İSLAM ÜLKELERİNDE EKONOMİK ÖZGÜRLÜĞÜN GİRİŞİMCİLİK ÜZERİNDEKİ ETKİSİ

THE EFFECT OF ECONOMIC FREEDOM ON ENTREPRENEURSHIP IN ISLAMIC COUNTRIES

Gökhan ÖZKUL[1]

1. Dr. Öğr. Üyesi, Süleyman Demirel Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, Finans ve Bankacılık Bölümü, gokhanozkul@sdu.edu.tr, https://orcid.org/0000-0001-7545-8292

Abstract

The level of economic freedom which is expressed as institutions and policies based on market economy is one of the most significant indicators of entrepreneurial activities since the increase in economic freedom has caused a decrease in transaction costs preventing the entrepreneurial activity. The aim of this study is to analyze the effect of economic freedom on entrepreneurship in Islamic countries by using the data belonging to years between 1995 and 2019. In the study, self-employment rate has been used as entrepreneurial criterion; gross domestic product per capita, money supply, import and inflation have been used as the indicators of the entrepreneurship; economic freedom index presented by The Heritage Foundation and its 9 subcomponents out of 12 (property rights, government integrity, government spending, tax burden, business freedom, monetary freedom, trade freedom, investment freedom and financial freedom) have been used as the economic freedom criterion. According to the findings of this study, entrepreneurship has been affected positively by economic freedom and property rights, government integrity, government spending, monetary freedom, investment freedom and financial freedom and negatively by tax burden and trade freedom.

Keywords: Economic Freedom, Entrepreneurship, Self-Employment, İslamic Countries, Panel Data Analysis

Öz

Piyasa ekonomisi odaklı kurum ve politikalar olarak ifade edilen ekonomik özgürlük, girişimcilik aktivitelerinin en önemli belirleyicilerinden biridir. Çünkü ekonomik özgürlük seviyesindeki artışlar, girişimcilik aktivitesini engelleyen işlem maliyetlerinin azalmasına neden olmaktadır. Bu bağlamda çalışmanın amacı 1995-2019 yıllarına ait verileri kullanarak İslam ülkelerinde ekonomik özgürlüğün girişimcilik aktiviteleri üzerindeki etkisini incelemektir. Çalışmada girişimciliğin ölçütü olarak serbest çalışma oranı; girişimciliğin belirleyicileri olarak kişi başına GSYH, para arzı, ithalat ve enflasyon; ekonomik özgürlüğün ölçütü olarak Miras Vakfı tarafından sunulan ekonomik özgürlük endeksi ve bu endeksin ölçümünde kullanılan 12 alt bileşenden 9 tanesi (mülkiyet hakları, hükümetin dürüstlüğü, devlet harcamaları, vergi yükü, iş özgürlüğü, parasal özgürlük, ticaret özgürlüğü, yatırım özgürlüğü ve finansal özgürlük) kullanılmıştır. Araştırma bulgularına göre ekonomik özgürlük ile alt bileşenlerinden mülkiyet hakları, hükümetin dürüstlüğü, devlet harcamaları, parasal özgürlük, yatırım özgürlüğü ve finansal özgürlüğün girişimciliği pozitif; vergi yükü ve ticaret özgürlüğünün ise negatif etkilediği bulunmuştur.

Keywords: Ekonomik Özgürlük, Girişimcilik, Serbest Meslek Sahipliği, İslam Ülkeleri, Panel Veri Analizi

GENİŞLETİLMİŞ ÖZET

Çalışmanın Amacı

Günümüzde ekonomik büyümenin itici güçlerinden biri girişimcilik aktiviteleridir. Bir ülkenin girişimcilik aktivite seviyesi ise sahip olduğu kurumsal çevrenin kalitesinden oldukça etkilenmektedir. Bu anlamda kurumsal çevre, bir toplumun ekonomik özgürlük seviyesini göstermektedir. Ekonomik açıdan özgür bir toplumda, girişimsel aktivite seviyesi yükselmekte bu ise ekonomik büyümeyi desteklemektedir. Dolayısıyla çalışmanın amacı İslam ülkelerinde ekonomik özgürlüğün girişimcilik üzerindeki etkisini 1995-2019 dönemi yıllık verileri kullanarak panel veri analizi yöntemiyle incelemektir.

Araştırma Soruları

Araştırmada İslam ülkelerinde ekonomik özgürlük, girişimciliği etkilemekte midir sorusunun cevabı aranmaktadır. Bu çerçevede ekonomik özgürlük endeksi ile bu endeksin ölçümünde kullanılan mülkiyet hakları, hükümetin dürüstlüğü, devlet harcamaları, vergi yükü, iş özgürlüğü, parasal özgürlük, ticaret özgürlüğü, yatırım özgürlüğü ve finansal özgürlüğün İslam ülkelerinin girişimcilik aktiviteleri üzerindeki etkisi incelenmektedir. Dolayısıyla araştırmada İslam ülkelerinde girişimciliğin belirleyicilerinin neler olduğu ortaya konmaya çalışılmaktadır.

Literatür Araştırması

Girişimcilerin etkileşimde bulunduğu kurumsal çevre, girişimcilerin ekonomik büyümeye ve zenginlik yaratmaya sağlamış olduğu katkıyı belirleyen en temel unsurlardan biridir. Çünkü kurumsal çevre, bir ekonomi içinde iktisadi birimlerin karşılaştığı teşvik ve ödül yapısını belirlemektedir. Güvenli mülkiyet hakları, adil ve dengeli bir yargı sistemi, sözleşmelerin etkin bir şekilde uygulanması gibi düzenlemelere sahip ülkelerde bireylerin girişimci olma olasılığı daha yüksektir. Bu çerçevede literatürde kurumların kalitesini ölçmede kullanılan kavramlardan en önemlisi ekonomik özgürlük kavramıdır. Miras Vakfı (2020)'na göre ekonomik özgürlük, her insanın kendi emeğini ve mülkünü kontrol etme temel hakkıdır. Ekonomik açıdan özgür bir toplumda bireyler; istedikleri şekilde çalışmak, üretmek, tüketmek ve yatırım yapmakta özgürdür. Ekonomik olarak özgür toplumlarda hükümetler; emeğin, sermayenin ve malların özgürce hareket etmesine izin verir ve özgürlüğü korumak ve sürdürmek için gerekli olan kapsamın ötesinde özgürlüğü zorlamaktan veya kısıtlamaktan kaçınır. Dolayısıyla girişimciliğin ekonomik büyümeyi sağlamada başarılı olabilmesi, ülkelerin sahip olduğu ekonomik özgürlük seviyesine bağlıdır. Literatürde ekonomik özgürlük ile girişimcilik arasındaki ilişkiyi farklı yöntemler ve farklı ülke gruplarını kullanarak ele alan birçok çalışma söz konusudur. Bu çalışmaların çoğunda ekonomik özgürlük seviyesindeki artışın girişimciliği pozitif yönde etkilediği bulunmuştur. Bununla birlikte bu ilişki incelenirken genellikle gelişmiş ülkelere veya OECD ülkelerine odaklanıldığı görülmektedir. Bu anlamda literatürde İslam ülkeleri üzerine yapılan herhangi bir çalışmaya rastlanmamıştır. Dolayısıyla çalışmanın literatürdeki diğer çalışmalardan en büyük farkı İslam ülkeleri üzerine kurgulanmasıdır.

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

Yöntem

Çalışmanın temel amacı çerçevesinde araştırmada, zaman serisi verileri ve yatay kesit serilerinin aynı anda kullanımına imkân sağlayan panel veri analiz yöntemi kullanılmıştır. Bu bağlamda araştırmada öncelikle rassal veya sabit etkiler panel veri tahmincisinden hangisinin tercih edilmesi gerektiğine ilişkin Hausman testi yapılmıştır. Hausman testinin sonucuna göre sabit etkiler tahmincisinin daha uygun olduğu görülmüştür. Ayrıca değişen varyans ve otokorelasyon problemlerinin olup olmadığını belirlemek için modifiye edilmiş Wald ve Wooldridge testleri yapılmıştır. Buna göre hem otokorelasyon hem de değişen varyans sorunu bulunduğu görülmüştür. Değişen varyans ve otokorelasyon sorunlarını çözebilmek için ise doğrusal dinamik panel veri modeli kullanılmıştır.

Sonuç ve Değerlendirme

Araştırma bulgularına göre İslam ülkelerinde ekonomik özgürlüğün girişimcilik üzerinde pozitif bir etkisi olduğu bulunmuştur. Bir diğer ifadeyle İslam ülkelerinde ekonomik özgürlük seviyesi yükseldikçe girişimcilik seviyesi de yükselmektedir. Ekonomik özgürlüğün alt bileşenlerinin girişimcilik üzerindeki etkisine bakıldığında iş özgürlüğü değişkeni dışındaki bütün değişkenlerin girişimcilik üzerindeki etkisi anlamlıdır. Bu çerçevede mülkiyet hakları, hükümetin dürüstlüğü, devlet harcamaları, parasal özgürlük, yatırım özgürlüğü ve finansal özgürlük değişkenlerinin girişimcilik üzerindeki etkisi pozitiftir. Bu değişkenler içinde girişimcilik üzerindeki en büyük etkiyi ise mülkiyet hakları değişkeni yaratmaktadır. Bir diğer ifadeyle iyi korunan mülkiyet hakları, insanların girişimcilik ve inovasyon aktivitelerine yönelmelerini sağlayarak girişimciliği desteklemektedir. Diğer yandan ekonomik özgürlüğün alt bileşenlerinden vergi yükü ve ticaret özgürlüğü değişkenlerinin girişimcilik üzerindeki etkisi beklenenin aksine negatiftir. Bu bağlamda, girişimcilik ve serbest meslek, vergilerden kaçınma stratejisi olarak kullanılabilir. Çünkü serbest meslek, gelirleri gizlemek için daha fazla esneklik sunduğundan, ücretlere uygulanan daha yüksek vergiler insanları, kendi işini yapmaya teşvik edebilir. Ticaret özgürlüğü ise girişimciler açısından yeni fırsatlar yaratarak pazar potansiyellerinin arttırmasını sağlamakla birlikte özellikle az gelişmiş ve gelişmekte olan ülkelerde rekabet gücü düşük firmaların uluslararası sermayeyi arkasına almış büyük firmalarla rekabet etmesine neden olmaktadır. Bu rekabet yarışını ise finansal açıdan zayıf olan yerli girişimler sürdüremeyeceğinden ticaret özgürlüğü, çoğunluğu az gelişmiş ve gelişmekte olan ülkelerden oluşan İslam ülkelerinde girişimcilik aktivitelerini olumsuz etkileyebilir. Sonuç olarak İslam ülkelerinde ekonomik özgürlük ve alt bileşenlerinin girişimcilik üzerinde oldukça önemli bir etkisi vardır. Dolayısıyla İslam ülkelerinde politika yapıcıların ekonomik özgürlük seviyesini yükseltici yönde atacağı adımlar ve yapacağı düzenlemeler girişimciliği olumlu yönde etkileyecektir. Girişimcilik seviyesinde meydana gelen artışlar ise ekonomik büyümeyi ve gelişmeyi tetikleyecektir.

