Original Research Article

Path dependence and democracy: Case of Arab spring Countries

Hayet Ben Said

Economic Department, High School of Economic and Commercial Sciences, Tunis, Tunisia

E-mail: bensaidhayet@yahoo.fr
Tel: +21697528593

After the revolutions of 2011, Tunisia and countries of the Arab Spring (Egypt, Libya) had been governed by Islamic parties that came to power. However, these governments were not stable because of the political, economic and social revendications of their societies. We propose to show that democracy is not the appropriate mode of governance for these countries, in particular Tunisia. Indeed, the institutions that the Islamic government wants to build belong to the "Islamic" path dependence which is not in favor of the alternation of power and which explains the instability of these governments. To this end, we show through an analytical approach which is based on game theory that institutions that belong to this path dependence do not allow a cooperative coordination among the key political actors who cannot reach a higher equilibrium.

Key words: Institution, path dependence, democracy, game theory, non cooperative coordination, superior equilibrium, lower equilibrium.

INTRODUCTION

The revolution experienced by Tunisia (January 14, 2011) and other Arab Spring countries cannot be explained only by political demands but also by socioeconomic and cultural factors. Indeed, after the first election in Tunisia, Egypt and in other Arabic countries, protests and popular movements had multiplied in these regions. These movements had shown that the institutions which were created by the Islamic governments who had won elections did not fit into the political, economic and social needs and aspirations of the people living in these countries. These institutions which are unable to inspire trust foster blocking in these countries. Indeed, they do not allow a cooperative coordination between political parties and social and economic actors in general.

In what follows, we try to study the features of these,

institutions and their origins in order to explain the political and social crises that rose in the Arab spring countries and in particular Tunisia. This study also allows us to evaluate the ability of the Islamic governance system which belongs to an Islamic path dependence to ensure a cooperative coordination between the political actors. Analyzing the nature of this path dependence seems to be very important to understand the blocking in these countries which are governed by Islamic parties. For that, we propose a reflection that addresses the relationship between the "path dependence", the nature of governance institutions and the type of coordination.

Several studies are interested in the relationship among "path dependence", the nature of governance mode, the political consequences and the type of coordination

between the political and socio-economic partners. However, few studies have attempted to illustrate this relationship with an analytical method which is based on game theory[1]. The objective of this article is to show that the democratic system which is based on Islamic majority of governance and opposition cannot ensure a cooperative coordination between them and reach the social optimum because the institutions (rules and regulations) that Islamists want to build depend on the "path dependence" which is antidemocratic. Analyzing the nature of this path dependence seems to be very important to understand the blocking in Arab Spring countries which are governed by Islamic parties. To this end, we use the neo-institutionalist analysis (North 1990, 2005) and Schooter (1981) which has the theoretical tools that can be used to study the history of Islamic institutions of power. These tools allow us to understand the relationship between the nature of these institutions and the type of coordination between the majority and the opposition. Indeed, Schotter (1981) using the game theory shows that "path dependence" explains the nature of the game, the reactions of the players and the result of the game. Thus, in what follows, we propose to show that the institutions that Islamists want to build are marked by path dependence (North, 2005). This development will be the subject of the first section of this article. Next, we will use an analytical method which is based on game theory to show that these institutions do not allow a cooperative coordination between the government and the opposition. Each party (player) tries to find the "institutional configuration" allowing him to limit the power of the other party because they do not refer to the same "path dependence". Thus, the equilibrium of the game is lower. This situation negatively affects economic growth. Indeed, North (2005) shows that economic performance is explained by the history of institutional evolution or by the nature of "path dependence". North (2005) recognizes that some institutions have favored economic growth while others have blocked it. This development will be the subject of the second section of this article. The discussion of results and conclusion will be presented in the third section.

Conceptual framework

Institution, path dependence and democracy

In what follows, we propose to define the concept of

"institution". Subsequently, we study the institutions of power in the framework of an Islamic state. Finally, we analyze the relationship between the path dependence and the principles of democracy.

Institution: Definition and role

The institution is a human creation. It is a result of an intentioned and dynamic action. It is a formal (law, constitution, regulation) and informal (norms, convention, code) set of rules which affect the behavior of people (North, 2005). Schotter (1981) considers institutions as constraints that can take the form of game's rules which govern the behavior of people. According to him, institutions allow coordination between people, solve the problems of prisoner dilemma cases and preserve inequalities. Coase (1937) and Williamson (1985) are interested in different modes of governance. They consider that institutions which can be organic (firm, organization) and/or procedural (rules, laws) reduces transaction costs. Akerlof (1970) and Laffont (1993) consider institution as an incentive system which can reduce the cost of lack of information's. Therefore, we can say that institution is created by people in order to solve problems of information and lack of coordination and resolve a prisoner's dilemma situation. Institutions are created to preserve inequalities.

