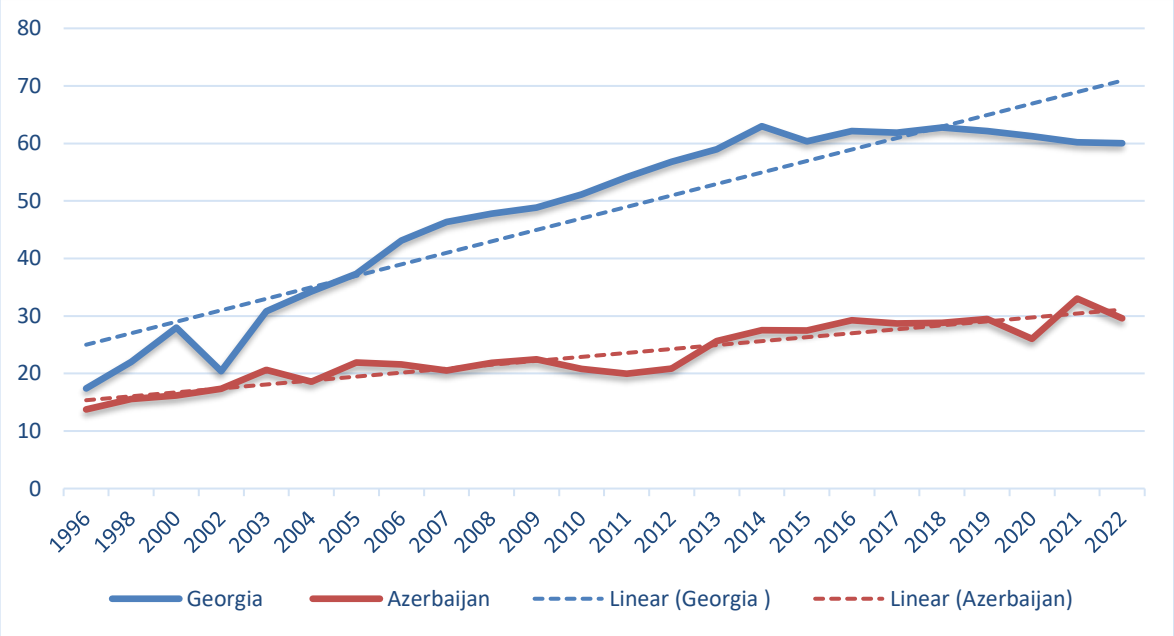
Years	Institutions (WGI percentile rank)						
	RL	RQ	GE	CC	VA	PS	Average
1996	13.07	11.41	18.58	2.69	15.50	21.28	13.75
1998	15.00	15.76	18.03	3.74	17.91	22.87	15.55
2000	14.13	18.48	18.03	4.26	21.89	20.11	16.15
2002	18.91	24.86	16.22	6.35	20.40	17.46	17.36
2003	22.39	30.27	18.92	10.58	20.40	21.11	20.61
2004	19.71	27.86	17.91	10.34	18.75	16.99	18.59
2005	26.79	29.90	26.96	15.61	15.38	16.99	21.93
2006	21.53	32.84	30.24	12.68	10.58	21.53	21.56
2007	21.53	34.47	22.33	11.17	12.02	21.53	20.50
2008	22.12	41.75	23.30	10.68	11.06	22.12	21.83
2009	20.38	41.63	30.14	9.09	13.27	20.38	22.48
2010	21.33	38.28	24.40	6.67	12.80	21.33	20.80
2011	17.84	37.44	24.64	9.48	12.68	17.84	19.98
2012	21.60	33.18	24.64	11.85	12.21	21.60	20.84
2013	26.29	36.49	38.86	16.59	9.39	26.29	25.65
2014	28.37	43.75	42.29	14.90	7.39	28.37	27.51
2015	28.10	40.00	45.24	16.67	6.90	28.10	27.50
2016	31.90	39.05	46.67	19.52	6.40	31.90	29.24
2017	31.43	38.10	46.67	17.62	6.90	31.43	28.69

2018	28.57	39.52	47.62	21.45	7.28	28.57	28.83
2019	28.10	44.29	46.19	22.86	7.25	28.10	29.46
2020	24.29	39.05	47.62	15.24	5.80	24.29	26.04
2021	30.00	50.48	58.57	21.45	7.73	30.00	33.03
2022	25.94	48.11	50.94	16.98	9.66	25.94	29.59

Source: WGI World Bank Interactive data, https://www.govindicators.org/interactive-data-access

Table 6 and 7 above contain data on WGI indices for both countries from 1996 until 2022 (all available data from WGI). To show the overall development in regards to formal institutions, we built a new index, based on an average arithmetic mean (OECD, 2008) from all institutional indicators in Georgia and Azerbaijan for every year. This allows us, to build a comparative graph in order to follow up the evolution of the formal institutional framework in the last 25 years in both countries, and see its current trend.

Figure 34: Evolution of institutional frameworks in Georgia and Azerbaijan and their trends.



Source: Own calculations and trend of arithmetic mean, based on WGI Interactive data (online retrieved, September 21, 2024) .

The diagram 3 shows general institutional development in Georgia and Azerbaijan from 1996 to 2022, according to World Bank Governance Indicators (WGI). Over this period, Georgia demonstrates a substantial upward trend reflecting major improvements, especially after 2004, with a notable peak around 2014. The steep positive slope of the linear trend line evidences this statement. In contrast, Azerbaijan's institutional development has been modest, with a relatively flat trend line indicating slower progress in this field. The chart clearly confirms the textual information about the contrasting development trajectories of the two countries, emphasizing Georgia's significant progress compared to Azerbaijan's slower and more modest improvements. This is an important point in relation to the previous discussion and research findings: when institutions do not change rapidly, profoundly and deeply, a vacuum is often left and people and society may not believe in reforms and new laws, governance structures or formal institutions, and this void can be filled by remaining informal institutional attitudes and rules (Pau et al., 2020; Helmke & Levitsky, 2004)

Informal institutions

As discussed in the theoretical part, there are many different types of informal institutions. Therefore, below we will look at some of them, probably the most important ones for the transition from a communist regime to a more decentralized and capitalism-oriented regime. To begin, we will focus on one of the major and basic changes - the recognition of private property, that is crucial for entrepreneurial activity (Acemoglu & Robinson, 2012). In addition, we will discuss perceptions and trust in other formal institutional reforms, as well as some informal institutional structures.

5.5.2.1 Privatization and the cultural shift towards the private property

Private ownership and property rights is an important formal institution that has a big effect on economic development (Acemoglu, Johnson, and Robinson 2001), therefore, privatization of state property is an effective tool of institutional change

(Megginson & Netter, 2001). The general definition of privatization is the transfer of state property into the ownership of private legal or individual persons. Since the primary objective of entrepreneurs is to make profits, transferring state property into private hands boosts productivity and adds jobs (Brown et al, 2004). Therefore, it is vital to have clear privatization laws and regulations, and govern the process properly, to attract foreign and local investment into the national economy (Sader, 1993).

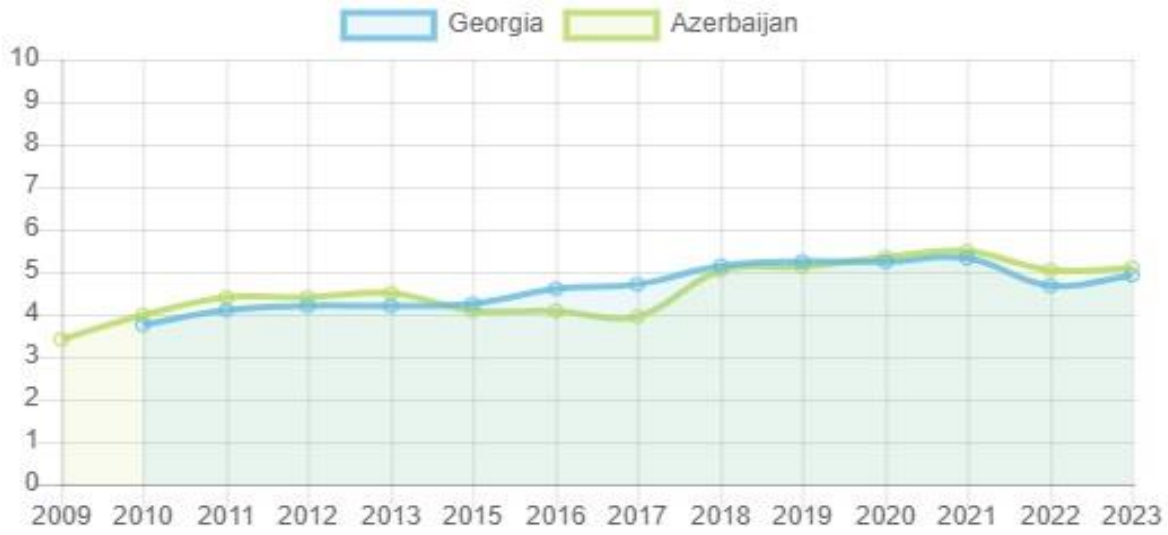
During the USSR, everything belonged to the state, and after the collapse, all the member states had to create new legislation and fulfill the privatization process on their own (McFaul, 1995). As known from the literature, there were three types of privatizations, typical for the post-soviet countries: moderately radical, radical, and evolutionary privatization (Balcerowicz, 1995). Moderately radical type was fulfilled in Hungary, Slovakia, Bulgaria and Czech Republic; as an example, in the latter the government was distributing to all adult population "Coupon books" that give the owner the right to buy shares of a state enterprises through an investment funds (2500 euro share) (Balcerowicz, 1995). However, the owner had no right to buy or sell it. This coupon privatization allowed the government to distribute the state property among the population (86% of population participated) and at the same moment to reduce the risk of criminalization/monopolization of large privatization by nomenclature elites (Balfour, M., & Crise, C. 1993). The most famous radical privatization happened in Poland, where the government chose shock therapy transition. Out of 8000 state companies 1150 were privatized immediately, sold to investors, 5000 - transferred to a privatization agency and later successfully privatized, the rest 2000 were closed, as uncompetitive ones (69% of population involved) (Megginson & Netter, 2001).

The privatization process in Georgia and Azerbaijan was like the one in Russia, but with some distinctions. It followed a two-wave model of radical privatization. In the first wave, legislative frameworks were adapted, leading to the rapid privatization

of small enterprises. Medium and large enterprises were transformed into joint-stock companies and then sold through vouchers, nearly free of charge, facilitated by state privatization agencies and funds (Sutela, 1994). Notably, only 11% of the Azerbaijani population participated in the first wave, indicating a likely concentration of privatized capital among political elites. In Georgia, this figure was higher, with almost 32% of the population involved (Bayramov, 2001). In the second wave, vouchers of big companies were freely bought and sold for six USD per unit in Georgia and eight USD per unit in Azerbaijan. However, due to the very low purchasing power of the population of both countries (+1000% inflation), the process faced delays and hindered the formation of a middle class, capable of participating in small enterprise privatization. Dealing with large companies was even more complex, as their low, non-market prices led to massive losses for the state budget (Sutela, 1994). In Azerbaijan, privatization income was 100 million USD, 25% of that amount was transferred to the privatization fund, responsible for state enterprises modernization before sale, and only 75 million USD reached the budget (Bayramov, 2001). In Georgia, the entire privatization income of 80 million went into the state budget (Djugeli, & Chantladze, 1999).

Despite both governments displaying political will to support privatization, some misbalance emerged. In general, the privatization process was uneven and chaotic, and with different results. To see, if the reforms were indeed effective, we will check them up with the International Property Rights protection index and WB Values Survey, wave 4 and 6 (during and after privatization) for Azerbaijan and Georgia. The World Bank Global Values survey includes population feedback on different issues in the size of the 1000 respondents for each country.

Figure 35. Property rights protection index for Azerbaijan and Georgia (2009-2023 available data)



Source : https://www.internationalpropertyrightsindex.org/#compare-panel (retrieved 12.04.2024)

The property rights protection index is similar for both countries, showing an upward trend from 2009 for Georgia and 2010 for Azerbaijan. However, the consistency of these improvements varies, with more fluctuations for Azerbaijan.

In addition to these data, we have also included here some results on what society and individuals think about these chances, which allows us to understand how these new rules are accepted or perceived in society, setting the tone for the new culture or rules (WB Global Values Survey, wave 3 and 7). This is more reflective of the informal institutional environment, thus whether there is trust, acceptance or support for these changes (Sobel, 2008).

Table 41 a and b: *Private ownership of business and industry should be increased, or government ownership of business and industry should be increased?*

a) Azerbaijan

Year	1997	2011
Private	53.4%	56.7%
State	41.7%	42.9%

Source: World Bank Values Survey, Wave 3, N 126, Wave 6 N 97

b) Georgia

Year	1997	2011
Private	49.6%	56.0%
State	48.2%	38.0%

Source: World Bank Values Survey, Wave 3, N 126, Wave 6, N 97

As we can see from the WB Values survey data from 1997, during the privatization, and 2011, more than ten years after the privatization process ended, the population in Azerbaijan was not affected by its benefits that much. A slight increase in preferences for private property alongside an increase in preferences for state ownership indicates a mixed attitude of population towards the results of privatization. Whereas in Georgia, a clearer shift towards a preference for private property aligns well with a consistent improvement in the international property rights protection index. Thus, here we see a strong difference in the rules and cultural settings and acceptance in both countries, especially in regards to a main aspect – privatization, which might have to do with the different kinds of governance and the speed and intensity of how the laws deal with privatization in reality (WB, 2016).

5.5.2.2 Taxation and tax reforms

The implementation of taxes is critical to facilitating the transition from a communist economic system to a market economy, because it provides the necessary financial resources for new governance structures and public services. Taxes serve not only as a source of revenue, but also as a mechanism to formalize the economy, create accountability, and stimulate private sector growth (Tanzi & Zee, 2000). Thus, both countries undertook tax reforms after independence in 1991.

Tax reform in Georgia had radical and comprehensive approach. Prior to 2004, Georgia's tax system suffered from inefficiency, high levels of tax evasion and corruption. Georgia had the biggest shadow economy among all post-soviet

countries after the USSR collapse (Schneider et al, 2010). The size of the shadow economic activity in Georgia (68%) for the period 1999-2007 was one of the highest in the overall sample, followed by 62% in Azerbaijan (Schneider et al. 2010). The government responded with extensive reforms that drastically reduced the number of taxes from 21 to 6 by 2009. These reforms included reducing VAT from 20% to 18%, simplifying personal income tax to a flat rate of 20%, and significantly reducing the corporate tax rate. Key component of Georgia's tax reform was the abolition of social tax and the reduction of the dividend tax rate to 5%, which was aimed at stimulating economic activity and attracting investment (Legislative Herald of Georgia, www.matsne.gov.ge). The reforms also helped to create a more business-friendly environment by reducing bureaucratic procedures and increasing transparency. These reforms were complemented by the modern tax administration methods, including electronic filing and payments (e-taxation), which reduced corruption and improved compliance process.

Legislative basis for taxation in Georgia is the Constitution of the Republic of Georgia and Tax Code of Georgia, adopted in 1997. Taxes in Georgia are collected at both the state and local levels. The most important taxes affecting enterprises are income tax and corporate tax. Personal income tax in Georgia is levied at a flat rate of 20% on locally sourced income; personal income from foreign sources is not taxable. Personal income tax on interest, dividends and royalties is 5%. Corporate taxes are levied at a flat rate of 15%, which was enacted in 2008. As of 2017, retained earnings are exempt from taxation with very few deductions that are available. This system was created to attract foreign investment. In addition, some luxury goods and environmentally harmful goods, such as gasoline, are subject to excise duties. Customs duties also apply to some imported goods (Legislative Herald of Georgia, www.matsne.gov.ge). In addition, every citizen In Georgia (natural and legal person) has the tax ID, as well as in all developed countries (EU, US etc.). It is an 11 digits number that is also reflected in the national ID pass. All foreigners changing their residency to Georgia also get such a tax ID six months

after their arrival. Natural persons engaged in economic activity fill in the declaration once a year, legal ones – once a month. The situation with taxes and the state budget is also very different here. 46.4 % of the state budget is Personal Income taxpayers, 4.2% is corporate taxpayers, 23,4% sales tax payers (mostly e-commerce) (Georgia Budget and Policy Institute, www.gbpi.org)

Tax reforms in Azerbaijan are still ongoing, aimed to modernize the tax system, reduce the still existing large shadow sector, increase tax revenues and improve the business environment. Before the reforms of 2005 ongoing, many taxes and great complexity characterized Azerbaijan's taxation system. In 2005, the government initiated a large tax reform, reducing the number of main taxes from 21 to 9, simplifying income and profit tax rates, keeping VAT at 18%, and bringing excise, land, property, and road taxes to more predictable and easy rates. One of the most significant reforms was the introduction of simplified tax rate, with a flat rate of 4% in the beginning, and 2% since 2020, aimed to ease tax burden for SMEs. This regime considerably reduced tax compliance costs and encouraged the formalization of the economy. In addition, electronic (e-taxation) system was introduced here too, to improve the tax declaration and tax revenues collection (Azerbaijan Ministry of Taxes, www.taxes.gov.az).

Azerbaijan's tax legislation also consists of the Constitution of the Republic of Azerbaijan and the Tax Code (The Constitution of Azerbaijan Republic, Tax Code of Azerbaijan Republic, 2000). State and local taxes affecting entrepreneurial activity the most are personal income tax, corporate tax and simplified tax. Income taxes in Azerbaijan are set at progressive rate. The tax rate on income of persons receiving less than 2500 AZN is 14%, if income is more than 2500 AZN, then 25% tax is levied on the proportion, which is exceeding 2500 AZN. Profit tax from legal persons - If a legal person is permanently established in Azerbaijan – then its profits should be taxed. The profits are taxed at a 20% rate. Companies pay corporate tax of 21% (15% in Georgia), Simplified tax payers pay 2% from their turnover (in case

if they serve the population, when they serve the taxpayers or have more than 10 employees, they must pay corporate tax) , tax for trading activities – 6%, for public catering activity – 8% (Azerbaijan Ministry of Taxes, www.taxes.gov.az). Besides, if entrepreneurs are using land or extracting mineral resources, they must pay land or royalty taxes that vary depending on the purpose of use and the area where the land is located. As a rule, the tax rates are higher for large and industrial cities. And with royalty (tax on extraction of mineral resources) – these taxes are paid by individuals and enterprises extracting mineral resources in the territory of the Republic of Azerbaijan, including the Caspian Sea waters belonging to the country. Tax rates for crude oil are 26%, natural gas 20%, and all metals 3%. Simplified tax is applicable to entities, whose turnover does not exceed 200.000 AZN in a year. Gross volume of cash flows received in respect of goods and services provided is subject to taxation. (Azerbaijan Ministry of Taxes, www.taxes.gov.az).

Tax revenues in state budget of Azerbaijan is mostly formed by VAT payers – big foreign companies majorly busy in oil and gas sector, and is a threat for national economy (Azerbaijan Ministry of Taxes www.taxes.gov.az). Besides, there is no unified tax ID as in Georgia, US or Germany. That means not every citizen is a registered taxpayer with a tax ID, only those who open a tax ID on purpose. This absence of a mass tax ID system for every citizen creates institutional gaps and therefore possibilities for the big shadow sector. According to IMF and ACCA recent data, the shadow sector in Azerbaijan makes more than 60% of GDP (IMF, 2020, ACCA 2017, Schneider et al, 2010); therefore, most of the reforms in taxation are aimed to bring those shadow entrepreneurs into the light. That might also mean that the real entrepreneurship figures are much higher, but they are still in the informal sector. The number of registered taxpayers in Azerbaijan is 1 million, and half of them are inactive. The rest 500 000 are almost all simplified taxpayers (2% from the turnover), their amount is 470 000, and VAT taxpayers – 30 000. The state income is on the opposite side, formed mostly through VAT payers –big foreign

companies, more than 80% of the tax income in budget (Azerbaijan Ministry of Taxes www.taxes.gov.az).

Table 42: Main taxes in Georgia before and after reform (2004)

Year	Number of taxes	VAT	Corporate Tax Rate	Personal Income Tax Rate	Social Tax	Dividend Income Tax Rate	Interest Tax	Property Tax
2004	21	20%	20%	12-20%	30%	10%	10%	1%
2005	7	20%	20%	12%	20%	10%	10%	1%
2009	6	18%	15%	20% (income + social tax	0%	10%	10%	1%
2012	6	18%	15%	20%	0%	5%	5%	1%
2015	6	18%	15%	20%	0%	5%	5%	1%
2020	6	18%	15%	20%	0%	5%	5%	1%
2023	6	18%	15%	20%	0%	5%	5%	1%

Source: Ministry of Finance Georgia, https://www.mof.ge/

Table 43: Main taxes in Azerbaijan before and after tax reform (2005)

Year	Number of taxes	VAT	Corporate Tax Rate	Personal Income Tax Rate	Social Tax	Dividend Income Tax Rate	Interest Tax	Property Tax	Simplified tax
2004	21	18%	22%	14-35%	25%	10%	10%	0.1-1%	-
2005	7	18%	20%	14-35%	25%	10%	10%	0.1-1%	-
2009	6	18%	20%	14-35%	25%	10%	10%	0.1-1%	-

2012	9	18%	20%	14-25%	25%	10%	10%	0.1-1%	4%
2015	9	18%	20%	14-25%	25%	10%	10%	0.1-1%	4%
2020	9	18%	20%	14-25%	25%	10%	10%	0.1-1%	2%
2023	9	18%	20%	14-25%	25%	10%	10%	0.1-1%	2%

Source: Ministry of Taxes Azerbaijan, https://www.taxes.gov.az/az

The rest of the taxes in Azerbaijan are variables, calculated differently than a flat rate. Excise tax depends on type of goods, Land tax – depends on location and use of land, Road tax – depends on type and use of vehicle, Mining tax – depends on the type of minerals extracted, etc. (Azerbaijan Ministry of Taxes, www.taxes.gov.az).

As we see from our tables, Azerbaijan has more sophisticated taxation system, more taxes and no obligatory tax ID, as in Georgia, which might lead to bigger informal sector. Tax reforms in Azerbaijan were mostly intended to improve tax compliance and tax collection and to simplify the tax structure in general. While the number of taxes was considerably reduced, the main tax rates remained unchanged or were slightly reduced. The reforms have helped to decrease the shadow economy, but Azerbaijan still faces challenges in fully integrating the informal economy and achieving a higher level of economic transparency. Still, there is the progress with the shadow sector in Azerbaijan - it has decreased from 64.66% of GDP in 1994 to 43.66% in 2018 (Medina & Schneider, 2018). Meanwhile, aggressive tax reforms in Georgia have led to more pronounced results. The number of taxes was drastically reduced, as were the rates of the main taxes, plus the social tax was abolished. As a result, overall economic activity increased and the shadow economy and corruption rate in Georgia decreased significantly compared to the pre-reform period, from 71.95% of GDP in 1995 to 46.5% in 2018 (Medina & Schneider, 2018). In general, both countries continue to work on improving their tax systems to foster economic growth and stability and eliminate informal sector.