1. INTRODUCTION

Whether it is formal or informal, the entrepreneurship is one of the most outstanding impetus shaping economic variances. A number of studies have emphasized that entrepreneurship encourages the innovation and improvement, increases the employment, provides more fair income distribution and accelerates the economic growth (Baumol 1990; Audretsch & Thurik, 2000; Audretsch, Carree, & Thurik, 2001; van Stel, Carree, & Thurik, 2005; Wong, Ho, & Autio, 2005; Martin, Picazo, & Navarro, 2010; Acs, Audretsch, Braunerhjelm, & Carlsson, 2012; Naudé, 2013; Bosma, Sanders, & Stam, 2018; Farinha, Ferreira, & Nunes, 2018). This has resulted that policymakers try to find new ways increasing the entrepreneurial level all over the world. The benefits that entrepreneurship provides has been shaped according to institutional environment. Therefore, the role of institutional effects on entrepreneurial level in societies and economies has attracted the economists' and politicians' attention (Kuckertz, Berger, & Mpeqa, 2016: 1288; Angulo-Guerrero, Pérez-Moreno, & Abad-Guerrero, 2017: 30). Entrepreneurs avoid taking new projects or direct their energies to inefficient projects where the institutions are weak (Aidis, Estrin, & Mickiewicz, 2012: 119).

In an enterprising society, institutions lead their entrepreneurship ability to productive entrepreneurship (Bosma et el., 2018: 483). Productive entrepreneurship term means any entrepreneurial activity directly and indirectly promoting to the economy's output and capacity of additional output (Baumol, 1993: 30). In this sense, the entrepreneur organizes the current resources like labor, finance and information in order to produce the outcome. Institutions determine the conditions that entrepreneurs can reach these sources (Bosma et el., 2018: 483). In other words, institutions define the rules of the game in terms of entrepreneurs within the frame of economic, social and politic interactions. The rules determined by the institutions can prevent or encourage the entrepreneurial action (Palagashvili, 2015: 12-13). Institutional environment, which is suitable for productive entrepreneurial activity and economic growth, provides encouragements for efficient production and source allocation by decreasing the production and transaction costs (Gohmann, Hobbs, & McCrickard, 2013: 147).

Institutional environment shows the level of economic freedom of a society. A good institutional environment has been determined according to various criteria like rule of law, government size, regulatory efficiency and open markets. A better institutional environment will bring more economic freedom. More economic freedom will result in a higher income level and a faster economic growth. In the meantime, entrepreneurship is the main reason why high level of economic freedom supports growth since more economic freedom end up with a higher welfare. The higher welfare creates a higher level of entrepreneurial activity (Sobel, 2015: 38). In this context, economic freedom expressed as institutions and policies based on market economy can be seen as an important impetus of entrepreneurial activities (Angulo-Guerrero et el., 2017: 31).

Shortages in institutional environment can be found in any economy. However, these shortages can reach dramatic levels especially in underdeveloped and developing countries (Aidis et el., 2012:

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

119). This situation causes that the economic freedom level in these economies are low. A low economic freedom level will decrease the effect of entrepreneurship on economic growth. The aim of this study is to analyze the effect of economic freedom on entrepreneurship in Islamic countries consisting of mostly underdeveloped and developing countries. It can be said that state sovereignty dominates in most of the Islamic countries so entrepreneurship couldn't improve enough. Primarily, the economic freedom criteria and the indicators for entrepreneurship in Islamic countries will be presented in this study.

Economic freedom index presented by The Heritage Foundation and its 9 subcomponents out of 12 used to measure this index (property rights, government integrity, government spending, tax burden, business freedom, monetary freedom, trade freedom, investment freedom and financial freedom) have been used as the economic freedom criterion in the study. Self-employment rate has been used as entrepreneurship criterion.

In the study, the effect of economic freedom on entrepreneurship has been examined with panel data analysis by using the data related to the years between 1995 and 2019 belonging 56 countries out of 57 which are the members of Organization of Islamic Cooperation except Palestine. First of all, the relationship between economic freedom and entrepreneurship has been analyzed theoretically. Second, the literature search related to the subject has been presented empirically. Then, it has been mentioned about the research methodology and findings in empirical analysis part. Lastly, the study ends with a conclusion part.

2. THE RELATIONSHIP BETWEEN ECONOMIC FREEDOM AND ENTREPRENEURSHIP

Entrepreneurship has an important role in market economy. According to Schumpeter (1934, 1942), the entrepreneur makes contributions to creative destruction period by carrying the economy from an equilibrium point to a better and higher equilibrium point thanks to the innovations they have made (Sciascia, & De Vita, 2004: 6). According to Kirzner (1973), the entrepreneur has a stabilizing role in market economy by taking advantage of the opportunities emerging as a result of the innovations and economic imbalances (Sciascia, & De Vita, 2004:9). These important functions performed by entrepreneurs in the limits of an institutional environment have contributed to economic growth and increasing life standards (Saunoris, & Sajny, 2017: 292).

The institutional environment which entrepreneurs interact with is one of the fundamental factors determining the entrepreneurs' contribution to economic growth and wealth (Saunoris, & Sajny, 2017: 292). The institutional environment defines the incentive and reward structure which economic units encounter in the economy. The policies changing the safety of private property rights, general restrictions on government actions, legal system, the thrust for unclassified market price signals and freedom of exchange can be given as examples (Sobel, Clark, & Lee, 2007: 221).

People have a natural tendency to exchange, compensation and barter, trade off as Adam Smith has pointed out years ago. This entrepreneurial spirit exists in every individual. However, this

entrepreneurial spirit can head towards different ways depending on the ruling economic and politic institutions. The possibility of creating new wealth period through private sector entrepreneurship with creative individuals is higher in the countries having institutions providing effective restrictions on the ability of transfer wealth by the way of taxation and regulations and administrating agreements on safe property rights, fair and impartial judicial system. The possibility that creative individuals take current wealth is higher in countries having poor institution by the way of unproductive political entrepreneurship (Sobel et el., 2007: 222).

Entrepreneurship is not at the same level in every country. It has differences between countries. One of the reasons for this difference between countries is institutional differences. The positive relationship between entrepreneurship and economic growth make it important that policy makers should improve institutional conditions for entrepreneurship (Nyström, 2008: 269-270). The quality of institutions is really important in providing economic growth in a society (Acemoglu, Johnson, & Robinson, 2001). The most significant term used for measuring the quality of the institutions is economic freedom (Nyström, 2008:270).

According to the Heritage Foundation (2020), economic freedom is individuals' right to control their own labor and property. In a free society in terms of economy, individuals are free to work, produce, consume and invest at their own will. In economically free societies, governments let the labor, fund and properties to move freely and they avoid forcing or restricting freedom beyond saving and maintaining it. Hence, that entrepreneurship is successful in providing economic growth depends on the economic freedom level countries have (Sobel et el., 2007: 225; Saunoris, & Sajny, 2017: 292; Nyström, 2008: 270).

The decision of being an entrepreneurial individual in formal or informal economy has been determined by taking the economic and social costs and benefits into consideration. The decisions made by governmental institutions, defined as the restrictions configuring politic, economic and social interactions, are the most fundamental indicator for these costs and benefits in the institutional environment entrepreneurs interact with (Saunoris, & Sajny, 2017: 293-294). According to North (1991: 71), these institutions affect the economic performance by shaping the incentive structure. Therefore, the level of supporting or preventing the economic freedom is highly effective in encouraging the entrepreneurial activities. Economic freedom has increased the possibility of allocating the sources to more profitable areas by decreasing structural rigidity emerging as a result of the improper government interferences. According to Schumpeter (1934), entrepreneurial activity generally provides economic development and wealth. For this reason, the increase in economic freedom causes a decrease in transaction costs, which is preventing entrepreneurship. (McMullen, Bagby, & Palich, 2008: 879). Lower transaction costs arising from the improvements in economic freedom provides significant incentives for entrepreneurs by bringing new ideas through creative destruction period according to Schumpeter (1942) and simplifying the competition period by means of using profit opportunities

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074
Aralık 2020 December

according to Kirzner (1973) (Saunoris, & Sajny, 2017: 294). As a result, the increase in economic freedom also increases the entrepreneurial activities (McMullen et el., 2008:879).

The idea that economic freedom is important for economic growth has been theoretically a cornerstone for a long time and has been emphasized by Smith (1776) presenting invisible hand principle for good markets and by Ricardo (1821) accepting that free trade is really important for economic growth. Consequently, the relationship between entrepreneurship and economic freedom has been theoretically and empirically being analyzed, recently (Nyström, 2008: 270).

