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State and Socio-Political Crises in the Process of Modernization

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This article starts with a brief analysis of the causes of state collapse as states undergo the process of political evolution. Next, I describe and analyze the mechanisms of social-political crises arising in the process of modernization. Such crises are a consequence of the inability of many traditional institutions and ideologies to keep up with changes in technology, communication, the system of education, the medical sphere, and demographic change. This analysis suggests that an accelerated development can cause a system crisis with potentially serious consequences to the society. It is important to take this aspect into consideration because some scholars recommend that the economic reconstruction and development are necessary for nation-building. This actually means rapid economic advancement (otherwise, the economy could not be reconstructed and developed). However, one should not ignore the possibility that very rapidly developing countries may run the danger of falling into the trap of fast transformation. The article describes several mechanisms that can contribute to sociopolitical instability, including social tensions arising from rapid urbanization, youth bulges, and 'resource curses.'

Introduction

I define the *state* as a system of specialized institutions and rules that regulate internal and external political life of a society. This system is a power-, administration-, and order-maintaining organization separated from the ruled population. It must possess the following characteristics: a) sovereignty (autonomy); b) supremacy, legitimacy, and reality of power within a certain defined territory over a certain set of people; and c) the ability to coerce to fulfill its demands, as well as to alter relationships and norms (Grinin 2008a, 2011a).

The issue of the state is a principal one in social studies. In this respect it is worth pointing out the growing interest in problems of nation-building and state-building (Fukuyama 2006; Dobbins et al. 2007; Fritz and Menocal 2007; see Turchin 2012). The nation-building theory started emerging quite long ago (see Deutsch 1963; Bendix 1977), and it has already gone through several phases when the nation-building research focus shifted from social cleavages to ethnic diversity and back (Connor 1994; Kolstø 1999: Ch. 2). As a result we are actually dealing not with an integrated nation-building theory, but rather with several theories, some of which emphasize ethnic dimension of the

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respective processes, and others paying more attention to the political dimension. Additionally, “there is disagreement among current theorists of nation-building as to the relationships between the development of a free market economy and the development of democratic participation, as well as over the necessity of building a civil society as a prerequisite for the development of state institutions for democratic participation. Different theories of nation-building emphasize different parts of the arguments” (Stephenson 2005). In general, I agree with Peter Turchin (2012), that “nation-builders today do not have... theoretical framework,” while conceptual weakness of the nation-building theory can be diminished with the help of evolutionary science (as regards the lack of conceptual clarity of state-building theory see Fritz and Menocal 2007: 4).

This article is organized as follows. The first part provides a brief analysis of some typical causes of state collapse in the process of the evolution of the state. The focus is on evolutionary and ‘world-system’ factors, which need urgent consideration particularly in connection with the process of globalization.

The second (main) part of the article describes and analyzes the mechanisms of social-political crises arising in the process of modernization, which society may fall into when trying to overcome its own backwardness (I call it *the modernization trap*). Such crises are a consequence of the inability of many traditional institutions and relations, as well as ideologies to keep up with changes in technology, communication, the system of education, the medical sphere, and demographic structure. The result is growth of the radical sentiment within society and a revolutionary crisis.

This analysis suggests that an accelerated development can cause a system crisis with potentially serious consequences to the society (although much later such a crisis can also lead to positive transformations). It is important to take this aspect into consideration because some scholars recommend that the economic reconstruction and development are necessary for nation-building (Dobbins et al. 2007). This actually means rapid economic advancement (otherwise, the economy could not be reconstructed and developed). In general, that is correct. It is impossible to create a modern state without a modern economy. Nevertheless, one should not ignore the possibility that especially rapidly developing countries run the danger of falling into the trap of fast transformation. One should keep in mind that many countries are still in the process of modernization or just started it.

Consequently, when looking at the process of state formation, special attention should be given to the prevention of disproportions in sociopolitical system that could explode the latter; it implies the search for an internal consensus while preserving the development trend. In this article I do not consider the forms of polity other than the state, as I have analyzed this issue in much greater detail elsewhere (Grinin 2009a-c, 2011, 2012; Grinin and Korotayev 2011a; for the origin of the state see Carneiro 1970; Claessen 2002,

2010; Marcus and Feinman 1998; Claessen and Skalnik 1978; Johnson and Earle 2000; Grinin 2011a).

State Collapse: General Causes

One of the important issues in developing a conceptual framework for the theory of nation-building is to elaborate a typology of state collapses and deep crises. Such a typology could take into account the following dimensions:

- a) the role of external vs. internal factors;
- b) the peculiarities of the socio-political system and the state itself as its fundamental part;
- c) the increasing complexity of state organization in the world (this refers to the crises and collapses typical of different evolutionary state types);
- d) the effects of the growth of global system networks;
- e) major transformations leading to the formation of entities larger than typical political systems. This process was important during the establishment of centralized states and large empires. Today it takes the form of globalization.

Of course, such an analysis and typology requires a considerable effort and a quantitative analysis. Thus, only some of the above-mentioned factors will be considered below.

Systemic and Evolutionary Causes of Crises

The history of the state during the whole five millennia period of its existence is simultaneously the history of state crises and collapses. The most important reasons of such events could be defined as systemic or evolutionary. The systemic causes stem either from important immanent properties of the given system or from the system's inability to react adequately to external challenges. For example, in archaic states a cause of deep crises could be constituted by a vague system of the royal succession when both senior sons and junior brothers of the deceased monarch could succeed to the throne. Another problem is insufficient adjustment between a state and society. This is particularly typical for young, recently formed states in the areas where the state was not generally developed (e.g., in sub-Saharan Africa). In these regions, people think in terms of different social dimensions (a village, a tribe, or an ethnic group). However, the need for the state in the form of a definite political regime should become inherent in social consciousness; it should become a part of mentality, culture, everyday life. As such it can only emerge from centuries of state traditions. The borders, according to Friedrich Ratzel, should turn into the state's peripheral 'organs,' not an artificial line dividing territory between related tribes. Otherwise, instability, disintegration and permanent crisis are inevitable. It is notable that a number of existing states in the world (an overwhelming majority in Tropical Africa) have a very short – about

several decades—history of their national independence as well as sovereignty. Therefore, it is not surprising that in the failed states ranking the African countries always take ‘seats of honor’ (The Fund for Peace 2011 and Figure 1). Some factors for a system crisis could appear when the technological level (especially the military one) significantly surpasses the political level. This is another factor for the emergence of fragile or failed states.