5.5.2.3 Shadow Economy

The shadow economy, often referred to as the informal sector, plays an important role in the economic landscapes of Georgia and Azerbaijan, influencing employment, tax revenue generation, and economic policies. This sector includes all economic activities that are not registered and regulated by the state and therefore not included in official GDP (Schneider, 2017). Shadow economy can be often driven by factors such as institutional voids, high tax burden, complexity of regulation, lack of trust in public institutions, or corruption and nepotism (Medina & Schneider, 2018). As we can see from our analysis above, all these problems still exist in Georgia and Azerbaijan, even though they made some or substantial progress with formal institutional change and formalization of their economies (World Bank, 2022). Still, significant informal activities persist, posing challenges for their development and growth, therefore effective measures and reforms aimed to fix these problems and reduce informal sector must be a crucial part of their economic policies (International Monetary Fund, 2021). The data below is derived from various sources, including studies by Friedrich Schneider and the World Bank. Here is a table summarizing the shadow economy as a percentage of GDP for Georgia and Azerbaijan from 1995 to 2017 (only available data).

Table 44: Shadow Economy of Azerbaijan and Georgia, 1995-2017

Year	Georgia (% GDP)	Azerbaijan (% GDP)
1995	71.9	64.7
1996	64.3	55.2
1999	60.7	53.1
2002	57.1	51.0
2005	53.5	48.9
2008	51.9	46.8
2011	46.3	45.7
2014	42.7	44.6
2017	46.5	43,6

Source: Medina & Schneider, 2018

As we can see from the Table 11 with informal sector data over the past two decades, Georgia has made significant progress in reducing its shadow economy. Schneider (2017) estimates that the shadow economy in Georgia amounted to about 71, 9% of GDP in 1995 and by 2017 it had shrunk to 46% (Schneider, 2017). This reduction can be caused by a series of reforms implemented in the early 2000s under the reign of President Mikheil Saakashvili. These reforms were aimed at improving tax administration, reducing corruption and simplifying business registration processes (World Bank, 2022). The tax system was simplified too, making it easier for many informal businesses to move into the formal sector (International Monetary Fund, 2021). Despite these improvements, the shadow economy is still significant, due to high levels of unemployment, which pushes many people into informal work. Industries like agriculture and construction are particularly vulnerable to informal activities, due to their seasonal nature and the prevalence of cash transactions. Official data from the World Bank and the International Monetary Fund (IMF, 2021) also show that, despite progress, a big share of economic activity remains informal.

Similar situation or even more of a shadow economy is observed in Azerbaijan. Its' shadow economy is estimated at the level of 40% (Medina & Schneider, 2018). This sector is driven by high tax rates, bureaucratic inefficiencies and corruption. The formal economy is dominated by the oil and gas sector, but a large proportion of the population is engaged in informal activities, especially in agriculture and small-scale trade (World Bank, 2019). Informal sector is supporting livelihoods, especially in rural areas where formal employment opportunities are limited as well as low literacy level, preventing people from registering tax numbers and submitting declarations (IMF, 2020). Azerbaijani government recognizes the need to address the shadow economy and has taken some measures to eliminate it via institutional reforms described in previous section (See table 3). However, these efforts have not been always successful due to continued corruption and lack of transparency (World Bank, 2020). The World Bank's Doing Business reports and other international

studies on Azerbaijan emphasize the continuing challenges of fully integrating the shadow sector into the formal economy (WBDB, 2021).

The shadow economies of Georgia and Azerbaijan remain significant and pose serious challenges to economic development and governance efficiency. Georgia has made notable progress in reducing the informal sector through targeted reforms, while Azerbaijan faces persistent obstacles. Both countries must continue to improve the quality of institutions, reduce corruption, and create a more favorable environment for formal economic activity, to bring the shadow sector into the light. Thus, what we observe here is when the formal institutions and structures are weak, the informal institutions replace them and have a huge impact on the entrepreneurial activities and economic situation in general.

5.5.2.4 Corruption and Nepotism

Corruption is a persistent problem in both Georgia and Azerbaijan, affecting different sectors and levels of government and society. After the collapse of the Soviet Union, both countries experienced huge amounts of corruption and nepotism in the economy - informal institutions inherited from the Soviet system (Aliyev, 2017). This was the result of political instability in Georgia and Azerbaijan during the first years of independence, when there was no stable government and therefore no stable formal institutional setting, so these informal institutions were the only mechanism in place.

Georgia was one of the richest republics in the Soviet Union, but after independence its economy collapsed, and GDP fell 78% from its pre-1991 level (Machavariani, 2007). The informal economy accounted for 71% of all economic output, meaning that most of the businesses were neither registered, nor paying taxes (Schneider, 2013). When Shevarnadze came to power, corruption and nepotism became simply a way of doing business (Mitchell, 2009). With explicit nepotism, there were no limits on what and who could be bought and sold through informal channels and

bribes. Nearly all positions in ministries and other state institutions were filled using bribery or informal connections (Engvall, 2012). Even admission to universities could be bought (Orkodashvili, 2009). According to the Transparency International's Corruption Perceptions Index, Georgia was one of the most corrupt countries in the world, ranking 84 among 99 countries (Corruption Perceptions Index, 2000).

That all changed in 2004 with the Rose Revolution took its place (a series of Anti-Shevarnadze protests) and Michael Saakashvili came into power (Jawad, 2005). The post-revolutionary government led by Saakashvili and his newly formed United National Movement (UNM) party had as its main objectives the formalization of state institutions and the fight against corruption, as well as the decriminalization of society (Engvall, 2012). The problem was not only state institutions being dysfunctional but also them being filled by former communist nomenclature and other informal interest groups that promoted and placed their own interests above those of the state (Aliyev, 2017).

Since Georgia lacked a functional institutional framework, Saakashvili's goals required large-scale institutional transformation that included both the creation of new formal institutions and the counteraction and displacement of existing informal ones (Machavariani, 2007, Engvall, 2012). Relying on his team of young, mostly Western-educated officials, the new president began purging the system of communist nomenclature, criminal elements and Shevardnadze-era power structures (Di Puppo, 2010). Among the officials arrested in 2004 were several high-ranking ministers, as well as 80 middle and lower-level civil servants and businessmen. This year alone, more than 50 million dollars' worth of property was confiscated and 70 million dollars embezzled by officials was returned to the state (Mitchell, 2009). The Ministry of Justice reported that in the first two years of the anti-corruption crackdown, about 1000 state officials, 6 former members of parliament and 15 deputy ministers were arrested on corruption charges (Stefes,

2006). The Georgian government launched large-scale anti-corruption reforms that included reorganization of the police, simplification of administrative processes, CRA creation and increased transparency of public services. As a result, according to Transparency International's Corruption Perception Index (CPI) in the 2021, Georgia ranked 45th out of 180 countries, a significant improvement over its ranking in the early 2000s. However, challenges remain, especially in the judicial and political spheres, where corruption and abuse of influence are still relevant (OECD, Fighting Corruption report 2016-2022, Mitchell, 2009).

In Azerbaijan, the situation after the Soviet Union collapse was similar, unstable political situation, regional war, massive inflation, bribery and nepotism as inherited and working informal institutions when formal environment was not formed yet. The first presidential elections were held in September 1991 and Ayaz Mutalibov, the first secretary of the communist party, won. However, the country faced heavy political turbulence, while immediately after the USSR collapse Azerbaijan was involved in the war with Armenia in the Karabakh region, and lost 20 percent of its territory, and as a result, one million Azerbaijanis were expelled from their lands and became refugees. This defeat resulted in national revolts, and the president Mutalibov resigned. The interim President - Isa Gambar - assumed the office until the next elections took place (one month later), and in June 1992, the representative of the National Front, Abulfaz Elchibey was elected as Azerbaijan’s president (59.4 percent votes). However, his presidency led to an even worse political situation and bigger losses in the war. He invited Heydar Aliyev to become Prime Minister. In 1993, Heydar Aliyev was elected as the president of Azerbaijan by 93 percent of the electorate. His presidency solved many problems, including the war situation; he signed the peace treaty with Armenia and started economic reforms in the country. After his death in 2003, his son Ilham Aliyev was elected as the president and continued his economic course. (Hasanov, 2009; Estrin & Mickiewicz, 2010).

Anti-corruption measures were also taken in Azerbaijan as well as in Georgia, but not in that radical and effective way. Azerbaijan has made improvements in combating corruption in many areas, such as traffic police, civil services delivery, and education, but there has been less progress within comparison to Georgia. Despite some government efforts to address it, including the establishment of ASAN service centers to organize and reduce corruption in public services, as well as police and court reforms, corruption remains widespread. In addition, the judiciary and law enforcement agencies are often subject to criticism for their lack of transparency, independence and susceptibility to bribery. The country ranked 128th out of 180 countries in Transparency International's 2021 CPI ranking, indicating continued problems with transparency and corruption. Stronger political will, anticorruption initiatives, and a supportive atmosphere for widespread stakeholder participation in the fight against corruption are needed to address the corruption-prone regions (OECD, Azerbaijan Anti-Corruption report 2018).

In addition, corruption has the power to hinder entrepreneurship level significantly by increasing transaction costs and creating barriers to new businesses. Entrepreneurs often face bribe demands and a non-transparent regulatory environment, which discourages investment and innovation. According to Aidis et al. (2008), corruption distorts market mechanisms, leads to unfair competition and misallocation of resources, which ultimately suppresses entrepreneurial activity. Furthermore, Estrin and Mickiewicz (2011) emphasize that high levels of corruption are associated with lower levels of business start-up and survival, as businesses must navigate corrupt practices to thrive. Such an environment undermines trust in institutions and discourages both domestic and foreign investment, which is crucial for entrepreneurial development. The World Bank Global Enterprise Survey 2019-2023 reflects the data on a negative impact of corruption on entrepreneurship in Georgia and Azerbaijan.

Table 45: Corruption and Enterprises in Georgia and Azerbaijan 2019-2023

Indicator	Azerbaijan	Georgia	Eastern Europe & Central Asia
Bribery incidence (percent of firms experiencing at least one bribe payment request)	12.1	1	12.7
Bribery depth (% of public transactions where a gift or informal payment was requested)	8.7	0.4	10
Percent of firms expected to give gifts in meetings with tax officials	9.7	0	9.6
Percent of firms expected to give gifts to secure government contract	5.6	n.a.	16.3
Percent of firms expected to give gifts to get an operating license	0	0	9.5
Percent of firms expected to give gifts to get an import license	0	0	9.6
Percent of firms expected to give gifts to get a construction permit	18.2	2.4	17.5
Percent of firms expected to give gifts to get an electrical connection	10.6	0.1	13.3
Percent of firms expected to give gifts to get a water connection	17.3	0	11.9
Percent of firms expected to give gifts to public officials "to get things done"	5.8	2.5	15.3
Percent of firms identifying corruption as a major constraint	5.6	11.7	26.6
Percent of firms identifying the courts system as a major constraint	2.4	6	12.3

Source : https://www.enterprisesurveys.org/en/enterprisesurveys

The table 12 shows that the level of corruption in Georgia is significantly lower by most indicators than in Azerbaijan and the regional average. In particular, the level of bribery in Georgia is 1%, while in Azerbaijan and the regional average it is 12.1%. Similarly, other indicators such as the depth of bribery and the percentage of companies that must give gifts in different contexts are much lower in Georgia.

These indicators show that Georgia has made significant progress in fighting corruption (WBGES, 2023)

Nepotism is another serious problem existing in both countries and embedded in their political and social systems. It is the practice of favoring relatives and friends for jobs and other advantages that influences politics, business, education, public administration, and other spheres of social life (World Bank, 2020). In the post-Soviet transition period, nepotism became particularly prominent as networks of relatives and friends played a significant role in the allocation of public resources and employment (Smith, 2015).

In Georgia, nepotism is particularly prominent in the public sector. Despite reforms to promote merit-based hiring and transparency, personal connections often play a decisive role in securing employment, promotions, and contracts. This undermines public confidence in institutions and reduces the effectiveness of anti-corruption measures (Jones, 2018). The Government of Georgia has made efforts to address this problem, but enforcement remains inconsistent and cultural attitudes towards nepotism have been slow to change. Civil society organizations and the media continue to play an important role in exposing nepotism, but the entrenchment of these networks poses serious challenges to reform (Brown, 2019).

In Azerbaijan, nepotism is even more widespread and deeply ingrained in the fabric of society. Nepotism in Azerbaijan extends beyond the political sphere to the private sector, where the intersection of family, politics, and business often prioritizes personal relationships over qualifications and merit (Davis, 2017). Selected family or private networks often control large enterprises, and employment frequently depends on personal connections rather than academic or professional achievement. This perpetuates a cycle of privilege and limits opportunities for those outside established networks (Green, 2021). Besides this overview of reforms and official statements, it is again important to gain insights what the society thinks about these

informal settings. The World Bank Global Values Survey reflects the pervasive issue of nepotism in both countries (World Bank, 2020, wave 3 and 7).

Table 46 a & b: "In the long run, hard work usually brings a better life" vs. "Hard work doesn't generally bring success—it's more a matter of luck and connections" (Nepotism)

a) Azerbaijan

Year	1997	2011
Hard work	65.7%	32.9%
Luck and connections	29.6%	67%

Source: World Bank Values Survey, Wave 3, N 129, Wave 6, N 100

b) Georgia

Year	1997	2011
Hard work	67.7%	61.9%
Luck and connections	30.7%	37.2%

Source: World Bank Values Survey, Wave 3, N 129, Wave 6, N 100

As we see from the World Bank Global Values survey result, nepotism in Azerbaijan sine 1997 rose twice – that means the trust in government and formal institutions went down immensely because government and private work positions are mostly distributed through the informal networks of family and friends. That situation hinders healthy competition on the labor market and devaluates the professional competency of the candidates. The situation in Georgia gives a more positive impression, here the nepotism level declined significantly over the last period. However, nepotism and corruption remain a huge problem both in Georgia and Azerbaijan, impeding fair competition and distribution of resources and having negative impact on the trust of population into formal institutions. Addressing these problems requires commitment to transparency, accountability, and the rule of law, targeted economic policies and reforms alongside the active participation of civil society and independent media in exposing these harmful practices.

5.5.2.5 Access to finance

Access to finance is one of the most crucial factors of fostering entrepreneurial activity and economic growth worldwide and of course in both Georgia and Azerbaijan (Beck & Demirgüç-Kunt, 2006). In the Georgian financial sector, significant reforms to improve access to finance for SMEs, such as modern banking regulations, including strengthened oversight by the National Bank of Georgia (NBG) as well as establishment of Enterprise Georgia in 2014 (WB, 2020) have been undertaken (World Bank, 2015). The development of credit guarantee schemes and support from international financial institutions has also played a crucial role in this process. The Enterprise Georgia state agency provides financial support, training, and market access to SMEs, however its' funds are limited to provide all necessary funding for entrepreneurs (www.enterprisegeorgia.gov.ge). Therefore, the banking sector remains the primary source of financing, but challenges with high-interest rates and strict collateral requirements persist, making it difficult for many SMEs to get necessary funding. There is a slowly growing body of alternative financing, such as venture capital and microfinance but it still needs some time to develop into sufficient source of finance (IFC Trade Finance, 2020).

Similarly in Azerbaijan, access to finance for SMEs or any entrepreneurial activity (like start-ups) has been recognized as a crucial driver for diversifying the economy towards many small or medium private companies in different sectors, potentially reducing the dependence on the oil and gas sector (Asian Development Bank, 2023). Recent reforms (see in the following) have focused on improving the legal and regulatory framework and increasing the role of non-bank financial institutions to provide more diverse financing options (OECD, 2020). There are state funds such as Azerbaijan Investment Company (www.aic.az/az) and the National Entrepreneurship Support Fund (www.edf.gov.az/en) who offer financial support and facilitate access to credit for SMEs, implemented and created in the year of 2002. But as in case with Georgia, the banking sector is the main source of finance for SMEs who still face obstacles such as very high interest rates, limited access to

long-term financing and high collateral requirements. Thus, a lot of informal financing is taking place, such as using own savings or lending money from friends and family, to avoid the enormous interest rates (Veen, 2020).

Based on OECD data from 2020, Azerbaijan's SMEs generated 42% of total employment but contributed to only 17% of value added (24% in the non-oil sector) and 6% to GDP. Their overall contribution to economic development is significantly lower than in other OECD countries, where SMEs account for about 53% of value added and 65% of employment (OECD, 2020). One of the reasons is that interest rates are too high (approximately 30%), and most of them are short term loans, often unbearable for SMEs. The situation has changed slightly since February 2018, when Azerbaijan state bodies have applied insurance for such kinds of loans (adif.gov.az). This decree under the President of Azerbaijan Republic states that in the case of business failure the government is obliged to pay 70% of the loan, and that measure is supposed to impact business activity of the country in the positive key. According to official data, provided by EBRD "Business Environment and Enterprise Performance survey" in 2019, more than a half of all small and medium enterprises in Azerbaijan, are discouraged to take loans, and the main reason for this was high interest rate. More than 50% of enterprises cited this reason; the second popular reason was complex procedures, then approval expectancy and all other issues to follow (EBRD, 2014).

The World Bank report also mentions that the top three barriers to starting an SME in Azerbaijan are: difficulty in finding needed funding, large initial investment and difficulty in finding proper business partners. The most common regulatory constraints were constantly changing taxation and bankruptcy legislation. Eastern Partnership (EaP) Comparable analysis of countries shows that, the majority of enterprises in Azerbaijan (72%) are funded by entrepreneurs' own resources and generally, the trend continues throughout the life of the enterprises. Only 25% of Azerbaijan entrepreneurs use loans from commercial banks and alternate loan

options such as international financial institutions and public financing schemes do not exist. The East Survey Index (2020) also shows that the number of SMEs taking loans from international donors or international financial institutions is close to zero. All these facts show us that SMEs' access to finance is not diversified. Many financing forms such as crowdfunding, business angels, venture capitalists are either non-existent or just emerging forms of SME financing, accompanied by a very low level of population awareness/business literacy. The same applies to special entrepreneurship funds that exist but are not used by the population (WB, Azerbaijan - Access to Finance for Micro, Small and Medium-Sized Enterprises Project, 2014)

As for Georgia, according to OECD 2020 data, 99.6% of active enterprises were SMEs, which accounted for 59.3% of business sector employment, 40.8% of business sector turnover and 58.0% of output in the business sector. The Georgian financial system is dominated by the banking sector, whose assets to GDP reached an all-time high of 96% in January 2020. The banking sector loan and deposit portfolios followed a similar trend. They stood at 64% and 56% of GDP, respectively, in January 2020. The interest rate for SMEs diminished from 17.5 to 9.3 (OECD, 2022). The Economic Department of the European Investment Bank recently conducted a survey on bank lending (BLS), in which several financial institutions in Georgia participated. The survey collected information on lending conditions, availability of various financial products, restrictions on lending, rejection rates, etc., focusing on the SME market and included questions on recent lending developments.

According to this survey (EIB BLS), the Georgian market is characterized by a significant level of rejected loans and credit-constrained businesses. The reasons for application rejections fall into four categories: lack of eligible collateral, lack of credit history, unmeasurable risk and poor business plans. Most notably, customer or project risk is the primary reason for loan application rejections across all

business segments. The lack of suitable collateral also reflects the inability of companies to meet banks' collateral requirements. This difficulty seems to be particularly pronounced among smaller companies. On the other hand, the lack of credit or financial history seems to be less of a problem for banks, as many of them confirmed that they could easily access the credit history of potential borrowers. This reflects the good quality of Georgia's credit bureaus and the success of the government's efforts to improve information systems, which favors the business environment. Both demand- and supply-side factors contributed to credit developments - 47% of respondents indicated that credit demand was a factor hindering the expansion of the SME loan portfolio, while only 13% associated this solely with supply components. The remaining 40% indicated a combination of both. Supply-related issues primarily relate to interest rates on loans granted, the profitability of proposed projects, and the collateral required by banks (Bank Lending Survey, 2022).

The legal framework for registering assets or security rights also does not seem to be a major obstacle for SMEs in Georgia (Enterprise Georgia). Credit guarantee schemes are not a widely used product in the market due to limited availability and high cost (Enterprise Georgia). The regulatory framework as well is not the main factor hindering their development - 60% of banks have no problems with the timing of approval or the transparency of the process (EIB Bank Lending Survey, 2022). However, the cost of credit guarantee schemes, related to their availability, is seen by 60% of banks as a significant barrier to the development of these financial instruments, limiting the depth and size of their market (EIB Bank Lending Survey, 2014). Trade finance has become more important, especially for SMEs (IFC Trade Finance, 2020). All banks surveyed are providers or users of this alternative source of financing. It is described as widely available. However, according to the EIB's bank lending survey, limited financial literacy among businesses remains a pressing issue, limiting demand for trade finance products (EIB Bank Lending Survey). The

situation with alternative funding is better, but still like the one in Azerbaijan – newly emerging sector with big potential (World Bank, 2014).

Table 47: Access to Finance Indicators for Azerbaijan and Georgia (2023)

Indicator	Azerbaijan	Georgia
Percent of firms identifying access to finance as a major constraint	12.9%	10.4%
Proportion of investment financed by banks	9.9%	18.8%
Proportion of investment financed internally	88.0%	78.6%
Proportion of investment financed through supplier credit	2.0%	1.3%
Firms using banks to finance investments	6.8%	15.7%
Firms with a bank loan/line of credit	15.6%	21.2%
Firms using banks to finance working capital	14.6%	22.9%
Value of collateral needed for a loan (% of the loan amount)	183.7%	218.6%

Source : https://www.enterprisesurveys.org/en/enterprisesurveys

The combined table illustrates access to finance for SMEs in Azerbaijan and Georgia in accordance with World Bank Enterprise Survey. Both countries face similar constraints, but Georgia performs slightly better. Here, only 10.4% of firms identify access to finance as a major obstacle, compared to 12.9% in Azerbaijan. Georgian firms have twice higher levels of bank-financed investment (18.8% vs. 9.9%) and are more likely to use bank loans (21.2% vs. 15.6%). However, Georgia also requires more collateral for loans in comparison to Azerbaijan (218.6% vs. 183.7%).

5.5.2.6. State funds and institutional support

In both countries, Azerbaijan and Georgia, there are special agencies and funds facilitating SME sector development and providing financial support to them (OECD 2019; OECD 2020). In Georgia, such agencies are the Entrepreneurship Development Agency (Enterprise Georgia) and the Innovation and Technology Agency (GITA), established in 2014 by the Ministry of Economy and Sustainable

Development. Their aim is to promote SMEs development and growth via innovative approaches (www.gita.gov.ge/en) within the SME Development Strategy of Georgia 2016-2020. *Enterprise Georgia* is providing SME aid programs, supporting start-ups, facilitating modern entrepreneurial culture, supporting diversification of export of goods and services (www.enterprisegeorgia.gov.ge/en). And GITA (Georgia National Innovation Ecosystem) is a main coordinator in the process of creating an innovative ecosystem, stimulating R&D, modern technologies, supporting innovative start-ups and their competitiveness growth. Besides, GITA manages the implementation of innovation grant programs – such mini and micro grants help Georgian SMEs to commercialize their business ideas and technologies (www.gita.gov.ge/en). Recently GITA has launched a Startup Matching Grants Program aiming to support globally scalable start-ups, including in the field of green technology and agriculture, and improve their access to finance and access to global markets. These national programmers bring together a larger number of projects with a consolidated budget of about USD 100 million per annum (OECD, Monitoring Georgia's SME Development Strategy 2016-2020).