The economic freedom level, which is directing the entrepreneurial effort to productive activities, is a norm for good institutions (Sobel et el., 2007: 225). While economic freedom and the institutions defining it have been accepted as an important source of entrepreneurship and economic growth, there are a few consensuses about what really constitutes the economic freedom. Scientists have suggested a wide range of definitions for freedom criterion. Most of these criteria are the complex indexes including more than one dimension of social and politic life (Hall, Nikolaev, Pulito, & VanMetre, 2013: 89). Nevertheless, the outstanding criterion used in many studies in recent years in these indexes has been the index of economic freedom calculated by The Heritage Foundation (2020) since 1995. The Heritage Foundation index of economic freedom has been calculated based on 12 quantitative and qualitative factors classified as 4 wide categories: rule of law (property rights, government integrity, judicial effectiveness), government size (government spending, tax burden, fiscal heath), regulatory efficiency (business freedom, labor freedom, monetary freedom) and open markets (trade freedom, investment freedom, financial freedom) (The Heritage Foundation, 2020; Miller, Kim & Roberts, 2020: 13).

2.1. Rule of Law and Entrepreneurship

Rule of law expresses a judicial system compatible with the economic freedom (Lawson, 2015: 71). The Heritage Foundation has measured the rule of law based on three fundamental factors; property rights, government integrity and judicial effectiveness. These factors have been used for measuring the level of regulating the market in terms of law (Miller et el., 2020: 13).

Property rights are the important component providing economic freedom to make wealth (Nyström, 2008: 276). Rule of law and safety of protected property rights provide a basis for both economic freedom and productive markets (Lawson, 2015: 72). Private property and the ability of making wealth are significant motivation powers for workers and investors. Safe property rights give confidence for citizens to take over entrepreneurship activities, protect their incomes and make long term plans (Miller et el., 2020: 13). In other words, the entrepreneur will not have the encouragement for making innovation and making savings as long as he/she doesn't have enough control on the incomes of properties (Troilo, 2011: 16). Thus, good protected property rights support entrepreneurship and innovation (Aidis et el., 2012: 122). Nyström (2008) has revealed in her study that the safety of property rights is in tendency to increase entrepreneurship. Troilo (2011) has found that the property rights affect advanced technological entrepreneurship and Schumpeterian entrepreneurship.

There are no corrupted practices like bribery, favoritism, embezzlement and corruption in government integrity. These types of practices prevent markets' from being transparent and productive restricting the economic freedom. (Miller et el., 2020: 14). This negatively affects economic growth and improvement by reducing the entrepreneurial activities.

Judicial effectiveness has been expressed as protecting all citizens' rights against violations of law performed by governments, powerful political parties and others with legal frameworks. In this sense, judicial effectiveness requires productive and fair judicial system for performing legal actions against violations and ensuring full obedience with laws (Miller et el., 2020: 13-14). Nyström (2008) has revealed that having a good legal system positively affects entrepreneurship.

Consequently, if rule of law measured based on three fundamental factors; property rights, government integrity and judicial effectiveness, is powerful, national law protects the property rights and doing business is no longer exposed to the corruption. Improving the rule of law makes entrepreneurship activities easier by increasing the predictability and stability (Kuckertz et el., 2016: 1289).

2.2. Government Size and Entrepreneurship

Government size has measured the government's consumption spending, subvention and transfer expenditures, government initiatives and investments and the highest marginal tax rate and the level of government interference (Nyström, 2008: 275). According to The Heritage Foundation, the government size has been measured based on three fundamental factors; government spending, tax burden and fiscal health (Miller et el., 2020: 13).

When the government's expenditure is paired with its size and interventionism, government spending is one of the factors affecting the economic freedom (Miller et el., 2020: 14-15). When government spending is more than the spending made by individuals, households, and businesses, government's decision-making mechanism will not work properly and decrease the economic freedom (Lawson, 2015: 71). However, government spending may not always negatively affect the economic freedom. Government spending can be made for infrastructure, providing funds for researches and improving labor force or government properties which people widely use in the society and markets cannot price properly. All in all, government spending must be financed with higher taxes and it requires an opportunity cost. This opportunity cost is consumption or investment expenditures if related sources would be left for private sector. Therefore, excessive government spending has a great risk in terms of excluding private economic activities. Even if an economy obtains a faster growth by the way of more government spending, this kind of economic expansion is in tendency to be temporary and ruins the investment incentive and market allocation of sources. Even worse, isolating the government from market discipline causes bureaucracy, low productivity, ineffectiveness and increasing public debt which is a big burden for future generations (Miller et al., 2020: 14-15). Increasing government spending results in a decrease in entrepreneurial activities by affecting economic freedom negatively.

Tax burden is governments' fiscal burdens on economic activity through taxation and loan. The governments letting individuals and business firms use most of their incomes and wealth at their own will,

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074
Aralık 2020 December

upraise the economic freedom. The higher government's income or wealth cut is, the lower individuals' incentive to take over businesses and reward for economic activities. Higher tax rates decrease individuals' and firms' abilities to reach their goals in the market. Thus, the private sector activity level also decreases (Miller et el., 2020: 14). Accordingly, taxes have a mechanism affecting the entrepreneurship. High tax rates cause a reluctance to avoid from variable incomes. Because of this reason, they decrease the possibility of self-employment. High income taxes decrease the opportunities for legal and productive entrepreneurship and discourage entrepreneurs who avoid paying high taxes (Shane, 2003: 153; Henrekson, Johasson, & Stekula, 2010: 5-6). In other words, taxes have a negative effect on entrepreneurship by decreasing the reward for being an entrepreneur (Nyström, 2008: 276). In this sense, many empirical studies in the literature like Gentry and Hubbard (2000), Blau (1987), Robson, & Wren (1999) have revealed that there is a negative relationship between marginal tax rates and self-employment rates.

Fiscal health shows to what extent a government follow its budget. Spans and increasing debt burden as a result of the government's wrong budget management causes an erosion of country's general fiscal health. Deviating from strong financial positions causes uncertainty by destabilizing the macro economy and limits the economic freedom. High public debt can have many negative effects such as an increase in interest rates, excluding private investments and restricting the government's flexibility of taking action against economic crises. Increasing public debt arising from permanent budget deficits usually weakens the general productivity rate and causes economic recession rather than growth in the end (Miller et el., 2020:15). Degenerating fiscal health negatively affects the entrepreneurship. Within this scope, McMullen et el. (2008) have presented in their research that financial freedom positively affects the opportunity motivated entrepreneurship activities.

In conclusion, government size is one of the important subcomponents of economic freedom affecting the entrepreneurship. A massive public sector creates effects decreasing potential entrepreneurship (Nyström, 2008: 275). When the empirical studies about the relationship between the government size and entrepreneurship have been analyzed, Bjørnskov, & Foss (2008) have stated that the government size negatively affects the entrepreneurship. Sobel et el. (2007) have revealed that there is a powerful relationship between the government size and entrepreneurship. Nyströn (2008) has found that a smaller state sector positively affects the entrepreneurship.

2.3. Regulatory Efficiency and Entrepreneurship

Regulatory efficiency is a component of economic freedom containing business freedom without government's excessive intervention, labor freedom of individuals and stable currency as exchange base (Kuckertz et el., 2016: 1289). In this sense, regulatory efficiency has been calculated based on three fundamental factors: business freedom, labor freedom and monetary freedom (Miller et el., 2020: 13).

Business freedom, which is the individual's ability to found and manage a business firm without government's unnecessary interference, is one of the most fundamental indicators for economic freedom. Slow and unnecessary regulations are the most common drawbacks against carrying out entrepreneurial activities freely. The regulations increasing production costs and strict business

establishment procedures negatively affects the entrepreneurial activities (Miller et el., 2020: 16). These kind of government regulations devoted to starting a business and managing it decrease the present entrepreneurs' ability to adopt these regulations (McMullen et el., 2008: 883). Van Stel, Storey, & Thurik (2007) have found that minimum capital requirement regulations are in tendency to decrease the entrepreneurship rates. Klapper, Leaven, & Rajan (2006) have stated that the regulations related to starting a new company are also in tendency to decrease the entrepreneurship.

Labor freedom, which is the individuals' ability to find job opportunities and work, is also a fundamental subcomponent of economic freedom. Business firms' ability of contracting freely and firing the unnecessary workers when there is no need for them is significant for increasing the productivity and maintaining general economic growth (Miller et el., 2020: 16). In this connection, Kanniainen, & Vesela (2005) have found that labor market regulations related to the unemployment benefits, feather bedding and power of labor unions negatively affects the self-employment rates. Van Stel et al. (2007) have presented that the regulations for labor market are in tendency to decrease the rate of entrepreneurship.

Monetary freedom is the prices determined by the market and stable currency (Miller et el., 2020: 16). Sound money is required for protecting property rights and economic freedom (Lawson, 2015: 72). Economically free people, who act as an entrepreneur or a consumer, need a stable and reliable currency as a medium of exchange, unit of account and store of value. Therefore, it is hard to create long-term value or accumulate capital without monetary freedom (Miller et el., 2020: 16) because inflation, especially fluctuant inflation, creates enormous uncertainties by restricting the signaling effect of relative prices (Bjørnskov, & Foss, 2008: 314). This negatively affects the entrepreneurial activities. In this context, Bjørnskov, & Foss (2008) have revealed that monetary freedom positively affects the entrepreneurship. McMullen et el. (2008) have stated that monetary freedom positively affects opportunity motivated entrepreneurial activities.

Consequently, low regulatory efficiency negatively affects the entrepreneurship by creating costs for being an entrepreneur (Kuckertz et el., 2016: 1289).

2.4. Open Markets and Entrepreneurship

Open markets is the fourth fundamental subcomponent since it affects the free flow of goods and services across borders, presence of financial capital and its national and international free flow (Kuckertz et el., 2016: 1289). According to The Heritage Foundation, open markets has been calculated based on three fundamental factors: trade freedom, financial freedom and investment freedom (Miller et el., 2020: 13).