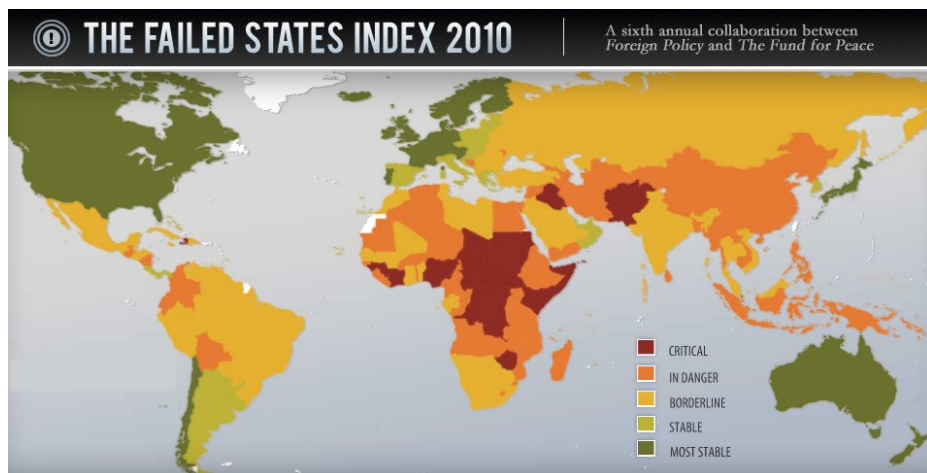


Figure 1. The map of failed states. Source: Foreign Policy 2012

Main evolutionary causes of the state crises and collapses are connected with the fact that forms of the state should correlate with the general level of societal development. With a significant growth of societal complexity, comparably significant changes of state institutions become necessary. However, such transformations do not occur automatically, because (a) not every country is capable of transition to a new level of the state development and (b) such a transition is connected with an increase in the average size of political entities that occurs through a voluntary or forced integration of states and political entities of the previous type.

During the period of such transformations some large polities, whose structure does not meet requirements of the situation, can disintegrate. For example, during the post-World War II period large colonial empires began fragmenting, which led to a proliferation of nation-states (in 1954 the UN includes 51 members, and in 1994 – already 185 [Webber 1997: 24; Inoguchi 1999: 175], whereas in 2012 their number increased 193 [United Nations 2012]). The nation-state became the world leading type of political system (Held et al. 1999: 46). At the same time, different supranational alliances and

organizations arose gradually becoming an increasingly important form of the modern political life.

Additionally, a transition to a new evolutionary level requires new political regimes. Thus, a transition to developed states (see below) in Early Modern Europe forced feudal non-bureaucratic monarchies to transform into absolute monarchies with bureaucratic apparatus. This led to a deep political crisis in much of Europe (in particular, in Italy and Germany). And the transition to the mature state (see below) in the nineteenth century required a transformation of absolute monarchies into constitutional ones which also led to a number of crises and revolutions.

Claessen and coauthors proposed two evolutionary types of state organization: an early state and a mature state (Claessen and Skalník 1978, 1981; Claessen et al. 2008; see Bargatzky 1987; Shifferd 1987). We think that a better typology is the tripartite division: ‘early – developed – mature state’ (Grinin 2008a, 2011a; Grinin and Korotayev 2006)¹.

- *Early states* are insufficiently centralized states. They are an instrument of political organization within societies with underdeveloped administrative-political and social structures.
- *Developed states* are the centralized states of the Late Antiquity, the Middle Ages, and the Early Modern period. They politically organize societies with distinct estate-class stratification.
- *Mature states* are the states of the industrial epoch. They organize politically societies, in which estates have disappeared, the bourgeois and working classes have formed, and representative democracy has proliferated. Note that the welfare states/mass consumption societies formed in the 1950–70s no longer meet the classical characteristics of a mature state as a class state with certain limitation of political rights (as regards political and organizational forms of early, developed, and mature states see Grinin 2008a, 2011a, 2012).

The causes of crises and collapses, as well as forms they took, differed with the evolutionary type of the state. For example, the decentralization crises were more typical of the early states. As a result these states were not usually restored within the same boundaries and in the same political form (with a few exceptions, e.g., Ancient Egypt). A new state would form with different boundaries, name, and ethnic composition. Unlike the early states, the developed states quite often reconstructed themselves within almost the same boundaries. In other words, there was a clear tendency to continuity (China can serve a classical example).

¹ Actually, Claessen himself admitted this, pointing out that with this (early – developed – mature state) classification ‘a serious gap in the evolution of the state is closed’ (see Claessen et al. 2008; Claessen 2010: 35).

Of all known early states, just one type of a state, namely the aristocratic/oligarchic with democratic elements, avoided decentralization crises. For example, the Roman Republic (and its rival Carthage) never split into territories seeking independence. However, the large oligarchic-democratic states as well as small democratic poleis faced other crises, political upheavals and revolutions, as well as civil wars. Thus, already the Ancient history demonstrates that the forms of social political crises significantly depend on the form of political regime (and every regime in its turn is based on its own form of legitimacy). It is worth noting that today deep political crises leading to possible social collapses are characteristic of not traditional democratic societies, but are characteristic of young democracies or pseudo-democratic societies.

Social upheavals are less typical of the early states. But in the developed states they occurred more frequently, more than once shaking empires and frequently leading to dynastic change (for example, in China or Russia). Crises associated with religious wars were a new phenomenon related to the transition to the developed state. Those wars were of particular significance for the formation of a new type of the state (i.e. a developed one) and international relations in Europe in the sixteenth–seventeenth centuries.

Religious wars during the early Islam history occurred because Islam spread to the territories with already developed states (the Sassanian and Byzantine Empires). The few religious wars in the Buddhist countries can be explained both by the peculiarities of the religion and by a small number of developed Buddhist states, while in many countries (India, China, Japan, Korea etc.) Buddhism was not the dominant religion backed by the state.

In early states, the crises were often associated with the struggle for the throne. However, they became even more widespread in the developed states. Nevertheless, the mature states were practically devoid of such crises, as the transfer of power was usually regulated there by means of clear legislative acts. The resolution of this, at first sight easy, but in practice difficult task evidenced the high political and legal level achieved by the mature states. However, the mature states' scourge was social revolutions (in the form unfamiliar to the developed states or typical of some countries like England only at the end of the stage). Social revolutions (as we will see it in the second part of the article) are closely related to the modernization processes. The mature states are also characterized by revolutions caused by an insufficient level of democratization.

World-System Crises

Evolutionary types of crises are closely related to world-system crises, which result from far-reaching expansions or serious restructuring of the World System, resulting in the appearance of new political configurations which can destroy or transform the old state systems. It is clear that such changes could

only be a result of great evolutionary shifts. At the same time, they significantly influence the evolution of the state.

One such crisis took place in the late fifteenth–sixteenth centuries, when a number of major processes took place simultaneously: the first phase of the Industrial Revolution; the beginning of globalization in the full sense of the word; the Military Revolution which required fundamental changes of the state system (Duffy 1980; Downing 1992). It is no wonder that it was during this period when a number of developed states arose in Europe and Asia. Such modernization was especially evident in Turkey and Russia, but it had also significant consequences in Iran and India (for details see Grinin 2011a, 2012).

It was the Military Revolution that made Asian countries and Russia modernize: introduction of artillery, firearms improvement, and the need to form a new (to a certain extent) type of army (including permanent units, such as the janissaries in Turkey and the *Streltsy* in Russia). At the same time, modernization affected a great number of states and in many respects destroyed the previous political system (in particular, as a result of the Ottoman, Russian, and Persian conquests, as well as the change of boundaries within Europe). The next wave of the world-system crisis came in the seventeenth century and was connected with a new phenomenon—international inflation (the price revolution), which had strong negative effects on the domestic situation in several countries, including Turkey and China (Goldstone 1988, 1991), and worsened the situation in England. Although this wave (in distinction from the previous one) did not lead to the collapse of states, it still caused deep domestic crises, stimulating significant transformations of state structure.