Besides, Georgia has Institutions working with the SME sector, such as Georgian Chamber of Commerce and Industry (www.gcci.ge), Georgian Employers' Association and Georgian Small and Medium enterprises Association. (SME Development Strategy of Georgia, 2016-2020). "Produce in Georgia" is another SME support program developed by the Ministry of Economy and Sustainable Development and managed by Enterprise Georgia. Also established in 2014, it supports the competitiveness of Georgian industry with a focus on building entrepreneurship in the SME sector and increasing their export potential (www.nasp.gov.ge). According to 2021 data, "Produce in Georgia" had supported 803 businesses with total investment value of Georgian lari (GEL) 1.74 billion (about USD 720 million) and had created more than 17 740 jobs. Much of this was invested in the field of agriculture and tourism/hotels (Enterprise Georgia, 2019).

The Ministry of Agriculture also promotes SMEs through the Agricultural Projects Management Agency (APMA) created in 2016, to implement more than ten projects to support SME development in agriculture. (https://mepa.gov.ge/En/Projects/Details/13).

Institutional support for SMEs in Azerbaijan has been developed after the adoption of "Strategic Road Map on Production of Consumer Goods in Azerbaijan, at Small and Medium Enterprises in the Republic of Azerbaijan," in December 2016 (Strategic Roadmap, 2016). State bodies have enacted several legislative acts, such as the Law on Entrepreneurship, the Law on State Support for Small Business, the Law on State Registration and State Registry of Legal Entities (Law of the Republic of Azerbaijan, azranking.az) and established Department of Entrepreneurial Development Policy within the Ministry of Economy (azerbaijan.az). At the same time, several state agencies promoting entrepreneurship development have been established here, such as ABAD (www.abad.gov.az), KOBIA (www.sbm.gov.az), AZPROMO (www.azpromo.az), and state funds such as State Fund for Development of Information Technology (www.ictfund.gov.az) or National Fund for Entrepreneurship Support (www.edf.gov.az).

The ICT fund was formed from state budget and supports innovative ICT projects in several ways; it distributes concessional loans through banks with maximum 5% interest rates and provides venture capital for development projects, technologies, equipment and software. It awards grants, mainly to SMEs, for development of software products and innovative infrastructure projects. The maximum potential size of grants awarded by the ICT Fund is 300,000 AZN; fund gave grants only 10,000 AZN to 12,000 AZN to 30 companies that far (ICT fund data, 2022, www.ictfund.gov.az)

The National Fund for Entrepreneurship Support (NFES) is another state fund for entrepreneurship development with preferential loans. In 2019, 2,402 (97%) of

investment projects financed on favorable conditions were small loans (22,887. thousand AZN), 34 (1.4%) were medium scaled loans (8,890.3 thousand AZN) and 41 (1.7%) were large-scaled loans (157,652 thousand AZN) (NFES, 2016). NFES has already provided loans to 12,500 enterprises, averaging $47,000 USD per each. Most of these loans were addressed to agricultural production (Azerbaijan Ministry of Economy, 2022). Besides, this Fund in partnership with ASAN service created ABAD service, to solve such issues as limited credit resources of commercial banks, high interest rates as well as lack of skilled and qualified staff. The ABAD service has targeted problems related to finance, infrastructure and skilled workforce. Its main goals are implementation of projects to support family businesses, small and medium-sized businesses, and establishing a fund for financing these projects (www.abad.gov.az).

AZPROMO is also important state agency established by the Ministry of Economy with an annual budget of 1 million EUR. It allocates funds for SMEs to participate in international sales fairs to help them to proceed in international trade, import and export operations and offers consulting services free of charge. In 2015, AZPROMO established the Exporter Club, whose main function is to support manufacturers in exporting Azerbaijani products to foreign markets (AZPROMO, 2023).

Both Georgia and Azerbaijan have established comprehensive public funds and institutional support mechanisms to promote SME development. These initiatives play an important role in enhancing the competitiveness and growth of SMEs in both countries, contributing to their economic development. However, their potential is still untaped. For example, in Georgia, Enterprise Georgia is one of the main agencies providing financial support, business consulting and export promotion for SMEs. Despite comprehensive offerings, the 2022 report showed that only about 37% of SMEs in Georgia are actively participating in these programs, with a significant proportion of entrepreneurs unaware of available financing opportunities. In Azerbaijan, the KOBIA (Small and Medium Business

Development Agency) was established to help entrepreneurs with financing, training and other resources. However, the survey they conducted showed that only 25% of SMEs were aware of the financial support available through this agency, and many expressed skepticism about the ease of access to government resources due to bureaucratic obstacles. To improve their effectiveness, it is important to publicly promote their activities and inform the population about the funds availability and services provided.

5.5.2.7 Civil service reforms (CRA and ASAN)

Civil service reforms in Georgia and Azerbaijan improved government efficiency by introducing merit-based hiring and streamlining bureaucratic processes. These reforms have also helped reduce corruption by increasing the transparency and accountability of public institutions (WB, 2019).

In Georgia, this reform entailed major institutional changes. The Law on Structure, Powers and Regulations, adopted in early 2004, reduced the number of ministries from eighteen to thirteen (Aliyev, 2017). In 2004, the notoriously corrupt State Register, which was responsible for issuing passports, land registries, and other official documents to citizens and businesses, was liquidated and replaced by the new Civil Registry Agency (www.cra.gov.ge), a self-financed structure under the control of the Ministry of Justice. The new computerized civil registry office is coordinated through a central office that does not interact directly with the public. That body not only replaced more than seventy local civil registries, but also consolidated six state institutions, including the Chamber of Notaries and the National Archives, which had previously played a big role in providing or registering official documents (www.matsne.gov.ge). Unlike the previous civil registry office, where issuing documents required bribes or waiting several years, the new body is characterized by a simplified and formalized process and that reduced the amount of corruption in state bodies of Georgia enormously (WB Doing Business, 2019). When it comes to a business climate development, thanks to this

agency, a company in Georgia can be registered within several hours. The process needs minimum documentation and a 15-minute visit to the registration office. According to the Doing Business Report 2020 in terms of ease of registration, Georgia comes in second behind only New Zealand (www.pbservices.ge). Thus, this reform is widely used and well established, so from an informal institutional point of view it has a positive impact and is working (WB Doing Business, 2019).

Similar types of civil service body was established in Azerbaijan in 2011. It is called ASAN – Azerbaijan Service and Assessment Network (ASAN in Azerbaijani means "easy"). ASAN service centers, also replacing many state bodies, contributed to the elimination of conditions conducive to corruption in the provision of various administrative services to the population and significantly improved the interaction between the government and citizens in the provision of services (OECD, 2016). ASAN service centers are a "one-stop shop" that brings together representatives of 10 government agencies and private companies providing services within the framework of public-private partnership. This location offers over 300 services, such as identity cards, passports, driver's licenses, birth, death, and marriage registration, real estate paperwork, immigration status, and other civil services. In addition, the center offers functional support services in the areas of banking, insurance, law, translation, and other related services (ASAN charter https://asan.gov.az/az/confidential).

According to the World Bank's Doing Business 2019, Azerbaijan was ranked 5th based on the simplicity of registration procedure for new companies, thanks to the ASAN service. Data in this report revealed that starting a business in Azerbaijan requires 2 procedures, takes 3 days, and costs 1.3% of income per capita for men and women. Registration for individual entrepreneurs is free of charge and it takes three days for companies to register. Entrepreneurs can easily do their registration in any ASAN Service Centers (World Bank Doing Business, 2019). Besides, the ASAN service in Azerbaijan is widely recognized among the population with high

levels of trust and satisfaction. According to internal surveys, customer satisfaction with the ASAN service is over 90%, as it simplifies various bureaucratic processes, including company registration, reduces corruption and increases government transparency (OECD, 2018). The efficiency and ease of use of the service has made it a popular mechanism for entrepreneurs, contributing to its high ranking in the World Bank Doing Business report.

To get more insights, if these reforms are really changing something on an informal institutional level, we again refer to a survey of the World Bank (Wave 3 and 7), showing the trust or acceptance of these measures in the two countries.

Table 48 a & b: I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them - The Civil Service

a) Azerbaijan

Year	1997	2011
Yes	37.4%	63%
No	60.6 %	35%

Source: World Bank Values Survey, Wave 3, N 137, Wave 6 N 118

b) Georgia

Year	1997	2011
Yes	44.4%	47.2%
No	53%	48.3%

Source: World Bank Values Survey, Wave 3, N 137, Wave 6 N 118

Overall, civil service reforms in Georgia and Azerbaijan have successfully organized administrative processes and reduced state corruption. The Georgian CRA and Azerbaijani ASAN services have significantly improved public trust and efficiency of business registration, which is obvious from the survey results above.

CRA's modernization made Georgia a leader in business registration, while ASAN's one window model earned Azerbaijan high rankings for ease of starting a business. These reforms have played a crucial role in creating a more transparent and efficient public administration system in both countries, benefiting both citizens and businesses.

5.6 Discussion and Policy recommendations

5.6.1 Discussion

Summarizing the main results of our comparative study, we see a significant difference in the indices of formal and informal institutions and levels of entrepreneurship development in Georgia and Azerbaijan. Our analysis reveals a clear contrast between the two countries in the process of creation and implementation of formal institutions, often accompanied by a gradual or parallel development of informal institutions and their impact on entrepreneurial activity. In Georgia, there is a strong positive relationship between the quality and strength of formal and informal institutions and entrepreneurial activity. We observe more developed and stronger (positive) formal and informal institutional indicators corresponding to an increase in the number of entrepreneurial ventures or a disposition to privatize and start a business. In Azerbaijan, by contrast, the relationship between formal and informal institutional quality and entrepreneurial activity is less obvious: weaker formal institutional structures and informal institutions are not conducive to creating a favorable environment for entrepreneurial initiatives. Often - especially due to weak or underdeveloped formal institutions - informal institutions that reflect trust and public perception in society are reluctant to change old habits, showing strong inertia of these established beliefs and habits (IRPI 2023, WGI 2023, government statistics data 2024).

Formal institutions play a critical role in shaping entrepreneurial ecosystems by creating the legal and regulatory frameworks that support business operations, protect property rights and enforce contracts - all of which are essential for

entrepreneurship (Bradley & Klein, 2016; Ibrahimova & Moog, 2023). A well-developed formal institutional framework provides the stability and predictability that entrepreneurs need to invest in new ventures and take risks (Mickiewicz et al., 2021). For example, the World Bank emphasizes that countries with strong institutional environments tend to have more dynamic and resilient entrepreneurial sectors (World Bank, 2019).

In Georgia, significant improvements in the formal institutional quality, such as reforms to the legal and regulatory systems, have led to a more favorable business environment, as evidenced by an increase in the number of entrepreneurial enterprises and improved institutional performance (WB, 2020). These reforms have simplified business registration processes, improved protection of property rights, and significantly reduced bureaucratic hurdles. As a result, Georgia has seen an increase in the number of entrepreneurial enterprises and strengthened institutional performance, which has led to the development of a more diversified and sustainable economy (Glawe & Wagner, 2022)

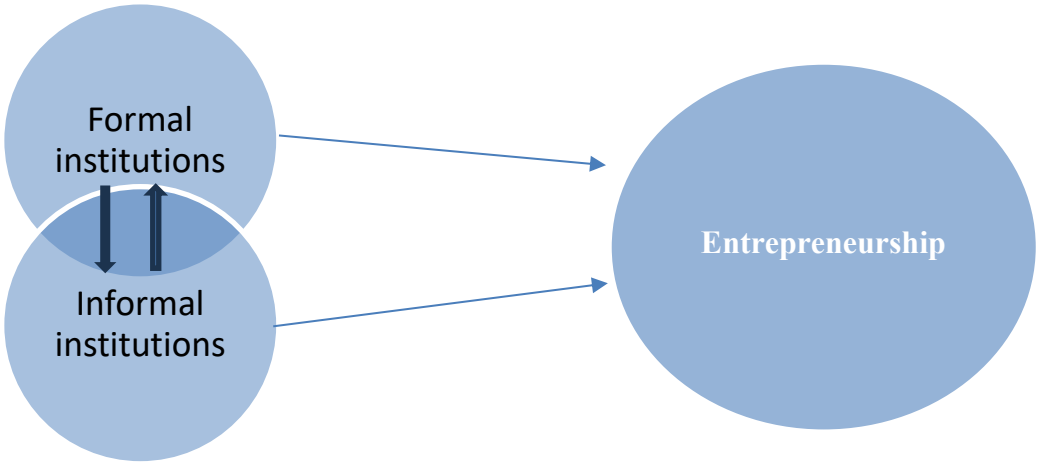
In contrast, Azerbaijan's slowly changing formal institutional structures hinder the development of a robust entrepreneurial ecosystem. Even though most of the economic reforms transferring Georgia and Azerbaijan from socialistic to capitalistic system after the USSR collapse, were similar (privatization, reforms of the judicial and police systems, taxation, civil service), the results of such market institutions building process is very different, and well reflected in the institutional and entrepreneurial indicators of both countries. As we could show, Azerbaijan has a much more complicated and less transparent legal and regulatory formal framework which coupled with inadequate legal protection for businesses, has led to dependence on informal networks and practices that stifle entrepreneurial initiatives (World Bank, 2020).

Additionally, as could be seen, informal institutions also play a crucial role in this process. In comparison to Georgia, Azerbaijan faces more challenges related to the prevalence of informal norms and practices that often impede the functioning of formal institutional frameworks, such as sharp nepotism increase from 30 to 67%, between 1997 and 2011 and low control of corruption index (WBGV Survey, WGI 2023). These informal institutions of corruption and nepotism pose a serious threat to the functioning of the whole entrepreneurial ecosystem, undermining their effectiveness of formal institutions, blocking access to finance and equal opportunities, legitimacy and ability to facilitate entrepreneurial activity. When nepotism prevails in the formal institutions, which is the case, in accordance with WB values survey data for Azerbaijan, positions of authority as well as decision-making process become allocated disproportionally, based on personal relationships rather than on competences of candidates (WB 2020; Sauka, 2020).

This holds true even when individuals or society perceive formal institutions as week or not trustworthy or have the expectation this will be the case even in the near future (Mickiewicz et al., 2021). This certainly destroys confidence in the institution's ability to govern impartially and fairly, leading to disappointment among citizens and potential entrepreneurs. Similarly, corruption in formal institutions hinders competition and creates entry barriers for aspiring entrepreneurs (WEF, 2018). Resources become diverted illegally, suppressing economic growth, instead of being allocated in accordance with free market supply and demand laws, or entrepreneurial potential, thus shadow economy remains strong and informal jobs and entrepreneurial activity as well (Schneider, 2015; World Bank, 2020). As a result, this increases inequality in society, by discriminating against fair competition and undermining trust in public institutions (i.e. Treisman, 2000). Multiple studies confirm the detrimental effects of nepotism and corruption on institutional effectiveness (Kaufmann, 2010; Schneider, 2013), emphasizing the urgent need for strong anti-corruption measures and fair governance structures to ensure the integrity and functionality of formal institutions, being the most crucial part of

entrepreneurial ecosystem. Thus, in this study we could conceptionally and with some first quantitative and qualitative data show, that strong and serous formal institutional changes can lead to change institutional settings and beliefs of society, being supportive to a change in society and economic behavior, like embracing ownership and responsibility and acting entrepreneurial.

Figure 36: Relationship between formal and informal institutions and entrepreneurship



Source: Own illustration

This study makes a significant contribution to the study of entrepreneurship by exploring the dynamic interaction between formal and informal institutions within entrepreneurial ecosystems. It expands the understanding of how institutional structures - both formal laws and regulations and informal social norms - influence entrepreneurial activity. A comparative analysis of Georgia and Azerbaijan shows how these institutional structures shape economic behavior and entrepreneurship differently in post-Soviet economies.

One of the key contributions is the research on the role of institutional quality, the results of which show a stronger correlation between institutional quality and entrepreneurial outcomes in Georgia compared to Azerbaijan. This emphasizes the

fact that effective governance reforms and improved regulatory framework promotes entrepreneurship (Ibrahimova & Moog, 2023). In addition, the study examines the often neglected role of informal institutions such as trust, social norms, culture, corruption and nepotism in shaping entrepreneurship an economic activity in general. The study also shows the persistence of informal practices, where corruption and nepotism continue to hinder entrepreneurship despite formal institutional changes (Sauka, 2020; World Bank, 2020).

This study has a number of limitations. First, it is an initial comparative analysis of only two post-Soviet countries, which limits the ability to generalize the findings to other regions. Second, the availability and reliability of quantitative data, especially with regard to informal institutions and entrepreneurship, remain insufficient, limiting the depth of analysis. Third, due to limited access to some government and institutional documents, some aspects of the study rely heavily on secondary data sources such as reports and newspaper articles. Finally, conducting qualitative interviews with experts could provide additional insights, and future research should consider including such primary data to enrich the analysis.

5.6.2 Policy recommendations

Strengthening Institutional Frameworks

To create a strong entrepreneurial ecosystem, Georgia must continue to improve its legal framework to ensure the protection of property rights and the enforcement of contracts. By streamlining bureaucratic processes and making regulatory procedures more transparent and efficient, it will reduce barriers for entrepreneurs, facilitating a smoother business process. By minimizing bureaucratic delays, the government will be able to create a more predictable and favorable environment for start-ups and existing businesses, encouraging both local and foreign investment. Georgia has made significant progress in political and economic reforms over the past two decades (World Bank, 2020). In recent years, however, the pace of reform has slowed, and some analysts believe that in some areas it has even regressed

(Freedom House, 2023). This stagnation threatens not only the country's economic, but also social stability, as evidenced by increasing public protests (Civil Georgia, 2023). To ensure sustainable development, Georgia would benefit from realigning back to the European Union, which could provide crucial support for reforms in governance, financial markets, and trade (European Commission, 2022). These efforts would strengthen the country's formal institutions and create a more favorable environment for entrepreneurship (Glawe & Wagner, 2022).

Azerbaijan should give priority to reforms aimed at stronger legal protection of business and property rights (WB, 2020). Simplifying business registration and taxation process is crucial to stimulate new businesses and reduce the economy's dependence on informal networks (WB Doing Business, 2019). Furthermore, enhancing access to financing and international markets, including the ability to open international bank accounts and conduct business transactions freely, would significantly contribute to business growth and economic diversification (EBRD, 2021). These kind of reforms will not only improve the business environment, but will also attract more investment, contributing to the development of a more diverse and vibrant entrepreneurial sector. On top of this, if the government will be able to extinguish or minimize corruption and bribery, this would foster informal institutional changes in terms of public trust in the formal norms and regulations, which is necessary to make a free choice to open up and run a business (Sauka, 2020).

Anticorruption measures and transparency

Building on existing anti-corruption initiatives, Georgia should strengthen enforcement mechanisms and ensure consistent application of laws to effectively combat corruption. Studies by Kaufmann and Kraay (2002) highlight that strong institutions and sustained anti-corruption efforts can significantly improve economic performance by increasing transparency and accountability. Similarly, studies of post-Soviet states have shown that effective anti-corruption bodies play a

critical role in improving the business environment, fostering a sense of fairness, and reducing bureaucratic inefficiency (Paldam, 2002). Reforms in Georgia, including the establishment of the Anti-Corruption Council, are a good example of an institutional framework that has had a positive impact on governance and the business climate (Transparency International, 2020).

Azerbaijan also needs to develop comprehensive anti-corruption strategies targeting both the public and private sectors. Studies have shown that reducing the influence of nepotism and informal ties is necessary to create a level playing field (Sauka, 2020). Public awareness campaigns combined with institutional reforms can further support efforts to fight corruption and create a zero-tolerance culture towards corrupt practices, as demonstrated in other transition countries (Schneider, 2013). Therefore, implementing effective anti-corruption measures and ensuring transparency in the government's work will help restore public trust and create a more favorable environment for doing business.

Economic Diversification

For Georgia, it is necessary to continue supporting sectors beyond the former, traditional industries. This can be achieved through targeted incentives such as tax breaks and grants for start-ups and enterprises in emerging sectors Aghion and Howitt (2006) highlight discussed in their studies, that fiscal incentives, such as these, are key to fostering innovation and entrepreneurship. Improving access to finance, especially for small and medium-sized enterprises (SMEs), is important as has shown the research of Beck et al., 2005. The creation of public-private partnerships can facilitate the flow of capital and expertise into these sectors (Zahra & Wright, 2011). In addition, stimulating innovation and research through publicly funded programs and cooperation with universities and business incubators can foster the development of new industries, as well as great education and investment in education and offering teaching in innovation and entrepreneurship (Audretsch & Keilbach, 2007).

For Azerbaijan diversification is even more important. It should invest heavily in sectors beyond oil and gas to reduce economic dependence on natural resources. A diversified economy requires a strategic approach that includes financial incentives for businesses in sectors such as technology, manufacturing, and agriculture. Investment in non-oil sectors such as technology, manufacturing and agriculture is critical for long-term economic sustainability, as observed in countries such as Saudi Arabia (Albassam, 2015). Providing comprehensive training programs and creating a skilled workforce is essential to support growth in these sectors (Fagerberg et al., 2005) as well as (and in parallel) improving infrastructure, including transportation and communication networks, is critical to facilitate business and market access (Aschauer, 1989). In addition, fostering innovation through research and development can support the growth of high-margin industries and supporting small and medium-sized enterprises with access to finance, mentoring and market opportunities will encourage entrepreneurship and economic diversification, leading to a more sustainable and robust economy (Cavusgil et al., 2013).

Promoting Entrepreneurial Culture

Expanding existing educational programs and workshops to reach a broader audience, including rural populations, will foster a vibrant entrepreneurial culture in Georgia and Azerbaijan. Countries such as Finland have successfully integrated entrepreneurship education into a broad education system, starting from elementary school. This strategy fosters a culture of innovation and risk-taking by allowing students to participate in entrepreneurial projects from an early age (Ruskovaara & Pihkala, 2013). Georgia and Azerbaijan can adopt similar models to instill an entrepreneurial mentality from an early age. By developing entrepreneurial skills and mindset, these programs will enable more people to start and grow their own businesses, contributing to a more vibrant economy. Collaboration with educational institutions and the private sector to create comprehensive programs that meet

market needs and stimulate entrepreneurial activity could be another good opportunity in creating entrepreneurial culture.

Programs such as the Young Entrepreneurs program in Brazil demonstrate the benefits of collaboration between educational institutions and the private sector. This initiative aims to provide students with practical business skills and mentoring from experienced entrepreneurs, resulting in a more competent and innovative workforce (World Bank, 2019). Encouraging Social Entrepreneurship: Supporting social entrepreneurship through educational initiatives can also be beneficial. Programs that train people to solve societal problems through business ventures not only create economic opportunities but also foster a sense of social responsibility (Mair & Marti, 2006). Both countries could develop educational programs that emphasize the importance of social enterprises in the development of society.