Therefore, the choice of institution type affects the transaction costs and therefore, the economic performance (North 1990, 2005). Transaction costs results from the costs of negotiation, supervision, monitoring and conflict resolution. Moreover, these costs are higher than the economic performance. Indeed, the work of the World Bank (Kaufmann et al., 1996-2007) on governance indicators are based on North's researches and has shown that quality of governance increases social trust, improves coordination between people, reduces transaction costs and foster economic performance.

Path dependence and democracy

In what follows, we try to define path dependence and then we show that Islamic path dependence cannot fit into the principles of democracy.

Path dependence of Islamic Institutions

The theory of path dependence seems very interesting to understand so is explaining the institutional structure that Islamic policy makers like to establish in the main Arab

---

1[(Shubik, M. (1982)].

spring countries. The concept of "path dependence" was developed by David, Paul A (1985) and was adapted by North (1990) in order to analyze institutional emergence and change: "Can one extend this argument of technological change to institutional change?" North (1990).

In the institutional context, path dependence is used to analyze institutional change. In this framework, the change can take different forms which depend on the nature of institutions and its historical evolution (North, 1990). These evolutions are explained and shaped by the norms, principles and beliefs related to Islamic history and culture (North 2005). This is the case of rules, norms and laws established or inspired by the Quran or Sunnah and other Islamic legislatives sources.

Path dependence and democracy

The institutional structure that Islamic decision makers like to edify cannot be separated from its path dependence. It represents an institutional heritage (formal and informal rules) which is undemocratic and reproduces incentives and constraints that can negatively affect coordination between the main political parties in Tunisia and Arab Spring countries.

This heritage which characterizes this path dependence preserves a status quo (North, 2005). Indeed, Schotter (1981) considers that the most important role of the institutional environment which follows a path dependence is to preserve inequalities to maintain the status quo. From the Persian Empire through the Islamic Caliphate, the preservation of inequality has stabilized the power of Islamic states (Ibn Khaldun)[2]. For example, after the death of Prophet Muhammed[3], the confusion between Khilafa and power pushed the caliphs to use fanaticism "Asabiyya"[4] to protect their hegemony. Asabiya has been justified by the Quran[5] and Sunnah. Indeed, the prophet Muhammed had taken into account this factor « Asabiyya » as a stabilizer of Islamic power and he required that his successor must belong to the Quraysh tribe[6] which is marked by a high level of « Assabiyya ». The "Assabiyya" is

a form of social capital such as "bonding"[7] and "linking"[8] unifying individuals around the caliphate or the kingdom in order to strengthen social trust and then reduce conflicts between the governors and the governed. « Assabiyya » is based on principles such as the unity of truth and ownership. For example, public affairs become a private matter in the interests of the Muslim community: Ummah. In addition, the Caliph has a linguistic privilege allowing him to interpret the Quranic verses and Sunna to maintain his hegemony. These practices characterize the "path dependence" of power's institutions and their reproduction in the Arab-Muslim states. Islamic governments refer largely to this "path dependence". This explains their willingness to disarm the opposition parties of any collective regulation device. Thus, coordination between Islamic policy makers and other democratic parties cannot be cooperative. This leads to a high transaction costs, a lower equilibrium and can hinder the process of growth and development.

METHODS

North (2005) considered that institutions that belong to the path dependence can constitute another constraint to production and exchange besides technical and cognitive constraints. Indeed, institutions which are adopted for a particular time, even if they were effective at that time, may not be at all when the human environment changes over time (North, 2005). The objective of the political revolution in the countries of the Arab Spring (Tunisia, Egypt, Libya) is to establish a democratic regime. But the new governments in these countries which are in their majority Islamic are creating institutions that belonged to the Islamic path dependence. So the political regime which is based on government and opposition is not appropriate for these countries because the majority party (Islamic party) is obliged to be authoritarian and dictatorial to maintain the power delegated to him by God. Therefore, the coordination between government and opposition cannot be cooperative, the transaction cost will be higher, the equilibrium is not superior and that will hinder the process of economic growth.

Thus, on the basis of the above discussion, we can advance the following proposition:

---

[2] Ibn Khaldoun Al Muqaddima p 327.

[3] Muhammed prophet of Islam.

[4] Assabiyya refers to social solidarity between groups.