The new phase of globalization also plays a role in driving some states and regions towards political crises and even collapses. One of the first large-scale crises was the dissolution of the socialist system and multinational socialist states (the USSR, Czechoslovakia, and Yugoslavia). Now we observe the crisis of the state (in the form that has been established over the last decades) in Arab countries of the Near East and North Africa, subsequent upon a complex combination of internal and external causes (see in detail Grinin 2012; Grinin and Korotayev 2012). Lacking space to dwell on these factors, we will only point out the most common one. In recent decades and as a result of the process of globalization the economic processes greatly outran the political ones. This leads to a painful adjusting of the political component, contributing to the instability of many political regimes. The Arab Spring is a part of such an ‘adjusting’ and ‘tightening’ of the political component. Why has this process started in the Arab countries? One of the explanations is that in these countries the gap between the level of economic, technological, and educational development, on one hand, and the mentalities and the degree of religious influence on various aspects of social life, on the other hand, was larger than in other cultural regions.

Another world-system process is the effect of globalization on sovereignty transformation, mainly in the form of reduction (both forced and voluntary) of sovereign prerogatives (Walker and Mendlovitz 1990; Barkin and Cronin 1994; Farer 1996; Held et al. 1999; Held and McGrew 2003; Weiss 2003; see also Grinin 2008b, 2009b-d, 2011a, 2012; Grinin and Korotayev 2010b, 2011). Voluntary and deliberate reduction of sovereignty was driven by considerations of gaining prestige, economic benefits, or under the pressure of the world public opinion. Here is a brief glance at the spheres where sovereignty was reduced. These include the right to impose duties and taxation and determine their rate; to prohibit or reward import and export of goods and some types of activity; to issue currency; to borrow; to use the capital punishment; to proclaim specified politic liberties or restrict them; to define fundamental rules of elections and electoral qualification. Not so long ago the Europeans abandoned the *sanctum sanctorum*, their own national currencies for the sake of a common currency (euro).

Paradoxically enough maximum sovereignty (*i.e.*, the minimum restrictions on sovereign rights) is possessed today by the countries that are closed ideologically and sometimes economically (such as North Korea, Cuba, China, Iran, Saudi Arabia and some other Muslim countries).

The reduction of sovereignty (and, consequently, the general change of the mode of sovereignty) has many effects. Within this article, we will analyze only two: separatism/secessionism and the fragile/failed states.

Globalization has multiple effects on nationalism (Grinin 2011a, 2012; see also Ryan 1997; Bahcheli et al. 2004). Sovereign prerogatives can be deliberately delegated to international and supranational (regional and inter-regional) organizations and alliances. However, along with the tendency to reduce national sovereignty, one can observe a significant growth of nationalism with even the smallest nationalities striving for their own sovereignty. In some countries, growing secessionism creates severe and often protracted crises, which sometimes lead to disintegration.

I think that *nationalism is gaining strength because states are weakening as systems* (for more details, see Grinin 2011a). For example, in multiethnic states some territories strive for secession and establishment of national states to join the supranational alliances. In other words, they struggle for sovereignty so that they can hand it immediately to a supranational union. The Baltic countries and states of former Yugoslavia are examples. As the most states' security is actually provided by the world community and the strongest states (see Pugh 1997; Grinin 2011a), one does not need powerful armed forces to secure sovereignty in the present-day world. Thus, ease of preserving sovereignty strengthens secessionist tendencies.

In failed states, the government builds a more or less fragile and non-effective construction, while the majority of population is controlled by other (non-governmental) institutions. Besides, as I have already mentioned, the

present-day failed states are often states without any substantial state tradition. A salient example is the failed state of Chechnya. The Chechens had an ample opportunity to create an independent state, but did not realize it because they have never lived in an independent state (with the exception of the period of Shamil Imamate and struggle for independence in the nineteenth century, but even then it was a multinational, Islamic, but not a purely Chechen state). The regions with stronger state traditions have better chances to overcome a deep crisis (e.g., Ethiopia, Kampuchea, Laos).

Fragile or failed state present a dilemma. On one hand, they obviously do not meet modern criteria of the state with respect to maintaining internal order and observance of international obligations. As a result, their sovereignty can be ignored and (more or less reasonable) aggressive acts and sanctions etc. can be committed against them. On the other hand, the current state of the international system frowns on annexation. This leads to failed states becoming trapped in a vicious circle of domestic crisis—intervention from outside that makes things worse—deepening crisis.

Summing up this section, the transition to the next evolutionary level of political organization, with such aspects as the on-going sovereignty transformation, growing significance of supranational structures and organizations, and rampant globalization, will result in an increase of the probability of new and severe crises of the state.

The Malthusian and Modernization Traps

In the second part of the article, I analyze two types of mechanisms that create a serious danger to social stability, namely: the Malthusian and modernization traps. The former is characteristic of highly developed agrarian states, in which overpopulation, resulting from long-term demographic growth, creates conditions for social crisis and collapse. The escape from the Malthusian trap can occur as a result of society's modernization and industrialization. However, during modernization period a society undergoes serious structural transformations and, in consequence, certain disproportions arise. The society enters an unstable state, which leads to an increased danger of social-political crises. Thus, the escape from the Malthusian trap is associated with an increasing danger of getting into traps of a new type—the modernization ones. The modernization traps are quite widespread in the modern world so their analysis can help us forecast risks of political instability in the developing countries.

Social-Demographic Cycles in Complex Agrarian Societies

The trajectory of social evolution is not necessarily linear (or, at least, monotonic); it often contains a cyclical component. Cyclic patterns are often seen in traditional societies (see Turchin 2003; Turchin and Nefedov 2009;

Korotayev and Khalitourina 2006; Korotayev et al. 2006; Grinin et al. 2011: 4–5; Grinin and Korotayev 2012). Cycles can arise for a number of reasons: weakness of political structures of the early state (Claessen and Skalník 1978, 1981; Grinin and Korotayev 2009a; Grinin 2003, 2004, 2009a, 2010a, 2011a), dynastic crises (Turchin 2003), and the rigidity of some traditional societies that impeded change (Tsirel 2004).

One important mechanism is the limits on population growth in traditional societies, which results in socio-demographic cycles, which may also involve periodic political/dynastic and social crises (for example, in China). Recurrent overpopulation results in political tensions and socio-demographic crises that lead to population declines. However, better land supply, resulting from decreasing population, initiates a new period of demographic growth leading to another demographic cycle. This mechanisms of cyclical dynamics generally prevailed at least until the second half of the nineteenth century.

Socio-demographic cycles in the history of pre-industrial Europe and China have become an object of research from the second half of the twentieth century (Braudel 1986; Postan 1950, 1973; Abel 1974, 1980; Le Roy Ladurie 1974; Hodder 1978; Chao Kang 1986; Cameron 1989; Goldstone 1991). Over the past fifteen years, as a result of research by Sergey Nefedov and Peter Turchin, considerable progress has been made in understanding these cycles, suggesting that socio-demographic cycles were a much more widespread phenomenon in the macrodynamics of complex agrarian systems, than was thought earlier. These authors described more than 50 socio-demographic ('secular') cycles in the history of ancient and medieval Eurasian and North African societies (Nefedov 2003, 2005, 2007; Turchin 2003, 2006; Turchin and Nefedov 2009). In addition to empirical investigations, this research program also involved mathematical modeling (Turchin 2003; Nefedov and Turchin 2007; Komlos and Nefedov 2002; see also Grinin et al. 2008, 2009).