Access to Finance and Markets

Both countries should focus on improving access to finance for startups and SMEs, which are crucial for economic diversification and growth. The development of venture capital markets and alternative financing mechanisms such as crowdfunding and peer-to-peer lending will provide entrepreneurs with more financing opportunities. For example, platforms such as Kickstarter and Indiegogo have successfully facilitated the funding of numerous entrepreneurial projects around the world, similar initiatives can be adapted to local conditions in Georgia and Azerbaijan (Belleflamme et al., 2014). The creation of government credit programs and guarantees can reduce the risks of financial institutions and stimulate lending to small businesses. A notable example is the Startup Georgia initiative, which provides financial support and guarantees to new businesses aimed at stimulating innovation and entrepreneurship (Ministry of Economy and Sustainable Development of Georgia, 2020)

In addition, improving the financial literacy of entrepreneurs through targeted training programs and workshops will enable them to effectively navigate the complex financial landscape. Research shows that improved financial literacy correlates with improved business outcomes by helping entrepreneurs make informed decisions about financing options (Iram et al., 2023). Besides, increased connectivity and the development of transportation and communications infrastructure will facilitate market access and business. Both countries should prioritize the development of digital and physical infrastructure to improve market access. Increased web connectivity and access to digital tools can help improve operational efficiency and market reach for businesses. For example, Estonia effectively uses digital tools to promote entrepreneurship and optimize business operations (Kattel & Mazzucato, 2018). In addition, improved transportation networks, including roads, ports and airports, will facilitate the movement of goods and services, making it easier for entrepreneurs to connect with customers and suppliers. The Baku-Tbilisi-Kars railway project is an example of an initiative aimed at increasing regional connectivity, which can significantly improve trade and commerce in both Azerbaijan and Georgia (Mikayilov & Sattarov, 2020).

Taxation

Taxation plays a crucial role in creating a favorable environment for entrepreneurship. Georgia already utilizes existing taxpayer identification systems to ensure transparency and accountability of tax procedures. Implementing measures to simplify tax compliance and reduce administrative burdens can attract more businesses to the formal economy. For example, countries such as Estonia have successfully used e-government solutions to streamline tax processes, which significantly improves tax compliance and encourages formal entrepreneurship (Kallio, 2018). Tax incentives for start-ups and SMEs can also stimulate entrepreneurial activity, as evidenced by successful initiatives in countries such as Ireland, where lower corporate tax rates have attracted numerous foreign investments and fostered a vibrant startup ecosystem (Deloitte, 2021).

Ensuring that tax revenues are effectively used to improve public services and infrastructure will further promote business activity and economic growth. A transparent and efficient tax system will strengthen Georgia's institutional framework and contribute to a thriving business sector. Azerbaijan should introduce taxpayer identification numbers to bring more economic activities out of the shadow economy and into the official tax system. This will increase market transparency and ensure that all businesses contribute fairly to public finances. This change could mirror successful implementation in countries such as Ghana, where a similar initiative has led to improved tax compliance and increased revenue (International Monetary Fund, 2019). Introducing tax incentives for new businesses and SMEs can stimulate entrepreneurial activity and economic diversification, as seen in Singapore, where targeted tax incentives have become a key driver of innovation and growth (World Bank, 2019). Consistent application and transparency of tax policy will build confidence in the system and reduce opportunities for corruption. By creating a fair and transparent tax environment, Azerbaijan can support the development of a more dynamic and inclusive entrepreneurial ecosystem.

5.7 Conclusion

Our comparative analysis of the development of formal and informal institutions and entrepreneurial activity emphasizes the multifaceted nature of entrepreneurship and the critical role of institutional factors in shaping the entrepreneurial ecosystem, underlining other research in this direction (i.e. Audretsch & Fiedler, 2023; Audretsch et al. 2022). Differences in institutional structures and entrepreneurial outcomes between countries such as Georgia and Azerbaijan show the complex interplay between formal and informal institutions, government policies, regulatory frameworks and societal attitudes such as entrepreneurial spirit, risk taking and willingness to make choices. Although our results for Georgia show stronger and more positive changes with respect to formal and informal institutions and at the same time more positive entrepreneurial development, this leads to the conclusion

of the conceptual discussion that there is a positive correlation between the quality of institutions and entrepreneurship. Moreover, this study shows that when formal institutions are well developed and implemented, informal institutions will also develop in line with them and no interference of old habits and behaviors, rules and culture will hinder this movement towards ownership, privatization and finally, the entrepreneurship. Therefore the innovative contribution of this paper is to discuss the interplay of formal and informal institutional settings and how they affect entrepreneurship.

Azerbaijan faces big challenges related to informal practices such as corruption and nepotism, leading to trust issues in the society and a persistence of old habits like perceiving bribery as the normal habit and daily business (Transparency International, 2020; World Bank, 2019). Addressing these differences requires a comprehensive approach that includes not only string and sharp and well established and planned formal and informal institutional reforms and entrepreneurial education and awareness, but also anticorruption and anti-nepotism measures that ensure transparency, efficient resource allocation and fair competition (Kaufmann et al., 2010). Reducing information asymmetries by eliminating destructive informal institutions and investing in entrepreneurial education is critical (OECD, 2021). Raising awareness of the benefits of entrepreneurship and creating an enabling institutional environment can also form favorable ecosystems that foster entrepreneurship, innovation, and economic growth (Isenberg, 2010). Furthermore, by formalizing economic activity, and lowering barriers to entry (i.e. access to finance, increasing transparency and accountability) governments can unlock the full potential of entrepreneurship as a catalyst for sustainable development and prosperity (WEF, 2018).

The experiences of Georgia and Azerbaijan emphasize the need for strong formal institutions to create a dynamic entrepreneurial ecosystem, supported and not hindered by remaining old fashioned informal institution. Georgia's success in

improving its regulatory framework demonstrates the positive impact of well implemented formal institutional reforms on entrepreneurship and economic diversification, by changing informal institutions in parallel and the trust and belief of society in these actions (WB, 2020). On the other hand, Azerbaijan's struggles with weak formal institutions and the pervasive influence of informal mal practices such as nepotism and corruption, highlighting the barriers to entrepreneurial development. As these countries continue to develop their economies, it is critical to prioritize building and strengthening formal institutions that can provide a stable and predictable environment for business. This involves not only strengthening legal protections and simplifying regulatory processes, but also taking effective measures to fight corruption and increase transparency. By doing so, Georgia and Azerbaijan can create fairer and more dynamic economic landscapes that support innovation, attract investment, and ultimately lead to sustainable development and improved living standards.

In addition, attention to entrepreneurial education and access to finance can significantly strengthen the entrepreneurial landscape in both countries. By equipping potential entrepreneurs with the necessary skills, knowledge and resources, these countries can foster a culture of innovation and resilience that will promote economic progress. In addition, financial systems need to be accessible and supportive of new ventures to stimulate entrepreneurial growth. This includes developing venture capital markets, providing alternative financing mechanisms and ensuring transparency and accountability of financial institutions. By addressing these multifaceted challenges through targeted policies and reforms, Georgia and Azerbaijan can create a more favorable environment for entrepreneurs, thereby unlocking the full potential of their economies and ensuring sustainable growth. The lessons learned from their experiences can serve as valuable lessons for other transition economies seeking to strengthen their entrepreneurial ecosystems through institutional development and reforms.

6. Summary of the Findings and Concluding Remarks

This dissertation's overall motivation has been to deepen the understanding of entrepreneurial ecosystems and how they function in different economic and social contexts. The research is driven by the necessity to analyze various factors within the ecosystem – such as formal and informal institutions – and to understand how these elements interact to facilitate or hinder entrepreneurial activity. Considering the complexity of these ecosystems, the research aims specifically to identify the significant impact of formal and informal institutions on entrepreneurial ecosystem design (and the other factors included) as well as on entrepreneurial outcomes, irrespective of whether it takes place in developing nations or in transition economies, or in settled and high-tech countries. Knowing that formal institutions are the written rules, laws, and regulations in a country that govern economic activity, and informal institutions are the unwritten norms, values, and practices that influence behavior in society, an understanding of these two types of institutions is critical. This is, because they together shape the environment and – as has been shown in the studies in this thesis – the entrepreneurial ecosystem in which entrepreneurship can either thrive or fail (Williamson, 2000).

To achieve these goals, the thesis adopts a multi-methodological approach utilizing both qualitative and quantitative data sources. The research is based on a combination of longitudinal and cross-sectional analysis to provide a holistic view of entrepreneurial ecosystems over time and across geographies. It includes historical textual analysis, large-scale quantitative datasets, and comparative case studies, providing a rich, detailed understanding of how ecosystems evolve and function in different contexts.

The first paper included in this study builds the broader theoretical background for the dissertation by conducting a cross-country analysis to examine the relationship between selected formal institutions and entrepreneurship, in particular established and early stage entrepreneurial activities. Scholars such as Estrin, Korosteleva, and

Mickiewicz (2013) have already explored how institutional quality influences entrepreneurs differently at various stages. They demonstrate that startup entrepreneurs face distinct challenges compared to established entrepreneurs, often more sensitive to regulatory frameworks and market entry barriers. By including two different country sets and comparing different countries with different economic development levels, this study identifies patterns and correlations that highlight the importance of certain formal institutional settings for entrepreneurship development. It contributes to the ongoing research, filling the gap and showing that this relationship differs with varying levels of economic development.

The paper distinguishes between the impact of institutional quality on start-up entrepreneurs (those in the early stages of business development) and established entrepreneurs (those who have been in business for more than 42 months). The results suggest that while all selected institutional dimensions (rule of law, control of corruption, and regulatory quality) are important, their impact varies by stage of entrepreneurship and country development level. The paper employs data from the Global Entrepreneurship Monitor (GEM) and the Worldwide Governance Indicators (WGI) to analyze how specific institutional factors, such as the control of corruption, rule of law, and regulatory quality, influence entrepreneurship in efficiency-driven and innovation-driven economies (GEM, 2016).

Key findings of this paper are that the quality of formal institutions significantly affects entrepreneurial activity. In innovation-driven economies, the rule of law has a greater impact on both early stage and established entrepreneurial activity (TEA and EBO). On the other hand, in efficiency-driven economies, regulatory quality plays most important role in sustaining mature entrepreneurial activity (EBO).

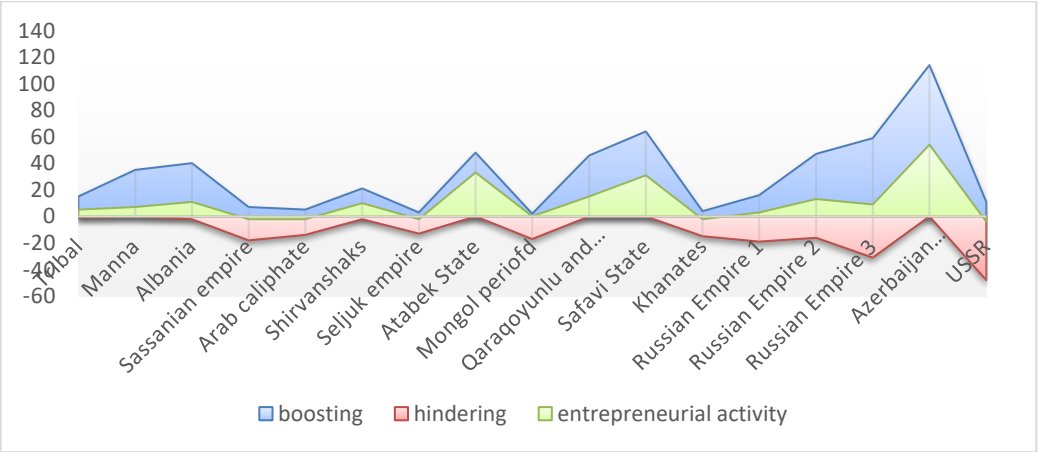
Following this global analysis, in the second study of the PhD thesis, the research narrows its focus on the detailed analysis of Azerbaijani entrepreneurial ecosystem development for a very long period, using all available data sources. This qualitative study shades light on the historical evolution of the entrepreneurial ecosystem using Stam and Van de Ven's table of ecosystem construct (Stam & Van de Ven, 2021). It does this over different historical periods and events. Such holistic long-term

approach combined with simple point ranking technique offers the possibility to measure ecosystem elements and their development, revealing hindering and promoting factors of the entrepreneurial ecosystem and widening existing perspectives of entrepreneurial ecosystems' evolution over time.

The further back in time one goes, the less data is available on the structure mentioned by Stan and Van de Ven. The paper, as a consequence, proposes an innovative approach based on historical research to offer a framework to systematically analyze and measure these factors over time. Thus, the question how to interpret old historical data on specific items – such as market access or transportation – and how to create comparable indicators over time was addressed to determine how changes in these components shape ecosystems and affect entrepreneurial activity. Therefore, this study adopts an ecosystem approach to entrepreneurship that examines the different components, such as formal and informal institutions, resources and networks, and other areas of the entrepreneurial ecosystem (Stam & Van den Ven, 2021) that facilitate or hinder entrepreneurial activity in the long term.

Such a comprehensive, long-term approach combined with a simple point ranking technique allows for the measurement of ecosystem elements and their development over time, as it reveals hindering and promoting factors of the entrepreneurial ecosystem and its evolution.

Figure 37: Paper 2, Results (entrepreneurial activity, boosting, hindering factors)



Source: Own

As shown on the diagram, during periods of independence, entrepreneurial activity flourished, supported by favorable institutional frameworks and social networks. Conversely, colonial periods were characterized by exploitative economic policies that suppressed entrepreneurial growth, which is also well illustrated on the diagram. The turbulence shown there is caused by the changes of institutional framework, following every governance change. It shows how Azerbaijan's formal institutional structure, such as its centralized government during independence, provided stability and support for entrepreneurship. In contrast, during the colonial periods, these institutions were often dismantled or repurposed for the benefit of the colonial authorities, resulting in a decline in entrepreneurial activity. Therefore, formal and informal institutions are seen as critical determinants of entrepreneurial success. Besides these innovative results, this study emphasizes the importance of historical context in shaping entrepreneurial ecosystems. Azerbaijan's turbulent history, marked by a shift between colonialism and independence, has had a deep impact on its entrepreneurial landscape.

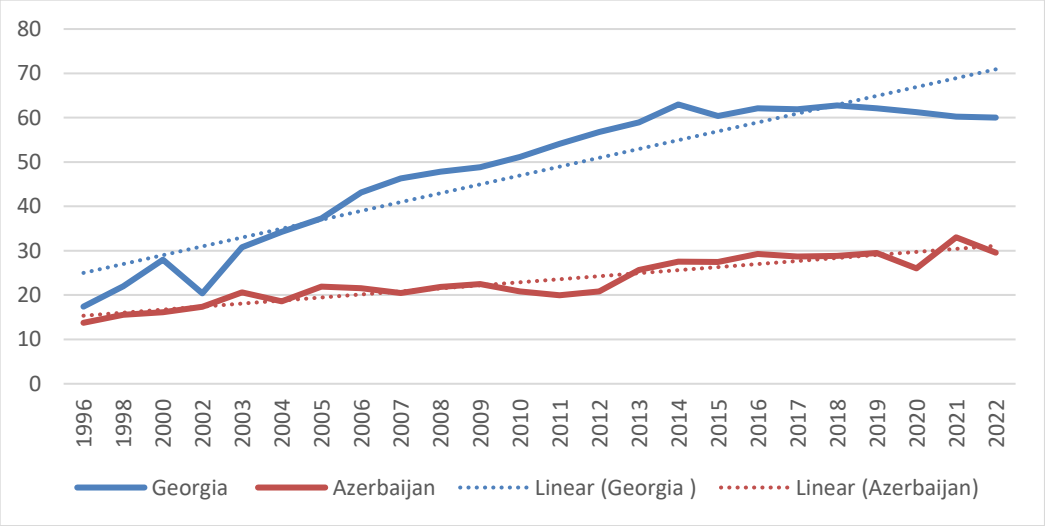
Unlike many current studies which focus on short-term analysis or individual ecosystem components, such as those by Brown and Mason (2017), Spigel (2017), and Acs et al. (2014), this study is an innovative approach to interpreting historical data and creating comparable indicators that allow for a deeper understanding of how different ecosystem factors evolve and affect entrepreneurship. The study's contribution lies in its ability to connect historical data with contemporary ecosystem analysis, providing a more holistic view of how entrepreneurial ecosystems adapt over time.

The last study included into this dissertation conducts a comparative analysis within the context of two transition countries in South Caucasus, Georgia and Azerbaijan. These countries were chosen because of their unique development trajectories in the post-Soviet space, providing valuable insight into how different formal and informal institutional arrangements can lead to different outcomes in entrepreneurship development. Through an in-depth examination of formal and informal institutions in Georgia and Azerbaijan, the study aims to identify specific factors that either hinder or promote entrepreneurship development in these two specific contexts.

This includes analyzing the effectiveness of existing laws and regulations, the role of government policies, the influence of cultural norms, and the impact of informal networks and practices, as well as trust in the government or laws, expectations or "feelings", and culture in the population.

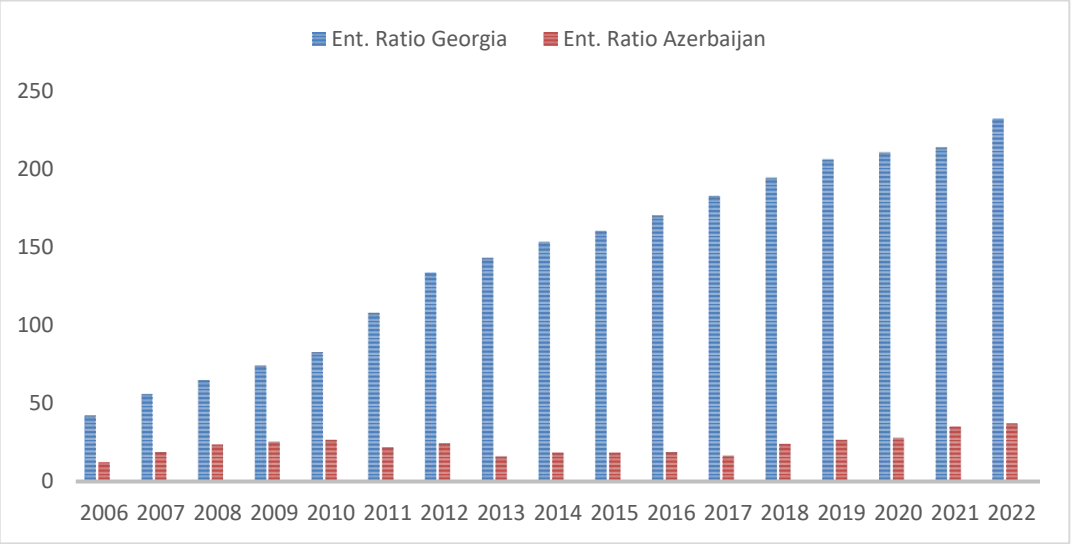
The study uses both quantitative data (e.g., World Bank governance indicators, national statistics) and qualitative data (e.g., policy and legislative documents) to assess the development of entrepreneurial ecosystems. Such a mixed approach allows for the inference of conclusions about the impact of institutional changes on entrepreneurial outcomes in two neighboring countries. Looking at the data on institutional indices and entrepreneurship levels for both countries, two similar starting points become evident, and then the huge gap between the development in both dimensions (institutions and entrepreneurship) and the positive correlation between the quality of institutions and entrepreneurship becomes apparent.

Figure 38: Evolution of formal institutions in Georgia and Azerbaijan



Source: WGI World Bank Interactive data

Figure 39: Comparison of entrepreneurship ratio in Georgia and Azerbaijan



Source: State Statistical data from Azerbaijan and Georgia

The paper concludes that the different ways of developing the entrepreneurial ecosystem in Georgia and Azerbaijan are largely due to differences in formal institutional reforms as well as changes or inertia in regard to informal institutions. It also stresses the importance of both formal and informal institutions in shaping a favorable environment for entrepreneurship. The study provides valuable recommendations for policy makers in transition economies, emphasizing the need for comprehensive institutional reforms to support long-term economic growth.

Different from previous studies that often look at either formal institutions or informal norms in isolation (e.g. Aidis et al., 2008; Estrin et al., 2013), this study combines both qualitative and quantitative data and employs a mixed method to provide a holistic view of how institutional quality shapes entrepreneurial ecosystems. It contributes to ongoing research in this area by emphasizing the double importance of formal institutional reforms (laws, regulations) and informal institutions (cultural norms, trust in government) in shaping entrepreneurship, which is less often addressed in comparative studies of transition economies (Welter & Smallbone, 2011; Manolova et al., 2008). This perspective not only provides an enriching understanding of how institutional quality affects entrepreneurial

outcomes, but also emphasizes the need for comprehensive institutional reforms in transition economies for entrepreneurship development.

6.1 Theoretical Implications

This dissertation extends the theoretical understanding of entrepreneurial ecosystems by accounting for the role of both formal and informal institutions in shaping entrepreneurial activity. The findings contribute to the existing body of knowledge by demonstrating how different aspects of institutional quality affect entrepreneurial activity in different economies, building on earlier frameworks like Acs et al. (2014), which emphasize the significance of institutional quality. Compared to many studies that focus on static or short-term assessments of institutions, this study emphasizes the importance of considering the stage of a country's economic development, as suggested by Baumol (1990), when analyzing the impact of institutional factors on entrepreneurial activity. Moreover, the study emphasizes the value of long-term historical analysis in understanding how institutional changes, especially in transition economies, may lead to different entrepreneurial outcomes over time, echoing the arguments of studies such as Welter & Smallbone (2011) who call for more nuanced, context-specific studies.

The first study contributes to the research on the relationship between formal institutions and entrepreneurship, an area previously explored by scholars like Acs et al. (2014) and Estrin et al. (2013). The novelty of this study is the separated analysis of this relationship in innovation and efficiency-driven countries. Much of the literature in this sphere uses homogenous country sets, with the rule of law often emerging as the most influential formal institution (Acs et al., 2014; Estrin et al., 2013). Research of this kind splits countries into efficiency and innovation-driven nations, as well entrepreneurial activities into early stage and established entrepreneurship (GEM), acknowledging prior suggestions in the literature that these different contexts might lead to a different institutional effects (Bosma & Levie, 2010).

The results of this study show that effect of specific formal institutions in the two country sets are slightly different. Even though rule of law has the biggest impact in both country sets on early stage business, it is different for the case of efficiency-driven countries and established businesses, where regulatory quality has the biggest impact. This finding is not only consistent with existing research, but also extends it by emphasizing the importance of tailoring institutional analysis to different stages of entrepreneurial activity as well as different economic contexts. This distinction is both innovative and informative because it highlights the differential impact of formal institutions in different economic contexts, offering valuable ideas for policy design in both developing and developed economies.

The second paper extends existing knowledge on long-term historical analysis of entrepreneurial ecosystems by addressing a significant gap in ecosystem research noted by scholars such as Mack & Mayer (2016) and Malecki (2018). A key innovation of this study is the use of historical data to create comparable measures of ecosystem elements across different historical periods. For example, transportation infrastructure in earlier times might have been characterized by ships, camels, and antiquated forms of accommodation, while human capital was reflected in the creation of schools. These examples illustrate the challenge of interpreting historical data in a way that allows for meaningful comparisons across time.

To analyze these tendencies, the study employs a simple point ranking technique to weigh the elements of the entrepreneurial ecosystem, following the Stam and Van de Ven (2021) theoretical framework. This tool allows for the assessment of the impact of different factors on entrepreneurial activity in different historical periods. By integrating quantitative and qualitative data sources such as archival records, historical texts, academic research and official statistics, mixed-methods approaches offers a new framework for systemic analysis of the entrepreneurial ecosystems' evolution and development. Thus, this methodology provides a more complete understanding of how these ecosystems evolve over time, thereby contributing to the broader field of ecosystem research by offering a way to assess long-term change that is relatively understudied in the existing literature.