Trade freedom expresses the degree of a national economy's exemption from the government restrictions on international trade (McMullen et el., 2008: 880). Protective restrictions in international trade limit specialization and the participation to open markets (Herrera-Echeverri, Haar, & Estévez-Bretón, 2014: 1922). In this context, trade restrictions, tariff, import taxes, trade quotas or prohibitions of direct trade are the most fundamental drawbacks against trade freedom. The degree of prevention against international law has a negative effect on individuals' ability to fulfill their economic goals and productivity and carry their wealth to the highest level. This prevents economic growth and productivity

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

by negatively affecting the entrepreneurs' productivity (Miller et el., 2020: 16). Trade freedom means more access to international price signals. This lets potential entrepreneurs to use not only national but also international opportunities (Bjørnskov & Foss, 2008: 314). Therefore, international trade provides an increase in market potentials by creating new opportunities for entrepreneurs (Nyström, 2008: 276). Sobel et el. (2007) have revealed that these is a negative relationship between tariff barriers decreasing international trade and entrepreneurship.

Investment freedom expressed as a free and open investment place provides maximum entrepreneurial opportunities and incentives for broaden economic activity, more productivity and creating a business. Such a free and open investment place supports not only individual institutions taking entrepreneurial risk in the expectation of higher income but also the society as a whole (Miller et el., 2020: 17). In this sense, investment freedom means to let foreign business ownership and not restricting foreign people's investments (McMullen et el., 2008: 882) An effective investment environment has been characterized with transparency and equality. It supports all kinds of firms instead of just strategically important companies and promote innovation and competition instead of dissuading (Miller et el., 2020: 17). Investment freedom makes contributions to technological improvements by providing more entrepreneurial discovery stimulation (Njornskov, & Foss, 2008: 314). The government activity of directing capital flow and the restriction activity of capital selection is an imposition for the freedom of both investor and the person searching for capital. Thus, the more a government make restrictions for investment, the lower its entrepreneurial activity level (Miller et el., 2020: 17).

Financial freedom called as an accessible and productive financial system provides disposability of saving, loan, payment and investment services for individuals and businesses. A developed banking system promotes entrepreneurship and competition by widening the finance opportunities (Miller et el., 2020: 17). Since bank loans are the most important financial source for entrepreneurial activities, the regulations preventing opening a bank account and receiving a bank loan, opening a branch and partnership in terms of foreign banks are significant drawbacks for entrepreneurial activities (McMullen et el., 2008: 884). Álvarez, Amorós, & Urbano (2014) have stated in their study that financial freedom positively affects entrepreneurial activities in developed countries.

Consequently, open markets positively affect entrepreneurial activities by creating a competitive environment promoting innovation and entrepreneurship (Kuckertz et el., 2016: 1289).

3. LITERATURE REVIEW

There are many studies discussing the relationship between economic freedom and entrepreneurship by using different methods. It has seen that different criteria have been used in terms of both economic freedom and entrepreneurship while analyzing this relationship. Therefore, outstanding studies discussing the relationship between economic freedom and entrepreneurship have been summarized in this part.

Kreft, & Sobel (2005) have analyzed the relationship between economic freedom and entrepreneurship by using the data of USA states between the years 1996 and 2000. In the study, the Economic Freedom of North America Index and sole proprietorship rate have been used as economic freedom and entrepreneurship criterion, respectively. A positive relationship between economic freedom and entrepreneurship has been stated at the end of the study.

Kreft, & Mafi-Kreft (2007) have analyzed the relationship between economic freedom and entrepreneurial activities by using the panel data of 50 states in USA in terms of Granger causality analysis. The Economic Freedom of North America Index has been sued as economic freedom criterion and patent activity and sole proprietorship rate have been used as entrepreneurship criterion. It has seen that economic freedom is the reason for entrepreneurship at the end of the study.

Sobel et el. (2007) has analyzed the relationship between the GEM's (Global Entrepreneurship Monitor) entrepreneurship data for 21 OECD countries and Lawson's (2004) economic freedom index and stated that government size has the most powerful relationship with entrepreneurship between the economic freedom index subcomponents.

McMullen et el. (2008) have analyzed the effect of 10 economic freedom factors on opportunity motivated entrepreneurial activity and necessity-motivated entrepreneurial activity by using 37 countries' data of the Heritage Foundation 2003 economic freedom index and GEM's 2002 entrepreneurship data. In the study, it has stated that the labor freedom positively affects opportunity motivated entrepreneurial activity although labor freedom, financial freedom and monetary freedom negatively affects the necessity-motivated entrepreneurial activity.

Nyström (2008) has examined the relationship between institutional environment and entrepreneurship in terms of economic freedom by using 23 OECD countries' data between the years 1972 and 2002 with panel data analysis. Self-employment data and world economic freedom index published by Fraser Institute have been used as entrepreneurship and economic freedom criterion, respectively. It has stated that small state sector, better legal structure and the safety of property rights and regulations of loan, labor and business are in tendency to increase entrepreneurship level.

Bjørnskov, & Foss (2008) have tried to explain the international differences in entrepreneurship in terms of the differences in economic policy and corporate design by using the data of 29 countries belong to year 2001. The relationship between economic freedom index of Fraser Institute and entrepreneurship data obtained from GEM has been analyzed with ordinary least squares method. It has been revealed at the end of the research that government size and monetary freedom negatively affect the entrepreneurship.

Díaz-Casero, Díaz-Aunión, Sánchez-Escobedo, Coduras, & Hernández-Mogollón (2012) have empirically analyzed the effect of economic freedom on 3 groups of countries' entrepreneurial activities. It has stated in the study used the data of GEM's entrepreneurial activity index and the Heritage Foundation economic freedom index that the increase in economic freedom increases the

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

entrepreneurship level. In the study, it has been revealed that having small state size and more financial freedom increase the opportunity motivated entrepreneurship.

Powell, & Weber (2013) have analyzed the effect of the economic freedom on five different entrepreneurship criteria by using the data of 50 states between the years 1981 and 2009 with panel data analysis. In the study, The Economic Freedom of North America Index has been used as economic freedom criterion and business birth rates, The Kaufman Index of Entrepreneurial Activity, the number of patents per 100.000 people, venture capital per 100.000 people and sole proprietorship rate have been used as entrepreneurship criterion. At the end of the study, it has been revealed that higher economic freedom causes higher business birth rates and higher numbers of patent per person. In the study, it has been stated that small state government size causes higher business birth rates and patents when government size being one of the economic freedom subcomponents is discussed.

Gardner, McGowan Jr, & Sissoko (2014) have analyzed the relationship between the entrepreneurship definitions defined by GEM and The Heritage Foundation's economic freedom index by using the data of 42 countries belong to year 2005 with principal component analysis and regression analysis. It has been revealed at the end of the study that the economic freedom index criteria have explained 22% of GEM's variables.

Autio, & Fu (2015) have analyzed the effect of economic and politic institutions in 18 countries in Asian Pacific region between the years 2001 and 2010 on the extensity of formal and informal entrepreneurship. It has been found that an increase of standard deviation in the quality of economic and politic institutions will double up the formal entrepreneurial rate, cut the informal entrepreneurship rate in half in the study using business freedom index generated by The Heritage Foundation as explanatory variable and GEM entrepreneurship data as dependent variable.

Goel, Nelson, & Payne (2015) have analyzed the role of economic freedom on entrepreneurship by using the data of 72 countries' Global Entrepreneurship and Development Index and the Heritage Foundation economic freedom index. In the study, it has seen that economic freedom level has a positive effect on the entrepreneurship.

Kuckertz et el. (2016) have analyzed the effect of four components of economic freedom on entrepreneurial activity for factor-driven, efficiency-driven and innovation-driven economies by using the data of 63 countries in the year 2013 with fuzzy-set qualitative comparative analysis. In the study, GEM data and The Heritage Foundation economic freedom index have been used as the entrepreneurship and economic freedom criterion, respectively. At the end of the study, it has been revealed that government high economic freedom levels being independent from development stages promote the entrepreneurial activity level.

Saunoris, & Sajny (2017) have analyzed the effect of economic freedom on formal and informal entrepreneurship by using the data of 61 countries belong to years between 2001 and 2010. In the study, GEM data and The Heritage Foundation economic freedom index have been used as entrepreneurship

and economic freedom criterion, respectively. At the end of the study, it has been revealed that economic freedom promotes the entrepreneurship and prevents informal entrepreneurship.

Angulo-Guerrero et el. (2017) have analyzed the effect of economic freedom on opportunity entrepreneurship and necessity entrepreneurship by using the data of OECD countries belong to years between 2001 and 2012 with panel data analysis method. In the study, GEM data and Freser Institute economic freedom index have been used as the entrepreneurship and economic freedom criterion, respectively. According to research findings, economic liberalization prevents informal entrepreneurship while promoting the formal entrepreneurship. In the study, it has been emphasized that the improvements in legal structure of property rights and safety and regulations in loan, labor and trade positively affects the opportunity entrepreneurship.

Mandić, Borović, & Jovićević (2017) have analyzed the effect of economic freedom on entrepreneurial activity by using the data of 11 European Union (EU) countries belong to the years between 2000 and 2014 with PMG/ARDL (Pooled Mean Group/Autoregressive Distributed Lag Bound Test) model. GEM and Fraiser Institute data have been used in measuring the entrepreneurial activities and economic freedom, respectively. At the end of the study, it has been revealed that economic freedom has a positive and powerful effect on entrepreneurial activity in long term.

When the literature has been examined it has seen that Fraiser Institute or the Heritage Foundation's economic freedom indexes have been used. Within this scope, it has drawn attention that the economic freedom has been taken as the only variable in some studies while other studies have also used the subcomponents of economic freedom. In this study, the Heritage Foundation's economic freedom indexes and its subcomponents have been used. It has seen that a number of different criteria like GEM and self-employment data, business birth rates, The Kaufman Index of Entrepreneurial Activity, number of patents, sole proprietorship rate have been preferred as entrepreneurial criteria in literature. Self-employment criterion has been used in this study. When the literature has been examined, it has seen that most of the studies discussing the relationship between economic freedom and entrepreneurship are about developed or OECD countries. In this context, there are no studies carried on Islamic countries. Hence, the main difference of this study from other studies is that this study is built on Islamic countries and covers a wider range (1995-2019).

4. EMPIRICAL ANALYSIS

In this part of the study, it has been mentioned about the research methodology first and then obtained research findings have been presented.

