CAN MARKET CONTESTABILITY RELIEVE ECONOMIC STRESS IN ARAB SPRING COUNTRIES

ABDELHAMID MAHBOUR* AND DOAA MOHAMED SALMAN ABDOU**

Abstract: This study examines the effects of overall contestability OCI on economic growth in some Arab countries. The econometric methodology follows the cross-country studies with empirical application to a panel of 4 Arab Spring countries observed over the period 1995 to 2011. Panel regressions are carried out using the fixed-effects model. The aim is to provide an empirical evidence for the driving forces of Arab Spring revolutions. The results show that overall contestability is significantly and negatively related to GDP per capita. By testing the relation between overall contestability and principal economic stress variables, inflation provided significant negative relation but unemployment did not. Adding Granger causality tests showed that: first a unidirectional relationship between GDP per capita and inflation, and second a unidirectional relation between each of inflation and unemployment on one hand and OCI on the other hand.

Keywords: Arab countries, causality, economic stress, growth, overall contestability

JEL: D44, G21, L11

1. INTRODUCTION

A wave of turmoil shocked several Arab countries since the start of 2011. It was synchronized with similar kinds of mass restlessness and street riots in many cities around the world. In at least five countries: Egypt, Libya, Tunisia, Yemen and Syria, the protest in the street was -and still is- against corruption in the form of a close cooperation -and even unification- between the political and business circles. This kind of unification has blocked the way before people, especially the youth, to
earn their living and build up for their future. This paper examines data from five countries during period 1995 to 2010. These countries witnessed revolutions since 2011, and were suffering from economic stress factors such as high rates of inflation and unemployment during the last ten years preceding the events. In 2008 for example, annual CPI inflation rate in Yemen averaged 19%, in Egypt around 18%, in Syria 16%, in Libya 10% and in Tunisia 5%. On the other hand the double digit high unemployment rates too were observed in these countries; 11% in Syria, 14% in Tunisia, 15% in Yemen, and 9% in Egypt. Libyan data were not available (World development indicator, WDI, 2011).

Fragile economic and financial systems in these countries were shaken by the 2008 global financial crisis. Countries under study observeda decline in GDP growth rate since then until 2010, resulting in a continuous and accelerated economic stress that affected negatively the day to day life of the masses.

The paper argues that the economic factors are playing a vital role in the Arab Spring events. Political improvement is demanded in itself of course, but if the new emerging political regimes do not relieve the economic stress, demonstrations and restlessness are not expected to stop easily. One fundamental way of achieving the relief of economic stress is through the free market forces. If markets become more contestable, i.e. easier to be accessed by potential investors, whether small or big, more channels of creating jobs and incomes will open, and the causes of restlessness will be significantly reduced. Therefore the paper tries to deal with the question of the causal relation between the degree of market contestability and the variables that cause economic stress.

2. CONTESTABILITY THEORY

Economic growth continues to attract the attention among researcher and policy makers. The importance of this macroeconomic indicator stems from its crucial role in affecting other vital segments of the economy. Scholars identified many core factors that robust economic growth. Growth can mainly be explained by a combination of two key factors, i.e. economic competition/contestable (which promoted efficiency and encouraged innovation) and political contestability (which stabilized a competent system of checks and balances). Both factors have been studied in the recent literature on economic growth and political economics and have a tendency to affect the long-term growth.

The concept of creating a “contestable” environment has influenced USA, UK and many other countries during their deregulation phase.
In theory, contestable markets yield an efficient (cost minimizing) market structure. Baumol (1982) emphasizes that “in the limiting case of perfect contestability, oligopolistic structure and behaviour are freed entirely from their previous dependence on the conjectural variations of incumbent firms, and they are determined, instead, by the pressures of potential competitors”. The theory of contestable markets emerged in the late seventies and early eighties. It can be “considered a generalization of the concept of perfect competition” (Baumol and Lee, 1991). Simply, the threat from entry of new firms and/or the actual entry, into the market (the industry) can force the incumbent firms to price their products at the average cost (including the normal profit).