The last paper provides empirical support for the institutional theory of entrepreneurship (North, 1990; Acemoglu & Robinson, 2012), which argues that the quality of institutions plays a crucial role in determining entrepreneurial outcomes. By examining the specific contexts of Georgia and Azerbaijan, two countries with shared post-Soviet histories but different developmental trajectories, the study deepens the understanding of how the institutional environment affects entrepreneurial activity in transition economies. Such comparative analysis is critical to understanding the subtle differences and challenges in the entrepreneurial development in these contexts, consistent with a growing body of literature emphasizing the importance of institutions in shaping entrepreneurial ecosystems (Bruton et al., 2010; Estrin et al., 2013).

The mixed method used in this study analyzing both quantitative and qualitative data provides more accurate conclusions about the different paths of ecosystem development. It contributes to the broader literature on entrepreneurial ecosystems by offering a comparative analysis of two countries with a common history but different development outcomes. This methodology aligns with an emerging trend in ecosystem research that favors comparative analysis of countries with similar historical backgrounds but different economic outcomes (Audretsch & Belitski, 2017). The findings contribute to the broader literature on entrepreneurial ecosystems by providing a deeper understanding of how formal and informal institutions interact to facilitate or hinder entrepreneurial activity. Besides, this study offers valuable insights not only for academics, but also policy makers seeking to promote entrepreneurship in post-Soviet and other transition economies.

6.2 Policy Implications

Based on the results of this dissertation, the following policy recommendations are offered for the development of the entrepreneurial ecosystem in transition economies, particularly in Georgia and Azerbaijan. These recommendations are aimed at strengthening the quality of institutions, improving the regulatory environment, fighting corruption and stimulating innovation.

First of all, the governments should enhance transparency and regulatory quality through simplifying and streamlining business regulations to reduce red tape, following the basic ideas of Djankov et al. (2002) and the World Bank's Doing Business reports (2019). By creating a more efficient and predictable regulatory framework, policymakers can lower barriers to entry for entrepreneurs and stimulate formal business activity (Loayza et al., 2005). This can be reached through clear and accessible regulation for business which includes transparent procedures for business registration, licensing and taxation. Regular updates and communications from state regulators will also help businesses stay informed and compliant with the regulations. In addition, implementing e-government solutions, as highlighted by Bhatnagar (2004), can significantly reduce administrative burdens and increase transparency. Online platforms for business registration, tax filing and licensing can make these processes more transparent and efficient and less prone to corruption (Knack & Keefer, 1995; Kaufmann et al., 2010).

Strengthening the rule of law is another important policy measure to take. Improving the independence and effectiveness of the judiciary system is necessary to enforce contracts and protect property rights, as it is conducive for entrepreneurship and investment (North, 1990; Acemoglu & Robinson, 2012). Empirical studies show that countries with stronger legal institutions usually have higher levels of entrepreneurship (La Porta et al., 1997). By ensuring impartial and timely resolution of legal disputes, governments can build confidence in the system, which contributes to increased business activity.

Moreover, providing affordable legal services and support to entrepreneurs, especially small and medium-sized enterprises (SMEs), can help them navigate the legal system more effectively. One successful example is South Korea, where the government has established legal aid centers to help SMEs navigate complex legal procedures such as contracting, intellectual property rights protection and business registration (UNCTAD, 2011). In India, also, organizations such as the Legal Services Authority offer free legal advice to low-income entrepreneurs, helping them deal with legal problems more effectively (Singh, 2010).

Fighting harmful informal practices such as corruption and nepotism is also an important part of institution building process (North, 1990). These informal institutions are able to undermine the efficiency and fairness of markets, creating barriers to entry for honest entrepreneurs. Effective anti-corruption measures suppose the strengthening of anti-corruption bodies – governments should enhance the capacity and independence of anti-corruption agencies to effectively investigate and prosecute corruption cases. Such agencies should be well funded and free from political interference to carry out their job impartially (Kaufmann, 1997).

A successful example of anti-corruption reform is Singapore, where the Corrupt Practices Investigation Bureau (CPIB) has been given full independence and resources to conduct investigations, resulting in a significant reduction in corruption (Quah, 2017). Another notable example is Georgia, studied in the last paper of this dissertation, where the government's focus on building strong anti-corruption agencies helped improve the country's ranking in Transparency International's Corruption Perceptions Index (World Bank, 2012).

Providing transparency in the public procurement sector is also a powerful anti-corruption measure. Transparent and competitive public procurement processes can reduce opportunities for corruption – governments should ensure openness, fairness and independence of public tenders (OECD, 2009). This includes publishing contracts and procurement decisions, and ensuring that independent agencies or civil society organizations monitor the process (World Bank, 2015).

Access to finance is another strategically important sector to intervene. As the third study shows, both Azerbaijan and Georgia are facing challenges in providing sufficient funds for SMEs. Therefore, improving the banking sector and offering business friendly loans, as well as venture capital markets and alternative financing mechanisms, can provide entrepreneurs with more financial opportunities (OECD, 2018). Additionally, it is important to improve the financial literacy of entrepreneurs through different trainings and seminars, as well as partnerships with relevant educational institutions. It will help them to understand financial products and services, manage risk, and become aware of existing entrepreneurial funds (IFC, 2017). Similar programs have already been implemented by the European Bank for

Reconstruction and Development (EBRD) in Central and Eastern Europe, and they have proven effective in improving financial literacy and helping entrepreneurs make better-informed financial decisions (EBRD, 2019).

Innovation is a cornerstone of flourishing entrepreneurial ecosystem development. Governments can stimulate innovation through particular policies by creating research and development incentives and activities. These include tax incentives, grants and subsidies for innovative enterprises (OECD, 2015). For example, countries like South Korea and Israel have R&D tax credit programs that boost innovation in strategically important sectors (World Bank, 2016).

Establishing innovation centers and technology parks can provide entrepreneurs with the resources and infrastructure needed to develop and commercialize new technologies. Such centers can serve as incubators for startups, offering mentorship, networking opportunities, access to funding and consulting services. Silicon Valley offers examples of innovation hubs that significantly impact entrepreneurial growth (Audretsch & Belitski, 2017).

In addition, collaboration between academic institutions and the private sector can also foster innovation. Governments can promote the idea by funding collaborative research projects, creating platforms for knowledge-sharing, and encouraging university-business collaboration (Etzkowitz & Leydesdorff, 2000). The Fraunhofer Institutes in Germany illustrate such a model where government funding fosters such partnerships, increasing the innovation capacity of the entrepreneurial ecosystem.

Last but not least, entrepreneurship should be an available option for everyone. Policies should aim to promote inclusive entrepreneurship by providing targeted support to women and minority entrepreneurs. This may include access to funding, mentoring programs, and training opportunities. For example, the Global Entrepreneurship Monitor notes that the US and Canada have launched initiatives that target women entrepreneurs by offering financial support and mentoring opportunities (GEM, 2020).

Entrepreneurship education is another key policy area. Introducing entrepreneurship into the curricula at all educational levels can foster an entrepreneurial mindset, as noted by the *European Commission* in its framework on entrepreneurship education (European Commission, 2013). Netherlands and Finland are good examples of countries which have successfully integrated entrepreneurship into their education systems, instilling innovation and risk-taking in students from an early age. Besides, governments can also support entrepreneurship training programs for aspiring entrepreneurs. For instance, the International Labor Organization (ILO) and the United Nations Development Program (UNDP) support entrepreneurship education programs that provide practical business skills to marginalized populations in developing countries (ILO, 2015).

6.3 Limitations and Future Research

Despite its contribution, this thesis acknowledges several limitations. First, the study is limited to the context of Georgia and Azerbaijan, which may limit the generalization of the findings to other transition economies. While the selected countries provide valuable insights, their unique historical, cultural and economic characteristics may limit the ability to generalize the findings to other transition countries with different characteristics. According to Peng's (2003) study of institutional transitions, the institutional context of different transition economies can vary considerably, having different effects on entrepreneurial development. To increase the validity of the findings and understand how institutional quality shapes entrepreneurial ecosystems better, future research could include a wider range of transition countries with different institutional contexts.

Another limitation of this study is its reliance on secondary data sources, which may cause problems in terms of data accuracy and completeness and consistency (Smith, 2008). To address this limitation, future research could prioritize primary data collection from countries using qualitative methods, such as surveys and interviews. These methods would provide a deeper, broader context for understanding the experiences and challenges faced by entrepreneurs in transition countries. In addition, expanding the study to include other geographic regions and countries

would increase the generalizability of the findings by covering a wider range of institutional and cultural contexts (Eisenhardt, 1989).

Finally, the study focuses mainly on institutional factors affecting entrepreneurial activity, potentially overlooking other critical components of entrepreneurial ecosystems (Isenberg, 2011). Future research could explore other aspects of entrepreneurial ecosystems, affecting entrepreneurial output, such as access to finance, entrepreneurial education, and cultural attitudes toward entrepreneurship. That would provide a more holistic view of the determinants of entrepreneurial success, especially in transition economies where such elements may vary widely across contexts (Spigel, 2017).

6.4 Conclusion

The dissertation explores critical factors affecting entrepreneurship in developing or transition economies, with a particular focus on Georgia and Azerbaijan. Examining the role of institutional quality, informal institutions, regulatory frameworks and entrepreneurial ecosystems provided valuable insights into the challenges and opportunities faced by entrepreneurs in these regions. By addressing challenges and opportunities existing in these countries' entrepreneurial ecosystems, policymakers can create a more favorable environment for entrepreneurship, leading to sustainable economic growth and development.

The key findings of this study emphasize the need for comprehensive and context-specific country level measures of economic development and institutional settings. This study emphasizes that building a robust entrepreneurial ecosystem requires addressing both formal and informal institutional gaps, providing policymakers with practical recommendations to stimulate entrepreneurial activity and sustainable economic growth in transition economies.

The results highlight the importance of sound institutions and transparent regulatory frameworks in promoting entrepreneurial activity. Clearly, high levels of corruption and complex, inconsistent regulations can inhibit entrepreneurial activity,

discouraging innovation and limiting economic growth. Conversely, when institutions are strong and regulations are clear and fair, entrepreneurs are more likely to risk and thrive, leading to a more dynamic and sustainable economy.

The theoretical and practical implications of this research offer valuable insights for academics, policy makers and practitioners. This study expands the theoretical understanding of entrepreneurial ecosystems and their development. In terms of policy implications, the dissertation provides specific recommendations for the development of an entrepreneurial ecosystem in transition economies. These include measures to improving regulatory quality, fighting corruption, strengthening the rule of law and promoting entrepreneurship. By implementing these recommendations, policymakers can create an environment more favorable to entrepreneurship.

Ultimately, this dissertation contributes to a broader understanding of entrepreneurship in transition economies and offers a roadmap for future research and policy development. The findings of the study are applicable not only to Georgia and Azerbaijan, but also to other transition economies seeking to harness the power of entrepreneurship as a catalyst for economic transformation. The findings and recommendations presented here serve as a foundation for building more inclusive, innovative and prosperous societies in the years to come. Despite its limitations, this dissertation lays the foundation for future research to further explore the complex interactions between institutional quality and entrepreneurship in different economic contexts.

Bibliography

Paper 1

Acemoglu, Daron, and James Robinson. 2008. The Role of Institutions in Growth and Development. *Working Paper no. 10*, Washington, DC: The World Bank (On behalf of the Commission on Growth and Development).

Ackerman, John. 2004. Co-governance for accountability: beyond "exit" and "voice". *World Development*, 32(3), 447-463. doi.org/10.1016/j.worlddev.2003.06.015.

Acs, Zoltan J. 2006. Start-ups and entry barriers: Small and medium-sized firms population dynamics. *The Oxford handbook of entrepreneurship.* DOI: 10.1093/oxfordhb/9780199546992.003.0008

Acs, Zoltan J., Erkko Autio, and László Szerb. 2014. National systems of entrepreneurship: Measurement issues and policy implications. *Research Policy*, 43(3), 476–494. doi.org/10.1016/j.respol.2013.08.016

Acs, Zoltan J., Sameeksha Desai, and Leora F. Klapper. 2008. What does „entrepreneurship" data really show? *Small Business Economics*, 31, 265 – 281. doi 10.1007/sl 1187-008-9137-7

Agostino, Mariarosaria, et al. 2020. Rule of law and regulatory quality as drivers of entrepreneurship. *Regional Studies*, 1–13. doi.org/10.1080/00343404.2019.1648785

Ahmad, Nadim and Richard G. Seymour. 2008. Defining entrepreneurial activity: Definitions supporting frameworks for data collection. OECD Statistics Working Paper. doi.org/10.2139/ssrn.1090372.

Aidis, Ruta, Saul Estrin, and Tomasz Marek Mickiewicz. 2012. Size matters: entrepreneurial entry and government. *Small Business Economics*, *39*(1), 119–139. DOI 10.1007/s11187-010-9299-y

Amorós, José Ernesto, et al. 2019. Necessity or opportunity? The effects of State fragility and economic development on entrepreneurial efforts. *Entrepreneurship Theory and Practice*, 43(4), 725–750. doi.org/10.1177/1042258717736857

Amorós, José Ernesto. 2009. Entrepreneurship and quality of institutions: A developing-country approach. WIDER Research Paper No. 2009/07. 1-23.

Aparicio, Sebastian, David Urbano, and David Audretsch. 2016. Institutional factors, opportunity entrepreneurship and economic growth: Panel data evidence. *Technological Forecasting and Social Change*, *102*, 45-61. doi.org/10.1016/j.

Barley, Stephen R., and Pamela S. Tolbert.1997. Institutionalization and structuration: Studying the links between action and institution. *Organization studies.* 18(1), 93-117.

Baumol, William J. 1990. Entrepreneurship: productive, unproductive and destructive. *Journal of Political Economy,* 98, 893–921.

Boettke, Peter J., and Christopher J. Coyne. Context matters: Institutions and entrepreneurship. Vol. 22. *Now Publishers Inc*, 2009.

Bosma, Niels. 2013. The Global Entrepreneurship Monitor (GEM) and its impact on entrepreneurship research. *Foundations and Trends in Entrepreneurship*, *9*(2).

Bosma, Niels., Sanders, Mark & Stam, Eric. (2018). Institutions, entrepreneurship, and economic growth in Europe. *Small Business Economics*, *51*(2), 483-499.

Bridgman, Benjamin, Shi Qi, and James Andrew Schmitz. 2009. The economic performance of cartels: evidence from the New Deal US sugar manufacturing cartel, *1934-74* (Vol. 437). *Minneapolis: Federal Reserve Bank of Minneapolis.*

Bruton, Garry D., David Ahlstrom, and Han–Lin Li. 2010. Institutional theory and entrepreneurship: where are we now and where do we need to move in the future?. *Entrepreneurship Theory and Practice*, 34(3), 421–440. doi.org/10.1111/j.1540-6520.2010.00390.x

Casson, Mark C., Marina Della Giusta, and Uma S. Kambhampati. 2010. Formal and informal institutions and development. *World Development.* 38(2), 137-141. doi.org/10.1016/j.worlddev.2009.10.008

Chang, Ha-Joon, and Peter Evans. 2005. The role of institutions in economic change. *Reimagining growth*. 99-129.

Chowdhury, Farzana, David B. Audretsch, and Maksim Belitski. 2019. Institutions and entrepreneurship quality. *Entrepreneurship Theory and Practice*, 43(1), 51-81. https://doi.org/10.1007/s10490-019-09648-2

Coase, Ronald. H. (1981). The Coase theorem and the empty core: a comment. *The Journal of Law and Economics*, *24*(1), 183-187.

Desai, Sameeksha. 2011. Measuring entrepreneurship in developing countries. *In Entrepreneurship and economic development*, London: Palgrave Macmillan. 94-107.

Dutta, Subrata. 2012. Entrepreneurship & global competitiveness: a study on India. *Indian Journal of Industrial Relations*, 617-633.

Estrin, Saul., Korosteleva, Julia, & Mickiewicz, Tomasz. 2013. Which institutions encourage entrepreneurial growth aspirations? *Journal of business venturing*, *28*(4), 564-580.

Efendic, Adnan, Tomasz Mickiewicz, and Anna Rebmann. 2015. Growth aspirations and social capital: Young firms in a post-conflict environment. *International Small Business Journal*, *33*(5), 537-561.

Friedman, Eric, Simon Johnson, and Daniel Kaufmann. "P. Zoido-Lobatón. 2000. Dodging the grabbing hand: the determinants of unofficial activity in 69 countries. *Journal of public economics*, *76*(3), 459-493.

Fuentelsaz, Lucio, et al. 2015. How different formal institutions affect opportunity and necessity entrepreneurship. *BRQ Business Research Quarterly*, 18(4), 246–258. doi.org/10.1016/j.brq.2015.02.001

GEM. 2014. Global Entrepreneurship monitor 2013 Global Report Fifteen Years of Assessing Entrepreneurship Across the Globe by José Ernesto Amorós and Niels Bosma. Available at: https://www.gemconsortium.org/report. (last accessed 15 April 2020).

GEM. 2015. The Global Entrepreneurship Monitor Report 2015/2016. Available at: https://www.gemconsortium.org/report (last accessed 15 April 2020)

GEM. 2016. The Global Entrepreneurship Monitor Report 2016/2017. Available at: https://www.gemconsortium.org/report (last accessed 15 April 2020)

GEM. 2019. How GEM defines entrepreneurship. Available at: https://www.gemconsortium.org/wiki/1149 (last accessed 15 April 2020).

GEM. 2020. How GEM defines entrepreneurship. Available at: https://www.gemconsortium.org/wiki/1149 (last accessed 15 April 2020).

Gneezy, Uri, and Aldo Rustichini. 2000. A fine is a price. *The Journal of Legal Studies.* 29(1), 1-17.

Greif, Avner. 2006. *Institutions and the path to the modern economy: Lessons from medieval trade*. Cambridge University Press.

Grindle, Merilee S. 2004. Good enough governance: poverty reduction and reform in developing countries. *Governance.* 17 (4), 525-548. doi.org/10.1111/j.0952-1895.2004.00256.

Groşanu, Adrian, et al 2015. The influence of country-level governance on business environment and entrepreneurship: A global perspective. *Amfiteatru Economic Journal*, *17*(38), 60-75.

Hartog, Chantal, André Van Stel, and David J. Storey. 2010. Institutions and entrepreneurship: The role of the rule of law. Research Report H201003, Zoetermeer, Netherlands: EIM.

Ibrahimova, Ganira., & Moog, Petra. (2023). Colonialism versus independence—the role of entrepreneurial ecosystems in Azerbaijan over time. *Small Business Economics*, 1-48.

Johnson, Simon, Daniel Kaufmann, and Andrei Shleifer. 1997. Politics and entrepreneurship in transition economies. Working Paper. No 57. William Davidson Institute: University of Michigan. Doi.org/10.2139/ssrn.1117620

J Johnson, Simon, John McMillan, and Christopher Woodruff. 2002. "Property rights and finance." American Economic Review 92, no. 5, 1335-1356.

Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2008. *Governance matters VII: aggregate and individual governance indicators 1996-2007*. The World Bank. doi 10.1596/1813-9450-4978

Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2010. The Worldwide Governance Indicators: Methodology and Analytical Issues. World Bank. Policy Research Working Paper. No. 5430. *Washington, DC: The World Bank*.

Klapper, Leora, et al. 2007. Entrepreneurship and firm formation across countries. Policy Research Working paper 4313. The World Bank.

Klapper, Leora. 2006. Entrepreneurship: how much does the business environment matter?. *The World Bank Viewpoint*. Note, 313.

Knowles, Stephen, and Clayton Weatherston. 2006. Informal institutions and cross-country income differences. Credit Research Paper, No. 06/06.

Leftwich, Adrian, and Kunal Sen. 2010. Beyond institutions: Institutions and organizations in the politics and economics of poverty reduction–Thematic synthesis of research evidence." *IPPG Research Consortium on Improving Institutions for Pro-Poor Growth,* University of Manchester.

Leftwich, Adrian. 2010. Beyond institutions: rethinking the role of leaders, elites and coalitions in the institutional formation of developmental states and strategies. *Forum for Development Studies*. 37 (1). doi.org/10.1080/08039410903558327

Levie, Jonathan, and Erkko Autio. 2011. Regulatory burden, rule of law, and entry of strategic entrepreneurs: An international panel study. *Journal of Management Studies*, 48(6), 1392–1419. doi.org/10.1111/j.1467-6486.2010.01006

Mickiewicz, Tomasz, Stephan, Ute, & Shami, Muntasir. (2021). The consequences of short-term institutional change in the rule of law for entrepreneurship. *Global Strategy Journal*, *11*(4), 709-739.

Minniti, Maria, and Moren Lévesque. 2008. Recent developments in the economics of entrepreneurship. *Journal of Business Venturing*. 23, 603–612. doi.org/10.1016/j.jbusvent.2008.01.001

North, Douglass C. 1990. Institutions, Institutional Change and Economic Performance. Cambridge University Press: Cambridge. doi.org/10.1017/CBO9780511808678

North, Douglass C. 1991. Institutions. *The Journal of Economic Perspectives*, *5*(1), 97–112. doi 10.1257/jep.5.1.97

North, Douglass C., John Joseph Wallis, and Barry R. Weingast. 2009. *Violence and social orders: A conceptual framework for interpreting recorded human history*. Cambridge University Press.

North, Douglass C., John Joseph Wallis, Steven B. Webb, and Barry R. Weingast. 2013. *In the shadow of violence: Politics, economics, and the problems of development*. Cambridge University Press.

Ostrom, Eleonor 1990. Governing the commons: The evolution of institutions for collective action. *Cambridge university press.*

Rodrik, D., Subramanian, A., & Trebbi, F. 2004. Institutions rule: the primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, 9(2), 131-165. https://doi.org/10.1023/B:JOEG.0000031425.72248.85

Sobel, Russell S. 2008. Testing Baumol: Institutional quality and the productivity of entrepreneurship. *Journal of Business Venturing.* 23(6). 641-655. doi.org/10.1016/j.jbusvent.2008.01.004

Stam, Erik., & Van de Ven, Andrew. (2021). Entrepreneurial ecosystem elements. *Small Business Economics,* 56:809–832. https://doi.org/10.1007/s11187-019-00270-6

Stenholm, Pekka, Zoltan J. Acs, and Robert Wuebker. 2013. Exploring country-level institutional arrangements on the rate and type of entrepreneurial activity. *Journal of Business Venturing*, *28*(1), 176–193. doi.org/10.1016/j.jbusvent.2011.11.002

Svensson, Jakob. 2005. Eight questions about corruption. *Journal of economic perspectives* 19(3). 19-42. DOI: 10.1257/089533005774357860

Theodoraki, Christina,& Messeghem, Karim. (2017). Exploring the entrepreneurial ecosystem in the field of entrepreneurial support: a multi-level approach. *International Journal of Entrepreneurship and Small Business*, 31(1), 47-66.