4.1. Methodology

Many studies both theoretically and empirically carried out shows that the entrepreneurship is one of the most significant impetus of economic growth. The quality of institutional environment the entrepreneurs interact with is one of the most fundamental factors defining the entrepreneurs' contribution to the economic growth. The level of economic freedom is just one way of measuring the

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

quality of the institutional environment. In this sense, the aim of the study is to analyze the effect of economic freedom on entrepreneurship with panel data analysis method.

In the research, economic freedom index presented by The Heritage Foundation and 9 of 12 subcontinents used to measure this index (property rights, government integrity, government spending, tax burden, business freedom, monetary freedom, trade freedom, investment freedom and financial freedom) have been used as the economic freedom criterion. Judicial effectiveness, fiscal health and labor freedom have been excluded from the research because there is not enough observation. Self-employment rate instead of GEM (Global Entrepreneurship Monitor) entrepreneurship data has been used as the entrepreneurship criterion since there is not enough GEM entrepreneurship data for the analysis in Islamic countries. Therefore, the effect of economic freedom index, property rights, government integrity, government spending, tax burden, labor freedom, monetary freedom, trade freedom, investment freedom and financial freedom on self-employment rate in Islamic countries has been discussed in the study.

In the study, the data related to the years between 1995 and 2019 and belonging 56 *(Afghanistan, Albania, Azerbaijan, Bahrain, Bangladesh, Benin, United Arab Emirates (UAE), Brunei Darussalam, Burkina Faso, Algeria, Djibouti, Chad, Indonesia, Morocco, Cote D'ivorie, Gabon, Gambia, Guinea, Guinea-Bissau, Guyana, Iraq, Iran, Cameroon, Qatar, Kazakhstan, Kyrgyzstan, Comoros, Kuwait, Libya, Lebanon, Maldives, Malaysia, Mali, Egypt, Mauritania, Mozambique, Niger, Nigeria, Uzbekistan, Pakistan, Senegal, Sierra Leone, Somali, Sudan, Surinam, Syria, Saudi Arabia, Tajikistan, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Oman, Jordan, Yemen.)* countries out of 57 except Palestine which are the members of Organization of Islamic Cooperation have been used. When the members of the Organization of Islamic Cooperation have been examined, it has seen that most of them are under developed or developing countries. It can be said that State Sovereignty is dominating and private sector entrepreneurship couldn't improve much. This study will reveal the indicators of entrepreneurship in Islamic countries, especially the economic freedom and its criteria.

The panel data analysis is a kind of analysis using time-series data and cross-sectional series at the same time (Yerdelen Tatoğlu, 2016: 1). In panel data, there are more than one unit and more than one observation for each unit. The usage of panel data has started to become widespread thanks to the small sizes of the cross sectional and time-series data (Yerdelen Tatoğlu, 2018:1, 2016: 2-3).

One of the advantages of panel data analysis is to show the impact differences between variables while creating the model. Therefore, the general equation of panel data analysis and fixed effect equations are in below (Kennedy, 2006: 345):

$$Y_{it} = a_i + \beta X_{it} + \varepsilon_{it} \tag{1}$$

Y_{it}: i. unit and t. dependent variable for period

X_{it}: i. unit and t. independent variable for period

a_i: constant, β: independent variable coefficient, ε_{it}: error term

On the other hand, the estimator equation for random effect estimation is as in follows (Kennedy, 2006: 345):

$$Y_{it} = \mu + \beta X_{it} + (u_i + e_{it}) \tag{2}$$

μ: random section coefficients

$u_i + e_{it}$: combined error term

Linear dynamic panel data model can be used in models related to the delays of dependent variable. This model contains covariate and fixed or random unobserved panel effects of dependent variable p. Arellano, & Bond (1991) or Arellano, & Bover (1995), Blundell, & Bond (1998) have estimated the dynamic panel data model by using estimators. In the meantime, it has more advantages than these two models because it lets variables determined earlier and having a more complex structure in comparison with the other two models.

In the research, random or fixed effects have been predicted with panel data estimator and Hausman test has been carried out to choose one. It has seen that fixed effects estimator is more suitable according to the Hausman test result. The data have covered the whole audience because it deals with all Islamic counties instead of a particular country group. Because of this reason, it has been more suitable to use fixed effects estimator (Gujarati, 2004; Kennedy, 2006). Besides, modified Wald and Woolridge tests have been carried out to determine if there are variance and autocorrelation problems or not. According to the test results, there are autocorrelation and heteroscedasticity problems. Linear dynamic panel data model has been used to solve autocorrelation and heteroscedasticity problems.

In the research, all data except economic freedom criteria have been obtained from The World Bank (2020). The data related to the economic freedom criteria has been taken from The Heritage Foundation (2020).

The summary statistics related to the variables used in the research have been shown in Table 1.

Table 1. Summary Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
Self-Employment	1,400	51.68405	29.13014	0.408	94.839
L.GDPPC	1,306	7.848833	1.350487	5.371408	11.15166
BMONEY	1,245	15.83967	16.75375	-57.5672	181.6993
IMPORT	1,256	39.64371	20.40971	0.015623	191.4582
CPI	1,185	95.58456	62.45374	1.303748	1344.193
EF	1,182	55.36717	8.857608	15.6	77.7
EF1	1,206	37.24212	16.02785	5	90
EF2	1,222	30.38502	16.30407	4	90
EF3	1,205	73.28315	17.41958	0	97.6
EF4	1,196	76.04423	16.11691	10	100
EF5	1,216	58.59531	13.57646	20	100
EF6	1,210	71.86694	13.98328	0	94
EF7	1,195	63.17272	15.62059	0	90
EF8	1,204	44.64701	17.68795	0	80
EF9	1,189	41.49706	16.96538	0	90

The definitions of variables used in the research are as in follows:

Self-Employment: It is an entrepreneurship criterion used as a dependent variable. It has been used as self-employment rate in total employment. Many studies in literature (Blachflower, 2000;

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

Nyström, 2008; Pietrobelli, Rabellotti, & Aquilina, 2004; Dvouletý, 2018; Narita, 2020) has used self-employment variable as the entrepreneurship criterion.

L.GDPPC: This variable represents the income level namely gross domestic product (GDP) per capita. It is used for determining the effect of the countries' wealth on the entrepreneurship. The GDP variable has been determined with stable prices in 2010 in dollars and calculated by taking its logarithm. The lag variable value of this variable in the studies of Saunoris, & Sajny (2017), Bosma et el. (2018) and Albulescu, & Tămăşilă (2016) has been included in the model. It has been expected from GDP per capita to negatively affect the entrepreneurship (Bjørnskov, & Foss, 2008; Nyström, 2008; McMullen et el., 2008; Saunoris, & Sajny, 2017; Bosma et el., 2018).

BMONEY: This variable represents the improvements in money supply. The effect of money supply on the entrepreneurship is unknown. The increase in money supply can increase the entrepreneurial activities by decreasing the interest rates. A decrease in interest rates can improve the entrepreneurs' possibility of investment and innovation by providing an access of cheaper financial sources. The increase in money supply can make the economy less competitive by increasing the prices and decrease the opportunities for realizing entrepreneurial activities (Méndez-Picazo, Galindo-Martín, & Ribeiro-Soriano, 2012: 870-872). Therefore, it is probable that the improvement in money supply can affect the entrepreneurship both positively and negatively.

IMPORT: This variable represents the proportion of import of goods and services to GDP. It supports the entrepreneurship by letting the increasing international trade entrepreneurship to benefit from international opportunities. The increasing competition in international markets can increase the attention to the entrepreneurship by creating a negative effect on the survival rate of small businesses (Arin, Huang, Minniti, Nandialath, & Reich, 2015: 612). Hence, it has been expected that import negatively affects the entrepreneurship.

CPI: This variable represents the inflation. The consumer price index has been calculated by using the stabile prices belong to the year 2010. The inflation and its fluctuation make the workplace environment riskier and prevent entrepreneurs from obtaining expected incomes from their investments. The inflation increases the uncertainty in the markets and makes difficult to have accurate expectations about markets for entrepreneurs (Arin et el., 2015: 613). Therefore, it has expected that the inflation negatively affects the entrepreneurship (Arin et el., 2015; Rusu, & Roman, 2017).

EF: This variable represents the economic freedom index. This index calculated by using 12 subcomponents (property rights, government integrity, government spending, tax burden, business freedom, monetary freedom, trade freedom, investment freedom and financial freedom) gets a value between 0 and 100. The value of 0 has shown that the economic freedom is low while the value of 100 has shown that it is high (The Heritage Foundation, 2020). It has expected that economic freedom positively affects the entrepreneurship (Powell, & Weber, 2013; Saunoris, & Sajny, 2017; Miller et el., 2020).

EF1: This variable represents the property rights. An increase in this variable shows that the safety of property rights raises. Therefore, it has expected that the property rights positively affect the entrepreneurship (Nyström, 2008; McMullen et el., 2008; Miller et el., 2020).

EF2: This variable represents the government integrity. An increase in this variable shows that the degenerated implementations like bribery, favoritism, embezzlement and corruption decrease. Hence, it has expected that the government integrity positively affects the entrepreneurship (Miller et el., 2020).

EF3: This variable represents government spending. An increase in this variable means that government spending decreases. Therefore, it has expected that the government spending positively affects the entrepreneurship (Nyström, 2008; Álvarez et el., 2014; Miller et el., 2020).

EF4: This variable represents the tax burden. An increase in this variable shows that the fiscal burden on government's economic activity decreases. Hence, it has expected that tax burden positively affects the entrepreneurship (Nyström, 2008; Miller et el., 2020).

EF5: This variable represents business freedom. An increase in this variable means a decrease in business establishment procedure. Therefore, it has expected that business freedom positively affects the entrepreneurship (Nyström, 2008; McMullen et el., 2008; Miller et el., 2020).

EF6: This variable represents monetary freedom. An increase in this variable shows that the stability of the currency increases. Hence, it has expected that monetary freedom positively affects the entrepreneurship (Nyström, 2008; McMullen et el., 2008; Bjørnskov, & Foss, 2008; Miller et el., 2020).