This result is true even if the number of incumbent firms in the market is very small or even just one. Not only will the output price be equal to average cost, but it will be equal to marginal cost as well. The perfect contestability will lead to the equality between the product price and the minimum average cost (the optimal price). This is similar to the long run result of perfect competition. However, unlike perfect competition, perfect contestability does not require the existence of a great number of incumbent firms. Moreover, the above-mentioned results can hold where economies of scale exist. In general, competition among incumbent firms operating already in the market (perfect competition model) is replaced by competition among potential firms contesting for the market, i.e. attempting to enter the market (perfect contestability model). Simply, if the cost of starting a new business becomes high the market is said to be closed or incontestable. Businesses are attracted to markets, which are characterized by lower entry cost, as cost burden decreases. Incontestable markets decrease the number of entry firms and price increases due to the power the firms incur from these practices. When the product prices increase, this will echo on the macro level reflecting a source of economic stress.

The theory of contestable markets is frequently defined as an alternative to the traditional, neoclassical theory of the firm. Perfectly contestable markets can deliver the theoretical benefits of perfect competition, but without the need for a large number of firms. Market structure becomes an endogenous variable that affects market performance and consequently affects the performance of the economy. According to the theoretical literature, contestability should have a major impact on competition. Bikker et al. (2007) concludes that both theoretical and empirical evidence that various factors related to market structure affect the competitive climate in the banking sector, such as
regulation, foreign entry, contestability, institutional framework, and macro-economic stability.

We adopt Baumol approach on the macro level and employ the contestability index for the sample countries under study to measure if there is a relation between the country-level market contestability and economic stress. Overall Contestability Index (OCI) measures whether the overall (economy-level) conditions help new entrants access the markets (industries). This index was developed by Mahboub and Salman (2008). The index is based on six sub-indexes, reflecting overall contestability. These sub-indexes are taken from the Index of Economic Freedom as follows: Business Freedom, Trade Freedom, Investment Freedom, Financial Freedom, Property Rights, and Freedom from Corruption. The averages of these sub-indexes are calculated and they construct the overall contestability index OCI (see appendix 1).

Contestability theory receives criticism especially from the history of airline industry, since many major incumbents did not roll over when the newer airlines entered the market after deregulation. Many carriers which entered the market during the early eighties have either merged or vanished. Generally any new theory attracts the attention to economic relationships in some slightly different perspective. The theory may be useful in attracting researcher to propose new questions or find better answers to previous questions. In 1984, Shepherd presented his criticism focusing on that the theory rests on extreme assumptions and has been subjected to searching criticism.

3. HYPOTHESIS, DATA AND METHODOLOGY

3.1. Hypotheses

To analyze the issues raised by the authors and see if they apply to Arab countries we defined the following hypotheses:

3.1.1 The relation between economic growth and overall contestability is positive and significant

3.1.2 There is a negative relation between economic stress variables and overall contestability

3.2. Data

This study employs three methods in examining casual relationship between overall contestability and economic growth and the magnitude of effect for Arab countries. It is an ‘overall’ index because it does not relate to a specific market. Higher values of OCI (maximum 100) reflect favorable values or higher degrees of overall contestability. On the other
hand economic stress is measured by inflation rate, unemployment rate and GDP per capita. Data are taken from the World Development Indicators (2011) from 1995 to 2011.

3.3. General Econometric Model

Following to the empirical literature, the standard linear function specification of long-run relationship between overall contestability and GDP per capita may be expressed as:

$$GDPC_t = \beta_0 + \beta_1 OCI_t + \epsilon_t$$  \(1\)

$$OCI_t = B_0 + B_1 INFL + B_2 UNEMPL + \theta_t$$  \(2\)

In the model the dependent variable GDPC is the real GDP per capita (in constant 2000 US$) and OCI is the overall contestability index as explained before. INFL is the Inflation rate (in %), measured as the annual percentage change in GDP deflator, and UNEMP is the unemployment rate (in %), and finally \(\epsilon_t\) are the error terms.