[5] In the name of Allah, the Beneficent, the Merciful: "And appoint for me a minister from my family Aaron, my brother. Increase through him my strength. And let him share my task". Quran, Surah Taha (20): Ayats 28-32.

[6] A powerful merchant tribe that controlled Mecca (is a city in Saudi Arabia) and its Ka'aba (is the most sacred site in Islam in Mecca).

[7] (Lin,1995).

[8] (Lin,1995).

Table 1. Matrix gains

		2		
		N	I	C
	N	(0,0)	(0, r-c)	(0, R - $\overline{C}$)
1	I	(r- c, 0)	($\hat{r}$ - c, $\hat{r}$ -c)	($\hat{R}$ - c, $\hat{R}$ - $\overline{C}$)
	C	(R – $\overline{C}$,0)	($\hat{R}$ - $\overline{C}$, $\hat{R}$ - c)	(R^{*} - $\overline{C}$, R^{*} - $\overline{C}$)

It is difficult for institutions related to Islamic "path dependence" to ensure a cooperative coordination that leads to superior equilibrium.

Demonstration

Consider two identical players i (1, 2) who are part of a static game with complete information and without external intervention. Each player has three strategies: $S_i = (N, I, C)$ N , I and C are three different levels of cooperation. The player may decide not to cooperate (N); in this case he has neither benefit nor cost related to this strategy. He can be a free rider (I); in this case, he supports a lower cost and profit than the player who cooperates. Finally, the player may decide to cooperate (C) ; in this case, he supports the highest cost and receives the highest benefit. The players make their choice independently and simultaneously. Moreover, we consider that the selection of the equilibrium is based on the principle of deductive selection. In other words, the selection is independent of the history of interactions. The gains are based on the level of cooperation. A simultaneous choice of the strategy "cooperate" (C , C) by both players reflects the case of a cooperative coordination. Otherwise, coordination is uncooperative or conflictive. In this case, transaction costs increase due to increased supervision, negotiation and litigation conflicts. Thus, we show that the game equilibrium is inferior (lower and unstable gain). To formalize this game, we make hypotheses associated to the costs and gains which are related to the adoption of each of these three strategies (C, I, N). For this, we assume that: $r \prec \hat{r}$ and $R \prec \hat{R} \prec R^{*}$.

r : is the gain obtained by the player who adopts the strategy I while the other player adopts the strategy N ;

$\hat{r}$: is the gain obtained by each player when they adopt the same strategy I ;

R : is the gain obtained by the player who adopts the strategy C while the other player adopts the strategy N ;

$\hat{R}$: is the gain obtained by the player who adopts the strategy C while the other player adopts the strategy I ;

R^{*} : is the gain obtained by each player when they adopt the same strategy C .

We consider that the strategy (C, C) is the equilibrium which is superior and which is related to a cooperative coordination: 2 (R*- $\overline{C}$) > (2 $\hat{R}$ - $\overline{C}$ -c) > 0 where $\overline{C}$ is the cost related to the adoption of the strategy cooperation (C) while c is the cost related to the adoption of the free rider strategy (I).

We suppose that:
The higher gain is obtained when one player cooperates (C) while the other is a free rider:

$0 < (\hat{R}$ - $\overline{C}$) $< (R^{*}$ - $\overline{C}$) $< (\hat{R}$ - c)

We suppose that the choice of the two strategies: (N , I) and (N , C) and reciprocally cause losses. In other words: $(R – \overline{C}$) $< (r – c) < (\hat{r} – c) < 0$ is the lowest loss related to the case when each player chooses the strategy of the free rider (I) . The results of the two players interactions are shown in Table 1.

As is shown in Table 1, if no individual cooperates, the net income is zero. In contrast, when both players cooperate, each supports a cost $\overline{C}$ and obtain an income R^{*} where $R^{*} > \overline{C}$. The simultaneous choice of this strategy (C, C) represents the superior equilibrium. It represents the coordinated solution of the game. However, when both players are free riders, they experience a loss. If the first player cooperates (C) while the second does not (N) , the first player undergoes the largest loss [($R – \overline{C}$) < 0] of the game. If the first player cooperates (C) while

the second is a free rider (I), the first player receives a gain which is lower than the one that is obtained by the second player $[(\hat{R}-\overline{C},\hat{R}-c)]$. If the first player is a free rider (I) while the second player does not cooperate (N), the first player undergoes a loss $[(r-c)\prec 0]$ while the second realizes a zero gain.