Nevertheless, it is worth noting that secular cycles are not typical of every agrarian society, for example because populations stayed for long periods of time below the Malthusian threshold (due to favorable climate, developing new lands, etc.). Non-state agrarian societies usually stayed well below the upper limit of carrying capacity as a result of endless intercommunal warfare, raids, and blood revenge. The danger of raids forces people to settle in certain places and choose only defensible ones. Quite often habits or fear cause the unwillingness to situate settlements close to each other (Sahlins 1999).

Cycles occur in complex and supercomplex agrarian societies (in the early state and developed state societies, respectively), because their relatively effective state mechanisms could impose social order and domestic peace and, thus, create conditions for considerable economic and population growth (for more details see Grinin 2007c). The more effective the state, the more likely such cycles would occur. That is why, in my opinion, socio-demographic (secular) cycles are much more characteristic of supercomplex

societies/developed states than of complex agrarian ones/early states. Many complex agrarian societies failed to achieve the threshold where they would face the danger of demographic collapse due to weak state systems or disunity leading to constant wars (Grinin 2007c). In other early states the demographic cycles occurred, but no new state would arise following the collapse of the previous one. The classical, that is, recurrent, socio-demographic cycles are typical, first of all, of imperial China after it achieved the developed state level (starting from the third century BCE) and of Europe after it acquired developed states. Some ancient states, like Neo-Babylonian Empire and states of the Early Modern Period, for example, the Ottoman Empire, where demographic cycles took place (Nefedov 2003), were also developed states or their analogues (for details see Grinin 2010a).

Agrarian Society and the Malthusian Trap

The mechanism underlying socio-demographic (secular) cycles is the *Malthusian trap* (Artzrouni and Komlos 1985; Steinmann and Komlos 1998; Komlos and Artzrouni 1990; Steinmann et al. 1998; Wood 1998; Kögel and Prskawetz 2001; Grinin and Korotayev 2009a; Grinin et al. 2008, 2009). This phenomenon, which is quite typical of pre-industrial societies, was first analyzed by Thomas Malthus (Malthus 1798, 1978).

I suggest the following definition. With respect to complex and supercomplex agrarian states, *the Malthusian trap denotes the almost inevitable danger of a social-structural crisis due to overpopulation, which in turn is a result of rapid and successful development*. This phenomenon can be called a 'trap' because society is an involuntary victim of its own success. The more progress is made, the more probable is the trap (the better are conditions for the development of production and living standards, the faster population growth fills the ecological niche, Grinin and Korotayev 2012).

Society falls into the Malthusian trap because in the long-run the production growth lags behind the demographic growth, and consequently the GDP per capita does not increase, whereas the living conditions of the overwhelming majority are not improved and *remain at the level close to bare survival level*.

The essence of this mechanism is as follows. Population numbers in agrarian societies are restricted by the upper limit of environmental capacity with respect to currently existing technologies. The upper limit of environmental capacity can grow as a result of technological innovations, thus opening up possibilities for economic growth along with temporal improvement of living standards. Due to this and an improved nutrition, the mortality rates decrease, while fertility remains at the same level or even grows. In complex and supercomplex agrarian societies, this leads to an accelerating demographic growth rate. As a result, within two or three

generations productive resources and possibilities of labor intensification are exhausted. However, the demographic growth continues and the society faces overpopulation that causes increasing social tensions. This compression phase is characterized by more intensive development within some economic and social life spheres (e.g., urban extension, crafts and trade growth, intensive irrigation work), but, at the same time, by the aggravation of poverty within a considerable proportion of population, rising taxes, increased competition for resources and social conflicts, which undermine the existing order.

It is worth noting that when the level of state development made it possible to maintain domestic peace over several generations, and the authorities or other social institutions supported technological development (as it was in China under the Song Dynasty or the Qing Dynasty), the population densities reached high values for the epoch. However, finally the system would find itself in a rather unstable situation. Moreover, the greater progress was made with respect to providing conditions for population growth, the larger can be its reduction as a consequence of demographic catastrophe.

Falling into the Malthusian trap threatens a socio-demographic catastrophe, as a result of the following processes. Overpopulation and declining levels of consumption lead to popular dissatisfaction and social tensions. Harvest failure and epidemics become more likely and can trigger a demographic catastrophe. The external enemies can use this as an opportunity to launch an invasion. As a consequence, “things could take the scale of a global catastrophe; the catastrophe in the mid-seventeenth century China can serve an example here” (Nefedov 2007; see also Turchin 2003, 2006). Peter Turchin also points out that another important factor of the breakdown of the social order is elite overproduction (that is, growth of elite numbers relative to total population) and intraelite competition, factionalization, and conflict, as well as (indirectly) increased taxation (Turchin 2007).

Escape from the Malthusian Trap: Causes and Duration

As I discussed above, in the pre-industrial period the attempts of supercomplex societies to overcome resource restrictions typically resulted in their falling into the Malthusian trap. Nevertheless, due to technological and social innovations the upper limit of environmental capacity gradually rose even before the industrial revolution, which was reflected in the growth of the world population. In China this limit shifted from 50–60 mln people during the Han Dynasty in the second century CE to more than 410 mln by the nineteenth century during the Qing Dynasty (Ilyushechkin 1986: 207; see also Dikarev 1991: 71–72; Kryukov et al. 1987: 63; Khokhlov 1972: 30). In the nineteenth and twentieth centuries most social systems managed to escape the Malthusian trap (Boserup 1965; Artzrouni and Komlos 1985; Steinmann and Komlos 1998; Komlos and Artzrouni 1990; Steinmann et al. 1998; Wood 1998;

Kögel and Prskawetz 2001). But the Malthusian trap results not only from too slow improvements in agricultural productive capacity. Another important factor is that there is no stable system of international labor division that would allow states that focus on industrial production to import food.

Consequently, the escape from the Malthusian trap can occur if only the rate of food production growth or the GDP growth rate surpasses the population growth rate over the long term. But it also requires stable opportunities for food import.

To launch the process of escaping from the Malthusian trap one needs markets that will allow realization of food surplus from the production places to the places of food shortage, and high prices of agricultural products to stimulate the growth of investments in production. Such a situation originally emerged in some Northwestern European countries, especially in England and the Netherlands in the second half of the sixteenth century. In those countries, one observes (a) the emergence of a capitalist farming system; (b) the formation of the model of stable, extended commodity production based on economic rationalization and profit maximization (Grinin et al. 2008, 2009).

Consequently, in England the process of escaping from the Malthusian trap started with the beginning of the first phase of Industrial Revolution in sixteenth century, i.e. before the industrial breakthrough of the eighteenth–nineteenth centuries, which should be considered as the second phase of Industrial Revolution (for more details see Grinin 2007a, 2007b; Grinin and Korotayev 2009a). But it was completed already in the context of industrial modernization (including the growth of factory industry, urbanization, education, communications development, marketability, and technological progress in various spheres that, by the way, brings another round of agrarian modernization).² Thus, within the World System core the escape took place over a long period of three centuries, from the second half of the sixteenth century to the mid-nineteenth century (the abolition of the Corn Laws in 1847). In the late nineteenth century, the international labor division progressed so much that some societies were able to specialize in industrial production, making up for food shortages with imports. Thus, a growing number of states began escaping from the Malthusian trap. The final escape from the Malthusian trap took place in Europe in the context of the global agrarian crisis (1870–1890s), which led to a continuous price reduction or stagnation, thus clearly demonstrated a qualitative change in the World System (Grinin et al. 2010; Grinin and Korotayev 2012). Still there are some societies, especially in Tropical Africa, that have failed to fully escape it even now.