Tonoyan, Vartuhi., Strohmeyer, Robert., Habib, Mohsin., & Perlitz, Manfred. (2010). Corruption and Entrepreneurship: How Formal and Informal Institutions Shape Small Firm Behavior in Transition and Mature Market Economies. *Entrepreneurship Theory and Practice*, 34(5), 803–832. https://doi.org/10.1111/j.1540-6520.2010.00394.x

Troilo, Michael. 2011. Legal institutions and high-growth aspiration entrepreneurship. *Economic Systems*, 35(2), 158–175. doi.org/10.1016/j.ecosys.2010.08.001

Urbano, David, Sebastian Aparicio, and David Audretsch. 2019. Twenty-five years of research on institutions, entrepreneurship, and economic growth: what has been learned?. *Small Business Economics*, 53(1), 21–49. doi.org/10.1007/s11187-018-0038-0

Valliere, Dave, and Rein Peterson. 2009. Entrepreneurship and economic growth: Evidence from emerging and developed countries. *Entrepreneurship & Regional Development*, 21(5-6), 459–480. doi: 10.1080/08985620802332723

Van Stel, André, David J. Storey, and A. Roy Thurik. 2007. The effect of business regulations on nascent and young business entrepreneurship. *Small Business Economics*, 28(2-3), 171–186. doi.org/10.1007/s11187-006-9014-1

Vivarelli, Marco. 2012. Entrepreneurship in advanced and developing countries: A microeconomic perspective. IZA DP No. 6513. Bonn

WGI. 2020. The Worldwide Governance Indicators. Methodology. Online Database. Available at: https://info.worldbank.org/governance/wgi/ (last accessed 15 April 2020)

Welter, Friederike (2011). Contextualizing entrepreneurship—conceptual challenges and ways forward. *Entrepreneurship theory and Practice*, *35*(1), 165-184.

Welter, Friederike, William B. Gartner. 2016. A research agenda for entrepreneurship and context. Edward Elgar Publishing. https://www.e-elgar.com/shop/usd/a-research-agenda-for-entrepreneurship-and-context-9781784716837.html

Welter, Friederike, and David Smallbone. 2011. Institutional perspectives on entrepreneurial behavior in challenging environments. *Journal of Small Business Management*, *49*(1), pp.107-125.

Wilhelm, Paul. G. 2002. International validation of the corruption perceptions index: Implications for business ethics and entrepreneurship education. *Journal of business Ethics*, *35*(3), 177-189.

Williamson, Oliver. E. 2000. The new institutional economics: taking stock, looking ahead. *Journal of economic literature*, *38*(3), 595-613.

Wong, Poh Kam, Yuen Ping Ho, and Erkko Autio. 2005. Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small Business Economics*, 24(3), 335–350. doi.org/10.1007/s11187-005-2000-1.

Wooldridge, Jeffrey M. 2016. *Introductory econometrics: A modern approach*. 5th edn. Cengage Learning: South-Western.

Zou, Kelly H., Kemal Tuncali, and Stuart G. Silverman. 2003. Correlation and simple linear regression. *Radiology*, 227(3), 617–628. 10.1148/radiol.2273011499

Paper 2

Abdullaev, G.B. (1965) *Azerbaijan in 18 century and its relations with Russia*, Baku publishing

About Personal Income Tax: Decree of the USSR Supreme Soviet of 30 April 1943 http://docs.historyrussia.org/ru/nodes/199937-o-podohodnom-naloge-s-naseleniya-ukaz-prezidiuma-verhovnogo-soveta-sssr-ot-30-aprelya-1943-goda

Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. *Handbook of economic growth*, *1*, 385-472.

Acemoglu, Daron, & Robinson, James A. (2012). Why Nations Fail: The Origins of Power, Prosperity and Poverty. New York: Crown.

Acemoglu, Daron, & Robinson, James A. (2006). *The Economic Origins of Dictatorship and Democracy.* Cambridge: Cambridge University Press.

Acs, Z. J., Audretsch D. B., Lehmann E., & Licht, G. (2016). National systems of entrepreneurship. Small Business Economics, 46(4/1), 527 – 535. **DOI** 10.1007/s11187-016-9705-1

Acs, Z. J., Autio E., & Szerb, L. (2014). National Systems of Entrepreneurship: Measurement issues and policy implications. Research Policy, 43(3), 476 – 494. **DOI** 10.1016/j.respol.2013.08.016

Acs, Z. J., Stam, E., Audretsch, D. B., & O'Connor, A. (2017). The lineages of the entrepreneurial ecosystem approach. *Small Business Economics*, *49*(1), 1-10. **DOI** 10.1007/s11187-017-9864-8

Ács, Z. J., Szerb, L., & Autio, E. (2017). *Global entrepreneurship and development index 2011* (Vol. 49, No. 1, pp. 1-10). Springer International Publishing.

Agayev, V., Akhundov, F., Aliyev, F. T., & Agarunov, M. (1995). World War II and Azerbaijan. *Azerbaijan International*, *3*(2), 50-55.

Aidis, R., Estrin, S., & Mickiewicz, T. (2010). Institutions, finance and the level of development: the impact on entrepreneurship in transition. *Review of economics and institutions*, *1*(1). **DOI** 10.5202/rei.v1i1.3

Akhundov, B. A. (1954) *Monopolistic capital in pre-revolutionary Baku industry*, Moscow publishing

Aldrich, H. E., & Ruef, M. (2006). *Organizations evolving* (2nd ed.). Sage Publications: (L.A.; London), **DOI** 10.4135/9781446212509

Alvarez, S.A. , Barney, J.B. , & Anderson, P. (2013). Forming and exploiting opportunities: The implications of discovery and creation processes for entrepreneurial and organizational research. Organization Science, 24(1), 301–317. **DOI** 10.1287/orsc.1110.0727

Aliyev I. H. (1995) *History of Azerbaijan. From the most ancient times, till the beginning of XX century*, Elm publishing house

Aliyev, G.A. (1982) *Soviet Azerbaijan*, Baku publishing

Aliyev, I.H. (1990) *Essay on the history of Atropatena*, Elm publishing house

Aliyev, N. (1998) Medicinal plants and phytotherapy of Azerbaijan, Elm publishing house

Alizade, A.A. (1956*) Social-economic and political history of Azerbaijan in XIII-XIV centuries*, Baku publishing

Allahverdiyev, V., Mehdiyev, S. (1990) *Azerbaijan Democratic Republic. The Azerbaijani government*, Baku publishing

Andryukhin, E.A.(2010*)* Soviet Citizens Entrepreneurship in the 60–80s of the XX Century*, Proceedings of Altai State University, (4-1)*

Argyres, N. S., De Massis, A., Foss, N. J., Frattini, F., Jones, G., & Silverman, B. S. (2020). History-informed strategy research:The promise of history and historical research methods in advancing strategy scholarship. *Strategic Management Journal*,41, 343–368. **DOI** 10.1002/smj.3118

Ashurbeyli. S.B. (1984) *The states of the Shirvanshahs*. Elm publishing house.

Asian Development Bank, (2020) Azerbaijan Moving toward more diversified, resilient and inclusive development https://www.adb.org/publications/azerbaijan-diversified-resilient-inclusive-development

Audretsch, David B. & Belitski, Maksim & Caiazza, Rosa & Desai, Sameeksha (2022). The role of institutions in latent and emergent entrepreneurship, Technological Forecasting and Social Change, Elsevier, vol. 174(C). DOI 10.1016/j.techfore.2021.121263

Audretsch, David B.; Moog, Petra (2021),Democracy and Entrepreneurship. Entrepreneurship Theory & Practice ET&P. **DOI** 10.1177/1042258720943307.

Audretsch, David B. & Belitski, M. & Cherkas, N.(2021). Entrepreneurial ecosystems in cities: The role of institutions. PLOS ONE 16(3): e0247609. **DOI** 10.1371/journal.pone.0247609.

Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context.Research Policy,43, 1097–1108 **DOI** 10.1016/j.respol.2014.01.015

Azerbaijan Academy of Science, Institute of History and Institute of Archeology and Ethnography (1995) *History of Azerbaijan from the Ancient times till the 20th Century*, Baku publishing

Azerbaijan Ministry of Culture (2015). *Azerbaijan state register of intangible cultural heritage* http://intangible.az/front/az/aboutExample/21944, online resource

Babayev I.A. (1990) *Cities of Caucasian Albania*, Elm publishing house

Babayev, I.A.(1976) *The Emergence of Caucasian)Albanian State,* AzSSR Academy Of Science publishing

Baker, T., & Welter, F. (2018). Contextual entrepreneurship: An interdisciplinary perspective.Foundations and Trends®inEntrepreneurship,14(4), 357–426. **DOI** 10.1561/0300000078

Balayev, A.H.(1990) *Azerbaijan National-Democratic Movement of 1917-1920*, Baku publishing.

Bate, A.F. A comparative analysis on the entrepreneurial ecosystem of BRICS club countries: practical emphasis on South Africa. SN Bus Econ 1, 121 (2021). **DOI** 10.1007/s43546-021-00120-2.

Bergmann, T. J., and Scarpello, V. G. (2001): Point method of job evaluation. In: Thomas J. Bergmann & Vida Gulbinas Scarpello (2001): Compensation Decision Making. Harcourt College Publishers, New York, NY. 263-274.

Bjørnskov, C., & Foss, N. J. (2010). Do economic freedom and entrepreneurship impact total factor productivity?

Bosworth, C.E. *(1989),* "Azerbaijan IV: Islamic History to 1941"*, Encyclopaedia Iranica, 3, London: Routledge & Kegan Paul.*

Brouwer, M. (2000). Entrepreneurship and uncertainty: innovation and competition among the many. *Small Business Economics*, *15*(2), 149-160. **DOI** 10.4236/jss.2022.106016.

Brown, R., & Mason, C. (2017). Looking inside the spiky bits: a critical review and conceptualization of entrepreneurial ecosystems. Small Business Economics, 49(1), 11-30. **DOI** 10.1007/s11187-017-9865-7.

Brown, R., & Mawson, S. (2019). Entrepreneurial ecosystems and public policy in action: a critique of the latest industrial policy blockbuster. Cambridge Journal of Regions, Economy and Society, 12(3), 347-368. **DOI** 10.1093/cjres/rsz011.

Buniyadov, Z.M. (1978). *Azerbaijan in VII-IX centuries*, Baku publishing

Buniyadov, Z.M. (2007a) History of Azerbaijan, tom I. *(From the most ancient times to the XX century,* Chirag Publishing

Buniyadov, Z.M. (2007b). *Atabeks State of Azerbaijan (1136-1225),* East-West Publishing House

Cantillon, R., & Van den Berg, R. (2015). *Richard Cantillon's Essay on the Nature of Trade in General: A Variorum Edition*. Routledge. **DOI** 10.4324/9781315794686

Chardin, J. (1735). *Voyages en Perse et autres lieux de l'Orient* (Vol. 3).

Colombo, M. G., Dagnino, G. B., Lehmann, E. E., & Salmador, M. (2019). The governance of entrepreneurial ecosystems. *Small Business Economics*, *52*(2), 419-428. **DOI** 10.1007/s11187-017-9952-9

Constitution (Fundamental Law) of the Transcaucasian Socialist Federative Soviet Republic, ZSFSR. Section 4, Chapter VII, Article 38

De Clercq, D., Dimov, D., & Thongpapanl, N. T. (2010). The moderating impact of internal social exchange processes on the entrepreneurial orientation–performance relationship. *Journal of Business Venturing*, 25(1), 87-103. **DOI** 10.1016/j.jbusvent.2009.01.004

Dimov, D. (2011). Grappling with the unbearable elusiveness of entrepreneurial opportunities. *Entrepreneurship Theory andPractice*, 35(1), 57–81. **DOI** 10.1111/j.1540-6520.2010.00423.x

Dubini, P. (1989). The influence of motivations and environment on business start-ups: Some hints for public policies. *Journal of Business Venturing*, 4(1), 11 – 26. **DOI** 10.1016/0883-9026(89)90031-1.

Eisenhardt, K.M. (1989) Building theories from case study research. *Academy of Management Review* 14(4): 532–550.

Estrin, S., & Mickiewicz, T. (2011). Entrepreneurship in transition economies: The role of institutions and generational change. *The dynamics of entrepreneurship: Evidence from the global entrepreneurship monitor data*, 181-208. **DOI** 10.1093/acprof:oso/9780199580866.003.0009

Farzaliyev Sh. (1983*) Azerbaijan in the XV-XVI centuries,* Elm publishing house

Feigl, E. (2011). *The Land of Fire on the Silk Road: History of Azerbaijan*. Indigo.

Feld, B. (2012) Startup Communities: Building an Entrepreneurial Ecosystem in Your City (New York, NY: Wiley).

Feldman M.P. (2001). The entrepreneurial event revisited: firm formation in a regional context. *Ind. Corp. Chang.* 10(4), 861–891. **DOI** 10.1093/icc/10.4.861

Feldman, M.P., Siegel, D. S., & Wright, M. (2019). New developments in innovation and entrepreneurial ecosystems. *Industrial and Corporate Change*, 28(4), 817–826. https://doi.org/10.1093/icc/dtz031.

Fielding, W., Riley, J. and Oyejola, B. A. (1998): Ranks are statistics: some advice for their interpretation. PLA Notes. 33, pp. 35-39.

Florin, J., Lubatkin, M., Schulze, W., 2003. A social capital model of high-growth ventures. *Academy of Management Journal* 46 (3): 374–384.

Freytag, A., & Thurik, R. (2010). Introducing entrepreneurship and culture. In *Entrepreneurship and culture* (pp. 1-8). Springer, Berlin, Heidelberg. **DOI** 10.1007/978-3-540-87910-7_1

Fritsch M., Obschonka M., Wyrwich M. (2019) Historical roots of entrepreneurship-facilitating culture and innovation activity: an analysis for German regions. Regional Studies, 53(9), 1296–1307. **DOI** 10.1080/00343404.2019.1580357

Gaikov V.G. (1969) *Liability for engaging in a prohibited trade under Soviet criminal law,* Moscow Press

Georgadze, M. (1982) *USSR, Sixty Years of the Union, 1922-1982,* Progress Publishers

Geybullayev G.A. (1994) *From the history of formation of Azerbaijani Turks formation*, Baku publishing.

Gioia, D.A.; Corley, K.G.; Hamilton, A. (2013): Seeking Qualitative Rigor in Inductive Research. *Organizational Research Methods* 16(1):15-31. DOI: 10.1177/1094428112452151.

Gioia, D.A (2021). A Systematic Methodology for Doing Qualitative Research. *The Journal of Applied Behavioral Science*. 57(1) 20–29. https://doi.org/10.1177/0021886320982715.

Glaza, H. M. (2009). Lenin's New Economic Policy: What it was and how it changed the Soviet Union. *Inquiries Journal*, *1*(11).

Gnyawali, D. R., & Fogel, D. S. (1994). Environments for entrepreneurship development: key dimensions and research implications. Entrepreneurship theory and practice, 18(4), 43-62 **DOI** 10.1177/1042258794018004

Godfrey, P. C., Hassard, J., O'Connor, E. S., Rowlinson, M., & Ruef, M. (2016). What is organizational History? Toward a creative synthesis of history and organization studies. *Academy of Management Review*, 41(4), 590–608. **DOI** 10.5465/amr.2016.0040

Granovetter, M. (1992). Economic institutions as social constructions: a framework for analysis. *Acta sociologica*, *35*(1), 3-11. **DOI** 10.1177/000169939203500101

Guliev J. (1997) *To the history of the formation of the second republic Azerbaijan*, Baku publishing

Hasanov R. (2009) Management in transitive countries - Azerbaijan case study, Journal of The Caucasus and Globalization, V3 Issue 1

Heydarov M.H. (1982*) Cities and urban craft in Azerbaijan in XII - XVII centuries*. Baku Publishing

Hille, C. (2010). *State building and conflict resolution in the Caucasus*, Brill. **DOI** 10.1163/ej.9789004179011.i-350.158.

Hogwood, P. (2000). After the GDR: Reconstructing identity in post-communist Germany. The Journal of Communist Studies and Transition Politics, 16(4), 45-67. **DOI** 10.1080/13523270008415448

Hunter, M. (2012). How Feudalism Hinders Community Transformation and Economic Evolution: isn't equal opportunity a basic human right?

Ibrahimov, M.J. (1984) *Oil Industry of Azerbaijan during the period of imperialism*, Baku Publishing

Ingram, P., Rao, H., & Silverman, B. S. (2012). History in strategy research: What, why, and how? In S. J. Kahl &B. S. Silverman (Eds.),*History and strategy* (p. 241–273). Cusumano, MA: Emerald

Ismailov, M.A. (1964) *Capitalism in Azerbaijan's Agriculture at the End of the 19th and the Beginning of the 20th Centuries,* Baku Publishing

Ismayilov, M.A. (1960) *Agriculture of Azerbaijan in the early twentieth century*, Baku Publishing

Jafarov G.F., Jafarova D.G. (2017) *History of Azerbaijan from ancient times to the present day. Textbook for High Schools,* ASEU Publishing House

Jafarov, G.F (1984) *Connections of Azerbaijan with the countries of the West Asia in an epoch of late bronze and early iron*, Elm Publishing House

Jafarov, G.F (1985) *Ancient connections of Azerbaijan tribes with countries of the Middle East,* Elm Publishing House

Jafarov, G.F. (2020) *Ancient Garabagh*, Elm Publishing House

Jones, G., & Khanna, T. (2006). Bringing history (Back) into international business. *Journal of International Business Studies*, 37, 453–468 **DOI** 10.1057/palgrave.jibs.8400198

Kaempfer, E. (1712). *AMOENITATUM EXOTICARUM POLITICO-PHYSICO-MEDICARUM FASCICULI V: Quibus continentur VARIAE RELATIONES, OBSERVATIONES & DESCRIPTIONES RERUM PERSICARUM [et] ULTERIORIS ASIAE multa attention-ne, in peregrinationibus per universum Orientem, collectae*. Typis & impensis Henrici Wilhelmi Meyeri, aulae Lippiacae typographi.

Kashkai, C.A. (1977*) From the history of the Manna kingdom*, Elm Publishing House

Kayne, J. (1999). State entrepreneurship policies and programs. *Available at SSRN 1260444*. **DOI** 10.2139/ssrn.1260444

King, R.G., & Levine, R. (1993). Finance and Growth: Schumpeter Might Be Right. *Quarterly Journal of Economics* 108(3):717-37. **DOI** 10.2307/2118406

Kirzner (1973) Kirzner, I. M. (1999). Creativity and/or alertness: A reconsideration of the Schumpeterian entrepreneur. *The review of Austrian economics*, *11*(1), 5-17. **DOI** 10.1023/A:1007719905868

Kuzminov, S., Novickiy, D., Ivanov, V.(2017) *History of formation and stages of development oil and gas industry,* Tumen Publishing

Landström, H., & Lohrke, F. (Eds.). (2012). I*ntellectual roots of entrepreneurship research*. Cheltenham, UK: Edward Elgar

Levie, J., Autio, E. (2011). Regulatory burden, rule of law, and entry of strategic entrepreneurs: An international panel study. Journal of Management Studies, 48(6), 1392-1419. **DOI** 10.1111/j.1467-6486.2010.01006.x

Lounsbury, M., & Glynn, M. A. (2019). *Cultural entrepreneurship*. Cambridge, MA: Cambridge University Press. **DOI** 10.1017/9781108539487.

Mahmudov, Y. (1993) *Relations of Akkoyunlu and Safavid states with Western Europe*, Baku Publishing

Malecki, E. J. (2018). Entrepreneurship and entrepreneurial ecosystems. Geography compass, 12(3), e12359. **DOI** 10.1111/gec3.12359.

Mamedova, F. (1986) *Political history and historical geography of Caucasian Albania*, Elm Publishing house

Mason, C., & Brown, R. (2014). Entrepreneurial ecosystems and growth oriented entrepreneurship. Final report to OECD, Paris, 30(1), 77-102.

Matveeva, A. (2002). *The South Caucasus: nationalism, conflict and minorities*. Conran Octopus.

McMullen, J. S., & Dimov, D. (2013). Time and the entrepreneurial journey: The problems and promise of studying entrepreneurship as a process. *Journal of Management Studies*, 50(8), 1481–1512. **DOI** 10.1111/joms.12049

Mendeleyev, D.I. (1949) *Essays in 25 toms. – Tom 10: Oil*, USSR Academy of Science Press.

Mickiewicz, Tomasz; Stephan, Ute, & Shami, Muntasir (2021). The consequences of short-term institutional change in the rule of law for entrepreneurship. *Global Strategy Journal*, 11:709–739. DOI: 10.1002/gsj.1413.

Moog, P.; Backes-Gellner, U. (2013): Who is Willing to Become an Entrepreneur? The Jacks-of-all-Trades in Social and Human Capital. Journal of Socio-Economics, Vol. 47(Dec): 55-72.

Ministry of economics, 2020, https://www.economy.gov.az/ru/article/azda-sahib-inkishaf-tar/21410

Muchin, M. (2020) *Fuel of Victory,* Moscow Publishing house.

Muradalieva, E.P. (1989) *Monopolistic Capital in Northern Azerbaijan,* Baku Publishing.

Muradalieva, E.P. (2011) *Cities of the Caucasus on the Great Silk Road. Institute of Strategic Studies of the Caucasus*, Baku Publishing.

Niftiyev, I. (2021). How to Conceptualize the Resource Curse and Dutch Disease Theories in the Case of Azerbaijan? Initial and Negative Findings **DOI** 10.2139/ssrn.3857936.

North, Douglass C. (1990). Institutions, Institutional Change and Economic Performance. Cambridge University Press: Cambridge. **DOI** 10.1017/CBO9780511808678.

OECD (2019) *Azerbaijan driving diversification through strengthened entrepreneurship*, OECD publishing, Paris. https://www.oecd.org/eurasia/competitiveness-programme/eastern-partners/Azerbaijan-Driving-Diversification-through-Strengthened-Entrepreneurship.pdf

Olearius, A. (1666). *The Voyages & Travells of the Ambassadors Sent by Frederick, Duke of Holstein, to the Great Duke of Muscovy and the King of Persia: Begun in the Year M. DC. XXXIII. and Finish'd in M. DC. XXXIX. Containing a Compleat History of Muscovy, Tartary, Persia, and Other Adjacent Countries. With Several Publick Transactions Reaching Near the Present Times; in VII. Books. Whereto are Added the Travels of John Albert de Mandelslo (a Gentleman Belonging to the Embassy) from Persia Into the East-Indies... in III ...*. J. Starkey and T. Basset.

Orlov, G. (2017) *The Great Russian Enciclopedia (2004-2017)*: Merchant Guilds, Moscow Publishing house

Pandey, J., & Leelashree, M. (2012). A study on job evaluation-point factor analysis in sme's. *Asian journal of research in business economics and management*, *2*(5), 178-239.Poliak, G. B., & Markova, A. N. (2010) *History of world Economy,* Unity

Rahmani, A. (1981) *Azerbaijan at the end of 16 and 18 centuries (1590-1700),* Baku publishing

Rasulova, M.M. (1969) *Connections of Caucasian Albania with the ancient world in the IV century BC. - III century*, Baku Publishing

Rasulzadeh, M.E. (1990a) *Siyavush of our century*, Khazar Journal, (Vol 1), pp. 39-64.

Rasulzadeh, M.E. (1990b) *The Republic of Azerbaijan*, Baku Publishing

Saxenian, A. (1994). *Regional advantage: Culture and competition in Silicon Valley and Route 128*. Cambridge: Harvard University Press. **DOI** 0.2307/j.ctvjnrsqh

Schumpeter, J. A. (1947). The creative response in economic history. *The journal of economic history*, *7*(2), 149-159. **DOI** 10.1017/S0022050700054279

Schumpeter, J. A. (1949). The communist manifesto in sociology and economics. *Journal of Political Economy*, *57*(3), 199-212. **DOI** 10.1086/256806

Seidzade D.V. (1978) *From the history of the Azerbaijani bourgeoisie in the early twentieth century*. Baku Publishing

Sharifli, M. (1978) *Feudal states of Azerbaijan in IX-XI centuries*, Elm Publishing house

Smith, A. (1937). *The wealth of nations [1776]* (Vol. 11937).