EF7: This variable represents trade freedom. An increase in this variable shows that the restrictions in international trade decreases. Therefore, is has expected that trade freedom positively affects the entrepreneurship (Nyström, 2008; McMullen et el., 2008; Bjørnskov, & Foss, 2008; Miller et el., 2020).

EF8: This variable represents the investment freedom. An increase in this variable shows that the investment restrictions decrease. Hence, it has expected that investment freedom positively affects the entrepreneurship (McMullen et el., 2008; Miller et el., 2020).

EF9: This variable represents financial freedom. An increase in this variable shows that the finance opportunities increases. Therefore, it has expected that the financial freedom positively affects the entrepreneurship (McMullen et el., 2008; Miller et el., 2020).

The econometric model used in the research has been improved on the basis of models in Nyström (2008), Angulo-Guerrero et el. (2017) and Saunoris, &Sajny's (2017) studies. The common traits of these three models is that they analyze the effect of economic freedom on the entrepreneurship. Therefore, two models have been created based on these three models:

$$Self - Employment = \beta_0 + \beta_1 MATRIX + \beta_2 EF + u \qquad (3)$$

$$Self - Employment = \beta_0 + \beta_1 MATRIX + \beta_2 EF1 + \beta_3 EF2 + \beta_4 EF3 + \beta_5 EF4 + \beta_6 EF5 +$$
$$\beta_7 EF6 + \beta_8 EF7 + \beta_9 EF8 + \beta_{10} EF9 + u \qquad (4)$$

The "MATRIX" used in the model represents the control variables. Other variables represent the economic freedom variables which are relevant variables.

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

The base hypotheses of the model are formed with relevant variables. Auxiliary hypotheses are created with control variables.

Table 2. Hypotheses

| The Base Hypotheses	The Auxiliary Hypotheses
H1: Economic freedom affects the entrepreneurship.	H11: Income level affects the entrepreneurship.
H2: Property rights affects the entrepreneurship.	H12: Money supply affects the entrepreneurship.
H3: Government integrity affects the entrepreneurship.	H13: Import affects the entrepreneurship.
H4: Government spending affects the entrepreneurship.	H14: Inflation affects the entrepreneurship
H5: Tax burden affects the entrepreneurship.	
H6: Business freedom affects the entrepreneurship.	
H7: Monetary freedom affects the entrepreneurship.	
H8: Trade freedom affects the entrepreneurship.	
H9: Investment freedom affects the entrepreneurship.	
H10: Financial freedom affects the entrepreneurship.	

4.2. Research Findings

A correlation test has been carried out in order to determine if there is a relationship between independent variables before analysis. If the correlation relationship between two independent variables is 0.80 or above, one of them should be excluded from the model (Albayrak, 2005: 109). In this sense, the results of correlation test have been shown in Table 3. According to Table 3, there is not a correlation which is 0.80 or above between independent variables.

Table 3. The Results of Correlation Test

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Self-Employment	1														
2	L.GDPPC	-0.87	1													
3	BMONEY	0.04	-0.04	1												
4	IMPORT	-0.29	0.16	-0.00	1											
5	CPI	-0.02	0.07	-0.07	0.02	1										
6	EF	-0.33	0.47	-0.18	0.18	0.07	1									
7	EF1	-0.40	0.48	-0.09	0.13	-0.09	0.70	1								
8	EF2	-0.56	0.67	-0.18	0.17	0.02	0.71	0.67	1							
9	EF3	0.48	-0.40	0.07	-0.27	0.14	0.03	-0.16	-0.22	1						
10	EF4	-0.43	0.46	-0.06	0.14	0.22	0.60	0.24	0.42	-0.14	1					
11	EF5	-0.42	0.45	-0.07	0.17	-0.01	0.58	0.56	0.49	-0.22	0.31	1				
12	EF6	0.00	0.10	-0.35	0.10	0.07	0.56	0.21	0.34	0.11	0.32	0.10	1			
13	EF7	-0.27	0.35	-0.05	0.20	0.16	0.52	0.19	0.33	-0.05	0.52	0.18	0.21	1		
14	EF8	0.12	-0.04	-0.13	0.10	-0.15	0.52	0.39	0.22	-0.00	0.03	0.24	0.29	0.06	1	
15	EF9	-0.09	0.22	-0.11	0.22	-0.05	0.71	0.51	0.41	-0.05	0.24	0.33	0.37	0.26	0.61	1

The relationship between economic freedom and self-employment has been examined by carrying out a descriptive analysis before panel analysis. When the Figure 1 has been analyzed, it has seen that the relationship between economic freedom and self-employment is close to positive side.

Figure 1. The Relationship between Economic Freedom and Self-Employment
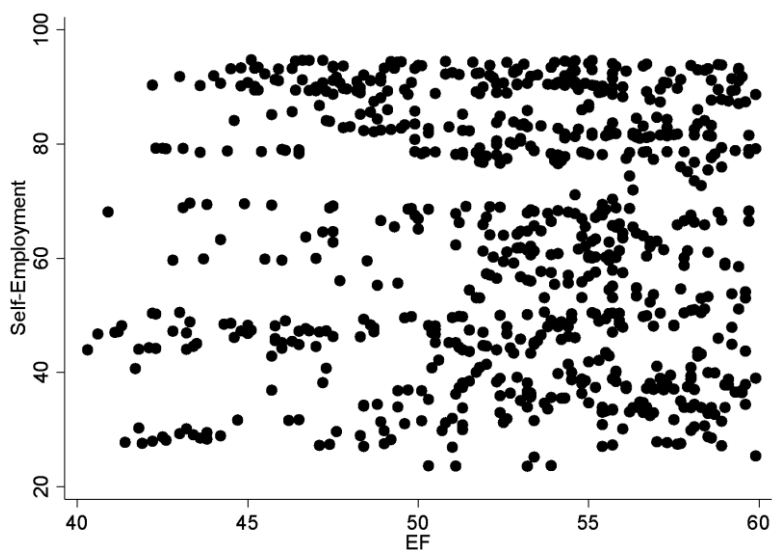
After descriptive analyses, Hausman test has been carried out in order to determine which estimation is suitable between fixed and random effects. According to the results of Hausman test, it has seen that fixed effect estimation is suitable for both models using economic freedom (chi2 = 848.93, Prob>chi2 = 0.0000) and subcomponents of economic freedom (chi2 = 5004.32, Prob>chi2 = 0.0000) as relevant variable. The estimation results of fixed effects have been presented in Table 4.

Table 4. The Estimation Results of Fixed Effects

VARIABLES	(1) Self-Employment	(2) Self-Employment	(3) Self-Employment
L.GDPPC	-6.492***	-6.263***	-3.945***
	(0.413)	(0.465)	(0.505)
BMONEY	0.00423**	0.0207***	0.0174***
	(0.00187)	(0.00549)	(0.00531)
IMPORT	-0.0409***	-0.0377***	-0.0328***
	(0.00787)	(0.00806)	(0.00780)
CPI	-0.0133***	-0.0130***	-0.0105***
	(0.00142)	(0.00150)	(0.00151)
EF		0.0748***	
		(0.0270)	
EF1			0.0234***
			(0.00904)
EF2			0.0235*
			(0.0120)
EF3			0.0319***
			(0.00989)
EF4			-0.0333***
			(0.0106)
EF5			-0.00507
			(0.0106)
EF6			0.00919
			(0.0119)
EF7			-0.0486***
			(0.00810)
EF8			0.00174
			(0.00708)
EF9			0.0123
			(0.00832)
Constant	110.1***	100.6***	85.57***
	(3.149)	(3.427)	(3.850)

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

Observations	1,119	928	928
R-squared	0.421	0.418	0.486
R-squared (Between)	0.8268	0.8254	0.8257
F-Testi	154.79***	104.43***	48.03***
Number of code	50	48	48

Note: The first line shows the coefficient value and the second line between columns shows standard error in the analysis results.
***p < 0.01, **p < 0.05, *p < 0.1.

According to results of fixed effects estimation, it can be said that models are generally significant because P value is under 0.05 when F statistics of both models have been examined. Modified Wald test has been carried out in order to determine whether there is heteroscedasticity problem or not in the models. It has been found that there is heteroscedasticity problem in models using economic freedom (chi2 = 1469.39, Prob>chi2 = 0.0000) and subcomponents of economic freedom (chi2 = 756.58, Prob>chi2 = 0.0000) as relevant variable. According to the results Woolridge test carried out for autocorrelation problem, it has been found that there is autocorrelation problem in models using economic freedom (F = 66.323, Prob>F = 0.0000) and subcomponents of economic freedom (F = 65.448.58, Prob>F = 0.0000) as relevant variable. Multilinear dynamic panel data model has been used in order to solve both heteroscedasticity and autocorrelation problems.

Table 5. The Results of Multilinear Dynamic Panel Data Estimation

VARIABLES	(1) Self-Employment	(2) Self-Employment	(3) Self-Employment
L.GDPPC	-8.758***	-6.369***	-4.390***
	(0.158)	(0.286)	(0.254)
BMONEY	0.00607**	0.0212***	0.0103***
	(0.00237)	(0.00290)	(0.00231)
IMPORT	-0.00887**	-0.0760***	-0.0404***
	(0.00381)	(0.00490)	(0.00367)
CPI	-0.00701***	-0.0217***	-0.0183***
	(0.000528)	(0.00114)	(0.00101)
EF		0.0955***	
		(0.0152)	
EF1			0.0219***
			(0.00423)
EF2			0.0216***
			(0.00582)
EF3			0.00885**
			(0.00436)
EF4			-0.0443***
			(0.00567)
EF5			-0.00608
			(0.00473)
EF6			0.0208***
			(0.00524)
EF7			-0.0228***
			(0.00432)
EF8			0.0143***
			(0.00345)
EF9			0.0134***
			(0.00441)
Constant	123.1***	102.2***	89.44***
	(1.244)	(1.899)	(1.831)
Observations	1,119	928	928
Number of code	50	48	48
Wald Chi-2	5871.60***	3040.40***	4617.14***

Note: The first line shows the coefficient value and the second line between columns shows standard error in the analysis results.
***p < 0.01, **p < 0.05, *p < 0.1.