² Modernization (especially a military-oriented one) can develop before industrialization, i.e. before an industrial breakthrough (e.g., the modernization during Peter I's reign). However, even such a modernization is connected with industrial (manufactory) development. On phases of modernization see Black 1966.

The Processes and Types of Modernization

Although the concept of modernization covers a wide range of subjects and its exact definition is disputable (Black 1966; Rostow 1971; Przeworski and Fernando Limongi 1997; Poberezhnikov 2006; Travin and Margania 2004; Nefedov 2007; Grinin 2010a), here we define it as follows. *Modernization is the process of a society's (and the World System as a whole) transition from archaic (supercomplex agrarian) to industrial society (and currently industrial-informational society)*. This process is accompanied by socially accelerated development and usually includes the following features:

- development of commodity sector and money circulation;
- industrial development;
- urbanization (transition to societies with the majority of population living in cities);
- modernization of agriculture;
- improvement of modern mass educational system, the establishment of modern health service, and propagation of general and medical culture;
- significant changes in demographic development, the so-called demographic modernization (i.e. the first and the second phase of demographic transition);
- transition to the economic model of extended reproduction tightly connected with the developmental economic cycles of a new type;

It is also important to emphasize that modernization is tightly connected with an escape from the Malthusian trap although unfortunately this aspect of modernization is rarely mentioned and insufficiently studied. In addition, modernization ultimately requires significant political, legal and social transformations (i.e. a political modernization which is primarily a transition from the developed to the mature state [see above]), which, however, political elites often resist. This is the main cause of modernization crises (see below).

The processes of modernization cover quite a long period and in every society have their own peculiarities (Berger 1994). However, one can distinguish several types of modernization: a *natural-historical*, a *catching-up modernization*, and a *forced one*.

Modernization occurs without external influences only in societies that are first to launch these processes. In such cases, modernization takes a long time. Such pioneer societies lack models and need to solve new problems by trial and error. Consequently, dramatic changes in social structure, in particular the growth of urbanization and literacy, can cause an acute tension and social conflicts. It is in such societies where the so-called early bourgeois revolutions took place as a result of falling into modernization traps. Since in such pre-industrial societies there was a relatively high level of urbanization, such type

of modernization trap will be further referred as urbanization trap, proposed as a subtype of the modernization trap.

But even more often modernization of a society is related to catching-up development, accelerated industrialization or rapid entrance into the international labor division, when already existing industrial and sociopolitical management technologies are borrowed. In these circumstances, on one hand, the process of transformation accelerates, but, on the other hand, many necessary reforms are not realized. Thus, great disproportions arise in a society, as modernization involves first technology and economy, while the privileges, distribution system, archaic political and social structures change much more slowly.

Sometimes a forced (imposed from outside) modernization can take place, but it is more often that only certain phases or modes of implementation are externally imposed rather than the entire process. It can be illustrated by the example of Egypt under English occupation (1882–1919), Japan under American occupation (after 1945), and India in the late period of British Raj. For purposes of the article, it is worth noting that society undergoing forced modernization often avoids social explosion. There are several reasons for this. First, foreign reformers, due to their own experience, can have a clearer view of social development laws. Second, self-confident winners or colonial authorities are not afraid to provoke discontent of some strata, as it often happens to local rulers. This point is applicable to some developing countries in the process of escaping from the Malthusian trap, for whom an outside control by international organizations could have a good influence in terms of trouble-free and safe escape from the Malthusian trap.

Causes of Increasing Social Tension and Risks for a Society

The process of escaping from the Malthusian trap for a particular country, even with already existing industrial and social technologies, usually need certain time (within twenty or thirty years, and in some cases many decades). This process presents an important challenge for a society. It entails considerable qualitative and quantitative changes with respect to demographic development (such as rapid population growth based on mortality decrease and a quick development of urbanization). Escaping the Malthusian trap actually means that the population on the whole begins to live better (as evidenced, for example, by increased average values of per capita calorie intake or rising life expectancies). However, the following disproportions emerge as result of the transformation process: 1) an unequal income distribution between certain social groups and regions (leading to underconsumption in some strata, groups, and regions); 2) maldistribution of resources and population within society (e.g., with an overall sufficiency of farmland, some districts face an acute problem of land shortage and rural overpopulation); 3)

disproportions in the age structure of the population (see below); 4) resistance by outdated, but influential institutions (for example, the Russian peasant community, the *obshchina* or the *mir*), ideologies on population growth and structure, attitudes of the authorities etc.; 5) the inadequate reaction by the authorities to increasing resources, in particular their interest in international adventures; 6) the growth of literacy and education creates a powerful group of intellectuals who try to ideologically influence the whole society; 7) increasing expectations of different sections of the population, which often fail to realize to the full.

It is recognized that modernization processes usually progress in a complicated way. They are often accompanied by upheavals and revolutions. One of the factors increasing tension in the context of modernization is an extended industrial production generating cyclical patterns of economic development. It is cyclical patterns that form the main mechanism of rising social instability in a modernizing society. This mechanism is as follows. The medium-term economic cycle (Juglar cycle) in its classical form is characterized, first, by a rapid and powerful upswing connected with intensification of all social resources and price increases (Grinin and Korotayev 2010a, 2012). In practice, this means that during the periods of rise, the economy desperately needs labor force, and the number of workers and their wages, along with their expectations, increase. Then the powerful upswing changes into an acute crisis and a downswing. Consequently, the employee circumstances worsen. However, in rapidly modernizing societies with abundance of natural and demographic resources, economic crises within some medium-term cycles can pass rather smoothly, and further development again demonstrates an economic boom. As a result, an intensive economic growth can last with some short breaks for a relatively long time, sometimes two, three or even more decades (e.g., in Russia in the 1870–80s, and especially in the 1890s; the same processes took place in Japan from the 1890s to 1930). Such a situation stereotypes expectations and/or conviction that worker activism is a possible and necessary way to gain better working conditions. Sooner or later, however, one of the cyclical crises turns out to be too severe. In consequence, the social tensions can explode. In combination with other social and political crises (rural overpopulation, poor harvest, national and international developments) it can well develop into a revolution. For example, although the European Revolutions of 1848 had complex causes, it is no coincidence that they took place after the poor harvests and famine of 1845–46 and the economic crisis of 1847. But even a serious economic crisis itself in the context of already existing revolutionary trends can provoke dangerous instability and socio-political upheaval that we observe today in the Arab world.

We should also note another point. The modernizing societies are usually authoritarian (or societies without developed stable democratic institutes).

Authoritarian societies have rigid structures and so they are subject to revolutionary collapse. On the other hand, really democratic societies, where the manifestations of social unrest can take legal forms, do not know revolutions. For example, in 1848 Europe and England experienced the rise of social activity. But in England the problems were settled in a peaceful way (Chartism), while Europe experienced revolutions. The most serious danger of social-political upheavals is created by situations with a partial (but non-institutionalized and inconsistent) democratization, or an authoritarian shift within the democratic system frame when authoritarian and radical forces come to the tug of war; as well as the situation when radical forces, which are not democratic by nature and convictions, use the democratic freedoms and rights to seize power.