Sotarauta, M. (2005) 'Shared Leadership and Dynamic Capabilities in RegionalDevelopment', in: Sagan, I. and Halkier, H. (Eds.), Regionalism Contested; Institution, Society, Governance, 53-72, Aldershot/Brookfield/Singapore/Sydney;Ashgate (21) - Leadership and sustainable regional development. Available from: https://www.researchgate.net/publication/236156855_Leadership_and_sustainable_regional_development [accessed Nov 07 2022].

Stam, E., & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small Business Economics,* 56:809–832. **DOI** 10.1007/s11187-019-00270-6 .

Stam, E. (2014). The Dutch entrepreneurial ecosystem. *Available at SSRN 2473475*. **DOI** 10.2139/ssrn.2473475

Stam, E. (2015). Entrepreneurial ecosystems and regional policy: a sympathetic critique. *European Planning Studies*, *23*(9), 1759-1769. **DOI** 10.1080/09654313.2015.1061484

The Statistical Committee of Azerbaijan Republic, 2021 (Official request 21st of April, N02/1-202)

Sternberg, R. (2021). Entrepreneurship and geography—some thoughts about a complex relationship. The Annals of Regional Science. **DOI** 10.1007/s00168-021-01091-w.

Strategic Roadmaps for National Economy and Key Sectors of the Economy (2016) https://monitoring.az/assets/upload/files/15075d6928310402cd152c96db0d6835.pdf online resource.

Strauss, A.; Corbin, J. M. (2014): *Basics of Qualitative Research* (4th ed.). SAGE Publications**:** (L.A.; London).

Sultanov, C. (2005) *Would the USSR and Europe withstand fascism in without of Baku oil?* Baku Publishing

Sultanov, F., Sultanova, Z. (1958) *Earthquakes*, Baku Publishing

Sumbatzade, A. S. (1990) *Azerbaijanis - Ethnogenesis and nation formation*. Baku Publishing

Sumbatzade, A.S. ((1980) *Agriculture of Azerbaijan in 19th Century,* Baku Publishing

Sumbatzade, A.S.(1964) *Industry of Azerbaijan in the 19th century* Baku Publishing

Svizzero, S., & Tisdell, C. A. (2014). The Neolithic Revolution and human societies: diverse origins and development paths.

Swietochowski, T. (2004). *Russian Azerbaijan, 1905-1920: The shaping of a national identity in a Muslim community* (No. 42). Cambridge University Press.

Swietochowski, T., & Collins, B. C. (1999). *Historical dictionary of Azerbaijan* (No. 31). Scarecrow Press.

Szabó, A., & Petrosyan, A. (2007). Small and medium-sized enterprises in the Caucasian countries in transition. *Asia Europe Journal*, *5*(1), 115-132. **DOI** 10.1007/s10308-006-0070-6

The Genesis of Capitalism in Caucasus (1969) *Proceedings and Reports of Conference*, Baku Publishing

Theodoraki, C., & Messeghem, K. (2017). Exploring the entrepreneurial ecosystem in the field of entrepreneurial support: a multi-level approach. International Journal of Entrepreneurship and Small Business, 31(1), 47-66. **DOI** 10.1504/IJESB.2017.083847

Tieck, W. (2005) *March to the Caucasus. Battle for oil. 1942/1943*. Moscow Publishing House

Tokarzhevsky, O. (1958) *Essays on the history of the Soviet Azerbaijan* (1921-1925), Baku Publishing

Valiyev T. (1987) *Industry and Proletariat of Azerbaijan during the Period of Imperialism*, Elm Publishing house

Valiyev, T. (1977) *Silk Processing Industry of Azerbaijan at the beginning of XX century*, Baku Publishing

Van de Ven, H. (1993). The development of an infrastructure for entrepreneurship. Journal of Business Venturing, 8(3), 211-230 **DOI** 10.1016/0883-9026(93)90028-4

Van Hoorn, A., & Maseland, R. (2010). Cultural differences between East and West Germany after 1991: Communist values versus economic performance?. Journal of Economic Behavior & Organization, 76(3), 791-804.

Veliyeva, T. (2009) *History of Azerbaijan XX century. Tutorial for universities,* Baku Publishing

Ventresca, Marc J., Mohr, John W. (2002). Archival Research Methods. In: Joel A. C. Baum (ed.): The Blackwell Companion to Organizations. Wiley-Blackwell: Oxford. 805-828. https://doi.org/10.1002/9781405164061.ch35.

Wadhwani, R. D., Kirsch, D., Welter, F., Gartner, W. B., & Jones, G. G. 2020. Context, time, and change: Historical approaches to entrepreneurship research. *Strategic Entrepreneurship Journal*, 14(1): 3–19. **DOI** 10.1002/sej.1346

Welter, F., Baker, T., Audretsch, D., & Gartner, W. B. (2016). Everyday entrepreneurship—A call for entrepreneurshipresearch to embrace entrepreneurial diversity. *Entrepreneurship Theory and Practice* ,41, 311–321. DOI 10.1111/etap.12258

Wood, M., Bakker, R., & Fisher, G. (2021). Back to the future: A time-calibrated theory of entrepreneurial action. *Academy of Management Review*, 46(1), 147–171. **DOI** 10.5465/amr.2018.0060.

Woolley, J. (2017). *Infrastructure for entrepreneurship*. Oxford Research Encyclopedia of Business and Management. Oxford: Oxford University Press. **DOI** 10.1093/acrefore/9780190224851.013.33

World Economic Forum. (2013). *Entrepreneurial ecosystems around the globe and company growth dynamics*. Davos: World Economic Forum.

Yankovskaya, N.B (1968) *International Trade Association of Kanesha,* Moscow Publishing house.

Yin, R. K. (2016). *Qualitative research from start to finish* (2nd ed.). New York, NY: The Guilford Press.

Zahra, S. A. (2007). Contextualizing theory building in entrepreneurship research. Journal of Business Venturing, 22(3), 443–452. **DOI** 10.1016/j.jbusvent.2006.04.007

Zahra, S. A., Wright, M., & Abdelgawad, S. G. (2014). Contextualization and the advancement of entrepreneurship research. International Small Business Journal, 32(5), 479–500. **DOI** 10.1177/0266242613519807

Paper 3

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American Economic Review, 91*(5), 1369-1401.

Acemoglu, D., & Robinson, J. A. (2008). Persistence of power, elites, and institutions. *American Economic Review*, *98*(1), 267-293.

Acemoglu, D., & Robinson, J. (2012). Institutions, political economy and growth. *Nobel prize 2012 presentations*.

Acs, Z. J., Stam, E., Audretsch, D. B., & O'Connor, A. (2017). The lineages of the entrepreneurial ecosystem approach. *Small Business Economics, 49*(1), 1-10.

Aidis, R., Estrin, S., & Mickiewicz, T. (2008). Institutions and entrepreneurship development in Russia: A comparative perspective. *Journal of Business Venturing, 23*(6), 656-672. https://doi.org/10.1016/j.jbusvent.2008.01.00

Aidis, R. (2017). Staying in the Family: The Impact of Institutions and Mental Models on Entrepreneurship Development in Post-Soviet Transition Countries. In A. Sauka & A. Chepurenko (Eds.), *Entrepreneurship in Transition Economies: Diversity, Trends, and Perspectives* (pp. 15-32). Springer Verlag. https://doi.org/10.1007/978-3-319-57342-7

Aliyev, H. (2017). When informal institutions change: Institutional reforms and informal practices in the former Soviet Union. University of Michigan Press.

Åslund, A. (2007). *How capitalism was built: The transformation of Central and Eastern Europe, Russia, and Central Asia*. Cambridge University Press.

Aschauer, D. A. (1989). *Is Public Expenditure Productive?*.

Aghion, P., & Howitt, P. (2006). *Appropriate Growth Policy: A Unifying Framework.*

Ackerman, J. (2004). Co-governance for accountability: beyond "exit" and "voice". *World Development*, *32*(3), 447-463.

Aidis, R., Estrin, S., & Mickiewicz, T. (2008). Institutions and entrepreneurship development in Russia: A comparative perspective. *Journal of business Venturing*, *23*(6), 656-672.

Aidis, R. (2017). Staying in the family: The impact of institutions and mental models on entrepreneurship development in post-soviet transition countries. *Entrepreneurship in transition economies: Diversity, trends, and perspectives*, 15-32.

Albassam, B. A. (2015). *Economic diversification in Saudi Arabia: Myth or reality?*.

Audretsch, D. B. (2003). Entrepreneurship: A Survey of the Literature. European Commission, Enterprise Directorate-General.

Audretsch, D. B., Belitski, M., & Cherkas, N. (2021). Entrepreneurial ecosystems in cities: The role of institutions. *PLOS ONE, 16*(3), e0247609.

Audretsch, D. B., & Keilbach, M. (2007). *The Theory of Knowledge Spillover Entrepreneurship*.

Audretsch, D. B., & Fiedler, A. (2023). Power and entrepreneurship. *Small Business Economics*, *60*(4), 1573-1592.

Audretsch, D. B., Eichler, G. M., & Schwarz, E. J. (2022). Emerging needs of social innovators and social innovation ecosystems. *International Entrepreneurship and Management Journal*, 1-38.

Audretsch, D. B., Belitski, M., Caiazza, R., & Desai, S. (2022). The role of institutions in latent and emergent entrepreneurship. *Technological Forecasting and Social Change*, *174*, 121263.

Bayramov, M. Power Market Reforms in New Independent Countries.

Baumol, W. J. (1993). Formal entrepreneurship theory in economics: Existence and bounds. *Journal of business venturing*, *8*(3), 197-210.

Balcerowicz, L. (1995). Socialism, capitalism, transformation. Central European University Press.

Balcerowicz, L. (1995). Various Roads to a Private Market Economy. In *Socialism, Capitalism, Transformation* (pp. 186-201).

Balfour, M., & Crise, C. (1993). A Privatization Test: The Czech Republic, Slovakia and Poland. *Fordham International Law Journal, 17*(1), 84.

Beck, T., & Demirgüç-Kunt, A. (2006). Small and Medium-Size Enterprises: Access to Finance as a Growth Constraint. *Journal of Banking & Finance*, 30(11), 2931-2943.

Beck, T., Demirguc-Kunt, A., & Levine, R. (2005). *SMEs, Growth, and Poverty: Cross-Country Evidence*.

Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of business venturing*, *29*(5), 585-609.

Boettke, P. J., & Coyne, C. J. (2009). Context matters: Institutions and entrepreneurship. *Foundations and Trends® in Entrepreneurship*, *5*(3), 135-209.

Bradley, S. W., & Klein, P. (2016). Institutions, economic freedom, and entrepreneurship: The contribution of management scholarship. *Academy of Management Perspectives*, *30*(3), 211-221.

Brown, J. D., Earle, J. S., & Telegdy, A. (2004). Does privatization raise productivity? Evidence from comprehensive panel data on manufacturing firms in Hungary, Romania, Russia, and Ukraine. *WE Upjohn Institute Staff Working Paper, 04*(107).

Brown, R., & Mason, C. (2017). Looking inside the spiky bits: A critical review and conceptualization of entrepreneurial ecosystems. *Small Business Economics, 49*(1), 11-30. https://doi.org/10.1007/s11187-017-9865-7

Brown, A. (2019). Tackling Nepotism in Georgia: Challenges and Strategies. Journal of Corruption Studies, 7(2), 145-163

Cao, Z., & Shi, X. (2021). A systematic literature review of entrepreneurial ecosystems in advanced and emerging economies. *Small Business Economics, 57*(1), 75-110. https://doi.org/10.1007/s11187-020-00326-y

Carree, M. A., & Thurik, A. R. (2010). The Impact of Entrepreneurship on Economic Growth. In Zoltan J. Acs & David B. Audretsch (Eds.), *Handbook of Entrepreneurship Research* (pp. 557-594). Springer.

Cavusgil, S. T., Knight, G., & Riesenberger, J. R. (2013). *International Business: The New Realities*.

Chatfield, C. (2003). The Analysis of Time Series: An Introduction. Chapman and Hall/CRC.

Chavance, B. (2008). *Institutional economics*. Routledge.

Chong, A., & Gradstein, M. (2007). Inequality and informality. *Journal of Public Economics, 91*(1-2), 159-179.

Coase, R. H. (1981). The Coase theorem and the empty core: a comment. *The Journal of Law and Economics*, *24*(1), 183-187.

Cornell, S. E. (2002). Autonomy and Conflict: Ethnoterritoriality and Separatism in the South Caucasus – Cases in Georgia. Uppsala University.

Cornell, S. E. (2015). *Azerbaijan since independence*. Routledge.

Curtis, G. E. (1995). Armenia, Azerbaijan, and Georgia. For sale by the Supt. of Docs., USGPO.

Davis, E. (2017). Nepotism in Azerbaijan: Patterns and Consequences. International Journal of Political Science, 25(4), 401-418.

De Soto, H., & Diaz, H. P. (2002). The mystery of capital. Why capitalism triumphs in the West and fails everywhere else. *Canadian Journal of Latin American and Caribbean Studies, 27*(53), 172.

De Clercq, D., Hessels, J., & Van Stel, A. (2008). Knowledge spillovers and new ventures' export orientation. *Small business economics*, *31*, 283-303.

Deloitte. (2021). *Ireland's Tax Strategy Group Report 2021*. Link.

Di Puppo, L. (2010). Anti-corruption interventions in Georgia. *Global Crime, 11*(2), 220-236.

Djugeli, E., & Chantladze, D. (1999). Georgia on its way to the market-oriented economy. *Russian & East European Finance and Trade, 35*(1), 32-67.

Engvall, J. (2012). *Against the grain: how Georgia fought corruption and what it means*. Central Asia-Caucasus Institute & Silk Road Studies Program.

Estrin, S., & Mickiewicz, T. (2011). Institutions and female entrepreneurship. *Small business economics*, *37*, 397-415.

Escandon-Barbosa, D., Urbano-Pulido, D., & Hurtado-Ayala, A. (2019). Exploring the relationship between formal and informal institutions, social capital, and entrepreneurial activity in developing and developed countries. *Sustainability, 11*(2), 550.

European Parliament (2023). *Resolution on the situation in Georgia and Russia's influence on its internal affairs*.

Fagerberg, J., Mowery, D. C., & Nelson, R. R. (2005). *The Oxford Handbook of Innovation*.

Feldman, M., Siegel, D. S., & Wright, M. (2019). New developments in innovation and entrepreneurial ecosystems. *Industrial and Corporate Change, 28*(4), 817-826.

Fischer, B., Meissner, D., Vonortas, N., & Guerrero, M. (2022). Spatial features of entrepreneurial ecosystems. *Journal of Business Research, 147*, 27-36. https://doi.org/10.1016/j.jbusres.2022.04.01

Fritsch, M., Greve, M., & Wyrwich, M. (2022). One transition story does not fit them all: Initial regional conditions and new business formation after communism. *Post-Communist Economies, 34*(8), 1001-1028. https://doi.org/10.1080/14631377.2021.1943

Fritsch, M., Obschonka, M., Wahl, F., & Wyrwich, M. (2021). Cultural imprinting: Ancient origins of entrepreneurship and innovation in Germany (Jena Economic Research Papers No. 012).

Fritsch, M., Obschonka, M., & Wyrwich, M. (2019). Historical roots of entrepreneurship-facilitating culture and innovation activity: An analysis for German regions. *Regional Studies, 53*(9), 1296-1307.

Gerlich, M. (2023). Devoid Elites and the Need for a New Elite Configuration. *Journal of Ethnic and Cultural Studies*, *10*(4), 13-42.

Glawe, L., & Wagner, H. (2022). *Institutional reforms and their impact on entrepreneurship: The case of Georgia*.

Güney, A. (2023). Geopolitical Shifts in the South Caucasus: The Role of Transportation Routes in Conflict Resolution. *Journal of Eurasian Studies*.

Green, M. (2021). Family Ties: The Role of Nepotism in Azerbaijan's Business Sector. Journal of Eurasian Studies, 12(3), 275-292.

Grindle, M. S. (2004). Good enough governance: poverty reduction and reform in developing countries. *Governance*, *17*(4), 525-548.

Gvalia, G., Lebanidze, B., & Iashvili, Z. (2019). Georgia's Incomplete Transition: How the Struggle for Power and Geopolitical Change Shapes Post-Soviet Georgia's Economy. *Caucasus Analytical Digest*.

Hall, P. A., & Soskice, D. (2001). An introduction to varieties of capitalism. In *Varieties of Capitalism* (pp. 21-27).

Hart, K. (1973). Informal income opportunities and urban employment in Ghana. *The Journal of Modern African Studies, 11*(1), 61-89.

Hart, K. (1985). The informal economy. *Cambridge Anthropology, 54*-58.

Hartog, C., Van Stel, A., & Storey, D. J. (2010). Institutions and entrepreneurship: The role of the rule of law. *EIM Scales paper H, 201003*, 591-629.

Hasanov, R. M. (2009). Social capital, civic engagement and the performance of local self-government in Azerbaijan. *Nationalities Papers*, *37*(1), 89-114.

Heinrich, A., & Meissner, H. (2011). The political system in Azerbaijan. *Caucasus Analytical Digest, 24.*

Helmke, G., & Levitsky, S. (2004). Informal Institutions and Comparative Politics: A Research Agenda. *Perspectives on Politics, 2*(4), 725-740.

Henn, S., & Schäfer, S. (2020). Wirtschaftsräumliche Struktur und Entwicklung Ostdeutschlands. Ein Überblick. In *Regionalentwicklung in Ostdeutschland: Dynamiken, Perspektiven und der Beitrag der Humangeographie* (pp. 85-98).

Iram, T., Bilal, A. R., & Ahmad, Z. (2023). Investigating the mediating role of financial literacy on the relationship between women entrepreneurs' behavioral biases and investment decision making. *Gadjah Mada International Journal of Business*, *25*(1), 93-118.

Ibrahimova, G., & Moog, P. (2023). Colonialism versus independence—the role of entrepreneurial ecosystems in Azerbaijan over time. *Small Business Economics, 1*-48. https://doi.org/10.1007/s11187-022-00725-3

Jawad, P. (2005). Democratic consolidation in Georgia after the "Rose Revolution"? Frankfurt: Peace Research Institute Frankfurt.

Jones, B (2013) *Georgia: A Political History Since Independence*. I.B. Tauris.

Jones, B. (2018). Nepotism and Its Impact on Public Administration in Georgia. Public Administration Review, 65(1), 82-97.

Johnson, D. L. (1997). *Presentations of groups* (No. 15). Cambridge university press.

Kapturkiewicz, A. (2022). Varieties of entrepreneurial ecosystems: A comparative study of Tokyo and Bangalore. *Research Policy, 51*(9), 104377.

Kallio, J. (2018). *The Impact of E-Government on Tax Compliance: Evidence from Finland*.

Kakachia, K., & Lebanidze, B. (2023). *Georgia's democratic backsliding: Between Russian influence and Euro-Atlantic aspirations*. Foreign Policy Research Institute.

Kalantaridis, C. (2007). Institutional change in post-socialist regimes: Public policy and beyond. *Journal of Economic Issues*, *41*(2), 435-442.

Kattel, R., & Mazzucato, M. (2018). Mission-oriented innovation policy and dynamic capabilities in the public sector. *Industrial and corporate change*, *27*(5), 787-801.

Kaufmann, D., & Kraay, A. (2002). *Governance Matters II: Updated Indicators for 2000–01*.

Knight, J. (1992). *Institutions and social conflict*. Cambridge University Press.

Knowles, S., & Weatherston, C. (2006). *Informal institutions and cross-country income differences* (No. 06/06). Credit Research Paper.

Korganashvili, L., Mammadova, N., Tsotskolauri, P., & Kochlamazashvili, L. (2017). Transformation of South Caucasus countries during 25 years of independence. *European Journal of Social Science Education and Research, 4*(4), 253-262.

Korosteleva, J., & Belitski, M. (2017). Entrepreneurial dynamics and higher education institutions in the post-Communist world. *Regional Studies, 51*(3), 439-453. https://doi.org/10.1080/00343404.2015.1103370

Kupatadze, A. (2008). Organized crime before and after the Tulip Revolution: The changing dynamics of upperworld-underworld networks. *Central Asian Survey, 27*(3-4), 279-299.

Lawrence, T. B., & Suddaby, R. (2006). 1.6 institutions and institutional work. In *The SAGE Handbook of Organization Studies* (pp. 215-254).

Leftwich, A., & Sen, K. (2010). Research in Progress.

Machavariani, S. (2007). Overcoming economic crime in Georgia through public service reform. In *Organized crime and corruption in Georgia* (pp. 37-49). Routledge.

Mahoney, J., & Thelen, K. (2010). Explaining Institutional Change: Ambiguity, Agency, and Power. Cambridge University Press.

Mair, J., & Marti, I. (2006). *Social entrepreneurship research: A source of explanation, prediction, and delight*. Journal of World Business, 41(1), 36-44. https://doi.org/10.1016/j.jwb.2005.09.002

McFaul, M. (1995). State power, institutional change, and the politics of privatization in Russia. *World Politics, 47*(2), 210-243.

Megginson, W. L., & Netter, J. M. (2001). From state to market: A survey of empirical studies on privatization. *Journal of Economic Literature, 39*(2), 321-389.

Mets, T., Sauka, A., & Purg, D. (2018). *Entrepreneurship in Central and Eastern Europe: Development through Internationalization*. Routledge.

Mets, T., Sauka, A., & Purg, D. (2018). *Entrepreneurship in Central and Eastern Europe Development through Internationalization*. Routledge.

Mickiewicz, T., Stephan, U., & Shami, M. (2021). The consequences of short-term institutional change in the rule of law for entrepreneurship. *Global Strategy Journal, 11*(3), 377-406. https://doi.org/10.1002/gsj.1374

Mickiewicz, T., & Zalata, A. M. (2021). When contextual risk shapes entrepreneurial intentions: A three-country study. *Journal of Business Research, 125*, 235-246. https://doi.org/10.1016/j.jbusres.2020.11.046

Mikayilov, J., & Sattarov, S. (2020). *The Impact of the Baku-Tbilisi-Kars Railway on Regional Connectivity*. *Journal of Transport and Land Use*.

Mitchell, S. D. (2009). *Unsimple truths: Science, complexity, and policy*. University of Chicago Press.

Mroczkowski, T., & Hanaoka, M. (2010). Effective innovation policies for development: The case of Poland's technology parks. *Research-Technology Management, 53*(5), 19-27. https://doi.org/10.1080/08956308.2010.11657645

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.

North, D. C. (1991). Institutions, ideology, and economic performance. *Cato J.*, *11*, 477.

Niftiyev, I. (2022). International spillovers of social challenges as a result of sanctions against Russia: An evaluation of the Azerbaijani case. In *Proceedings book* (pp. 377-388). Kyrenia: Cyprus Science University.

Nunn, N. (2009). The importance of history for economic development. *Annual Review of Economics, 1*(1), 65-92.