According to the results obtained from multilinear dynamic panel data model in Table 5, it has seen that both of the generated models are generally significant when the value of Wald test has been examined. When relevant variables have been evaluated, economic freedom positively affects the self-employment with 1% significance level. In other words, self-employment increases 0.0955 point when the economic freedom increases 1 point. Therefore, H1 hypothesis (Economic freedom affects the entrepreneurship) has been accepted. When the effect of subcomponents of economic freedom on self-employment has been examined it has seen that property rights, government integrity, monetary freedom, investment freedom and financial freedom positively affect the self-employment with 1% significance level and government spending also positively affects self-employment with 5% significance level. Property rights variable creates the greatest effect on self-employment among these variables. In this context, H2 (Property rights affects the entrepreneurship), H3 (Government integrity affects the entrepreneurship), H4 (Government spending affects the entrepreneurship), H7 (Monetary freedom affects the entrepreneurship), H9 (Investment freedom affects the entrepreneurship), H10 (Financial freedom affects the entrepreneurship) hypotheses have been accepted. On the other hand, tax burden and trade freedom variables which are the subcomponents of economic freedom negatively affect the self-employment with 1% significance level. In other words, H5 (Tax burden affects the entrepreneurship), and H8 (Trade freedom affects the entrepreneurship) hypotheses have been accepted. Finally, it has seen that business freedom variable as one of the relevant variables has not a significant effect on the self-employment. That is to say, H6 (Business freedom affects the entrepreneurship) hypothesis has been rejected.

When the control variables have been examined, the GDP per capita, import and inflation variables negatively affect the self-employment at 1% significance level and money supply variables positively affects it. In this sense, H11 (Income level affects the entrepreneurship), H12 (Money supply affects the entrepreneurship), H13 (Import affects the entrepreneurship) and H14 (Inflation affects the entrepreneurship) hypotheses have been accepted. The summary results of the research have been presented in Table 6:

Table 6. The Summary Results of the Research

Variables		Significance Level	Expected Mark	Obtained Mark	Hypothesis Accept/Rejected
Control Variables	L.GDPPC	***	-	-	Accepted
	BMONEY	***	+ / -	+	Accepted
	IMPORT	***	-	-	Accepted
	CPI	***	-	-	Accepted
Relevant Variables	EF	***	+	+	Accepted
	EF1	***	+	+	Accepted
	EF2	***	+	+	Accepted
	EF3	**	+	+	Accepted
	EF4	***	+	-	Accepted
	EF5	-	+	-	Rejected
	EF6	***	+	+	Accepted

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

EF7	***	+	-	Accepted
EF8	**	+	+	Accepted
EF9	***	+	+	Accepted

5. CONCLUSION

"Why some countries are rich while others are poor?" question has been one of the most fundamental subject economists interested in since Adam Smith (1776). A lot of studies aiming to analyze and explain the differences in economic growth and improvements between countries have focused on the entrepreneurship in recent years. The entrepreneurial activities provide some benefits related to innovation, labor and economic growth for the economy. Because of this reason, one of the most significant effort in terms of policy makers has been widening and increasing the entrepreneurial activities. In this context, one of the most fundamental factors determining a country's entrepreneurial level is institutional environment. In an economically free society, the level of entrepreneurial activity increases and this situation supports the economic growth. Therefore, the effect of economic freedom in Islamic countries on the entrepreneurship has been analyzed by using annual data belong to the years between 1995 and 2019 with panel data analysis method in the study.

Self-employment rate has been used as the entrepreneurship criterion in the study. GDP per capita, money supply, import and inflation have been determined as the indicators of entrepreneurship. The economic freedom index presented by The Heritage Foundation and its 9 of 12 subcomponents (property rights, government integrity, government spending, tax burden, business freedom, monetary freedom, trade freedom, investment freedom and financial freedom) have been used as the economic freedom criterion.

According to the results obtained from multilinear dynamic panel data model, control variables have a statistically significance effect on the entrepreneurship. While GDP per capita, import and inflation negatively affect the entrepreneurship, money supply variable positively affects it. In this sense, realized marks of control variables are corresponded with the literature and GDP per capita variable creates the greatest effect on the entrepreneurship. That is to say, individuals' wish for being an entrepreneur decreases as the level of GDP per capita increases as Bjørnskov, & Foss (2008), Nyström (2008), McMullen et el. (2008), Saunoris, & Sajny (2017) and Bosma et el. (2018) have mentioned in their studies earlier.

When the effect of economic freedom on the entrepreneurship in Islamic countries has been analyzed, it has seen that this effect is significant and positive. In other words, the level of entrepreneurship increases as the level of economic freedom increases. When the effect of economic freedom subcomponents on entrepreneurship has been examined, the effects of all variables on the entrepreneurship are significant except business freedom. Powell, & Weber (2013) have similarly revealed in their study that business freedom has no effect on the entrepreneurship. The effect of property rights, government integrity, government spending, monetary freedom, investment freedom

and financial freedom on the entrepreneurship is positive. Property rights creates the greatest effect on the entrepreneurship in comparison with other variables. In other words, well-protected property rights support the entrepreneurship by directing people to innovation and entrepreneurial activities as Nyström (2008) and Trolio (2011) have mentioned in their studies earlier. On the other hand, the effect of tax burden and trade freedom variables which are the subcomponents of economic freedom on the entrepreneurship is negative contrary to expectations. In this sense, the entrepreneurship and self-employment can be used as a strategy to avoid from taxes. Higher taxes on prices may promote people to run their own businesses because self-employment brings more flexibility in hiding the incomes (Nyström, 2008: 276). Bruce (2002) has revealed that the effect of tax evasion is important in being an entrepreneur. This shows that an increase in tax burden can promote the entrepreneurship. Therefore, this could be the reason for obtaining a result that tax burden negatively affects the entrepreneurship. Trade freedom increases the market potential by creating new opportunities for the entrepreneurs and it support competition between the firms, whose competitive power is low, especially in underdeveloped and developing countries and the major firms taking international capital. Trade freedom may negatively affect the entrepreneurship because financially poor local entrepreneurs cannot maintain this competition (Herrera-Echeverri et el., 2014: 1925-1926). When it is thought that most of the countries are underdeveloped or developing countries, it possible that trade freedom negatively affects the entrepreneurship in these countries. In this sense, Ghosh, & Hall (2018) have revealed in their study that trade freedom negatively affects the entrepreneurship in developing countries. Nyström (2018) and Herrera-Echeverri et el. (2014) have also stated in their studies that trade freedom negatively affects the entrepreneurship.

Consequently, economic freedom and its subcomponents have a significant effect on the entrepreneurship in Islamic countries. The level of economic freedom creates an environment supporting or preventing the entrepreneurial activity. In this context, the level of entrepreneurial activities increases as the economic freedom increases. Therefore, policy makers' steps in increasing the level of economic freedom and their regulations positively affect the entrepreneurship. The increase in entrepreneurship level stimulates the economic growth and improvement.

KAYNAKÇA

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. American Economic Review, 91(5), 1369-1401.

Acs, Z. J., Audretsch, D. B., Braunerhjelm, P., & Carlsson, B. (2012). Growth and Entrepreneurship. Small Business Economics, 39(2), 289-300.

Aidis, R., Estrin, S., & Mickiewicz, T. M. (2012). Size Matters: Entrepreneurial Entry and Government. Small Business Economics, 39(1), 119-139.

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074

Aralık 2020 December

Albayrak, A. S. (2005). Çoklu Doğrusal Bağlantı Halinde En Küçük Kareler Tekniğinin Alternatifi Yanlı Tahmin Teknikleri ve Bir Uygulama. ZKÜ Sosyal Bilimler Dergisi, 1(1), 105-126.

Albulescu, C. T., & Tămăşilă, M. (2016). Exploring the Role of FDI in Enhancing the Entrepreneurial Activity in Europe: A Panel Data Analysis. International Entrepreneurship and Management Journal, 12(3), 629-657.

Álvarez, C., Amorós, J. E., & Urbano, D. (2014). Regulations and Entrepreneurship: Evidence from Developed and Developing Countries. Revista Innovar Journal, 24(edición especial), 81-89.

Angulo-Guerrero, M. J., Pérez-Moreno, S., & Abad-Guerrero, I. M. (2017). How Economic Freedom Affects Opportunity and Necessity Entrepreneurship in the OECD Countries. Journal of Business Research, 73, 30-37.

Arellano, M., & Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. Review of Economic Studies, 58(2), 277-297.

Arellano, M., & Bover, O. (1995). Another Look at the Instrumental Variable Estimation of Error-Components Models, Journal of Econometrics, 68(1), 29-51.

Arin, K. P., Huang, V. Z., Minniti, M., Nandialath, A. M., & Reich, O. F. (2015). Revisiting the Determinants of Entrepreneurship: A Bayesian Approach. Journal of Management, 41(2), 607-631.

Audretsch, D. B., & Thurik, A. R. (2000). Capitalism and Democracy in 21st Century: From the Managed to the Entrepreneurial Economy. Journal of Evolutionary Economics, 10(1), 17-34.

Audretsch, D. B., Carree, M. A., & Thurik, A. R. (2001). Does Entrepreneurship Reduce Unemployment?. Tinbergen Institute Discussion Paper, 1-23.

Autio, E., & Fu, K. (2015). Economic and Political Institutions and Entry into Formal and Informal Entrepreneurship. Asia Pacific Journal of Management, 32(1), 67-94.

Baumol, W. J. (1990). Entrepreneurship: Productive, Unproductive, and Destructive. The Journal of Political Economy, 98(5), 893-921.

Baumol, W. J. (1993). Entrepreneurship, Management and the Structure of Payoffs. London: MIT Press.

Bjørnskov, C., & Foss, N. J. (2008). Economic Freedom and Entrepreneurial Activity: Some Cross-Country Evidence. Public Choice, 134(3-4), 307-328.

Blanchflower, D. G. (2000). Self-Employment in OECD Countries. Labour economics, 7(5), 471-505.