RESULTS

By calculating the pure-strategy equilibrium, we observe the existence of three equilibrium: $(I,C),(C,I)$ which are asymmetric and (N,N) which is symmetric. Regarding the asymmetric equilibrium, I is the best response of the first player to the choice of the second player who plays I. With this decision, the first player reaches the highest gains with the lowest cost. So (I,I) is also an equilibrium. About the symmetric equilibrium (N,N), if we assume that the first player thinks that the second will play the strategy N, since he gets a negative gain by selecting C, so it is optimal for him to play N. For the selection of equilibrium, two elements are considered. On the one hand, given that players are rational, therefore, they seek to maximize their gain, therefore, the choice of equilibrium (C,I) or (I,C) is justified while the simultaneous choice of the strategy I gives negative results. On the other hand, if both players want to achieve the highest gains, they may incur losses since the simultaneous choice of strategy I gives negative results. For that, not to cooperate becomes the only equilibrium of the game. It is a dominant risk equilibrium which implies that both players do not choose the strategy (C,C) given the risk that this strategy includes. The selection of dominant risk equilibrium determines a failure of coordination. Since the two players can achieve better results by coordinating their actions. This failure is mainly due to the lack of trust between the two players. Thus, the superior equilibrium (C,C) is not selected because it gives one player lower profits than in those related to asymmetric equilibrium $[(C,I)$ or $(I,C)]$. The strategy C will be selected only if there is an incentive element such as a trust that encourages the players to coordinate their action.

Therefore, we were trying to illustrate the case of an inefficiency of a non-cooperative equilibrium. Equilibrium because it is a situation where there is no advantage for each player to deviate from. Uncooperative because of the defection of players and inefficient because players can increase the collective surplus by changing their strategies.

DISCUSSION AND CONCLUSION

The objective of this article is to show that in the Arab Spring countries (Tunisia, Egypt, Libya) Islamic party in power tries to establish institutions that belongs to a "path dependence". The rules from these institutions do not allow a trust between the different political parties, because they are undemocratic. So the coordination between them is not cooperative and the equilibrium is not superior. This may increase the transaction costs and decreases the economic performance. The analytical approach that we have adopted and which is based on game theory showed that when political parties do not agree on the principles and bases of the institutional framework, higher equilibrium is not reached. Our results show that democracy is revealing the contradictions in the Arab spring countries. However, democracy which is based on government-opposition system cannot be a response to the institutional failure in these countries because the conflict and blocking will be permanent.

The revolutions experienced by the Arab Spring countries are not caused by an ideology or by a political party. Therefore, the choice of political system that can reach a cooperative coordination between the main political and socioeconomic actors must be creative. Indeed, it is possible to complete the path dependence analysis by a more general analysis of institutional dynamics, including the possibility of innovative change and deviation from the original path. This analysis will be the subject of future research.

REFERENCES

Akerlof GA (1970). The Market for lemons: quality uncertainty and the market mechanism. Quarterly J. Econ. (84): 488–500.

Arthur B (1994). Increasing returns and path dependence. in The Economy, AnnArbor, University of Michigan Press.

Coase RH (1937). The Nature of the firm. Economica. (4): 386-405.

David P (1985). Clio and the economics of qwerty.

American Econ. Rev. (75): 332-337.

Ibn Khaldoun A (1373). Al moukaddima. Dar El jil Bayrout.

Kaufman D, Kraay A, Mastruzzi M (2008). Governance matters VII: aggregate and individual governance indicators 1996-2007. World Bank Policy Research Working Paper No. 4654. The World Bank.

Krugman   (1991). Increasing returns and economic geography. The J. Pol. Econ. (99): 483-499.

Laffont JJ (1993). A Theory of incentives in procurement and regulation. Cambridge: MIT Press.

Lin N (1995). Les ressources sociales: une théorie du capital social. Revue française de sociologie. (36) :685-704.

Nielsen K (2006). An institutional approach to transformation in Central and Eastern Europe, in: Institutional change, values and learning, (k. Nielsen, ed.), Edward Elgar, Cheltenham.

North D (1990). Institutions, institutional change and economic performance. Cambridge, Cambridge University Press.

North D (2005). Understanding the process of economic change. Princeton University Press.

Romer P (1986). Increasing returns and long-run growth. J. Pol. Econ. (94): 1002-1037.

Schotter A (1981). The Economic theory of social institutions. Cambridge University Press, Cambridge.

Shubik M (1982). Game theory in the social sciences, Harvard University Press Cambridge (TraductionFrançaise chez Economica).

Williamson OE, (1985). The economic institutions of capitalism: firms, markets and relational contracting. the Free Press, a Division of Macmillan, Inc., New York.