O'Connor, A., Stam, E., Sussan, F., & Audretsch, D. B. (Eds.). (2018). *Entrepreneurial Ecosystems: Place-based Transformations and Transitions*. Springer International Publishing.

OECD (2008). Handbook on Constructing Composite Indicators: Methodology and User Guide. OECD Publishing.

Orkodashvili, M. (2009). Corruption in Higher Education: Causes, Consequences, Reforms. The Case of Georgia. *Online Submission*.

Pau, A., Sauka, A., & Grigorian, D. A. (2020). *Persistence of Informal Institutions in Transitional Societies: Evidence from the Former Soviet Union*. Journal of Institutional Economics.

Ragin, C. C. (2014). *The comparative method: Moving beyond qualitative and quantitative strategies*. University of California Press.

Rahmanov, R., Qasimov, A., & Tahirova, G. (2016). The labor market in Azerbaijan.

Ries, C. P., & Toubia, S. (2020). The impact of institutional reform on entrepreneurial activity: Evidence from a quasi-natural experiment. *Strategic Management Journal, 41*(9), 1689-1706. https://doi.org/10.1002/smj.3168

Rodrik, D. (2008). One economics, many recipes: Globalization, institutions, and economic growth. Princeton University Press.

Ruskovaara, E., & Pihkala, T. (2013). *Entrepreneurship Education in the Finnish National Curriculum: An Analysis of the Benefits and Challenges*. *Journal of Edu5cation and Learning*.

Sader, F. (1993). Privatization and foreign investment in the developing world. *World bank working paper*, *1202*.

Saunoris, J. W., & Sajny, A. L. (2017). Entrepreneurship and economic freedom: Cross-country evidence from formal and informal sectors. *Entrepreneurship Theory and Practice, 41*(6), 1224-1248. https://doi.org/10.1111/etap.12248

Sauka, A. (2020). *Informal Institutions and Their Impact on Economic Development*.

Schneider, F., & Williams, C. C. (2013). *The shadow economy*. Institute of Economic Affairs.

Schneider, F. (2015). *The Shadow Economy: An International Survey*. *The International Economic Journal*, 29(3), 383-402.

Schneider, F. (2017). *Shadow economies around the world: New estimates for 158 countries over 1991-2015*. International Monetary Fund

Stefes, C. H. (2006). *Understanding post-Soviet transitions: Corruption, collusion and clientelism*. Springer.

Sutela, P. (1994). Insider privatisation in Russia: speculations on systemic change. *Europe-Asia Studies*, *46*(3), 417-435.baz

Medina, L., & Schneider, F. (2018). *Shadow economies around the world: What did we learn over the last 20 years?* IMF Working Paper WP/18/17. International Monetary Fund

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge university press.

Papava, V. (2013). *Post-Soviet Georgia's Economic Transition: Reforms, International Assistance, and Development. Journal of Eurasian Studies.*

Paldam, M. (2002). The Big Pattern of Corruption: Economics, Culture and the Seesaw Dynamics.

Smallbone, D., Welter, F., & Ateljevic, J. (2014). Entrepreneurship in emerging market economies: Contemporary issues and perspectives. International Journal of Entrepreneurship and Innovation Management, 18*(1), 7-24. https*://doi.org/10.1504/IJEIM.2014.064488

Stam, E. (2015). Entrepreneurial ecosystems and regional policy: A sympathetic critique. *European Planning Studies, 23*(9), 1759-1769. https://doi.org/10.1080/09654313.2015.1061484

Stam, E., & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small business economics*, *56*(2), 809-832.

Smith, J. (2015). Nepotism in Post-Soviet Societies: Comparative Analysis. Cambridge University Press.

Sobel, R. S. (2008). Testing Baumol: Institutional quality and the productivity of entrepreneurship. *Journal of Business Venturing*, *23*(6), 641-655.

Stel, A. V., Carree, M., & Thurik, R. (2005). The effect of entrepreneurial activity on national economic growth. *Small Business Economics, 24*(3), 311-321. https://doi.org/10.1007/s11187-005-1996-6

Stephan, U. (2020). CULTURE AND ENTREPRENEURSHIP. *The Psychology of Entrepreneurship: New Perspectives*.

Tanzi, V., & Zee, H. H. (2000). Tax Policy for Emerging Markets: Developing Countries. *National Tax Journal*, 53(2), 299-322.

Treisman, D. (2000). Decentralization and inflation: commitment, collective action, or continuity?. *American Political Science Review*, *94*(4), 837-857.

Veen, S. (2020). *Financial Inclusion and Microfinance in the South Caucasus: Challenges and Opportunities*. Caucasus Analytical Digest.

Urbano, D., Aparicio, S., & Audretsch, D. (2019). Twenty-five years of research on institutions, entrepreneurship, and economic growth: What has been learned? *Small Business Economics, 53*(1), 21-49. https://doi.org/10.1007/s11187-018-0038-0

Welter, F. (2011). Contextualizing entrepreneurship—Conceptual challenges and ways forward. *Entrepreneurship Theory and Practice, 35*(1), 165-184. https://doi.org/10.1111/j.1540-6520.2010.00427.x

Williams, C. C. (2014). Explaining cross-national variations in the prevalence of envelope wages: Some lessons from a 2013 Eurobarometer survey. *Industrial Relations Journal, 45*(6), 524-543. https://doi.org/10.1111/irj.12084

Williams, C. C. (2017). Developing a holistic approach for measuring entrepreneurship in the informal economy: A multiple indicator multiple causes (MIMIC) approach. *International Journal of Entrepreneurial Behavior & Research, 23*(6), 1060-1081. https://doi.org/10.1108/IJEBR-05-2016-0140

Williamson, O. E. (2000). The new institutional economics: taking stock, looking ahead. *Journal of economic literature*, *38*(3), 595-613.

World Bank (2016). *Georgia's Privatization Process: Achievements and Challenges*.

World Bank. (2020). *Georgia - Financial Sector Assessment*. Washington, DC: World Bank Group.

World Economic Forum. (2018). *The Global Competitiveness Report 2018*. Retrieved from World Economic Forum

Wright, M., & Zahra, S. A. (2011). The other side of paradise: Examining the dark side of entrepreneurship. *Entrepreneurship Theory and Practice, 35*(1), 1-10. https://doi.org/10.1111/j.1540-6520.2010.00418.x

Zahra, S. A., & Wright, M. (2011). *Entrepreneurship's Next Act*.

Official Documents and Links

1. European External Action Service. (2023). European Union and Georgia. https://www.eeas.europa.eu/georgia/european-union-and-georgia_en?s=221
2. European External Action Service. (2022) European Union and Azerbaijan. Retrieved from https://www.eeas.europa.eu/azerbaijan/european-union-and-azerbaijan_en?s=217
3. OEC Georgia. (2022) https://oec.world/en/profile/country/geo
4. OEC. Azerbaijan. (2022) https://oec.world/en/profile/country/aze
5. Georgia and the WTO. https://www.wto.org/english/thewto_e/countries_e/georgia_e.htm
6. Azerbaijan and the WTO. https://www.wto.org/english/thewto_e/acc_e/a1_azerbaidjan_e.htm
7. Organization of the Black Sea Economic Cooperation (BSEC). Member states. http://www.bsec-organization.org/member-states
8. The State Statistical Committee of the Republic of Azerbaijan. Entrepreneurship statistics. https://www.stat.gov.az/source/entrepreneurship/
9. National Statistics Office of Georgia. Statistics. https://www.geostat.ge/en/single-archive/3364
10. World Bank. Worldwide Governance Indicators. https://databank.worldbank.org/source/worldwide-governance-indicators#
11. Startup Blink. Azerbaijan startup ecosystem. (2024) https://www.startupblink.com/startup-ecosystem/azerbaijan
12. Startup Blink. Georgia startup ecosystem. (2024) https://www.startupblink.com/startup-ecosystem/georgia
13. OECD economic outlook (2020) https://www.oecd-ilibrary.org/sites/8b45614b-en/index.html?itemId=/content/publication/8b45614b-en
14. OECD. Anti-corruption reforms in Georgia. https://www.oecd.org/corruption/anti-corruption-reforms-in-georgia.htm
15. Transparency International. Overview of corruption and anti-corruption in Azerbaijan. (2013) https://knowledgehub.transparency.org/helpdesk/overview-of-corruption-and-anti-corruption-in-azerbaijan
16. OECD. Azerbaijan: Anti-corruption reforms. https://www.oecd.org/corruption/acn/Azerbaijan_Report.pdf
17. World Bank. Georgia overview. (2023) https://www.worldbank.org/en/country/georgia/overview#:~:text=Economic%20Outlook,economic%20growth%2C%20while%20remaining%20prudent
18. Ministry of Finance of Georgia. (2018). Georgia: The outlook. https://www.mof.ge/images/File/Georgia-The%20Outlook_ENG_Jan-2018.pdf

19. U.S. Department of Commerce. Azerbaijan market overview. (2023)https://www.trade.gov/country-commercial-guides/azerbaijan-market-overview
20. Legislative Herald of Georgia. Law of Georgia on entrepreneurs. https://matsne.gov.ge/en/document/view/30346?publication=36
21. Constitution of Azerbaijan. https://president.az/en/pages/view/azerbaijan/constitution
22. World Bank. Fostering Entrepreneurship in Azerbaijan (2020) https://openknowledge.worldbank.org/entities/publication/a704250c-8ccf-5b9e-a916-e985ab085f38
23. United Nations Development Program (UNDP). Georgia Human Development Index .(2022) https://www.undp.org/georgia/press-releases/georgia-human-development-index
24. PB Services. Company registration in Georgia. https://pbservices.ge/services/company-registration-georgia/?utm_source=google&utm_medium=cpc&utm_campaign=s_europe_asia_middle_east_new&utm_content=137738090776&utm_term=open%20a%20company%20in%20georgia&gad_source=1&gclid=Cj0KCQiA1rSsBhDHARIsANB4EJYdmUHOTzlKFlFcVDNZvJSQam05VWHAAqLFJiOaUhQOH8jPJGlLvFkaAle4EALw_wcB
25. GITA. Georgia's innovation and technology agency. https://gita.gov.ge/en
26. Ministry of Economy and Sustainable Development of Georgia. (2017). SME development strategy. https://www.economy.ge/uploads/files/2017/ek__politika/eng_sme_development_strategy.pdf
27. OECD. Monitoring Georgia's SME development strategy 2016-2020. https://www.oecd.org/eurasia/competitiveness-programme/eastern-partners/Monitoring-Georgia's-SME-Development-Strategy-2016-2020.pdf
28. Monitoring.az. Annual report. (2020) https://monitoring.az/assets/upload/files/bed888a5b848498a2d5856bbf1ee9074.pdf
29. Azerbaijan Republic Law on state registration and state registry of legal entities. https://azranking.az/public/images/Qanunvericilik/Qanunlar/Law%20on%20state%20registration%20and%20state%20registry%20of%20legal%20entities%20of%20Azerbaijan%20Republic.pdf
30. Azerbaijan Government portal https://azerbaijan.az/en/related-information/139
31. ABAD. Official website. https://abad.gov.az/
32. Small and Medium Business Development Agency of Azerbaijan. Official website. www.smb.gov.az
33. AZPROMO. Azerbaijan Export and Investment Promotion Foundation. https://azpromo.az/az

34. ICT fund of Azerbaijan http://www.ictfund.gov.az/
35. National Statistics Office of Georgia. Gross Domestic Product of Georgia - I Quarter, 2023. https://www.geostat.ge/media/54414/Gross-Domestic-Product-of-Georgia---I-Quarter%2C-2023.pdf#:~:text=URL%3A%20https%3A%2F%2Fwww.geostat.ge%2Fmedia%2F54414%2FGross
36. OECD SME and entrepreneurship outlook. (2023) https://www.oecd.org/publications/oecd-sme-and-entrepreneurship-outlook-8d707502-en.htm
37. World Population Review. WTO countries (2024) https://worldpopulationreview.com/country-rankings/wto-countries
38. European Commission. EU-Georgia deep and comprehensive free trade area (2016). https://trade.ec.europa.eu/access-to-markets/en/content/eu-georgia-deep-and-comprehensive-free-trade-area
39. Food and Agriculture Organization (FAO). Official website https://www.fao.org/home/en/
40. Enterprise Georgia. Invest in Georgia. https://www.investingeorgia.org/
41. Ministry of Economy and Sustainable Development of Georgia. Official website https://www.economy.ge/
42. Gallup Analytics (2023) https://www.gallup.com/analytics/213617/gallup-analytics.aspx
43. OECD SME and entrepreneurship outlook.(2023) www.oecd.org/publications/oecd-sme-and-entrepreneurship-outlook-8d707502-en.htm
44. U.S. Department of Commerce. Azerbaijan market overview. (2020) www.trade.gov/country-commercial-guides/azerbaijan
45. SOCAR. Official website. www.socar.az/socar/en
46. Oxford Business Group. (2023). Azerbaijan 2023. https://oxfordbusinessgroup.com/azerbaijan-2023
47. Ministry of Economy of the Republic of Azerbaijan. Official website. https://www.economy.gov.az/en
48. FAO Azerbaijan. https://www.fao.org/azerbaijan
49. Azerbaijan.travel. Official website. https://www.azerbaijan.travel/en
50. CSIS. Russia's hybrid aggression against Georgia: Use of local and external tools. (2021) https://www.csis.org/analysis/russias-hybrid-aggression-against-georgia-use-local-and-external-tools
51. Congressional Research Service. (2018). Georgia: The outlook. https://sgp.fas.org/crs/row/R45307.pdf#:~:text=URL%3A%20https%3A%2F%2Fsgp.fas.org%2Fcrs%2Frow%2FR45307.pdf%0AVisible%3A%200%25%20
52. Enterprise Surveys. Official website (2021). https://www.enterprisesurveys.org/en/enterprisesurveys

53. World Bank (2016) Georgia snapshot. https://www.worldbank.org/content/dam/Worldbank/document/Georgia-Snapshot.pdf
54. Enterprise Georgia. Official website www.enterprisegeorgia.gov.ge
55. World Bank. IFC in Georgia (2011). https://documents.worldbank.org/en/publication/documents-reports/documentdetail/816471468249285841/ifc-in-georgia
56. Asian Development Bank. Georgia project (2023). https://www.adb.org/projects/36200-023/main
57. EIB. (2022). CESEE bank lending survey H1 (2022). https://www.eib.org/en/publications/cesee-bls-2022-h1
58. Azerbaijan Deposit Insurance Fund (ADIF). Official website www.adif.gov.az
59. CRA Official website www.cra.gov.ge
60. International Monetary Fund. (2021). Azerbaijan: 2021 article IV consultation-Press release; staff report; and statement by the executive director for Azerbaijan. https://www.imf.org/en/Publications/CR/Issues/2021/03/03/Azerbaijan-2021-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-50129
61. Medina, L., & Schneider, F. (2018). *Shadow economies around the world: What did we learn over the last 20 years?* IMF Working Paper WP/18/17. International Monetary Fund. https://www.imf.org/en/Publications/WP/Issues/2018/01/25/Shadow-Economies-Around-the-World-What-Did-We-Learn-Over-the-Last-20-Years-45583
62. Schneider, F. (2017). Shadow economies around the world: New estimates for 158 countries over 1991-2015. https://www.imf.org/en/Publications/WP/Issues/2018/01/25/Shadow-Economies-Around-the-World-What-Did-We-Learn-Over-the-Last-20-Years-45583
63. World Bank. (2022). Georgia economic update: From recovery to resilience. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099550011232231371/georgia-economic-update-from-recovery-to-resilience
64. International Monetary Fund. (2019). Georgia: 2019 article IV consultation-Press release; staff report; and statement by the executive director for Georgia. https://www.imf.org/en/Publications/CR/Issues/2019/03/01/Georgia-2019-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-Executive-46636
65. International Monetary Fund. (2020). Azerbaijan: 2020 article IV consultation-Press release; staff report; and statement by the executive director for Azerbaijan. https://www.imf.org/en/Publications/CR/Issues/2020/03/01/Azerbaijan-2020-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-Executive-50145

66. International Monetary Fund. (2021). Georgia: 2021 article IV consultation-Press release; staff report; and statement by the executive director for Georgia. https://www.imf.org/en/Publications/CR/Issues/2021/03/01/Georgia-2021-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-Executive-50146
67. World Bank. (2019). Azerbaijan economic update: Enhancing economic diversification. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099550011232231371/azerbaijan-economic-update-enhancing-economic-diversification
68. World Bank. (2020). Georgia economic update: Building resilience in uncertain times. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099550011232231372/georgia-economic-update-building-resilience-in-uncertain-times
69. World Bank. (2021). Doing Business 2021: Azerbaijan. https://www.doingbusiness.org/en/data/exploreeconomies/azerbaijan
70. World Bank. (2022). Georgia economic update: From recovery to resilience. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099550011232231373/georgia-economic-update-from-recovery-to-resilience

Appendix

Part A

Table A.1 – List of countries

N	Country	Economic Development Phase:
1 Group		
1	Bulgaria	Efficiency-driven
2	Chile	Efficiency-driven
3	Croatia	Efficiency-driven
4	Georgia	Efficiency-driven
5	Hungary	Efficiency-driven
6	Latvia	Efficiency-driven
7	Malaysia	Efficiency-driven
8	Poland	Efficiency-driven
9	Slovakia	Efficiency-driven
10	South Africa	Efficiency-driven
11	Uruguay	Efficiency-driven
2 Group		
1	Austria	Innovation-driven
2	Finland	Innovation-driven
3	Germany	Innovation-driven
4	Italy	Innovation-driven
5	Korea	Innovation-driven
6	Netherlands	Innovation-driven
7	Portugal	Innovation-driven
8	Slovenia	Innovation-driven
9	Spain	Innovation-driven
10	Switzerland	Innovation-driven
11	Taiwan	Innovation-driven

Part B – Empirical Results

Table B.1 – Correlation matrix, Efficiency-driven countries

		1	2	3	4
1	TEA rate	1.000			
2	Control of corruption	0.749**	1.000		
		0.008			
3	Rule of law	0.819**	0.665*	1.000	
		0.002	0.256		
4	Regulatory quality	0.615*	0.370	0.672*	1.000
		0.044	0.262	0.024	
		5	2	3	4
5	EBO rate	1.000			
2	Control of corruption	0.537	1.000		
		0.089			
3	Rule of law	0.571	0.665*	1.000	
		0.0665	0.256		
4	Regulatory quality	0.801**	0.370	0.672*	1.000
		0.0030	0.262	0.024	

Note: * $p < 0.05$, ** $p < 0.01$

Table B.2 – Correlation matrix, Innovation-driven countries

		1	2	3	4
1	TEA rate	1.000			
2	Control of corruption	0.480	1.000		
		0.135			
3	Rule of law	0.567	0.905*	1.000	
		0.069	0.0001		
4	Regulatory quality	0.307	0.831*	0.828*	1.000
		0.358	0.002	0.002	
		5	2	3	4
5	EBO rate	1.000			
2	Control of corruption	0.729*	1.000		
		0.011			
3	Rule of law	0.761**	0.905**	1.000	
		0.007	0.0001		
4	Regulatory quality	0.725*	0.831**	0.828**	1.000
		0.012	0.002	0.002	

Note: * $p < 0.05$, ** $p < 0.01$

Table B.3 – The series of simple OLS regressions in the sample of **efficiency-driven countries**

	(1)	(2)	(3)	(4)	(5)	(6)
	Model 1 TEA rate	Model 2 TEA rate	Model 3 TEA rate	Model 4 EBO rate	Model 5 EBO rate	Model 6 EBO rate
Control of corruption	0.373**			0.0991**		
	(0.137)			(0.0377)		
Rule of law		0.488***			0.126*	
		(0.144)			(0.0645)	
Regulatory quality			0.416*			0.201***
			(0.211)			(0.0507)
Constant	-14.98	-23.61**	-21.09	-0.384	-2.424	-8.836**
	(8.377)	(9.628)	(15.53)	(2.845)	(4.801)	(3.866)
R^2	0.560	0.671	0.378	0.288	0.326	0.642
Observations	11	11	11	11	11	11

Note: Robust standard errors are shown in parentheses.
*** p<0.01,
** p<0.05,
* p<0.1

Table B.4 – The series of simple OLS regressions in the sample of **innovation-driven countries**

	(7)	(8)	(9)	(10)	(11)	(12)
	Model 7 TEA rate	Model 8 TEA rate	Model 9 TEA rate	Model 10 EBO rate	Model 11 EBO rate	Model 12 EBO rate
Control of corruption	0.0737			0.0948**		
	(0.0439)			(0.0317)		
Rule of law		0.109**			0.124***	
		(0.0381)			(0.0371)	
Regulatory quality			0.0654			0.131**
			(0.0722)			(0.0458)
Constant	1.267	-2.184	1.654	-0.190	-3.225	-3.754
	(3.296)	(3.012)	(6.164)	(2.271)	(3.020)	(3.792)
R^2	0.231	0.321	0.094	0.531	0.579	0.525
Observations	11	11	11	11	11	11

Note: Robust standard errors are shown in parentheses.

*** p<0.01,
** p<0.05,
* p<0.1

Table B.5 – Regression results for innovation-driven countries, where y is the EBO rate

Innovation-driven countries

a Where the independent variable is the control of corruption

Source	SS	df	MS	Number of obs	=	11
				F(1, 9)	=	10.21
Model	16.3046756	1	16.3046756	Prob > F	=	0.0109
Residual	14.3771426	9	1.59746029	R-squared	=	0.5314
				Adj R-squared	=	0.4793
Total	30.6818182	10	3.06818182	Root MSE	=	1.2639

Establishedbusine~r	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Controlofcorruption	.0947866	.0296692	3.19	0.011	.0276702	.161902
_cons	-.1902057	2.47645	-0.08	0.940	-5.792324	5.41191

b where the independent variable is the rule of law

Source	SS	df	MS	Number of obs	=	11
				F(1, 9)	=	12.40
Model	17.7775562	1	17.7775562	Prob > F	=	0.0065
Residual	12.904262	9	1.43380689	R-squared	=	0.5794
				Adj R-squared	=	0.5327
Total	30.6818182	10	3.06818182	Root MSE	=	1.1974

Establishe~r	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Ruleoflaw	.1239574	.0352032	3.52	0.007	.0443223	.2035925
_cons	-3.224523	3.102921	-1.04	0.326	-10.24382	3.794772

c where the independent variable is regulatory quality

Source	SS	df	MS	Number of obs	=	11
				F(1, 9)	=	9.94
Model	16.1042466	1	16.1042466	Prob > F	=	0.0117
Residual	14.5775716	9	1.61973018	R-squared	=	0.5249
				Adj R-squared	=	0.4721
Total	30.6818182	10	3.06818182	Root MSE	=	1.2727

Establishedbusi~r	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Regulatoryquality	.1307288	.0414594	3.15	0.012	.0369413	.2245164
_cons	-3.754336	3.629904	-1.03	0.328	-11.96575	4.457077

Table B.6 - The coefficients of correlation

Relationship	**(r) Efficiency-driven countries**	**(r) Innovation-driven countries**
TEA rate and the control of corruption	0.749	0.480
TEA rate and the rule of law	0.819	0.567
TEA rate and regulatory quality	0.615	0.307
EBO rate and the control of corruption	0.537	0.729
EBO rate and the rule of law	0.571	0.761
EBO rate and regulatory quality	0.802	0.725

Authors' calculation based on the GEM and WGI