4. RESULTS AND DISCUSSION

First, OCI index and economic growth GDP per capita and economic stress variables are tested for unit root (Augmented Dickey – Fuller) to establish the extent to which variables meet necessary stationary condition. Table 1 presents the results for the unit root test.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Lags</th>
<th>Constant</th>
<th>Lags</th>
<th>Constant and trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDPC</td>
<td>0</td>
<td>0.019366</td>
<td>0</td>
<td>0.020321</td>
</tr>
<tr>
<td>DGDPC</td>
<td>0</td>
<td>0.120736***</td>
<td>0</td>
<td>0.121818***</td>
</tr>
<tr>
<td>INFL</td>
<td>0</td>
<td>0.130732***</td>
<td>0</td>
<td>0.131246***</td>
</tr>
<tr>
<td>OCI</td>
<td>0</td>
<td>0.050491*</td>
<td>0</td>
<td>0.055728*</td>
</tr>
<tr>
<td>UNEMPL</td>
<td>0</td>
<td>0.088977*</td>
<td>0</td>
<td>0.109706***</td>
</tr>
</tbody>
</table>

ADF is the Augmented Dickey-Fuller test. An * indicates rejection of the null hypothesis of nonstationarity at the 10% level of significance, while an ** indicates rejection at the 5% level and an *** indicates rejection at the 1% level.

Source: Authors’ calculations

Stationarity test for GDP per capita (GDPC) shows that it is stationary at the first level, while overall contestability, inflation, and unemployment are stationary at level. Now we are ascertained that we can apply panel data analysis using fixed effects.
### Table 2

Results for the Relation between OCI and Economic Stress

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Errors (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable: GDPC</td>
<td>-69.0683***</td>
<td>(13.75946)</td>
</tr>
<tr>
<td>OCI</td>
<td>-69.0683***</td>
<td>(13.75946)</td>
</tr>
<tr>
<td>Dependent variable: OCI</td>
<td>-0.3435133**</td>
<td>(0.1132948)</td>
</tr>
<tr>
<td>INFL</td>
<td>-0.3435133**</td>
<td>(0.1132948)</td>
</tr>
<tr>
<td>UNEMPLY</td>
<td>-0.0304513</td>
<td>(0.0197271)</td>
</tr>
</tbody>
</table>

Notes: Standard errors (SE) in parentheses. *** p<0.01, ** p <0.05, * p <0.1. *** is significant at 1% and * is significant at 10%

Model one result shows that the overall contestability index has negative and significant impact on the GDP per capita. This supports that fragile contestable markets have negative impact on the economic growth of these countries. Model two result shows a significant and negative relation between inflation and OCI, and negative but not significant relation between unemployment and OCI. The second step is to the standard Granger causality to reveal the presence of several causality relationships between the variables. It seems that there is unidirectional relation between GDP per capita and inflation. And there is a unidirectional relation between inflation and unemployment with OCI, as shown in table 3.

### Table 3

Granger Causality Test

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>F-Statistic</th>
<th>Probability</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDPC does not Granger</td>
<td>3.63981</td>
<td>0.03359*</td>
<td>causality exists</td>
</tr>
<tr>
<td>Cause INFL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCI does not Granger</td>
<td>3.12971</td>
<td>0.05258*</td>
<td>causality exists</td>
</tr>
<tr>
<td>Cause INFL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCI does not Granger</td>
<td>3.37765</td>
<td>0.04629*</td>
<td>causality exists</td>
</tr>
<tr>
<td>Cause UNEMPLY</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** p<0.01, ** p <0.05, * p <0.1. *** is significant at 1% and * is significant at 10%

### 5. CONCLUDING COMMENTS

To let the economy perform better we do not require increasing the number of firms (reducing the concentration ratio), but we require
reducing or even eliminating the monopoly behaviour measured by the product price being higher than the average cost (including the normal profit of course). In other words, the legislation must pay attention to the monopoly behaviour not to the number of firms or the concentration ratio. Competition and antitrust laws were focusing on the number of firms or the concentration ratio in determining what cases must or must not be considered a monopoly that need to be treated by law. This is a significant shift because over a long history of these legislations, monopoly power increased and industries became more concentrated in many countries all over the world. That is to say, the market oriented economies were moving from being competitive into being monopolistic despite these laws. The main challenge to this suggestion is ‘how to measure the normal profit’. There is no simple answer for such a question. However, one can be sure that if there is wide agreement on the idea and if the idea becomes a part of the constitution, new institutions will develop in order to ensure the practical methods of measuring the ‘normal rate of return to capital’ or simply ‘the normal profit’. Yes this is a big challenge, but who can claim that the antitrust laws were not facing similar challenges when they were suggested in the 19th century? New legal and economic institutions developed since then to ensure the enforcement of the law. Similar development will occur, once there is a wide acceptance of the idea of contestability.