As a result, rapid and uncontrolled changes and increasing structural disproportions can bring the society into a new—modernization—trap that, as we have already said, often causes revolutions and various political upheavals.

The Demographic Component in the Malthusian and Modernization Traps

Because population growth often accelerates in the process of modernization, social crises at this stage tend to have a structural-demographic component. That is why there is an obvious similarity between models of the Malthusian and modernization (post-Malthusian) traps. In both cases rapid population growth creates strong demographic pressure and consequently structural tensions. However, as was shown above, there is a fundamental difference between these crises. The Malthusian trap is typical of pre-industrial societies, a stage in which society is unable to solve Malthusian problem through technological advancement. The modernization trap, on the other hand, is characteristic for industrializing societies where it can be solved with the help of technological progress, and in the process of escaping the trap some powerful social-economic disproportions appear. So in the first case the agriculture remains the main sector, in the second one its role gradually diminishes, and excess population can be absorbed by industry and the tertiary production sector. Thus, although most modernization traps possess a significant demographic component, it is still improper to call this constituent 'Malthusian.' Instead it should be considered quasi-Malthusian, because within this trap the main Malthusian process, that population grows faster than food production (Malthus 1978 [1798]), is not a factor. On the contrary, as we observed, the GDP per capita growth (as well as food production in general) overruns the population growth rates.

Additionally, fast modernization can be accompanied by rapid population growth without causing revolutionary developments due to a more successful domestic and foreign policy of the state (e.g., Japan after the Meiji Restoration

or Egypt in the late nineteenth–first half of the twentieth century). This means that at a certain stage of development a society manages to escape falling into modernization trap.

The case of Egypt in the nineteenth–early twentieth century is instructive. Egyptian population increased in less than a century (1800–1907) almost threefold (from 3.5–4 mln to 11 mln people) and continued to grow (Panzac 1987; McCarthy 1976). Yet in the late nineteenth–early twentieth century Egypt acutely experienced overpopulation. Fast growth led to land shortage and mass dispossession of land among peasants (Fridman 1973). And, similarly to Russia, a rapid modernization of economy and the state was carried out in Egypt during this period. But, unlike Russia, Egypt evaded social revolution and any catastrophes (there was a struggle for independence from English occupation that spilt over into tumultuous, but not bloody events of 1919). The history of Egypt in the second half of the nineteenth century–beginning of the twentieth century is connected neither with starvation, nor with epidemics, nor with significant reduction of the population. Egypt's successful development was partly conditioned by forced modernization as a result of English occupation (since 1882), which created more effective political system and drew more attention to economic development than the Russian authorities did. Furthermore, in Egypt modernization affected primarily agriculture, while the industrial development was poor.

On the other hand, it is worth noting that modernization traps are not always connected with the problems of powerful demographic pressure and rapid population growth. In the nineteenth century France, for example, population grew slowly, increasing only by 50 percent, from 26.9 mln to 40.7 mln (Armengaud 1976: 29). But that did not prevent several revolutions in France during the nineteenth century. The demographic pressure can be present but mitigated by emigration (as happened in the Nordic countries or Italy in the nineteenth–the first half of the twentieth century) and even by direct mortality from famine, for example, in Ireland, whose population during the nineteenth century decreased from 5 mln to 4.5 mln population.

In some cases, especially in the colonized countries, modernization may progress within the context of real underpopulation. It is illustrated by the USA, Canada, Australia, a number of Latin American countries, in particular Argentina. However, in democratic states revolutionary changes are less probable than in non-democratic or formally democratic ones. This is the reason that led to the Civil war in the USA (exactly because of non-democratic character of the social sphere in the South) and made upheavals and revolutions quite a frequent phenomenon in Latin America. While in Canada, Australia and New Zealand, in general, there were no social political disturbances.

Types of Modernization Traps

Because the escape from the Malthusian trap in the world-system core generally took more than three centuries (from the second half of the sixteenth century to the nineteenth century inclusive) it is not surprising that we observe an evolution of the trap itself. This is the reason for working out a classification of traps. The main types of modernization traps in the process of escaping from the Malthusian trap are presented in Figure 2.

Urbanization Trap. Initially the Malthusian trap can evolve into the one that can be called the urbanization trap. It primarily affects pre-industrial societies with a relatively high urbanization level and an established bourgeoisie. In such societies, there is no machine industry yet, but there exist different forms of early capitalist trade and industrial enterprise. But the main point is that urbanization has reached a certain level beyond which some serious societal transformations are indispensable. At the same time the political elite do not realize this whereas some citizens, bourgeoisie, and *intelligentsia* come out as a vanguard of public opposition. Our investigations show that in modernizing societies the most tension arises at the level of urbanization from 10 to 20–30 percent (Grinin et al. 2009; Grinin and Korotayev 2009b).

Britain before the Revolution of 1640 is the first example of this dynamic. Another example is France on the eve of the Great French Revolution. But in Britain, as distinct from France, great progress was achieved in agriculture, which probably was one of the reasons for the peasantry's relative inactivity during the revolutionary period. The main difference of political crises and political actions against authorities in the situation of an urbanization trap (in comparison with rebellions in the late agrarian estate societies) consists in the following: there is an aspiration to transform the action into nation-wide and give it a definite ideological character. Moreover, another obvious difference is the aspiration to change existing social system and create a new national body of power. In addition, the upper urban strata, including counter-elites and a part of elite that has no real power or has been removed from power positions, act as a core of such movement (for the social structure of revolutionary masses see, for example, Sorokin 1992: 286). But all these strata are united by a new ideology. In other words, the urbanization trap means a transition from urban rebellions and peasant wars to social revolutions.

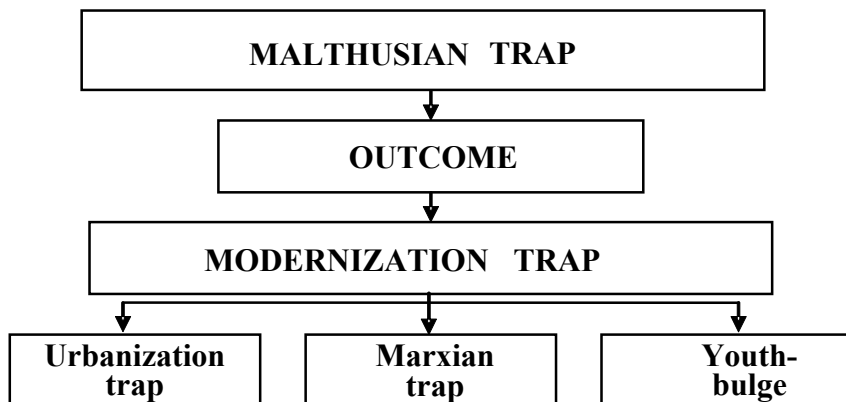


Figure 2. Main types of modernization traps

Marxian trap. A transition from the Malthusian trap to Marxian one occurs during the period before the beginning of the industrial revolution and during its first phases. This transitional type was called the Malthusian-Marxian trap (Grinin et al 2008: 81; for the analysis of this type in pre-revolutionary Russia see Grinin 2010b; Grinin and Korotayev 2012). But with the development of capitalist industrialization and the growth of class struggle the Malthusian-Marxian trap turns into a typical Marxian trap (Grinin 2010b; Grinin and Korotayev 2012). Its Malthusian component provides relatively cheap labor force, and Marxian component is connected with a high level of exploitation. Sizable and relatively redundant rural population is a source of serious demographic pressure in industrialized societies. In contrast to the Malthusian trap, however, here the problem of overpopulation is not fatal but mainly social because (a) GDP growth per capita exceeds population growth; (b) the growth of markets generally exceeds population growth, and as a result, urbanization grows more rapidly than population on the whole; so efforts and capital are directed to the most profitable spheres and this leads to a new GDP growth; (c) many people's standard of living depends not on land but on cash incomes, which intensifies processes of social mobility, diversification of population jobs, involvement in a more active life, and the living standards generally increase.