Blau, D. M. (1987). A Time-Series Analysis of Self-Employment in the United States. Journal of Political Economy, 95(3), 445-467.

Blundell, R., & Bond, S. (1998). Initial Conditions and Moment Restrictions in Dynamic Panel Data Models, Journal of Econometrics, 87, 115-143.

Bosma, N., Sanders, M., & Stam, E. (2018). Institutions, Entrepreneurship, and Economic Growth in Europe. Small Business Economics, 51(2), 483-499.

Bruce, D. (2002). Taxes and Entrepreneurial Endurance: Evidence from the Self-Employed. National Tax Journal, 55(1), 5-24.

Díaz-Casero, J. C., Díaz-Aunión, D., Sánchez-Escobedo, M. C., Coduras, A., & Hernández-Mogollón, R. (2012). Economic Freedom and Entrepreneurial Activity. Management Decision, 50(9), 1686-1711.

Dvouletý, O. (2018). How to Analyse Determinants of Entrepreneurship and Self-Employment at the Country Level? A Methodological Contribution. Journal of Business Venturing Insights, 9, 92-99.

Farinha, L., Ferreira, J. J. M., & Nunes, S. (2018). Linking Innovation and Entrepreneurship to Economic Growth. Competitiveness Review: An International Business Journal, 28(4), 451-475.

Gardner, J. C., McGowan Jr, C. B., & Sissoko, M. (2014). Entrepreneurship and economic freedom. International Journal of Entrepreneurship, 18, 101-112.

Gentry, W. M., & Hubbard, R. G. (2000). Tax Policy and Entrepreneurial Entry. American Economic Review, 90(2), 283-287.

Ghosh, S., & Hall, J. C. (2018). Economic Freedom and Entrepreneurship in the Developing World. American Journal of Entrepreneurship, 11(2), 5-20.

Goel, R. K., Nelson, M. A., & Payne, J. E. (2015). Entrepreneurship and Cross-National Economic Freedom. R. J. Cebula, J. Hall, F. G. Mixon Jr, & J. E. Payne (Ed.), Economic behavior, economic freedom, and entrepreneurship in (222-235), Cheltenham: Edward Elgar Publishing.

Gohmann, S. F., Hobbs, B. K., & McCrickard, M. J. (2013). Economic freedom, Entrepreneurial Activity, and the Service Sector. Journal of Entrepreneurship and Public Policy, 2(2), 144-159.

Gujarati, D. N. (2004). Basic Econometrics, 4. Edition, The McGraw−Hill Companies.

Mehmet Akif Ersoy İktisadi ve İdari Bilimler Fakültesi Dergisi - Mehmet Akif Ersoy University Journal of Economics and Administrative Sciences Faculty
Cilt: 7 Sayı: Özel Sayı s.1046-1074 Volume: 7 Issue: Special Issue p.1046-1074
Aralık 2020 December

Hall, J. C., Nikolaev, B., Pulito, J. M., & VanMetre, B. J. (2013). The Effect of Personal and Economic Freedom on Entrepreneurial Activity: Evidence from a New State Level Freedom Index. American Journal of Entrepreneurship, 6(1), 88-103.

Henrekson, M., Johansson, D., & Stenkula, M. (2010). Taxation, Labor Market Policy and High-Impact Entrepreneurship. Research Institute of Industrial Economics, IFN Working Paper No. 826.

Herrera-Echeverri, H., Haar, J., & Estévez-Bretón, J. B. (2014). Foreign Direct Investment, Institutional Quality, Economic Freedom and Entrepreneurship in emerging markets. Journal of Business Research, 67(9), 1921-1932.

Kanniainen, V., & Vesala, T. (2005). Entrepreneurship and Labor Market Institutions. Economic Modelling, 22(5), 828-847.

Kennedy, P. (2006). Ekonometri Kılavuzu. 5. Edition, Ankara: Gazi Kitapevi.

Kirzner, I. (1973). Competition and Entrepreneurship. Chicago, IL, US: University of Chicago Pres.

Klapper, L., Laeven, L., & Rajan, R. (2006). Entry Regulation as a Barrier to Entrepreneurship. Journal of Financial Economics, 82(3), 591-629.

Kreft, S. F., & Sobel, R. S. (2005). Public Policy, Entrepreneurship, and Economic Freedom. Cato Journal., 25(3), 595-616.

Kreft, S., & Mafi-Kreft, E. (2007). Entrepreneurship and State Public Policy. No. 2007-03, Indiana University, Kelley School of Business, Department of Business Economics and Public Policy.

Kuckertz, A., Berger, E. S. C., & Mpeqa, A. (2016). The More the Merrier? Economic Freedom and Entrepreneurial Activity. Journal of Business Research, 69(4), 1288-1293.

Lawson, R. A. (2015). Economic Freedom in the United States and Other Countries. D. J. Boudreaux (Ed.), What America's Decline in Economic Freedom Means for Entrepreneurship and Prosperity in (67-84), Fraser Institute.

Mandić, D., Borović, Z., & Jovićević, M. (2017). Economic Freedom and Entrepreneurial Activity: Evidence from EU 11 Countries. Economics, 5(2), 11-17.

Martin, M. A. G., Picazo, M. T., & Navarro, J. A. (2010). Entrepreneurship, Income Distribution and Economic Growth. International Entrepreneurship Management, 6(2), 131-141.

McMullen, J. S., Bagby, D. R., & Palich, L. E. (2008). Economic Freedom and the Motivation to Engage in Entrepreneurial Action. Entrepreneurship Theory and Practice, 32(5), 875-895.

Méndez-Picazo, M. T., Galindo-Martín, M. Á., & Ribeiro-Soriano, D. (2012). Governance, Entrepreneurship and Economic Growth. Entrepreneurship & Regional Development, 24(9-10), 865-877.

Miller, T., Kim, A. B., & Roberts, J. M. (2020). 2020 Index of Economic Freedom. Washington: The Heritage Foundation. Access: 20.07.2020, https://www.heritage.org/index/pdf/2020/book/Index_2020.pdf.

Narita, R. (2020). Self-Employment in Developing Countries: A Search-Equilibrium Approach. Review of Economic Dynamics, 35, 1-34.

Naudé, W. (2013). Entrepreneurship and Economic Development: Theory, Evidence and Policy. IZA Discussion Paper No. 7507.

North, D. C. (1991). Institutions. Journal of Economic Perspectives, 5(1), 97–112.

Nyström, K. (2008). The Institutions of Economic Freedom and Entrepreneurship: Evidence from Panel Data. Public Choice, 136(3-4), 269-282.

Palagashvili, L. (2015). Entrepreneurship, Institutions, and Economic Prosperity. D. J. Boudreaux (Ed.), What America's Decline in Economic Freedom Means for Entrepreneurship and Prosperity in (3-35), Fraser Institute.

Pietrobelli, C., Rabellotti, R., & Aquilina, M. (2004). An Empirical Study of the Determinants of Self-Employment in Developing Countries. Journal of International Development, 16(6), 803-820.

Powell, B., & Weber, R. (2013). Economic Freedom and Entrepreneurship: A Panel Study of the United States. American Journal of Entrepreneurship, 6(1), 64-84.

Ricardo, D. (1821). Principles of Political Economy and Taxation. London: John Murray.

Robson, M. T., & Wren, C. (1999). Marginal and Average Tax Rates and the Incentive for Self-Employment. Southern Economic Journal, 65(4), 757-773.

Rusu, V. D., & Roman, A. (2017). Entrepreneurial Activity in the EU: An Empirical Evaluation of Its Determinants. Sustainability, 9, 1-16.

Saunoris, J. W. & Sajny, A. (2017). Entrepreneurship and Economic Freedom: Cross-Country Evidence from Formal and Informal Sectors. Entrepreneurship & Regional Development, 29(3-4), 292-316.

Schumpeter, J. A. (1934). The Theory of Economic Development. London: Transaction Publishers, 1996.

Schumpeter, J. A. (1942). Capitalism, Socialism & Democracy. George Allen & Unwin, 2003.

Sciascia, S. & De Vita, R. (2004). The Development of Entrepreneurship Research. Liuc Papers, No.146, Serie Economia Aziendale 19.

Shane, S. (2003). A General Theory of Entrepreneurship the Individual-Opportunity Nexus, Northampton: Edward Elgar Publishing.

Smith, A. (1776). The Wealth of Nations. Oxford: Oxford University Press.

Sobel, R. S. (2015). Economic Freedom and Entrepreneurship. D. J. Boudreaux (Ed.), What America's Decline in Economic Freedom Means for Entrepreneurship and Prosperity in (37-66), Fraser Institute.

Sobel, R. S., Clark, J. R., & Lee, D. R. (2007). Freedom, Barriers to Entry, Entrepreneurship, and Economic Progress. The Review of Austrian Economics, 20(4), 221-236.

The Heritage Foundation. (2020). 2020 Index of Economic Freedom - About the Index. Access: 20.07.2020, https://www.heritage.org/index/about.

The World Bank. (2020). World Development Indicators DataBank, World Development Indicators. Access: 20.07.2020, https://databank.worldbank.org/source/world-development-indicators.

Troilo, M. (2011). Legal Institutions and High-Growth Aspiration Entrepreneurship. Economic Systems, 35(2), 158-175.

Van Stel, A., Carree, M., & Thurik, R. (2005). The Effect of Entrepreneurial Activity on National Economic Growth. Small Business Economics, 24, 311-321.

Van Stel, A., Storey, D. J., & Thurik, A. R. (2007). The Effect of Business Regulations on Nascent and Young Business Entrepreneurship. Small Business Economics, 28(2-3), 171-186.

Wong, P. K., Ho, Y. P., & Autio, E. (2005). Entrepreneurship, Innovation and Economic Growth: Evidence from GEM Data. Small Business Economics, 24(3), 335-350

Yerdelen Tatoğlu, F. (2016). Panel Veri Ekonometrisi, İstanbul: Beta Basım Yayın Dağıtım.

Yerdelen Tatoğlu, F. (2018). Panel Zaman Serileri Analizi, İstanbul: Beta Basım Yayın Dağıtım.