Acknowledgement
Acknowledgements will go in this section (Dr. Eyad Mohamed Atya and reviewers)

References


Appendix 1

Contestability index; is constructed based on equal weight for the following six variables

1. **Property Rights:** is an assessment of the ability of individuals to accumulate private property, secured by clear laws that are fully enforced by the state. It measures the degree to which a country’s laws protect private property rights and the degree to which its government enforces those laws. It also assesses the likelihood that private property will be expropriated and analyzes the independence of the judiciary, the existence of corruption within the judiciary, and the ability of individuals and businesses to enforce contracts. The more certain the legal protection of property, the higher a country’s score. The greater the chances of government expropriation of property, the lower a country’s score. Countries that fall between two categories may receive an intermediate score.

2. **Freedom from Corruption:** Corruption erodes economic freedom by introducing insecurity and uncertainty into economic relationships. The score for this component is derived primarily from Transparency International’s Corruption Perceptions Index (CPI). The CPI is based on a 10-point scale in which a score of 10 indicates very little corruption and a score of 0 indicates a very corrupt government. In scoring freedom from corruption, the Index converts the raw CPI data to a scale of 0 to 100 by multiplying the CPI score by 10. For example: if a country’s raw CPI data score is 5.5, its overall freedom from corruption score is 55.

3. **Business freedom:** is about an individual’s right to establish and run an enterprise without interference from the state. Burdensome and redundant regulations are the most common barriers to the free conduct of entrepreneurial activity. Business freedom is a quantitative measure of the ability to start, operate, and close a business that represents the overall burden of regulation as well as the efficiency of government in the regulatory process. The business freedom score for each country is a number between 0 and 100, with 100 equaling the freest business environment. The score is based on 10 factors, all weighted equally, using data from the World Bank’s Doing Business report. For example: if a country requires the highest number of procedures for starting a business, which yields a score of zero in that factor, it could still receive a score as high as 90 based on scores in the other nine factors.
4. **Trade freedom:** reflects an economy’s openness to the import of goods and services from around the world and the citizen’s ability to interact freely as a buyer or a seller in the international marketplace. Trade restrictions can manifest themselves in the form of tariffs, export taxes, trade quotas, or outright trade bans. Trade freedom is a composite measure of the absence of tariff and non-tariff barriers that affect imports and exports of goods and services. The trade freedom score is based on two inputs: the trade-weighted average tariff rate and Non-tariff barriers (NTBs). NTBs in a country’s trade policy regime using both qualitative and quantitative information.

5. **Investment freedom:** a free and open investment environment provides maximum entrepreneurial opportunities and incentives for expanded economic activity, greater productivity, and job creation. An effective investment framework will be characterized by transparency and equity, supporting all types of firms rather than just large or strategically important companies, and will encourage rather than discourage innovation and competition. The Index evaluates a variety of restrictions typically imposed on investment. Points, as indicated below, are deducted from the ideal score of 100 for each of the restrictions found in a country’s investment regime. It is not necessary for a government to impose all of the listed restrictions at the maximum level to effectively eliminate investment freedom. Those few governments that impose so many restrictions that they total more than 100 points in deductions have had their scores set at zero.

6. **Financial freedom:** a transparent open financial system ensures fairness in access to financing and promotes entrepreneurship. An open banking environment encourages competition to provide the most efficient financial intermediation between households and firms and between investors and entrepreneurs. The Index scores an economy’s financial freedom by looking into the following five broad areas: The extent of government regulation of financial services, The degree of state intervention in banks and other financial firms through direct and indirect ownership, The extent of financial and capital market development, Government influence on the allocation of credit, and openness to foreign competition. Freedom ensures easy and effective access to financing opportunities for. An overall score on a scale of 0 to 100 is given to an economy’s financial freedom through deductions from the ideal score of 100.