Thus, here the structural-demographic constituent acts not in the direct Malthusian form, but as a producer of socially explosive material in the form of unsatisfied proletariat and urban community. The entrepreneurs get labor force from the seemingly inexhaustible reserve of workers and the demographic pressure constantly emits new workers to towns. Nevertheless,

falling into the Marxian trap is possible also without serious demographic pressure (as was the case of France of the nineteenth century).

The Marxian component arises from the disproportion in distribution of benefits from rapid economic growth and with the lack of social legislation and all that makes the workers powerless and the exploitation often barbaric. In short, the rapid dynamics of economic development and changes in social life require serious transformations in the political system and legislation, but these changes can seriously lag behind. These disproportions are the most general reasons for revolutions.

A more specific mechanism is that most of new members of the working class have no skills. Therefore, a disparity emerges between demand for skilled labor force and an excessive offer of non-skilled labor force, and as a consequence a large gap in the income of workers of different groups. During the period of economic growth, masters are often ready to increase wages, yet in the crisis the demand for workers, especially the unskilled ones, significantly decreases and danger of social unrest grows.

The Marxian trap can be solved by means of (a) social reforms; (b) finishing industrialization; (c) finishing demographic transition (birthrate reduction); (d) democratization (but with the above-stated caveats).

The youth-bulge is always connected with social-demographic factors and is always a result of modernization. Due to modernization, the growth of food production and medical care reduces mortality and sharply increases the proportion of youths (from 15 to 24 years old), i.e. there appears a so-called youth bulge, which is presented in the diagrams showing the proportion of young people relative to the total adult population (Figure 3). Such a change in age proportions in the situation of modernization creates conditions for social-political instability. According to Jack Goldstone most twentieth-century revolutions in the developing countries occurred where exceptionally large youth bulges were present (Goldstone 1991; Goldstone 2002: 11–12; Moller 1968; Mesquida and Weiner 1999; Heinsohn 2003; Fuller 2004; Korotayev et al. 2011b).

Thus, it is just the youths who play the key role (especially at the present stage) in creating a continuity of political instability in society in the process of modernization and escape from the Malthusian trap. That is why, I propose to call this type of modernization trap the youth-bulge trap. The mechanism of falling into such a trap in the process and/or as a result of the escape from the Malthusian trap was discovered and described by Andrey Korotayev (Grinin et al. 2010; Akaev et al. 2011: Chapters 2, 6, and 18; Korotayev et al. 2011b). The youth-bulge trap is typical for the first phase of demographic transition (it can also operate at its final stage or at the beginning of its second phase). It appears due to a rapid reduction of infant and child mortality with the birth rate remaining high (Korotayev et al. 2011b; Grinin and Korotayev 2012). The results of reduction in children mortality and increase by several times of the

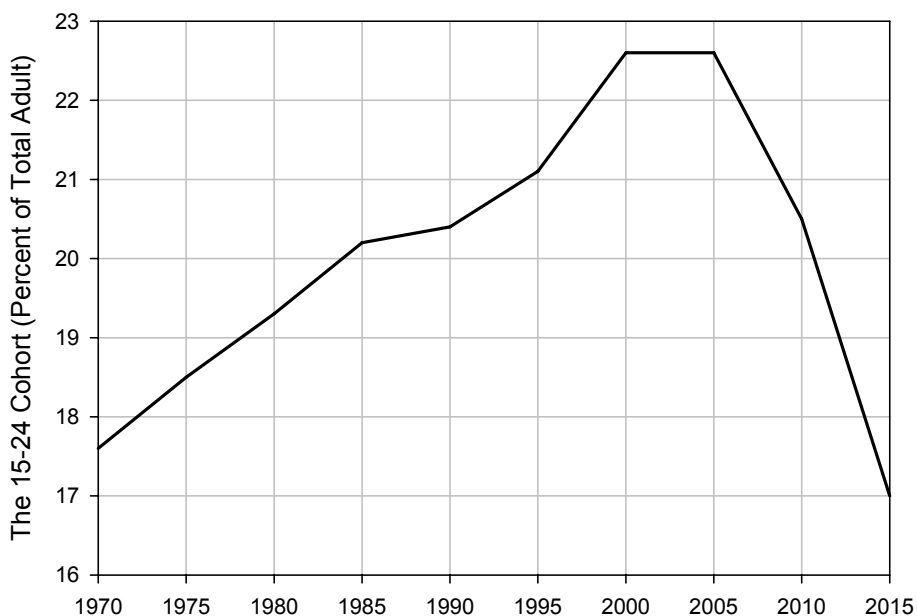


Figure 3. The proportion of the 15–24 years cohort among the total adult population (in percent): Algeria, 1970–2005 with a forecast to 2015. *Source:* UN Population Division 2009.

surviving children can lead to a seriously increased youth cohorts as part of the population structure within 15–20 years. As a result the generation of the grown-up children is much more numerous than their parents generation. The effect of this trap is reinforced by rapid urbanization processes (Grinin, et al. 2010; Grinin and Korotayev 2009b).

In the past centuries, ‘youth bulges’ were observed as part of the development of many modernizing states. However, in the present era due to the great progress in medicine the infant and child mortality has declined to an unprecedentedly low level. Additionally, in a number of contemporary developing countries the consumption level has substantially increased in comparison with the one in previous years even in the medium-developed countries. That is why today the youth proportion (and correspondingly the size of the youth bulge) with other conditions being equal is larger than in previous epochs. Consequently, nowadays the danger of falling into the youth trap for a number of developing countries is in some respects even larger in

comparison with the previous period (but at the same time owing to large historical experience and the international community's help the danger is also reduced). Today political scientists often speak about the countries with youth population structure (with the youth bulge) as a “curve of instability” stretching from the Andes region in Latin America to some African areas (especially south to Sahara), Near East and northern regions of South Asia (The World after Crisis 2009: 59). And such a forecast unfortunately, came true with respect to Tunisia, Libya, Egypt, Syria, Yemen, and other Arab countries in 2010–2011 (Grinin and Korotayev 2012: Chapters 4 and 5).

The ‘Resource Trap’ and Modernization Crises: the Case of Algiers

Natural resources can provide an opportunity for a society to maintain for a long time high income without major difficulties, and for the government an opportunity to solve social problems and fund economic development. This phenomenon is sometimes referred to as the ‘resource trap’ or ‘resource curse’ (Auty 1993). As a result, the level of expectations in the society rises significantly, and if the government revenues falls due to a drop in the prices of natural resources, these expectations will be disappointed. Resulting economic difficulties (inflation and unemployment) may cause social upheavals, especially if the youth bulge is also present. The functioning of the youth-bulge trap in these cases is, however, different than in the case of poorer countries. As a result of natural resources-driven modernization, consumption levels and, especially, the expectations of young people will be substantially higher than in poor countries not possessing natural resources. Correspondingly, a sharp fall of the income from natural resources can lead to a more serious crisis situation. Because the youth usually suffer especially heavily they will become the focus of social instability. (On the society’s overrated expectations that lead to social explosion, see Grinin and Korotayev 2012).

This dynamic can be illustrated with the case of Algeria. During the 1970s–80s, as a result of a decline of death rates (especially the infant mortality) and the growth of food production and general consumption levels the number of youths started rapidly increasing. This growth continued into the 1990s, but during the 2000s the youth share of population started to decrease (Figure 4).

Also during the 1970s the Algerian state became completely dependent on crude oil revenues, which made up 95 percent of the exports and 60 percent of the budget. As a result, Algeria represented a sort of popular oil democracy because income from oil production allowed the governing regime to buy social peace (Kepel 2004: 164–6). However, starting from 1980 oil prices started to decline. In 1982–86, oil prices dropped by a factor of two or more (Figure 5). Finally, in October 1988, the increase in the price of necessities and growing unemployment rate led to the breakout of civil (primarily youth) riots,

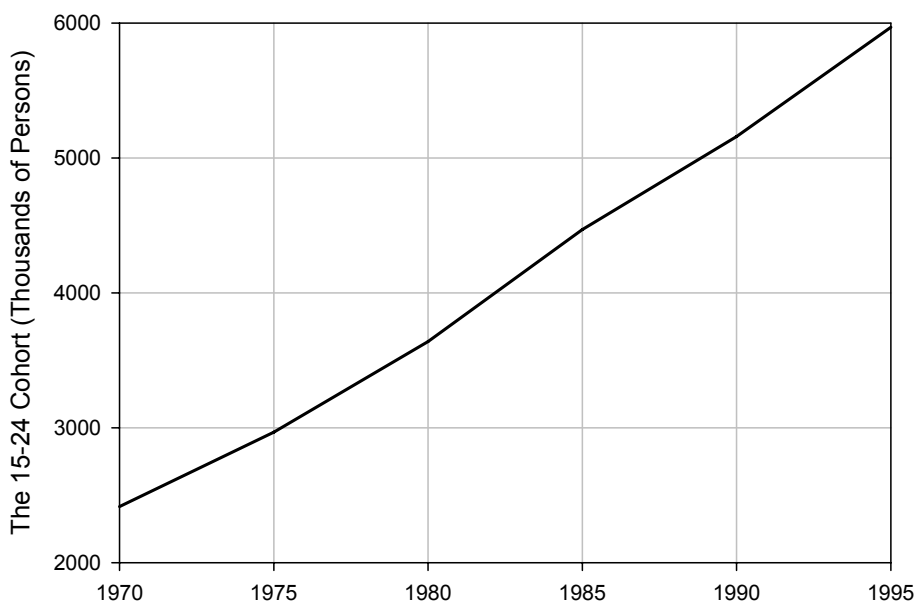


Figure 4. The dynamics of the total number (thousands of persons) of the 15–24 years cohort in Algeria, 1970–95. *Source:* UN Population Division 2009.

with young Algerians attacking symbols of state power and looting public organizations and services, luxury cars and shops (Kepel 2004: 164–6).

Eventually, social instability in Algeria transformed into a decade-long civil war. But sociopolitical instability began declining in 2000 and the civil war ended in 2002, which coincided with the period of oil prices new growth and a decline in the numbers of the 15–24 year cohort (Figures 3 and 5).

Conclusion

In summary, modernization processes together with the escape from the Malthusian trap increase the danger of social upheavals such as revolutions and civil wars. It is important to note that in most cases the demographic component, resulting from nutritional improvement and death rates decline (especially infant mortality), is an important and often the leading cause of falling into the modernization trap. At the same time, we distinguish the modernization trap with a strong social-demographic component from the classical Malthusian trap typical of supercomplex agrarian societies.

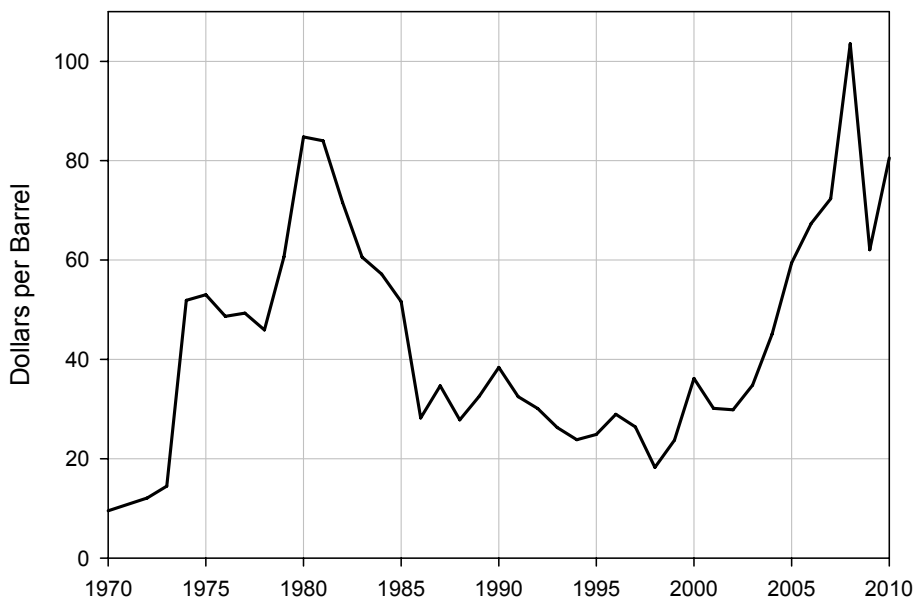


Figure 5. Dynamics of world oil prices (in constant 2007 dollars), 1970–2010. Source: *Earth Policy Institute* (Washington, DC, 2010).

Modernization traps come in several flavors: urbanism, Marxian, youth bulge, and resource curse. Furthermore, in most empirical cases causal factors leading to rising instability combine two or more of these mechanisms. For many developing countries the greatest danger currently is a combination of youth-bulge and urbanization traps. This can be used for forecasting the risks of political instability in these countries as well proposing recommendations for preventing such undesirable outcomes (Korotayev et al. 2011a).

As was pointed out in Introduction, in the process of state and economic development special attention should be paid to preventing various disbalances in the sociopolitical system, which can lead to its collapse. It is also important to note the following.

The modern standards of state organization and legitimation, based on democratic forms of governance surpass the level of economical development achieved by many modernizing states. Western democracies, before becoming fully blown democracies, have also experienced long periods of limited democratic institutes with restrictive voting qualification. Many of these

countries failed to avoid revolutions during their period of economic modernization and demographic transition.

The imbalance between the level of economic development and the political system presents a grave threat to state stability. At present, governments of many societies developing relatively successfully in terms of economy, but under insufficiently democratic (and often outright autocratic) regimes find themselves at risk of losing of the legitimacy in the society's eyes. And this can be the most important factor of possible collapse. The events of the Arab spring provide vivid examples (Grinin 2012; Grinin and Korotayev 2012). Thus, in the process of state development one should work out certain measures which would neutralize or compensate the gap between a lower level of economic and cultural development and a higher forms of political regimes.

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